SELECT COMMITTEE ON ECONOMIC AFFAIRS

The Economic Case for HS2

Oral and Written Evidence

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20 Miles More—Written evidence

20 Miles More is a campaign supported by a coalition of leading business figures and academics to have the proposed HS2 network extended to include Liverpool. At present Liverpool is the only major city in the North and Midlands not directly connected to HS2 and it is estimated that a link serving the city would help increase the city region’s GVA by an additional £8bn over 20 years.

The format of our submission is that of the Q&A posed in the Call for Evidence.

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1 Is there an economic case for HS2?

1.1 HS2 has the capacity to deliver substantial economic benefits to the UK economy. The HS2 Regional Economic Impacts report by KPMG[1] values this at up to £15bn per year. The HS2 project has a total cost of £50.1bn. An annual benefit of just £1.4bn would give a positive pay back over a 60-year period. A positive economic benefit from HS2 project seems assured.

1.2 However, significant opportunities to maximise the economic benefits and rebalance the economy are being left on the table by the HS2 project. Liverpool and its city region, the UK’s 5th largest metropolitan area, has the potential to play a major part in HS2 and rebalancing the economy, however it has no direct high-speed link.

1.3 Liverpool trains will use the new HS2 tracks for part of their journey from London, switching to the 19th century “classic” rail tracks at Lichfield or Crewe. When comparing other major cities in the North which are directly linked to HS2, such as Leeds and Manchester with Liverpool’s service, the competitive disadvantage is clear:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Liverpool</th>
<th>Leeds</th>
<th>Manchester</th>
</tr>
</thead>
<tbody>
<tr>
<td>London journey time improvement</td>
<td>25¹</td>
<td>49</td>
<td>60</td>
</tr>
<tr>
<td>HS2 trains per hour</td>
<td>2</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Maximum seats per train</td>
<td>550</td>
<td>1,100</td>
<td>1,100</td>
</tr>
<tr>
<td>Released rail paths for commuter / freight services</td>
<td>No²</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1.4 This material difference in connectivity is borne out by the resulting economic impacts.

¹ Average journey time as Liverpool’s two hourly trains are have significantly different journey times
² Liverpool has no released capacity or ability to access released capacity on the WCML
Compare the uplift to the average percentage GVA for Liverpool, Leeds and Manchester:

<table>
<thead>
<tr>
<th>City</th>
<th>GVA % Uplift¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liverpool</td>
<td>0.35</td>
</tr>
<tr>
<td>Manchester</td>
<td>1.40</td>
</tr>
<tr>
<td>Leeds</td>
<td>1.75</td>
</tr>
</tbody>
</table>

1.5 The relative lack of economic benefit to Liverpool results from the lack of a direct HS2 link.

2 Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?

2.2 The economic analysis is based on narrowly defined terms of reference handed down by the Treasury and Department for Transport. There is significant potential to improve and broaden these rules to more accurately model the real-world economic impacts. However, our main contention is with the implementation of the existing rules and statistics that have been used to decide the Phase 2 preferred route.

2.3 HS2 Limited made flawed assumptions in calculating future passenger demand from the Liverpool City Region [2]. These include inconsistent numerical comparisons between hub areas and the adoption of geo-political zoning that does not reflect the full extent of the urban boundary on both sides of the Mersey.

2.4 The result was an underestimate of the strong growth and demand for passenger travel to and from Liverpool. These shortcomings were eventually recognised by HS2 Limited but not until after the decision not to serve Liverpool with a direct HS2 link was made [2].

2.5 The analysis carried out by leading accountancy firm KPMG, on behalf of HS2 Limited, reveals that this decision could cost the City of Liverpool £50.2m annually in economic output [1].

2.6 Research commissioned by the Liverpool City Region Combined Authority indicates that a direct high speed link would yield an £8.3 billion boost to the local economy and an estimated £30 million a year extra in business rates [3].

2.7 HS2 Limited have taken a passenger centric approach, without sufficient consideration of freight capacity benefits and impacts. This is a critical issue for Liverpool and the North. North of Crewe HS2 services swapping to the classic tracks means that there will be no released freight capacity [4]. So Liverpool’s new post-Panamax container port, Liverpool 2, will be unable to access the classic rail capacity released south of Crewe. The giant increase in container capacity at Liverpool 2 will need to be accommodated on the road network.

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¹ Average of Low and High sensitivity scenarios as per KPMG report[1]
3 What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

3.1 High speed rail allows the North and Scotland to be, journey time-wise, closer to the southern half of the country. This could potentially assist in lessening the North-South divide, although it is not the whole solution and other measures will need to be included to realise this aim, such as local efforts to attract local investment and a nurturing of local talent and entrepreneurialism. More devolution to local and regional authorities will probably also be required in order to make this happen.

3.2 HS2 could also be the launch platform for better links between the great cities of the North. This could allow the cities of the North to function more as a regional economy than they currently do, making the area comparable to similar successful polycentric regions such as the Randstad in the Netherlands and the Rhine-Ruhr region in Germany. This could make the North a more attractive place for businesses to locate and for skilled professionals to live in.

3.3 HS2 will allow the possibility of increased local and regional services, where long distance services transfer onto the new right of way. This will further boost links between the major cities and commuter towns, and access to the ports and airports. However, Liverpool will need a direct HS2 link in order to see the full benefits of this.

4 Might some parts of the UK suffer economic disadvantage from HS2?

4.1 The HS2 Regional Economic Impacts report by KPMG[1] demonstrates how cities not on HS2 could suffer economic disadvantage. For example Liverpool, in the scenario where businesses are highly sensitive to transport costs, is estimated to lose £50.2m annually from its local economy. Over the 60-year period that HS2 is evaluated over this equates to £1.9bn (net present value) lost to the local economy.

4.2 Why should this happen when Liverpool receives services on HS2? Liverpool's neighbouring city-regions all gain a substantial competitive advantage over Liverpool as illustrated in Table 1. In the words of Patrick McLoughlin cities on HS2 act as “Growth Magnets”, but the magnetic attraction of neighbouring city regions will be far stronger and will attract growth from Liverpool.

5 Is London likely to be a main economic beneficiary of HS2?

5.1 London is a city with superb connectivity to almost every other city in the British Isles and to major cities around the globe. There is consequently, a danger that faster and more capacious rail links to the capital will result in greater centralisation of the UK economy – defeating the stated aim of HS2 of ‘rebalancing the economy’.
5.2 The main drawback of London is the very high cost both of living and doing business within its confines. This presents an opportunity for cities outside of London to capitalise on their much lower costs. To achieve the rebalancing, it will be necessary to increase the connectivity of these cities to make them attractive investment alternatives.

5.3 For Liverpool, not being directly linked to HS2 means that none of the stated connectivity benefits conferred by the new route will materialise and the city’s economy will suffer both in competition with London and other cities that are better served.

5.4 The physical form of the proposed new route demonstrates its London-centric nature. London is seen as the hub with spokes radiating out to the regional cities (Birmingham, Manchester, Leeds) – as opposed to a network providing connectivity between the cities of the UK.

5.5 The lack of an HS2 link for the Liverpool City Region is also an indicator of the failure to address the connectivity issue. How can HS2 rebalance the economy if Liverpool, the fifth largest metropolitan area in the UK is not linked?

5.6 There is a need to increase connectivity across the North - particularly east-west connectivity between Liverpool, Manchester, Leeds and Sheffield. These city regions, with a combined population greater than London, would have the critical mass to act as a counter balance to the over-heated, over-dominant, London economy.

5.7 David Higgins’ HS2 Plus is an attempt to address this problem as are the One North and HS3 initiatives. However, details of how east-west connectivity may be delivered remains to be seen.

6 How might the expected benefits of HS2 to the national economy be realised?

6.1 By ensuring that all major economic centres in the geographical area of the HS2 network are effectively served.

6.2 By ensuring that HS2 terminals are established in the geographic focus of the economic centres and that the local transport networks are improved to serve those terminals.

6.3 By taking a network approach, not a point to point approach, so that over time as the network develops, journeys between every city on the network can be accommodated, not just to/from London.

7 How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

7.1 The strategic importance of HS2 to the UK economy will tend to drive the case for service provision and fare levels to be externally monitored. A franchise model in which operators were free to increase services or reduce fares to compete with the West and East Coast Main Lines could lead to a reduction in services and higher fares in areas where the competition was less effective.
7.2 An alternative model of franchising, such as that used on the Merseyrail system may well be appropriate. Merseyrail's partnership approach has delivered the UK's highest rated level of passenger satisfaction [5]. The operator would be responsible for delivering a predetermined level of service and fares with payment on the basis of key performance indicators such as punctuality, cleanliness of trains and levels of customer service.

8 Should travellers expect to pay higher fares on HS2 than on other lines?

8.1 To justify the huge public investment in HS2, it will be important that the new trains and infrastructure are used effectively and so fare levels should not act as a deterrent to use of the new railway.

8.2 High fares are a major deterrent to rail use and will reduce the agglomeration benefits that would otherwise be generated by HS2. Research conducted by the LSE shows that the main reason for the surprisingly small numbers of commuters between Leeds and Manchester is the relatively high fares on trans-Pennine routes which discourages rail travel [6].

8.3 An important part of the justification for HS2 is that the new railway will encourage modal shift from more carbon intensive forms of transport such as the car and aeroplane. To achieve that, fare levels will need to be competitive.

8.4 The UK will reap the benefit of the large public investment in HS2 from the economic benefits that its construction will confer on those parts of the country that it serves. This will be realised in the form of higher tax revenues from both individuals and businesses. Higher fare levels may contribute more to the immediate economic payback of the line but will be unfair on the passenger who has already contributed for its construction through taxes.

8.5 In line with current railway practice, yields can be improved by offering lower fares to those travelling off-peak and to families, students and pensioners who would otherwise find standard rail fares uncompetitive with other modes.

8.6 An important issue for Liverpool and other cities not directly linked by HS2 will be the on-going lack of passenger seats. Liverpool's HS2 services are expected to be the most crowded of all HS2 routes according to HS2 Limited. It is an economic fact that Liverpool's routes will have the fewest discounted fares, as demand outstrips supply, and other routes with greater capacity will have a greater number of discount fares to fill otherwise empty seats.

9 Does the prospect of HS3 affect the economic case for HS2?

9.1 Connectivity across the North is key to rebalancing the economy. If the UK is to reach its full potential then the great cities of the North need to be an effective economic counterbalance to London. This requires transport infrastructure, to grow labour markets and support agglomeration. The HS2 Plus, One North and HS3 proposals are attempts to progress this concept.
9.2 Liverpool is uniquely positioned, as the likely route of a Liverpool “spur” to the HS2 truck route would be on an east-west axis. So a Liverpool HS2 link would not only put Liverpool on the HS2 network but would be the start of HS3, from Liverpool to Manchester, Leeds and beyond. This dual use and benefit has not been considered by HS2 Ltd and should shape the proposals north of Crewe to maximise the economic benefits for the nation.

10 Bibliography

1. HS2 Regional Economic Impacts, KPMG & HS2 Limited
2. 20 Miles More: A counterproposal for HS2 and Liverpool, 20Miles More Limited
3. Economics Study: HS2 and the Liverpool City Region, Steer Davies Gleave and Liverpool City Region Combined Authority
4. Liverpool City Region Freight Study: Preliminary Stage, MDS Transmodal & WSP

September 2014
51m—Written evidence

51m is an alliance of 18 local authorities deeply concerned with the proposed HS2 rail project. The group wants to emphasise the impact this proposed scheme will have on every taxpayer in the country for years to come.

Q1. Is there an economic case for HS2

1. 51m authorities do not believe the case for a new north-south line has been made and submit evidence below in relation to current and future capacity issues on the West Coast Main Line.

Summary

2. Whilst the original arguments for HS2 focussed on journey time improvements, the Government has more recently consistently argued that HS2 is primarily about the provision of vital additional capacity on the West Coast Main Line between London and the Midlands and the North.

3. For example, Patrick McLoughlin, the Secretary of State for Transport, stated in a speech to the Institution of Civil Engineers on 11th September 2013: ‘The reason we need HS2 isn’t for its speed… the benefits of faster journeys are easy to explain. But the main reason we need HS2 is as a heart bypass for the clogged arteries of our transport system..without the capacity provided by HS2 the main road and rail lines linking eight of our 10 largest cities will quite simply be overwhelmed.’

4. Similarly, Baroness Kramer said in the House of Lords on 5th June 2014: “Busy arteries such as the West Coast main line will be overwhelmed in the next decade if we do not build new capacity between our cities in the form of new rail, which is why we need the new north-south rail High Speed 2.”

5. However, the capacity argument is fundamentally flawed for the following reasons:

- The West Coast Main Line is the least crowded InterCity route to London;
- Growth of long distance rail travel has plateaued over the past two years, despite the upturn in the economy; and
- If additional capacity is needed, there are much quicker and less expensive ways of delivering this than HS2.

These points are discussed in more detail below.

Current crowding

6. There is consistent evidence, compared with other routes, that there are no major overcrowding problems on the West Coast Main Line to and from London.

- The most recent comprehensive data provided by Network Rail for morning peak demand and capacity for each London terminal shows that services into Euston have almost the lowest ratio of demand to capacity of any route into London (Annex 1)
• The average loading of Virgin West Coast trains in 2012/3 was only 166 passengers; the majority of trains used on the route have 589 seats.

• Data released to the High Court as part of the 2012 Judicial Review challenge to HS2 showed that the average evening peak load factor (the ratio of passengers to seats) for InterCity services from Euston was only 52%:

<table>
<thead>
<tr>
<th>Peak trains (1630 – 1843)</th>
<th>Average load factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester (9 trains)</td>
<td>45%</td>
</tr>
<tr>
<td>Liverpool (5 trains)</td>
<td>44%</td>
</tr>
<tr>
<td>West Midlands (9 trains)</td>
<td>64%</td>
</tr>
<tr>
<td>Preston/Glasgow (6 trains)</td>
<td>57%</td>
</tr>
<tr>
<td>Chester/North Wales (3 trains)</td>
<td>42%</td>
</tr>
<tr>
<td><strong>All peak trains</strong></td>
<td><strong>52%</strong></td>
</tr>
</tbody>
</table>

7. These counts were carried out before 35 out of the 56 “Pendolino” trains used on the route were lengthened from 9 to 11 cars, giving an additional 150 standard class seats

8. Furthermore, information obtained under the Freedom of Information Act⁴ showed that the peak loadings into and out of Euston slightly declined between 2011 and 2012:

<table>
<thead>
<tr>
<th><strong>Euston peak loadings</strong>⁵</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total capacity</td>
<td>Total passengers</td>
</tr>
<tr>
<td>Long distance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning peak arrivals</td>
<td>12255</td>
<td>8327</td>
</tr>
<tr>
<td>Evening peak departures</td>
<td>14109</td>
<td>8062</td>
</tr>
<tr>
<td>Suburban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning peak arrivals</td>
<td>23067</td>
<td>17839</td>
</tr>
<tr>
<td>Evening peak departures</td>
<td>22511</td>
<td>17634</td>
</tr>
</tbody>
</table>

**Long distance rail travel volumes**

9. The latest data from the Office of Rail Regulation (ORR)⁶ shows that long distance rail passenger volumes have now been flat for over two years, despite the recent positive growth in the economy:

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⁴ DfT letter of 13th December 2013, ref F0010822
⁵ Capacity and loadings for three hour peak period in each case
10. The strong growth up to 2011/12 reflected major service improvements, particularly the upgrade of the West Coast Main Line which transformed journey times and frequency for services between London and the West Midlands and the North West, with improvements on other key routes also. There is clear evidence that these improvements have now worked through, with volumes now having reached a “steady state” level.

11. The ORR data for the Virgin franchise also confirms very low growth on the West Coast Main Line; passenger journeys grew by only 0.66% in 2012/13 compared with the previous year.

12. In contrast, the HS2 business case is based on an assumption of continued compound annual growth of 2.5%.

Provision of additional capacity on the existing network
13. As part of its comprehensive input to the Transport Select Committee’s hearings on HS2 in 2011, 51m submitted an alternative strategy which demonstrated that, even if the high growth forecasts by DfT/HS2 Ltd proved to be realistic, the passenger numbers could be accommodated on the existing network.

14. The first key element of this strategy relates to train formations:
   - Reconfiguration of one of the four first class cars to standard class in each train
   - Lengthening West Coast Main Line InterCity trains from the current 9/11 car formations to 12 cars for all routes except London – Liverpool (lengthening platforms at Liverpool Lime Street would be prohibitively expensive).

15. These changes would increase the standard class seating capacity for each train from 294 for an existing nine car train to 594; for an existing eleven car train, the increase is from

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8 http://www.51m.co.uk/wp-content/uploads/2013/08/ch1.pdf
444 seats to 594. Given the current low loadings on the route, these changes potentially allow for passenger numbers to double on the route.

The first element of the train formation strategy is already being implemented in part under the recent “Direct Award” to extending the Virgin franchise to April 2017. As part of this agreement, Virgin will convert 21 first class cars to standard class.

16. The strategy also proposed potential infrastructure enhancements to allow the operation of more InterCity and commuter services and create additional capacity for freight:
   - Construction of a grade separated junction south of Milton Keynes to enable operation of additional fast commuter trains to Milton Keynes and Northampton.
   - Construction of a “Stafford bypass” to eliminate bottlenecks in the Stafford area.
   - Construction of an additional track between Attleborough and Brinklow (south of Nuneaton), providing an additional northbound tracks on this section.

The 51m strategy was deliberately cautious about capacity utilisation on the West Coast Main Line, hence the proposals allowed for a significant increase in capacity at key bottlenecks. However, from 8th September Network Rail are doubling the frequency of fast commuter trains to Milton Keynes and Northampton in the busiest part of the evening peak period without construction of the grade separated junction proposed by 51m – and are presumably confident that these additional services can be operated without impacting on overall punctuality. In addition, Network Rail have agreed with Alliance Rail Holdings (an open access operator and a subsidiary of Deutsche Bah, that there is capacity to operate an additional 12 InterCity trains a day on the West Coast Main Line (six in each direction between Euston and Blackpool and six between Euston and Leeds via Manchester Victoria and Huddersfield))

17. It is clear from the developments described above that the 51m alternative strategy is realistic, indeed cautious – Network Rail have agreed significant additional services without the infrastructure enhancements proposed by 51m.

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9 http://www.alliancerail.co.uk/2014/06/12062014-blackpool-to-london-and-huddersfield-to-london-direct-rail-services-move-a-step-closer/
### Annex 1

#### Table 4.2 - Morning peak demand and capacity (2010) for each London terminus/cordon

<table>
<thead>
<tr>
<th>Route into</th>
<th>Service group</th>
<th>3 hour weekday morning peak</th>
<th>Busiest 1 hour in morning peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total capacity</td>
<td>Total demand</td>
<td>Total demand/total capacity</td>
</tr>
<tr>
<td>London Paddington</td>
<td>Relief line trains 9,900</td>
<td>9,900</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Main line + other fast trains 18,600</td>
<td>18,600</td>
<td>99%</td>
</tr>
<tr>
<td></td>
<td>Heathrow Express 8,400</td>
<td>2,500</td>
<td>30%</td>
</tr>
<tr>
<td>London Marylebone</td>
<td>All services 14,100</td>
<td>11,500</td>
<td>82%</td>
</tr>
<tr>
<td>London Euston</td>
<td>Long Distance 12,400</td>
<td>7,500</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Suburban 22,100</td>
<td>15,000</td>
<td>68%</td>
</tr>
<tr>
<td>London St Pancras International</td>
<td>High Speed 1 (domestic) 13,800</td>
<td>5,700</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>Thame rail MML 27,900</td>
<td>19,600</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>MML Long Distance 5,500</td>
<td>4,400</td>
<td>80%</td>
</tr>
<tr>
<td>London King's Cross</td>
<td>Great Northern 21,700</td>
<td>15,800</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>ECML Long Distance 7,500</td>
<td>4,800</td>
<td>65%</td>
</tr>
<tr>
<td>Moorgate</td>
<td>All Services 17,000</td>
<td>15,300</td>
<td>90%</td>
</tr>
<tr>
<td>London Liverpool Street</td>
<td>West Anglia 41,900</td>
<td>26,900</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>Great Eastern Main Line 42,000</td>
<td>32,700</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td>GE Inner 29,600</td>
<td>27,700</td>
<td>94%</td>
</tr>
<tr>
<td>London Fenchurch Street</td>
<td>All services 34,800</td>
<td>29,100</td>
<td>84%</td>
</tr>
<tr>
<td>London Bridge</td>
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*September 2014*
Evidence Session No. 8  
Heard in Public  
Questions 88 - 99

TUESDAY 4 NOVEMBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Smith of Clifton

Examination of Witnesses

Councillor Martin Tett, Leader, 51m Alliance of Councils, and Dr Richard Wellings, Deputy Editorial Director, Institute of Economic Affairs

Q88 The Chairman: Councillor Tett, Dr Wellings, thank you very much for joining us for this second session of the fourth meeting of this inquiry. I was just asking what 51m stood for.

Councillor Martin Tett: As a marketeer by background, I believe in a good brand. 51m is an alliance of 19 local authorities that lie along the route, which have got together in order to, first of all, initially to understand the proposal and subsequently to campaign against it. We are currently now engaged in petitioning on it.

Why it is 51m, which is the nub of your question, is that on the original costings, which are substantially less than the current costings, we calculated that for every parliamentary constituency in the United Kingdom, including Northern Ireland and Scotland, albeit they are devolved, it would cost £51 million.

The Chairman: Thank you very much for that. Would either of you like to make an opening statement?

Councillor Martin Tett: I wanted to make two very brief comments to you. It is often said that people who oppose HS2 are groups of tree-hugging NIMBYs who are fundamentally opposed to infrastructure projects and particularly averse to rail. I just wanted to say that, as local authorities, we are well used to taking tough and often very unpopular decisions that are not always appreciated by our residents. Certainly I have had effigies of me hanging from trees around my county, because of some very unpopular infrastructure decisions I have had to take. We always say that, if you are going to take these sorts of decisions with taxpayers’ money, you have to make sure that they have a good business case, that they genuinely bring the benefits that are identified in those business cases, and that you have
looked at all the available opportunities and have done credible comparisons of those alternatives with the option you want to adopt. As local authorities, that is the original starting point we had. We did that and we found HS2 consistently wanting in all three.

Just on the issue of trains, again people say that I, in particular, am anti-train. Let me just observe that we are currently very active promoters of and supporters of an east-west rail scheme running initially between Oxford and Cambridge, via Bedford, and I am actually investing £15 million worth of our taxpayers' money in promoting that scheme, with a link down to Aylesbury. That will have a very significant impact on the north of the county, so it is completely untrue to say that we are anti-train or indeed anti-infrastructure.

Dr Richard Wellings: An economically rational transport investment policy would allocate scarce resources to those projects with the highest returns. Yet even if one accepts the official estimates, and in reality there are major doubts as to whether the benefits will actually outweigh the costs, it is clear that High Speed 2 offers poor value for money compared to alternative transport schemes. Data in support of this are available from a comprehensive study by John Dodgson, Rates of Return on Public Spending on Transport, and several other sources. The issue of opportunity cost is therefore the Achilles heel of HS2.

Clearly the vast resources required could be better deployed elsewhere. If the aim is to cut journey times, then other schemes would deliver far more valuable savings for less expenditure. If the objective is to address overcrowding, then there are far more cost-effective ways of increasing capacity and making more efficient use of existing links. If regeneration of the north is a priority, then greater gains would come from investing in local schemes that would deliver substantial agglomeration benefits.

In summary, High Speed 2 fails the test of economic logic. It has been driven by a mixture of politics and special interest pressure, rather than rational economic analysis.

Q89 The Chairman: Thank you very much. I think we shall return to some of those issues as we go through the questions. Can I just start with capacity? There seems to be quite a divergence between a lot of the commentators and the Department for Transport. The Department for Transport argues that there is severe overcrowding; many of the trains are only available to people who want to stand. Others say that this is not the case. In fact, in the previous session, we learnt that most of the trains are about half-full. What is your view on capacity?

Councillor Martin Tett: Shall I just kick off on that then Dr Wellings can come in? This is an area where there have been many twists and turns in the case generated by the Department for Transport. There have been a number of, I would say, quite frankly misleading statements. I have seen statements that West Coast Main Line is already full. I have seen statements that it will be full in 10 years. I have seen statements that our alternative, which I am sure we will discuss, could not possibly handle any of the growth on the West Coast Main Line. All of those are completely inaccurate.

My daughter used to go to Manchester University. She recently left. She always travelled on the West Coast Main Line to Manchester. I have experienced that train on many occasions. When you actually look at the reality of it, you will find that actually the intercity capacity between London and the north on the West Coast Main Line is one of the least-crowded lines coming out of London. The two busiest lines are actually Paddington, which has a 99% load factor, and Waterloo, with a 91% load factor. If you want to see really crowded trains, look at those two lines.
What the Government do, quite deliberately, I believe, is blur the distinction between commuter capacity and intercity capacity, and they are fundamentally different. When they talk about these crowded trains, it is absolutely true if you are looking at commuter capacity to London. If you are coming in from places like Hemel Hempstead, Milton Keynes and Northampton, you will experience problems on those lines. The issue at stake here is what the actual capacity requirements are on the intercity to places like Birmingham and Manchester.

The Government repeatedly refused to release the passenger load factors on those trains. The only place we got them eventually was in the High Court, when we had to, with great reluctance, take them to judicial review. Literally in the court, at the last minute, they revealed those numbers. They actually showed passenger load factors, at peak periods—for example a Friday evening—was 52%. The problem is on the commuter lines and you would not spend £50 billion-worth of taxpayers’ money to relieve commuter capacity problems into Euston. There are much quicker and cheaper ways of solving that problem. You would certainly look at the areas that are most crowded and, as I said, those are places like Paddington and Waterloo.

The Chairman: Dr Wellings, how would you describe the DfT’s capacity analysis?

Dr Richard Wellings: I would like to agree with Councillor Tett, in the sense that clearly the data show this is one of the least overcrowded routes coming into and out of London. If overcrowding were the main priority, then addressing the problems on this route would be quite low down the list. Clearly compared to things like the London Underground, the overcrowding is relatively trivial. We have hundreds of thousands of people standing for quite long periods—30 or 40 minutes every morning peak.

The main point I would like to make is that a lot of these problems are, in a sense, artificial and created by government intervention. Even now, roughly 40% of spending on the heavy rail network is funded by the taxpayer. You have price controls on the networks, so the Government decided not to introduce super-peak prices to try to flatten the peaks, spread the load and make better use of existing capacity. You have a particular problem on Friday night with the saver fares, when there is this sudden threshold and everyone suddenly crowds on to that first train where you are allowed to use the saver fare.

Also, government policy since the early 1990s has been distorting land-use planning to force more and more development into rail corridors. Rail users also get tax breaks, so you have road users paying massive fuel duty; rail users do not even pay VAT. It is an artificial market. Huge amounts of money have been pumped into the West Coast Main Line, but taxpayers pay—I do not know—maybe 90% or 95% of that bill; rail users, hardly any. This is a hugely distorted market and the price mechanism has not been allowed to operate to try to solve some of these problems.

Q90 Lord Lawson of Blaby: May I follow on from what you are saying? It seems to me that you have been very much addressing the business case for HS2. As far as we have read from the Department for Transport and from HS2 Ltd, the business case started emphasising very heavily the time saved, which they monetised, and now they talk more about willingness to pay. Yet when we had evidence last week from HS2 Ltd, which is the Department for Transport by another name, they said they would not charge higher fares for HS2 because, if they did that, then they said people would not use HS2; they would go on using the West Coast Main Line. That seems to me—maybe I am wrong and you will be able to explain—evidence that there is not a willingness to pay for the improved service in terms of higher speeds or whatever. Can you explain that?
**Councillor Martin Tett:** I cannot explain that, which is part of the problem. Let us be frank: there is history here. There is completely muddled thinking on this business case. It is one of the things that we originally found out and quite frankly caused us, as local authorities, to begin to have severe doubts about the good value of spending this sort of money. When you look at the original business case, it was predicated on the assumption that people did not work on trains. I am sure you have heard already from previous witnesses that the idea that in the 21st century no one used an iPad, a computer or had mobile phones was completely ludicrous, and there were various “Newsnight” commentaries showing the Secretary of State for Transport and indeed the Prime Minister busily working on trains—so that was complete nonsense and could not be defended, although it was in five previous versions of the business case.

In the most recent version, which was October last year, they had to admit defeat on this one. Magically, what they managed to do was transform the savings that were originally because people did not work on trains. It simply became “willingness to pay”. Now, the concept behind this is absolutely identical because, fundamentally, what you are saying is that an employer will pay the time value for an employee to get to a journey place faster, even though they now admit that the time spent on that train is productive. That is quite ludicrous. It is not going to happen. It is quite mythical, and it is simply a way of preserving the very vast amount of money that is generated for the business case by that assumption. It is completely ludicrous. Again, if you play in the issue of the price premium on it, that again completely contradicts the assumptions within it. This is a desperate business case that flounders for justification.

**Dr Richard Wellings:** On the business case, I thought it was bizarre that we had a significant rise in construction costs and so on during summer 2013. We also had a big fall in the time-saving benefits, because they started to account for business travellers working on the train, and yet the benefit-cost ratio stayed almost identical. That means that either the previous cost-benefit analyses were very far wrong or the newer one was very far wrong. How they achieved that was to massively increase the forecasts of the proportion of business travellers using the service, but I am not sure on what grounds that happened and why, all of a sudden, there was a big change in the modelling such that there would be a massive increase in business travellers.

I would also add that there is a problem in the sense that the economies of the Midlands and the North are very dominated by state spending. I wonder how many of these so-called business travellers are actually genuine wealth creators as opposed to various state functionaries and state-privileged professionals and sub-contractors for the state. The idea that there is this wide reaping of benefit from these kinds of journeys from those kinds of people who are not actually wealth creators is a problem. I would like to see some sort of analysis from the DfT as to the composition of those business journeys.

**Lord Lawson of Blaby:** Finally, do you think that your £1m alternative has a stronger, more robust business case? If so, could you explain very briefly why?

**Councillor Martin Tett:** It is not my view; it is the view of the Department for Transport and indeed the analysis it carried out. Just for comparison, at the time, two versions of the business case ago, the BCR for HS2 hovered around, I think, 1.2. The same analysis for our alternative was about 5.4, and it is for a simple reason: it is a vastly cheaper scheme. If I just outline it very briefly, it is incredibly straightforward. It basically utilises existing infrastructure but upgrades it in a way that is incremental; it can be done as demand
materialises or indeed does not materialise, depending on your view of the demand forecasts. It is far cheaper. It is something that actually is very easily explainable to people.

You have a situation at the moment where the configuration of trains normally involves about four first-class carriages, and yet the load factor in those first-class carriages is actually very low. If you converted one or two of those first-class carriages to standard-class carriages you would achieve a significant increase in capacity at virtually no incremental cost.

Likewise, the length of the trains is currently around nine carriages. They could be increased to 12 carriages, again with the exception of Liverpool Lime Street, which has a capacity constraint on its platform where you could probably increase to around 11. Again, by a combination of reducing the amount of first-class and increasing the length of the trains, it would lead to a massive increase in terms of the actual capacity on those routes. You could do that at virtually no incremental addition.

You then in addition, because of the commuter issue that we touched on earlier, need to take out some of the pinch-points along the line. These are capacity constraints that limit the number of trains that can actually pass through a particular point on the line. There are three particular pinch-points along the line: one near Stafford; and another major one is near Ledburn Junction just south of Milton Keynes; and the third one I always forget, which is Brinklow in Nuneaton. If you actually take those out, then you can massively increase the amount of commuter capacity on those routes as well. Pretty simple, easy steps lead to creating the volume step change that absolutely meets the 102% increase in demand that is forecast as the organic growth on that West Coast Main Line that is contained within the DfT’s own forecasts.

What it does not do—let me be quite frank—is meet the extra growth that is generated solely because HS2 is built. HS2 is justifying its own existence by creating its own demand. What you will do is meet all of the organic demand that is actually generated by things like population growth and so on along that line, and you will do it at a fraction of the cost in a quicker way and with a much more incremental approach than you would with High Speed 2.

Q91 Lord Rowe-Beddoe: Dr Wellings, in August 2013 you said that the plausible estimate for this HS2 project is £80 billion. Could you tell us how that was broken down?

Dr Richard Wellings: Yes. Firstly, the report points out that there are wider economic losses from the tax spending of HS2. These include deadweight costs: the economic activity that is suppressed by the extra taxation needs flowing from HS2. That is really a big plus on the bill. It is hard to pin down exactly, because it depends what form of tax you are using to raise the money to pay for the scheme, but in general economists estimate that it would add around 33% to the overall bill—so there are these wider economic losses. You also have things like diseconomies of agglomeration: the fact that increased clustering also creates costs. We do not really hear much about that; we always hear about the wider economic benefits, but not about the costs. That is a big plus on top of the scheme.

Usually the Treasury deals with that by disallowing or blocking schemes that have a low benefit-cost ratio, so you rarely see many schemes being built with a benefit-cost ratio of around 1.4, like High Speed 2 phase 1. That is pretty rare, if you look at the long list of government transport schemes. That is the first point.

The report is actually an analysis of the incentive structures facing policymakers. It is a public choice analysis. That leads to three predictions that then lead into cost risks for the project. I should explain the basic thesis is that concentrated special interests will be able to
outweigh dispersed interests, so concentrated interests like the train manufacturers, the local authorities and so on will be able to have a disproportionate influence over the political process compared to the big losers, who are the taxpayers. Also, concentrated losers, the people on the route, will have a disproportionate influence compared to dispersed losers, like taxpayers. The first prediction is that, because of these interest group pressures, there will be a lot more route changes and tunnelling along the route, as we have seen already, and that will increase costs. That is relatively minor, but it is still a substantial cost risk.

The second prediction is that local authorities will be successful in lobbying the Government for very expensive regeneration projects along the route, around the HS2 stations, as we saw with HS1 at King’s Cross, Stratford, Ebbsfleet and so on. That is potentially hugely expensive. This will create these sort of Potemkin villages full of public sector workers that we see in Salford Quays and we are going to see at Stratford City as well, rather than, in most cases, genuine wealth creation. It is all about the politics to create the illusion that HS2 has delivered all these benefits, so you build these shiny offices around the station.

The largest single off-balance-sheet cost is the links to the HS2 stations that will have to be built. This is partly because local authorities and regional transport bureaucracies, et cetera, will use HS2 to successfully lobby central government for funding for the schemes that link it to HS2, rather than much better-value schemes elsewhere or the alternative of cutting taxes. This is potentially a huge cost. It is also because HS2 creates problems in particular locations, including Euston, which is already the most overcrowded part of the Tube network. TfL will then use HS2 as a way of lobbying for Crossrail 2. Okay, it is an old scheme—you do not include the whole cost—but you have to include the cost of diverting the route to Euston, for example, or trams that will go specifically to HS2 stations. There are massive off-balance-sheet costs from HS2. Just the transport links alone I would estimate in the order of £12 billion to £15 billion.

**Lord Rowe-Beddoe:** Has the subsequent economic case that was published after your report changed your view at all?

**Dr Richard Wellings:** No. The report has been vindicated, because we have already seen extra tunnelling announced in the Midlands. There is massive lobbying for extra tunnelling in the Chilterns as well. We are seeing more details of these huge regeneration schemes at Old Oak Common, Manchester, Birmingham and so on. They are going to be hugely expensive for the taxpayer, and it is also getting more likely that these various transport links are going to be built as well. To be honest, most of those plans are already in the public domain; it is just that they are not heavily publicised. The main thing is that the Government now talks openly about these extra costs. It calls them “making cities HS2-ready”, so what I would like to see is for the Government to come clean about how much making cities HS2-ready is going to cost.

**Councillor Martin Tett:** Clearly I approach it from a slightly different perspective, but I completely agree. If you look, as a case study, at what is happening in the West Midlands with Centro, they are already, and have been now for well over a year, lobbying in terms of the incremental costs that will be required to interconnect it to HS2. Increasingly it is called “realising the benefits of HS2”. If you just substitute for “realising the benefits”, “additional costs because of”, then you actually have the reality behind it. If you look at some of the other obvious examples, in Sheffield you are going into Meadowhall rather than into the city centre. You are going to have to connect the two in some way. That again is an incremental cost.
Lord Carrington of Fulham: One of the justifications for HS2 is the future demand for rail travel from the demand forecasts that are coming forward. We have had evidence from Professor Glaister, to name but one, saying that he did not find the Department for Transport’s estimates for demand forecasts to be unreasonable. Do you think that they are unreasonable and, if they are reasonable, why do you think they are reasonable?

Councillor Martin Tett: I did not hear Professor Venables’ evidence, so I cannot comment on the context in which he said that. If you look at the examples of forecast growth that DfT has given, it is five times faster than the population growth. I heard the question about population growth as I came in belatedly. Let us just look at track record. Experience from HS1 shows that all the demand forecasts for HS1 were massively overoptimistic. They have not been realised whatsoever. I heard the gentleman who was in just before me giving you some numbers on that. There is always a tendency, and we have all written business cases in previous lives, to inflate the demand to get the numbers to add up. You start with a track record on that.

On assumptions on pricing, again you have to really factor those in. What is going to be your pricing assumption? Are you going to premium-price or are you going to skim the market with a high price? Are you going to go for market penetration with a low price? If you do that, you are in direct competition with the existing lines. You have to factor in a realistic assumption for pricing. I do not believe they have done that and you have clearly identified that from your previous questioning.

Dr Richard Wellings: I agree. Clearly, the possible impact of disruptive technology is an enormous risk. Things that I would imagine are improved teleworking and remote meetings; even driverless cars would be a lot more convenient for a lot of business drivers, because of course HS2 will still be a three-stage journey, which will be pretty long. You are probably looking at approaching three hours for a person who lives in a Manchester suburb and is travelling to the City of London. It is a three-stage journey. A lot of journeys will be in potential competition from driverless cars.

Another issue that Lord Lawson mentioned earlier is how HS2 will deal with competition from the existing West Coast Main Line. Remember that, in Birmingham, the existing West Coast Main Line actually goes into New Street Station, which is far more convenient for people coming in from Wolverhampton, Dudley or wherever. It means they do not have to take a 10-minute tram ride or walk to Curzon Street station. Providing that the Government allows fair competition, then clearly it could really eat into the HS2 revenues, particularly as people find it is easier now to work on trains. That extra bit of time that it
takess on the existing West Coast Main Line could be quite useful for business travellers, because they have set up their laptop or whatever.

What happened in Holland, of course, was that the market was rigged deliberately to try to force passengers on to the high-speed line. I can see something similar happening in the UK. They would deliberately slow down the existing West Coast Main Line, make services stop at more stations, and force people to use High Speed 2. When you have an artificial market like this, that is highly likely.

Finally, there is clearly a political risk that, given we could be looking at Japan-style long-term stagnation, with very low economic growth for the next 10 or 20 years, which I think is very likely, the appetite for continuing the current high level of rail subsidies could decline markedly. That would have a particular impact on some of the feeder routes into HS2 that are hugely subsidised, and that could then cut passenger numbers quite significantly.

**Lord Carrington of Fulham:** Just quickly if I could, is there any evidence that digital technology—using a shorthand for people using their laptops, iPads and what-have-you—has reduced demand for transport? I know anecdotally it has.

**Councillor Martin Tett:** There have been studies actually by the DfT that have shown similar trends. Do I personally have that at my fingertips? I do not, but I am sure you could find some. An appeal to common sense would tell you that, if you travel on train, it is some of the most valuable time that you actually have, even historically, being able to read reports, write work and so on. The advent of mobile and wireless technology makes that time extremely productive now. You are normally away from a lot of distractions, you can work very productively, and you can send and receive e-mails and reports. Just common sense tells you how productive that is.

May I make one quick point? I just want to reinforce something. Maybe you covered this earlier and I apologise if you have, but HS2 always talks about city centre to city centre connectivity and time savings. The reality is—I lived in Manchester for four years—that people who travel do not live in the city centre of Manchester. I live in Buckinghamshire. If I want to get to Birmingham, I go to High Wycombe. If I want to get to Manchester, I go to Watford. I do not spend an hour travelling into Euston to wait and then catch a train. Most of those journey-time savings, on which they predicate so much of the demand, are completely nullified when you look at where people actually live and what it gets to.

**Q93 Lord Shipley:** I would just like to ask Dr Wellings two questions that I did not fully understand from things that you have said so far. You referred to regional transport bodies, which are charged with local and sub-regional transport management and often investment. You referred to them as “regional transport bureaucracies”, and I wondered why you used the word “bureaucracies”. Secondly, you asserted, in answer to an earlier question, that a lot of business travel is generated by the state, not by the private sector. I would just like to know what your evidence base for that statement is.

**Dr Richard Wellings:** If you remember, I only said that this is something that the DfT should be looking into, trying to work out the composition of business travellers. My reasoning for that is, if you look at the economies of the West Midlands and the North-West, for example, they are heavily dominated by the state sector. On some measures, around 55% to 60% of regional GDP is government spending in those areas. There is relatively little genuine wealth creation going on. There is state money going in and then being circulated: benefits money and public sector workers who then spend that money in the private sector. That is what I am saying. If you look at Salford Quays, you have got
massive offices for HMRC, the BBC and these kinds of people. I do worry, given the pervasive nature of state intervention, that a lot of these so-called business travellers will not actually be wealth creators but government workers and so forth: state-privileged professionals in the legal profession, subcontractors for the Government and so on, just because of the nature of the economy in the Midlands and the north-west where, as I said, regional GDP is completely dominated by government spending.

Lord Shipley: I do not want to pursue the point now, but it might be helpful, Dr Wellings, perhaps we could have a note that just explained your view about wealth creation anywhere in the north of England or perhaps further north.

Why do you call them “bureaucracies”, as opposed to regional transport bodies, which is what they actually are?

Dr Richard Wellings: They are also bureaucracies. It is semantics really, is it not? If you look at TfL as a classic example, it has seen a massive increase in staffing levels, particularly those on very high salaries, and more and more increasing their power-grab, in terms of their responsibilities, which you have also seen in the Midlands, the north and so on. I am generally against these organisations, because I think they lead to jam-spreading where central government feels it has to dole out a certain amount of money to each of these organisations, even though that pattern of investment is likely to be seriously sub-optimal because it will not reflect optimising the economic returns.

Councillor Martin Tett: I should say I have a slightly different perspective from Dr Wellings on the benefits or otherwise of the public sector, but I would hope you would look at the dramatic increase in the percentage of business travellers, whoever they may be—public or private sector—in the latest business case, which has gone from 28% to 38%. I can find no evidence whatever that supports that dramatic increase, although it does magically rebalance the business case.

Q94 Lord Shipley: Thank you. That was helpful. Councillor, can I just ask you now a very specific question? Both of you have only once ever mentioned anywhere north of Manchester in my memory today, which is when you talked about air connectivity. There is an argument for saying that capacity would rise and people would come away from air, because there are a lot of air links to London, in fact, from places like Glasgow. A lot of people are driving cars; they may transfer to train. There are people who use coaches; it is possible that they would use a train. The point is that, although the high-speed track ends at Manchester, the rolling stock continues north to Glasgow, so actually the benefits in some of the saving of time for people who live in Strathclyde, for example, are actually going to be potentially significant. It may encourage people to move from their current mode of travel on to high-speed rail. Have either of you given that any consideration?

Councillor Martin Tett: The answer is that I have. Let me try to address that, and I am sure Dr Wellings will have a view as well. First of all, I think I have mentioned north of Watford a couple of times, because not only was my daughter at university there, but I was at university there and I also lived there for four years, so I know Manchester incredibly well. I also mentioned about going to Birmingham by train. I absolutely understand the geography of the UK and the importance of the regional diversity of the UK, and regenerating the regions of the UK, which I also attribute very high importance to.

When you look at connectivity, what you are talking about is that, by 2033, the track to Manchester in theory will be complete, if one believes that public sector projects complete on time and to budget. Then you transfer to the classic network up to Scotland, so the
time savings obviously diminish as you get on to the classic network. It is only when you get to Scotland and, indeed, achieve dramatic time savings that transfer from air to rail starts to kick in. You are looking a very significant period of time ahead. If you look at the DfT’s own forecasts within its own business case, the amount of traffic that transfers from road to HS2 is absolutely minimal. I seem to remember it is 3%. I think 95% of traffic currently travels by road, and the opportunity to divert that on to rail, even on the DfT’s own analysis, is absolutely minuscule.

Although I laud the aspiration of moving people en bloc from road to rail, the reality is that that is not going to happen. There is no evidence that it would happen. The DfT itself cannot generate the evidence that that would happen. As far as air is concerned, within England there is very little left. There would be some from Scotland admittedly, but you would have to wait a very long time to actually see that.

**Lord Shipley:** In broad terms, you think that the estimates of the benefits about what businesses are willing to pay for quicker journeys have not been met, although they might from Scotland in the longer term. Have I interpreted what you are saying correctly?

**Councillor Martin Tett:** Let me rephrase that slightly. As far as business is concerned, there are two concerns. One is I do not believe for a second the willingness-to-pay calculation. I think it is completely fictional and is calculated to hide a hole in the business case. Secondly, I do not believe the percentage of businesspeople who have now been calculated to travel on this train. It hides a second hole in the business case and they are completely artificial constructs.

As far as transfer is concerned, I believe there would potentially be some willingness of people to move from a conventional classic rail or air on to high-speed rail, once it reaches places like Glasgow and Edinburgh. The volumes of those would be very small compared to the total growth forecast by HS2.

**Q95 Lord Smith of Clifton:** Coming back to premium prices, if the operator was able to charge premium fares on HS2, what effect do you think it would have on passenger demand?

**Dr Richard Wellings:** That goes back to my point about what happens to the existing West Coast Main Line. If genuine competition were allowed, then clearly that would put a limit on how much premium fares could be charged on HS2, because it would push people on to the existing West Coast Main Line, particularly given that often stations are far more convenient and there are more of them on the West Coast Main Line. Let us not forget that, in the north and Midlands, you do not really have these gentrified inner-city areas. Generally, professional people tend to live quite a long way out of the city centre. I think that is a crucial issue. As I mentioned earlier, I suspect that the market will be rigged by the Government through the franchising process to deliberately slow down the existing West Coast Main Line in order to stifle any competition and perhaps allow the charging of premium fares.

**Lord Smith of Clifton:** It follows then that you are concerned about the extent to which HS2 is reliant on public subsidy, whether the premium rates are charged or not.

**Dr Richard Wellings:** From a commercial point of view it is completely loss-making, and private investors would never go near it at all. It is completely government-subsidised. Whether or not it can actually cover its operating costs is an interesting question; it would depend on the passenger numbers. If we look at HS1, Eurostar had to be bailed out by the taxpayer and the market was then rigged by the Government, so a greater share of the
track-access charges were pushed on to the local Kent services, which were heavily subsidised by the DfT. It was, if you like, a back-door way of subsidising Eurostar.

**Councillor Martin Tett:** Maybe I could add to that very briefly. I think it was Lord Lawson who was questioning the whole pricing demand equations. They do not make sense. There is a complete contradiction between the premium pricing and the volume demands that are in the business case. If one accepts that, the other key point on which I would completely agree with Dr Wellings is the opportunity-cost issue. Even if you accepted their numbers, which are clearly nonsensical, the fact that you are subsidising this system to such a large extent means that there is an opportunity cost, year on year, on which that money could otherwise be spent. When you look at where the real constraints are around this country—I am sure we will come on to this—when you look at the issue of skills shortages, particularly in the Midlands and the north of England, you could be spending that money on upgrading the skills of our young people and our blue-collar employees around the country to give a real competitive advantage to our regions. That is a forgone opportunity because that public subsidy is there.

**Q96 Lord May of Oxford:** Last week, Professor Overman told us that the wider economic benefits, using the methods that the Department uses, had been “carefully constructed”, which I must say I find rather delightfully ambiguous. The Department came up with the estimate that the overall benefit of this kind is £13.3 billion. I do not wish to be unduly unkind, but I am a theoretical physicist—that is how I was trained—and when somebody purports this sort of stuff to do something that would give me three-digit precision, I wonder. May I ask you what you think of this?

**Councillor Martin Tett:** I come from a marketing and business background, and I was told by a sales colleague once that, if you want to give spurious credibility to anything, always quote it to two decimal places. I would offer that as a context. I am surprised, because last year Professor Overman, when he was talking to the Transport Select Committee, said that he thought the KPMG study, on which a lot of this was based, was overstated by between six and eight times. There is massive lack of credibility in a lot of the underpinning wider economic benefit assumptions that go into this. Most of the methodology is widely discredited. Even KPMG themselves heavily caveated their work, and most of the negative impacts that HS2 will generate were actually omitted from any of the publicly released information, so it was a completely distorted picture.

One has to recognise that, although there may be somewhat wider economic benefits, which are not normally quoted, by the way, in the DfT benefit-cost ratios—they have had to be in these cases—there are also negative wider economic benefits. If you agglomerate around an HS2 station, the likelihood is that you will be sucking in those businesses from other surrounding areas. For example, take Manchester, which again I know well. If you build around Piccadilly Station because suddenly that becomes a high-rent area, because there is an HS2 station there, is that actually generating business that would otherwise be in London? I think not. It is almost certainly going to take business that would otherwise be in places like Bolton, Oldham, Rochdale or around the centre of the satellite towns. The wider economic benefits have to be treated, as I am sure any scientist would do, with a large block of salt.

**Lord May of Oxford:** My own position, as, I guess I sketched earlier, was that broadly having a better rail system is a benefit. I wonder what you think. I guess you have just sketched it; you do not think there are wider economic benefits. Although I do not believe the calculations, I do believe there are wider benefits.
**Councillor Martin Tett:** I think what I said is there are some benefits, but there are also negatives. Clearly if you build a railway station, let us say in Crewe or in Manchester Piccadilly, you will have some economic benefits because of that, and that is clearly true. If you spend a large amount of money on anything, you will generate jobs. Whether they are wealth-creating jobs is another question entirely. Whether they are sustainable jobs into the long term is a questionable assumption. You will increase property prices around where there is new development; that is clearly true. There are a number of wider economic impacts from that.

What I am saying is there are also negative wider economic impacts, which are then not mentioned in most of the analyses that you see before you. These are the issues where you suck in skills and resources into unproductive sectors of the economy, which could otherwise be deployed in more productive sectors of the economy, and indeed suck in capital to property speculation that would be better employed, for example, in factory production or whatever elsewhere. There are negative consequences as well as potentially some wider economic benefits.

**Dr Richard Wellings:** Could I just add that agglomeration benefits are subject to quite a steep distance decay? If you wanted to maximise those benefits, you would tend to focus on local transport schemes, rather than something like HS2. For example, if they have got to get to labour markets, you want schemes that can integrate labour markets and get people into commuting distance of a particular hub and cluster of activity. Clearly that would tend to be local schemes rather than long-distance schemes.

Also, these agglomeration benefits are vulnerable to technological change so, increasingly, businesses will interact online and in virtual clusters, and that is where you will get these new ideas generated. They do not necessarily have to meet face-to-face. There is also an issue of sectoral change. Some sectors like professional services tend to benefit quite a lot from increased connectivity, but other sectors like manufacturing benefit a lot less. If the sectoral composition of the economy changes, then those likely economic benefits would also change enormously, so there is a problem with predicting 20 or 30 years ahead.

**Q97 Lord Monks:** HS2 is a long-term project, and we are 10 years away from it ever running any trains if it goes ahead. The objective of taking a long-term view of the economy and the need to rebalance it, which I think both of you have accepted, even if there is a slight difference in your prescriptions of what to do about it, the sense of having a vision about the future of this country, when other countries are investing in high-speed rail for all kinds of reasons, including rebalancing the economy—do you not accept the fact that, by 2024, we should have a vision of this country with a stronger economic base outside the south-east and that transport has a lot to do with that? As a regular traveller by all means available, I would say that it is not an easy task getting to the north of England. With high-speed rail in other countries, are we to be the ones who are out of step with them? Even California, Dr Wellings, has been thinking about high-speed rail.

**Dr Richard Wellings:** On the rebalancing issue, the problem is that better rail does not really deal with the fundamental problems facing the north of England, which I would diagnose as being, in global terms, a very high-cost economy due to high levels of regulation and taxation, combined with rather low or mediocre levels of human capital, skills, abilities, entrepreneurship and so on. If you look at the data on that, it varies from place to place. It is not too bad in Manchester, but it is very poor in places like Liverpool, Bradford and so on. Unfortunately, due to demographic changes, those problems are likely to get worse rather than better over the next 20 or 30 years. Unless you are going to deal with this
fundamental cause of the north’s poor performance, so high costs and mediocre human capital, which means it is very hard for the region to compete at a global level, I do not think you are going to get very far with something that is only going to increase transport capacity quite marginally and is not really directed at the key problems.

There are numerous examples to show this; Doncaster is the classic one. It has the best rail links to London in the north of England yet, if you take the town itself, it is one of the very poorest places in the whole of the UK. Clearly, fast rail links have not transformed Doncaster. HS1 has not transformed east Kent, another old industrial area, Thanet and so on, which is still just about the poorest part of the south-east. These issues are far more deep-seated and are not going to be cured by faster rail connections.

_Councillor Martin Tett_: Can I build on that? It is always lovely to have a vision thing, and you can now brand it the “northern powerhouse” or whatever purple phrase you wish to have. You have to try to disassemble that slightly. Do we need sufficient capacity between our major cities? Absolutely. I have not argued against that for one second. I have argued there are quicker, more incremental and cheaper ways of doing that. Do we need to have stronger northern economies? Absolutely, but then you have to get to the root of the problem you are trying to solve there. Much of it is commuter capacity and not intercity capacity. Much of the deep-rooted problem and malaise in parts of the north—not all of the north, by all means—is because the original rationale for why those cities grew where they did has gone. It could be coal; it could be steel; it could be shipbuilding, et cetera; transatlantic trade, in the case of Liverpool; cotton and wool, in the case of Manchester and Leeds. They are having to recreate their competitive advantage nationally, and that is quite a difficult thing for places to do.

One of the things we have got to invest in there, as I said earlier, is skills. We actually have to create a new competitive advantage for those cities that gives them a self-sustaining momentum that is more than is just a satellite of London or indeed something, dare I say it, propped up by public sector spending. You have to create a new competitive advantage there. For me, heavy investment in skills, bringing together, particularly in the north—and we can come on to the so-called HS3 in a minute—linking up the commuter lands of the north of England, so that people can move to work on a commuter basis between some of our big northern cities, could be a significant advantage to those cities. The idea of just having a vision thing and spending £50 billion will simply generate the revitalisation of the north that is sustaining and wealth-creating, I am afraid I do not agree with.

_Lord Monks_: I do not think anyone is saying that, but thank you.

_Q98 Baroness Blackstone_: Some of the people who have given us evidence over the last few weeks have said that the October 2013 strategic case was an improvement on what went before. Do you agree with that? Do you think it does give a better narrative for making the strategic case for HS2?

_Dr Richard Wellings_: I found it highly suspect how the case has changed over time. It started when the Conservatives first introduced the line—it was supposed to be an alternative to Heathrow expansion. It was actually rather reprehensible vote-grabbing in south-west London. They wanted to win half a dozen seats down there, so they cancelled Heathrow expansion and then they had to come up with an alternative to try to pretend it would not harm the economy—thus the high-speed line to the north was envisaged back in 2009. It was only supposed to cost £20 billion back then. Then it became all about the time savings; then it was about capacity. Now it is all about rebalancing the economy and bridging the north-south divide, which just shows it is politically driven or, if you like, PR-
driven. Once the public becomes sceptical about the latest rationale, and it is criticised heavily and then they have to come up with a new rationale for the project. This makes the whole thing deeply suspect.

**Councillor Martin Tett:** HS2 has been described as a solution in search of a problem, and I have to agree. I can actually remember watching Teresa Villiers at the Conservative Party Conference announcing high-speed rail to the north as the means by which we avoided the need for a third runway at Heathrow. It has gone through more relaunches than the average soap opera’s career, in terms of the way in which it has transformed from solutions to the third runway to all about speed. I remember sitting with Philip Hammond when he explained to me it was all about journey-time savings: 20 minutes to Birmingham would transform the economy in Birmingham. Of course that lost credibility very rapidly, then it became all about capacity. Then we revealed just how low the capacity utilisation was on that line. Now it is all about creating the northern power hub.

It just keeps morphing from one rationale to another to another. We have already covered some of the underpinning flaws that, actually, the willingness to pay is simply the not working on trains rebadged. The increase in the percentage of business travellers from 28% to 38% again has no underpinning statistics whatever. The wider economic impacts have been added in, when they would not be in most business cases. The fact is the alternative that we have put forward was never properly compared against HS2; it was compared against completely illogical comparators in order to rubbish it completely fraudulently. That underpins the fact that this is not a business case that is made in any rational sense whatever.

**Baroness Blackstone:** That is a pretty devastating critique. Thank you.

**Councillor Martin Tett:** I like to tell it like it is.

**Baroness Blackstone:** You were very forceful.

**Q99 The Chairman:** Could we finally come to HS3? I think you have both said that improved connectivity, over relatively short distances, actually can be demonstrated to be of benefit to the economy, although the Ashford to London link does not seem to substantiate that point particularly well. There is a strong case being made by the northern hub group that improved connectivity between Leeds and Manchester—two cities that have good skill bases and have significant and successful economic sectors—would actually be beneficial. Do you agree with that?

**Dr Richard Wellings:** I disagree with you that those cities are successful. I think it is almost all due to government spending.

**The Chairman:** I said they had some successful sectors.

**Dr Richard Wellings:** Those are generally things like legal services that are dependent on state privileges and so on. I do not think they are successful in a genuine sense of wealth creation on the market, but that is a side issue perhaps. Looking at the sums for HS3, they are absolutely appalling. You have a very costly scheme that is likely to generate quite low passenger numbers compared to alternative schemes. I suspect the BCR will be very low indeed, but the problem is it is completely wrong for the economic geography of the north of England. Generally, professionals live in the outer suburbs or surrounding villages so, even with a half-hour journey from city centre to city centre, we are still looking at probably an hour and a half for a typical commuter coming from outside Leeds into the city centre, leaving some allowance to get the train, and then at the other end going from the hub in
Manchester Piccadilly to wherever they work in Manchester, which has a rather large city centre. The door-to-door journey times would still be too great to achieve a lot of those agglomeration and clustering benefits.

In the north, because you have multi-nucleated cities like Manchester, which is actually made up of Stockport, Salford, Bolton, Oldham, Rochdale, et cetera, really there should be a bias towards trans-Pennine road schemes rather than rail, because that is the only way you are going to be able to have a net of connectivity between all these small towns. City centre to city centre rail is completely the wrong idea. It completely ignores the geography of the area.

*Councillor Martin Tett:* I have a slightly different perspective to Dr Wellings again. For me, the jury is out, because I know virtually no details of the scheme. All I have seen is the political headline. Far be it for me, as a politician, to say that politicians make political headlines near elections, but it is a headline-grabbing announcement designed to get lots of publicity. I believe there is a rationale for extending the ability of people to commute for work between the major hubs, particularly in Manchester and Leeds. I do not know any of the details of what HS2 would actually look like, in terms of the number of stations and how people get on and off it. If it is simply city centre to city centre, then it is pointless, because that is not where your skills catchment areas are. That is self-evidently true. You need the ability for people to get on and off near where they live and commute to where they need to work. If you could devise a scheme that does that, that is great. It needs to be cost-effective and it needs to be in the right place. If one can devise a scheme that meets all those criteria, then I am open to it, but I have not seen any numbers other than what has been in the headlines of the press.

*The Chairman:* Thank you very much. That brings this evidence session to an end. Thank you for your helpful and stimulating answers.

*Councillor Martin Tett:* May I just thank you for your inquiry?
Disruption

Supporters of HS2 have constantly argued that the 51m Alternative will cause major disruption because of the infrastructure work required. This simply isn't true – work is only required at three locations (Ledburn Junction south of Milton Keynes, Brinklow – Nuneaton, and Colwich junction south of Stafford), and this is comparable to the work being carried out on the route at present, for example the recently completed flyover at Nuneaton, Bletchley remodelling, and the new flyover at Norton Bridge. The scale of work proposed is not in any way comparable to the previous West Coast upgrade, which involved comprehensive renewal of the route.

51m Alternative does not require any works at Euston. In contrast, HS2 construction work will be very disruptive at Euston, with a permanent reduction in the number of approach tracks (from 6 to 4) and platforms (from 18 to 13/14) at an early stage of the construction programme, almost inevitably resulting in a permanent reduction in peak services for both commuters and InterCity passengers.

This will also impact on the Scottish sleeper services, which will no longer be able to stand at Euston after arrival in the morning, enabling passengers to remain on the train until 0800, even for the 0647 arrival; it is quite likely that these trains will have to be permanently transferred to another terminal.

Even away from London, HS2 will require works that will cause as much disruption to exiting services as the 51m Alternative, with construction of new grade separated junctions near Lichfield, south of Crewe and south of Wigan.
West Coast Main Line – disruption caused by the construction of HS2

<table>
<thead>
<tr>
<th>Location</th>
<th>Severity</th>
<th>Comments</th>
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| Euston   | Very severe. | 1. The work involved at Euston is highly complex, and has always been on the critical path for construction of HS2 Phase 1. It will start shortly after Royal Assent and will take 10 years\(^\text{10}\).  
2. The work will certainly involve a high number of weekend closures, and is also almost certain to require closure for a number of extended periods, eg over entire Christmas/New Year holiday periods and for complete weeks at Easter/Bank Holidays  
3. In addition, there will be extended periods when the capacity of Euston will be severely limited, with reduced peak services. It is possible that the London Overground service between Euston and Watford will be suspended for the entire construction period.  
4. The reduced capacity during the construction work will also inevitably impact on service reliability over the entire period.  
5. HS2’s current proposals will permanently reduce the number of platforms for the existing route from 18 to 13, and the number of approach tracks from 6 to 4  
6. Far from increasing commuter capacity, as promised, the reduction in the number of platforms and approach tracks is likely to permanently limit the peak capacity into and out of Euston, probably below current levels. |

\(^{10}\) HS2 Ltd state 10 year construction timescale for Euston.
<table>
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<tr>
<th>Location</th>
<th>Level</th>
<th>Description</th>
<th>Work Impacts</th>
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<tbody>
<tr>
<td>Lichfield</td>
<td>Medium</td>
<td>This work will affect services between Euston and Manchester, Liverpool, Preston, Glasgow and North Wales. Services can be diverted via the West Midlands at weekends, with journey times extended by 20-30 minutes.</td>
<td>Installation of a new grade separated junction to connect HS2 with the existing route. Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods eg over Christmas and the New Year and/or a Bank Holiday week.</td>
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<tr>
<td>Crewe (Phase 2)</td>
<td>Medium</td>
<td>This work will affect services between Euston and Liverpool, Preston, Glasgow and North Wales, also some services to Manchester. Depending on the detailed design of HS2 in the Crewe area, some services could be diverted via Stoke-on-Trent/Manchester, with extended journey times.</td>
<td>Installation of a new grade separated junction to connect HS2 with the existing route south of Crewe. Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods eg over Christmas and the New Year and/or a Bank Holiday week.</td>
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<tr>
<td>Wigan (Phase 2)</td>
<td>Medium</td>
<td>This work will affect services between Euston and Preston/Glasgow, also Birmingham – Glasgow/Edinburgh services. Some services could be diverted via Manchester with extended journey times.</td>
<td>Installation of a new grade separated junction to connect HS2 with the existing route south of Wigan. Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods eg over Christmas and the New Year and/or a Bank Holiday week.</td>
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### West Coast Main Line – disruption caused by the 51m alternative

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<thead>
<tr>
<th>Location</th>
<th>Severity</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Euston</td>
<td>No impact</td>
<td>The 51m alternative requires no work at Euston</td>
</tr>
<tr>
<td>Camden</td>
<td>No impact</td>
<td></td>
</tr>
<tr>
<td>Ledburn junction</td>
<td>Severe</td>
<td>All long distance services would be affected. London Overground services, and suburban services between Euston and Watford, Hemel Hempstead and Tring would continue to operate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installation of a new grade separated junction south of Leighton Buzzard to increase capacity for fast commuter services between Euston and Milton Keynes and Northampton</td>
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<td></td>
<td></td>
<td>Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods e.g. over Christmas and the New Year and/or a Bank Holiday week</td>
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<tr>
<td>Rugby/Nuneaton</td>
<td>Medium</td>
<td>Construction of a section of additional Northbound track to increase capacity for freight.</td>
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<td>Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods e.g. over Christmas and the New Year and/or a Bank Holiday week</td>
</tr>
<tr>
<td>Colwich Junction</td>
<td>Medium</td>
<td>Construction of a grade separated junction to reduce conflicts where the Manchester via Stoke route diverges from the main West Coast route.</td>
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<tr>
<td></td>
<td></td>
<td>Likely to require a number of weekend closures over a 1-2 year period, with probable closure for a couple of extended periods e.g. over Christmas and the New Year and/or a Bank Holiday week</td>
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*November 2014*
Aberdeen & Grampian Chamber of Commerce—Written evidence

1.0 Introduction

1.1 Aberdeen & Grampian Chamber of Commerce (AGCC) is North-east Scotland’s leading private sector, member-focused, business organisation. It is the largest Chamber of Commerce in Scotland, representing more than 1,300 businesses with over 130,000 employees in the region.

1.2 Businesses based in Aberdeen and Grampian are drivers of the UK economy. The region is second only to London for Gross Value Added per head of population (£31,753) and Aberdeen has the second highest rate of business start-ups per 10,000 people. In addition, the oil and gas sector which is anchored in the North-east of Scotland contributed 16.4% of the UK Government’s total tax receipts in 2012, the highest proportion of any industry. While this percentage has fallen over the last two years it still remains important to the UK.

1.3 According to a CBI / KPMG infrastructure survey, over 80% of firms see the quality and reliability of transport as significant considerations in investment decisions. Given Aberdeen and Grampian’s “peripheral” location in the UK, good transport connections are even more essential in order to attract new businesses to the region, particularly in the oil and gas sector.

1.4 AGCC therefore welcomes the opportunity to submit evidence to the House of Lords inquiry. Transport issues are a policy priority of members, with good transport links essential in order to drive the continued growth of businesses based in Aberdeen and Grampian.

2.0 Comments on The Economic Case for HS2

2.1 According to research conducted by AGCC as part of North-east Business Week 2014, businesses regard the connectivity of the North-east to the rest of the UK by rail as having a net negative impact on business. Poor journey times to all the major cities in Scotland and the UK, poor-quality rolling stock and carriage services means that businesses in the Aberdeen and Grampian area do not view rail travel as a viable method of travel for long-distance journeys.

2.2 However, the same research showed that businesses in the North-east of Scotland believe that the proposed HS2 line will have a positive impact on their business in the future.

2.3 AGCC therefore supports, in principle, delivery of HS2.

2.4 AGCC agrees that Scotland will benefit from HS2. Faster journey times and additional capacity for new services will deliver benefits for business. Members welcome any

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12 PwC / Oil and Gas UK, February 2012, The Total Tax Contribution of the UK Oil and Gas Industry http://www.pwc.co.uk/assets/pdf/total-tax-contribution-feb2012.pdf
investment which will make important business locations like Manchester or London less distant for travellers.

2.5 In addition, AGCC also recognises the need to deliver significant new rail capacity in England. An improvement in rail provision will improve the UK’s reputation and competitiveness when international businesses look for locations to invest.

2.6 However, while AGCC agrees that The Economic Case for HS2 demonstrates a clear economic argument for HS2, in our view the project will not deliver any direct economic benefits for Aberdeen and Grampian.

2.7 A report conducted by KPMG\(^\text{15}\) into the regional economic impacts of HS2 showed that under a “low” scenario, Aberdeen and Grampian would be negatively affected to the value of £220million per year. Dundee is also forecasted to be impacted by a further c£100million of lost output.

2.8 AGCC were aware of this risk and can accept that some regions will see greater economic benefits from HS2 than others. Nevertheless, tax revenues from businesses in Aberdeen and Grampian will disproportionately help pay for the project and given the massive amounts of investment this project will require, no region in the UK should be allowed to feel any negative impact.

2.9 We consider that a clause should be added to the legislation for the project which requires investment in alternative transport improvements in the few negatively impacted regions. This is a credible offer given the KPMG business case is being used to justify the project. This investment would be equal to the opportunity cost of the project in regions negatively impacted. This would have a negligible impact on the overall project cost and would provide a more equitable outcome across the UK.

2.10 While faster journey times between the central belt of Scotland and England will deliver significant advantages for Edinburgh and Glasgow, the indicated improvement in journey times provided in The Economic Case for HS2 between Aberdeen and London (from over 7 hours currently to 6 hours 11 minutes) will not deliver any significant economic benefits for this area. This is because the cut in journey times is not significant enough to encourage a mode shift to rail by travellers.

2.11 Current and likely future rail journey times between Aberdeen and England, as forecast in the economic case, means air travel will always be the more efficient way to travel, particularly for business people. It is therefore critical that alongside the delivery of HS2, measures are taken to maintain and improve Aberdeen and Grampian’s access to the English regions, London and beyond via better air links.

2.12 Heathrow Airport in particular plays a critical role in supporting the international activity of AGCC members. The 2014 North-east Business Week research found that 60% of business considered access to Heathrow to be important for their business. Likewise there is a strong demand for flights to all of the London airports from Aberdeen, with

\(^{15}\) KPMG, 2013, HS2 Regional Economic Impacts
around 25% of Scottish flights to London arriving from Aberdeen International Airport, despite Aberdeen and Grampian making up only 10% of the Scottish population.

2.13 AGCC believes that a mode shift is achievable for passengers travelling from the central belt of Scotland with the opening of the HS2 route and as a result there may be less demand for flights from Glasgow and Edinburgh Airport’s to the English regions. There is potential therefore that this could open up additional capacity for flights from the more geographically remote areas of the UK.

2.14 It is the view of AGCC that this additional air capacity should be directed to distant UK airports through a form of guaranteed access to certain airports. This will require collaboration between the UK Government, the Civil Aviation Authority (CAA), airports and Local Authorities to be achievable, but it is the main way by which region’s which are forecast to be negatively impacted by HS2 could reap some indirect benefits.

2.15 While air travel will always be the most feasible method of travel for people accessing England from geographically distant regions such as Aberdeen and Grampian, there are also opportunities for HS2 to deliver additional benefits to the Scottish rail network.

2.16 Journey times between Aberdeen and Glasgow and Edinburgh continue to be extremely poor, with times of 2 hours 40 minutes and 2 hours 50 minutes respectively. One of the main reason for these poor journey times are due to capacity constraints on the rail line between Aberdeen and Dundee. In addition, there is no electrification of the East Coast Main Line between Aberdeen and Edinburgh.

2.17 While AGCC accepts that there will never be a business case to extend high speed rail to the North-east of Scotland due to the small population, there is a real case to deliver additional improvements to the East Coast Line between Aberdeen and Dundee to significantly improve journey times. The North-east Business Week research found that businesses in the area wanted a 45 minute reduction in journey times to the central belt.

2.18 AGCC recognises, however, that transport is a devolved issue and so requires collaboration with the Scottish Government to address this issue. Nevertheless some form of UK Government support to deliver additional rail investment would be a clear signal from the UK Government about their commitment to deliver benefits for the whole of the UK.

2.19 Indirect benefits, such as secured access to key airports, which could be delivered through coordinated action is an area which AGCC believes should be investigated further by HS2 Ltd. An assessment of indirect benefits could make the business case for HS2 more relevant for peripheral regions of the UK.

2.20 If any further evidence is required by the committee in relation to this issue, please contact the AGCC policy team to discuss further. We would be happy to participate in any verbal evidence gathering exercise.

September 2014
Q112 The Chairman: Lord Adonis, welcome to these familiar surroundings. Thank you very much for joining us today. This is the fifth session in our inquiry into the economic case for HS2, and, as somebody who was there at the start, I wonder if you could just help us briefly to answer one of the questions that a number of witnesses have put to us, which is: what is the exam question that HS2 answers?

Lord Adonis: You will have seen the command paper that I presented to Parliament in March 2010, which, on pages 8, 9 and 10, sets out the then Government’s rationale for HS2. I ought to make clear that, from the outset, the essential rationale for HS2 was about the need for a step-change in capacity between the three major conurbations of the country: Greater London, the West Midlands and the north-west, with connections also to the great conurbations of the East Midlands and West Yorkshire.

If I could draw the Committee’s attention to page 8 of the 2010 command paper, it is quite important in understanding the development of it. I know it has been asserted that there were some people, like myself, who were fixated with fast trains and train sets and saw the potential for cutting journey times and thought this was wonderful because we were unduly influenced by the bullet trains and the TGV and just wanted the same for Britain. In fact, it was a hard-headed analysis of likely capacity requirements that drove the rationale for HS2. Conclusion 1 of the Government’s assessment of the case for HS2, on page 8 of the 2010 command paper, was: “That over the next 20 to 30 years the UK will require a step-change in transport capacity between its largest and most productive conurbations, both facilitating and responding to long-term economic growth”. Conclusion 2 is: “That alongside such additional capacity, there are real benefits for the economy and for passengers from improving journey times and hence the connectivity of the UK”. So it was first capacity and
then associated benefits, which, in the strategic case that the coalition Government published last year, is reiterated.

There are only two ways, of course, of producing a step-change in capacity. One is to build an entirely new line, as in fact most developed countries have done between their major conurbations, if they have economic geography similar to ours, beginning with Japan in the early 1960s with the opening of the original Shinkansen line between Tokyo and Osaka, and as indeed is now starting to happen in the United States, which of course has been very averse over the previous two generations to rail travel; or you have to upgrade the existing lines.

I well recall my first ministerial engagement as Minister for Transport, which was opening the completed West Coast Main Line modernisation project. This was in October 2008. The west coast modernisation cost, at then prices, £9 billion, so at today’s equivalent HS2 prices significantly more, for a 10-year programme of upgrading the West Coast Main Line, which produced fractional benefits compared to HS2. Indeed, because this was the modernisation of a pre-Victorian railway—the West Coast Main Line, the London to Birmingham railway, was opened before the coronation of Queen Victoria in 1838, so it is coming on for 200 years old—many of the promised and proposed benefits within the price tag were not deliverable. It is a very difficult and complex job modernising a Victorian railway that is running at multiples of the capacity it was designed for. The completion of that work was after 10 years of chronic delay and inconvenience for passengers while that work was conducted. Indeed, of the £9 billion cost, from memory, I think half a billion, but it may have been more, was in payments to train operating companies as compensation from Network Rail for not running services, because of the chronic disruption while that work was taking place.

It became clear to my advisers and myself, as we were looking at what would happen with the next step-change in capacity, that there were only two alternatives. One was building a new line, which had been the norm. The other was very expensive upgrades in the Victorian and pre-Victorian infrastructure to seek to achieve—it may not even have been achievable—another step-change in capacity on the West Coast Main Line, on the Midland Main Line through to Sheffield and, ultimately, on the East Coast Main Line too.

In the command paper, and I will particularly draw the Committee’s attention to the table on page 51, was set out the assessment of those alternatives, and the conclusion reached there was that the highest capacity-increasing option on the existing lines would cost, in cash terms—leaving aside seeking to price the disruption, taking that completely outside—more than building HS2, and yielded half the additional capacity. In the strategic case, the Government dismissed that option as being impractical, and I could go through what that option involved. For example, it involved four-tracking the Chiltern Line; given the reaction to HS2, you can imagine how that would have been greeted. It was not a practical proposition.

The point that holds, to which I am sure the Committee were paying close attention, is that it is not a choice between doing nothing and doing HS2; it is a choice between very difficult and very expensive capacity enhancements on the existing lines, being the busiest lines in the country, and HS2. I cannot come before the Committee and say with any certainty, because there is no certainty in these matters, that one would have been cheaper than the other. I can say, because we have the experience, that the last upgrade of the West Coast Main Line cost £9 billion; it delivered a fraction of the benefits of HS2; and no sooner had it been completed than rail planners and transport analysts were telling me that the next phase of
upgrade would need to be planned rapidly because of capacity requirements, which are set out in both the command paper and the strategic case.

**The Chairman:** We want to get to the bottom of the question of capacity, and we have asked the Department for Transport for further information, but that so far has not been forthcoming. From your time at the Department for Transport, why is there a degree of reluctance to share this information? It has only come out as a result of a court hearing.

**Lord Adonis:** I have no idea. I am no longer responsible for these matters. When I was responsible, I shared almost everything. I have always taken the view that one should be as open as possible. Indeed, when I published these proposals in 2010, I also published all the alternative routes that we had considered and not decided to proceed with, which was thought at the time to be a very risky proceeding, because it might illustrate the fact that there were alternatives. However, I have always taken the view that all of this should be in the public domain. I hope that this material is forthcoming.

Q113 **The Chairman:** An important infrastructure alternative is the rollout of superfast broadband across the country, which will have quite a dramatic impact on the way business is conducted and the way people communicate. Was that taken into account in your thinking?

**Lord Adonis:** Yes. It is complementary. It is not an alternative. The evidence is that superfast broadband does indeed generate more local working and home-working, but it does not stifle growth in demand for travel.

**Lord Skidelsky:** Can I ask why that should be so? It is counterintuitive, just on the face of it.

**Lord Adonis:** People seem to like working in networked communities, which is why new highly networked communities with high concentrations of economic activity like Docklands have been so successful. There is clearly more. Of course, we are also an expanding economy with an increasing population, so the increase in home-working has not led to a decrease in demand for business travel. On the contrary, business travel demands have increased sharply.

I remember one of my first jobs on the *Financial Times* was telecommunication correspondent. This was 20 years ago, and we were told then that the introduction of mobile phones, much better telecommunications technology and fibre optics would lead to a dramatic surge in home-working, and a massive reduction in requirements for office networked communities, and that was just as Docklands was taking off. Unless the future is going to be radically different from the last 20 years, what one would expect to see is an increase in home-working and the connectivity that comes with being able to work outside the office, but also a continuing demand for networked business centres and travel between home and those centres, and between business centres.

**Lord Skidelsky:** I have just one follow-up. How much weight did you place, in estimating the capacity constraints you would face, on the rising population?

**Lord Adonis:** That was taken account of in the Department’s estimates.

**Lord Skidelsky:** It is quite substantial.

**Lord Adonis:** We were doing our work in 2009-10, and population projections have been increased since, substantially.
Q114 Lord Griffiths of Fforestfach: Regarding home-working and so on, to what extent would that still hold if the train operators had complete freedom in pricing?

Lord Adonis: They do have very substantial freedom in pricing at the moment. I am not sure where your question is leading.

Lord Griffiths of Fforestfach: If you had regulated prices and I now had the option that I could work more at home or, on the other hand, I could travel, if the price of travel were to be increased, I would clearly have a greater incentive to work at home. It does seem to me that rail fares are a highly charged political issue, and, when they increase, there is a lot of discussion in the press about them.

Lord Adonis: Business travel has increased substantially. A significant proportion of that is on regulated fares, because these are full-price tickets that people are buying. Equally, of course, there has been an explosion in cheaper travel because one of the big developments of the last 20 years has been the development of advance tickets and advance ticketing. I do not myself subscribe to the view that travel should only be for the rich. The development of advance tickets, which now account for a very substantial proportion of rail travel and can be extremely cheap, is a positive development, enabling people to travel in ways that otherwise would not have been possible or would have taken up a much larger proportion of their budget.

Of course, it is important to understand that it is meeting peak capacity that is a key requirement of a well functioning transport system, able to serve the needs of the economy. The peak requirements on the West Coast Main Line are very intensive, commuting into the metropolitan centres of London, the West Midlands and the north-west, and that will be on full-priced, regulated fares, because these are commuter tickets. In particular on the southern part of the West Coast Main Line, which is one of the busiest mixed-use railways in the world, south of Rugby, you have long-distance trains coming from Scotland, Liverpool, Manchester, north Wales, semi-fast trains coming from Birmingham and Milton Keynes, and very intensive commuter services coming in. Also, half of all of the freight traffic movements in the entire country use the West Coast Main Line at some point, particularly around Rugby, because of the distribution centres in the Midlands. It is that requirement for peak capacity on what are very, very busy commuter lines as well as long-distance lines. Commuter tickets are not discounted, which is the capacity requirement underlying HS2.

Q115 Lord Shipley: I would like to ask you about the October 2013 strategic case. Do you think it now provides a convincing narrative for the reasons as to why HS2 is required, and do you think that the public-relations handling of that strategic case has been as strong and as successful as it might have been?

Lord Adonis: I have not been a party to the public relations, so I cannot answer that question, I am afraid. The essential rationale, which is a capacity argument, was true in 2010, was true in 2013 and is true in 2014. I cannot answer for how well presented the case was, but I happen to think that it was brilliantly presented in 2010 and perhaps less well presented afterwards, but that may just be a matter of amour-propre. I do notice that the key compelling charts, like figure 6 on page 16 looking at past and forecast demand, and all of the charts that lay out peak-hour capacity coming out of Euston and how that would be dealt with in various different scenarios, ring true from the work that we did in 2009 and 2010.
Lord Shipley: Bridget Rosewell gave evidence to the Committee two or three weeks ago, and she said that the October 2013 version “articulates a case for an engine for growth”. Would you subscribe to that?

Lord Adonis: I have always taken a view in public policy that you should adopt the most conservative case. The first piece of serious academic work I did when I was a young Oxford academic was a history of the poll tax, with David Butler and Tony Travers, two very distinguished professors. What that taught me—and this was hugely important for my life as a Minister—was that, when you are engaging in public policy, you should always start with the assumption that the status quo may be better than any change. The then Thatcher Government would have done so much better if it had simply kept the status quo and not embarked on the poll tax. I know Lord Lawson has many views on these matters too.

The status quo in the case of the West Coast Main Line and the connectivity between London, the Midlands and the north-west is not an option. There is no option that is going to allow this Victorian railway to see us through the next 20 to 25 years. Only change options are available to us. The conservative argument for HS2, the one that persuaded me that it was right, on behalf of the then Government, to put forward this proposal, is that we will need a step-change in transport capacity, particularly to move businesspeople and commuters between and into the major conurbations of London, the West Midlands and the north-west. It was on that basis that the Government proceeded, and I have read out the relevant passage.

There are also many claimed benefits in terms of growth, connectivity and journey-time savings. They are clear benefits. How you price them is debatable, but they are manifest benefits. However, they, to my mind, are the added benefits; they are not the essential argument. The essential argument is that we have two choices as a country: we spend tens of billions over the next 20 to 30 years on upgrading the existing West Coast, Midland and East Coast Main Lines and the stations that serve them, or we do HS2. On the balance of the arguments, I thought the case for HS2 won out.

Lord Skidelsky: What thought was given to running HS2 at a slower speed?

Lord Adonis: It is in the 2010 command paper. It is perfectly possible to. The estimate of the cost of building a conventional line as against a high speed line is it is about 10% less, but it seemed to me to be crazy to do that, to build a 21st century railway to 19th century technology. No one that I am aware of has embarked on that particular course. If you are going to build a new railway you should build it to modern technology, which includes, of course, international markets for the signalling, the trains, and all of the equipment that is needed, which is now 400km an hour technology and rolling stock. I hope we will be buying internationally competitive equipment and rolling stock and not seeking to customise it any more than we need to to run some trains through to destinations beyond HS2, so there would need to be some customisation. I could not see any good argument for building a railway to historic rather than to present levels of technology.

Lord Griffiths of Fforestfach: It would just cost a little less.

Lord Adonis: It would cost a bit less, but then it is not even clear it costs less actually, because to build a railway to conventional line speeds you would then need wholly customised equipment for the whole of the route. Also—and this is quite a significant factor in the light of the public consultation that has been adopted—the argument for building such a line is that you could use existing transport corridors more; you could do it less with high speed rail. The idea that building next to existing transport corridors—which would also include having to significantly widen transport routes through major towns and cities—
would be less controversial than building HS2 is for the birds. The bits of HS2 that have proved most controversial are those very small sections, because it is a high speed line, so it largely goes through unpopulated territory. There are very small sections that do go through populated territory: the exit from Euston and the parts of the Chilterns and the approaches to cities where there is population. If you were using the existing transport corridors the impact on settled communities would have been very significantly greater, so I am not even sure the 10% saving would have been realised by the time you had had to do the mitigation or the route changes that would have been required to meet the opposition that would have been generated.

Lord Griffiths of Fforestfach: Would you say that HS2 would lead to an increase in productivity in the British economy and to an increase in the long-term trend rate of economic growth?

Lord Adonis: I hope so, but one cannot be certain. I hope it will do so, in particular because I hope what it will do is to network together far more efficiently than we do at the moment, to create greater agglomeration between the major conurbations of the country. In the 2010 command paper is what I thought was one of the most interesting pieces of work that was done—it is on page 60—which is GVA per head mapped against journey time by rail to central London, so it is not doing it by distance, but by journey time by rail. There is a strong correlation between proximity to London in terms of journey time and gross value added, which, of course, includes not just commuter destinations to London, but major cities like Oxford and Portsmouth and so on.

As I say, this is not the central case for HS2 by any means, but one would hope that by bringing the great metropolitan centres of the West Midlands, Greater Manchester, the East Midlands and West Yorkshire much closer to London, and creating agglomeration effects, this will boost growth. However, the future may not be like the past.

Q116 Lord Carrington of Fulham: One of the things that justifies the HS2 project, in terms of the numbers and the economics of it, is the amount that businesspeople particularly are prepared to pay extra to shorten their journey times. There have been various numbers that have been adjusted over the various reports that have come out, and I think have come down somewhat, but as we have probed those numbers it has been suggested to us that they are hard to justify other than being “directional”, in the words of a finance director of mine at one time, who was never prepared to be tied down to numbers. In other words, it just said “we assume” that businesses will value a quicker journey, and we will put a number on that, and then we will multiply it up, and that produces 75% or 80% of the benefit of HS2, and that is then projected forward for 20 years or so. It all suggests to us that the numbers are pretty hard to rely on; is that something you would agree with?

Lord Adonis: No, I would not agree with it. Can I first of all reiterate the points that, before you get to the economic case and the BCR and all of that, you have the capacity requirements, which this Government and future governments are going to have to address? When it comes to the BCR—and as a Minister I have been looking at these BCRs all the time, and I have always been somewhat sceptical of BCRs—a BCR is the economic model that is negotiated between the Department for Transport and the Treasury, which changes over time in terms of the components that go into it, which is trying to make an approximation of long-term economic benefits.

My own view is that this is an aid to policymaking, but it should not be a substitute for judgment. The reason why we have Ministers who take decisions, and a Government and Parliament that take decisions, rather than simply putting them through a computer, is that
this is a matter of judgment. My personal view, for what it is worth, is that aggregating small journey time savings is a debatable and maybe not particularly fruitful endeavour.

As it happens, in the case of high speed rail, they are not small journey time savings; they are substantial journey time savings for most of the journeys. It is not just 20 minutes, for example, London to Birmingham; Old Oak Common, which is the junction with Crossrail, to Birmingham International, which is the economic hub of the West Midlands, is a journey time of 31 minutes straight into Crossrail, which is the new £16 billion line that goes straight into the West End and the City. The journey time savings are going to be very substantial; they are not going to be marginal at all.

Even if we take the argument and accept that the value of journey time savings has been overestimated, there are other things in that model I think are frankly crazy; for example, the economic model posits that growth in passenger numbers stops in 20 years. You see it in the 2013 strategic case, on page 16; the long-term demand is then plateaued in 2033. That is, again, part of the model. I understand the rationale, which is the further out you go the greater the uncertainty and therefore the less reliance you should put on projections of passenger demand. All I would say, as a matter of common sense, is if anybody seriously thinks that demand on the West Coast Main Line and for travel between London, Birmingham and Manchester is going to stop growing in 2033, I think that they would be in a small minority of opinion and I would be prepared to wager a very large bet that that does not prove to be the case. It would have been equivalent to Brunel, when he was building the Great Western Railway, being told that the better option was to upgrade the canals, because you could not see and project any passenger number post-1870, and an upgraded twin-tracked canal system between London and Birmingham would be more than enough to meet demand for the next 20 years. It is not a plausible position.

Again, I am always into conservative cases on these things. The point I make in response to Lord Carrington is that even if you accept that journey time savings have been exaggerated, I would put to you there are other elements in that model—that is, of course, a model that produced a satisfactory BCR—that are hugely implausible; by far the most implausible assumption is that passenger growth will stop in 20 years. When I had this benefit-cost ratio and all the components explained to me, because I am not an economist, but I take my responsibilities seriously and went through all of this in some detail when we were going through this in 2010, the conclusion I reached was that you could put different assumptions in. You could have a lesser assumption for journey time savings; you could have a greater assumption for future passenger growth. It would come out somewhere around this, but that was not a substitute for judgment, and the central judgment that led to HS2 is that we are not going to be able, as a country, to get through the next 20 years without major infrastructure upgrading between the three principal conurbations of the country. We either do it by a further modernisation of the Victorian and pre-Victorian railway—and I have been there; that was going to be a very expensive option with marginal benefits—or we built a new line.

I was also influenced by the fact that almost every country with our economic geography, almost every country that had faced this issue over the previous generation, had opted for high speed rail. I visited them; again, I took this very seriously. I spent two months visiting most of the countries that have developed high speed rail over the last generation. I caught the tail-end of the last evidence session; you could have a debate about whether city X or Y benefited more or less; did Avignon benefit more or less than Lyon or Lille, which is very depressed? Did it get the full benefits that it might have got? What I can tell the Committee is I did not meet a single mayor of a city, whether it had gained more or less, Minister,
parliamentarian, of any country that has developed high speed rail, who told me that if they could have rerun the previous 20, 30, or 50 years, in the case of Japan, they would have thought they were better off not doing it: none, not one.

However, on the other big decision I had to take as Transport Secretary, which was on aviation options—that was very, very difficult, where we placed new runway capacity in the south-east of England—I can tell you that in probably about half of the countries I visited the Ministers, parliamentarians and mayors told me they thought they had made very significant strategic errors in the location of airports and the development of airport capacity over the previous generation. I simply put it to the Committee that when the whole of international opinion and evidence is on one side, which it certainly is not, I should say, in the case of aviation, then I tend to be of the school of public policy that thinks that is an argument for, not an argument against.

Lord Carrington of Fulham: That is very helpful, and I quite understand what you are saying, but the conclusion from that is that all the modelling that the Department for Transport does, and all the other various academics do, is all really a waste of time.

Lord Adonis: No.

Lord Carrington of Fulham: What we really ought to be doing is saying, “Well, we actually think this is a good thing; therefore it is a good thing.”

Lord Adonis: No, I did not say it was a waste of time; let me emphasise what I said. I said it was an important aid to decision-making—an important aid. If the modelling had not shown a robust business case, and it did, then that would have been a significant factor, but it is not the only factor. The Committee will have been looking at the historic evidence on the Jubilee Line, on the M25, on a number of big infrastructure projects in the past, which have had much weaker BCRs than HS2, but which nobody would dream now of revisiting.

Indeed, somebody said to me—this may be dangerously anecdotal—that of the major infrastructure projects linking major cities and conurbations, which had been carried out in the previous two generations, only two had significantly underperformed projections. One was the Humber Bridge; well, we all know the political history of that particular decision. The other, very tellingly—and I caught the end of your last evidence session—was HS1. I did look at HS1 with some care, because this is a very important issue in respect of HS2; HS1 was between three cities—London, Paris and Brussels—that did not have very substantial traffic; it is important to understand that. It was the then Conservative Government that back-engineered figures for the next 20 years that showed extraordinary levels of growth between those three cities where there was not substantial traffic at the time when the project was commissioned, whereas, again, with the conservative argument, building a line between the three major conurbations of the country where there is huge traffic and very great pressure at the moment, is a much stronger position. My own view, for what it is worth, if you could rerun the history, is that we built the wrong high speed line first; we should have built the high speed line between our major conurbations in England first, before we started building a line out to the continent, but that is another matter.

Lord Carrington of Fulham: If I can just finish on this, that is not the argument that we have been hearing. The argument we have been hearing is the pressure is not the traffic between London and Birmingham, and so on; the pressure is actually on the commuter traffic in London, and that is a very different issue.

Lord Adonis: No, it is not. No, the two are the same, because in order to address that, the released capacity on the existing lines is essential, and for freight traffic too, so the two
arguments are the same: that by taking all of the long-distance, and a good part of the semi-fast, semi-distance traffic off the West Coast Main Line and, in due course, the Midland Mainline and the East Coast Mainline, you dramatically enhance capacity in a way that is otherwise impossible to do on the conventional lines for commuter traffic, and also crucially for freight traffic as well.

Q117 Lord Lawson of Blaby: Lord Adonis, you are the only begetter of HS2, and far and away its most eloquent advocate. It is, however, a hugely expensive public expenditure project. Would you be in favour of it irrespective of what it cost?

Lord Adonis: No.

Lord Lawson of Blaby: What is the upper limit of cost where you would say, “No, that is too much”?

Lord Adonis: A price where any plausible view of the cost-benefits of upgrading the existing lines would be very significantly bigger than building a new line, including pricing in the cost of disruption, which is very expensive, and has not been priced properly in previous upgrades. The half-billion figure that I gave did not remotely price the cost of 10 years of chronic and sometimes perpetual disruption on the West Coast Main Line, but that is a judgment that would need to be made. At the current figure of £42 billion, of which 50% is contingency, my judgment is—again, looking at the alternatives—that HS2 is not at that upper limit, but, if it were to increase way above that then it might reach such a limit.

Lord Lawson of Blaby: Can you give us some idea—because you have studied this very carefully, very closely, over a number of years—of what that limit might be? I say this because we have had a lot of evidence that the great majority of these projects—not every one, but the great majority—substantially exceed the projected cost. Although you say £42 billion—in fact the Government now says around £50 billion; there are others who have said £80 billion—at what figure would you say, “No, that is too much”?

Lord Adonis: There are two different issues here, which I think are important. Increasing figures because of increasing projections of construction costs and so on, I entirely discount, because the same would be true of the conventional upgrades. It is not the case that conventional upgrades of existing infrastructure somehow overrun their costs by less than new lines. On the contrary, look at the upgrade of the Jubilee Line, which was hugely expensive, as well as the extension of the line; both massively overran their costs.

The issue that would weigh on me is if there were new factors, something like a massive increase in tunnelling, which, holding the two options at a constant price, led to a very big increase in the cost of HS2. That has not happened yet; there has been some increase in the costs, because of some design changes, but the spec for HS2 has not changed substantially since the one that was published in 2010, which in my judgment withstands comparison between plausible upgrades of the existing infrastructure.

Lord Lawson of Blaby: It has not happened yet, but it could happen. There could be cost escalation of various kinds, but you are not able to put a figure on the point at which you would cry, “No, stop; that is too much.”

Lord Adonis: I was very concerned when the figure that Government published went up by nearly £10 billion, from £32 billion, which is the figure that I published, to £42 billion. I was very concerned about that, but most of that increase was a big increase imposed by the Treasury for additional contingency—a big increase. Some increase was because of cost increases, and a very small proportion—I think about a tenth of it—was because of design
changes. The issue of contingencies is an issue I hope the Committee will pay some attention to, because I had a big difference of opinion with my advisers and with the Treasury. The Treasury requires a contingency of 50% on the cost of projects.

**Lord Lawson of Blaby:** Based on bitter experience.

**Lord Adonis:** This is an interesting issue for the Committee to consider. My view, having looked at what happens in other countries and why their costs are so much lower, is that part of the reason why our costs of infrastructure are so high is because the Treasury requires such high contingencies to be built in at such an early stage in the development of projects. When I was Transport Minister, I was dealing constantly with project managers; they immediately take the figure as the figure including contingencies, and all the bids come in close to it, and so on. The proof of that being the case is the way that HS2 is currently discussed; it is always referred to—indeed, you yourself referred to it Lord Lawson, as a £42 billion project. It is not: it is a £28 billion project with a 50% contingency, which has been built into the cost. If it was talked about as a £28 billion project, and the promoters would need to go cap in hand to the Treasury for additional funding, I would be prepared to wager, again, that the cost of this project at the end of the day would come in less than it does when imposing very large contingencies at a very early stage in the project.

**Lord Lawson of Blaby:** What are you proposing should be done now to reduce the cost?

**Lord Adonis:** I think it was a mistake, in my view, to build in such a large contingency at such an early stage.

**Lord Lawson of Blaby:** What practical proposal have you got now to prevent this lack of financial discipline?

**Lord Adonis:** The best advice I could give the Committee is to do whatever it takes to keep Sir David Higgins as the chief project manager, because he has got some record of delivering big infrastructure projects on time and on budget. It is the project management that is now going to be utterly vital to bringing this project in on time and on budget, and weak project management of a project of this kind, which is the largest construction project in western Europe, would be the most likely cause of an escalation in costs.

**Q118 Lord Lawson of Blaby:** May I just ask one question on a completely different topic: we were told by Professor Glaister, and I quote, “As I understand the history, when Lord Adonis commissioned HS2 to start to investigate the proposal, he dictated that fares should be the same on the new railway as they would be on the old railway. That was the starting point and it has been fundamentally that way ever since.” Is that correct?

**Lord Adonis:** I did not dictate it, no. It was the view of my advisers from an early stage that the railway should not be built as a premium-cost railway, but equally I took the view that the pricing policy and strategy on the line was going to be a matter for a later day. I thought the sensible conservative assumption to take was that the pricing would be broadly at today’s level, but, of course, you do have a choice, when we are much closer to the opening of this railway, which is not going to be until 2025 or 2026, whether or not you want to have particularly business fares priced at a higher level.

**Lord Lawson of Blaby:** Which might be sensible, do you think?

**Lord Adonis:** I can see arguments on both sides; I think I would be prepared to leave this decision to being taken much closer to the time, because who knows what conventional wisdom about pricing strategies for transport modes will be in 10 years’ time, which is when these decisions will be taken.
Lord Lawson of Blaby: You are very familiar obviously with the concept of willingness to pay, which is in the analysis. If it is felt that there is an unwillingness to pay for higher fares on the high speed HS2 track, is this not rather strange, if you are having this huge improvement, and there is not a willingness to pay higher fares?

Lord Adonis: As I say, when you said that I dictated—

Lord Lawson of Blaby: I did not say you did; Professor Glaister did.

Lord Adonis: I did take a decision that the modelling would be done on the basis of fares not being higher, but it would be possible to have fares higher, and, of course, I understand the argument. Rail fares have risen substantially above the rate of inflation over the last 20 years, and that has been accompanied by very significant increases in travel. I certainly do not take the view that if the benefits are there that passengers would not be prepared to pay for them, but I did not build in more expensive fares as an assumption in the costings.

Q119 The Chairman: The HS2 is a stimulant for growth across the country, but particularly in the north; that is one of the important claims that has been made. We have heard from a number of witnesses, and we are due to hear from local city leaders, and they have said in written evidence that significant additional investment is needed in order to connect cities with the new stations, if they are outside the city, and to put in additional infrastructure. In London the rebuilding of Euston is another major capital project. As I understand it, the cost of all of this, which is absolutely essential and necessary to generate growth, are not captured within the £50 billion overall cost—the difference between £42 billion and £50 billion I think is the rolling stock. Should those costs not be captured? It would seem that Network Rail and a number of other witnesses have said capacity is the justification for phase 1; for phase 2, it is economic growth. Unless you capture all the costs of that, and all the investment necessary in that, you are not able to do a proper analysis.

Lord Adonis: I do not think that is a fair criticism, because the £42 billion does include the cost of all the stations and infrastructure integral to HS2 itself, including London Euston, the new city-centre station in Birmingham, the new city-centre station in Manchester, and so on, so it includes all of those costs. Again, the counterfactual is quite important: London Euston is falling down. Many members of the Committee may use it; you will see it is a mid-1960s station built for half of the passenger numbers that currently use it, and it is in a semi-dilapidated state. Compared to King’s Cross St Pancras and the modernisation that has taken place there, Euston is clearly life-expired. There is not a future for Euston that has the status quo and no investment, against the rebuilding; it will have to be rebuilt either way. The question is whether it is rebuilt with high-speed capacity as part of it or not.

The other elements that you have referred to are additional investments with their own benefits over and above HS2, so the HS3, as it is loosely called; I do not think it will necessarily be a high speed line, but the east-west line from the north, which could link Liverpool, Manchester, Leeds, Sheffield and the north-east. That is an entirely separate and additional project. It is not required because of HS2; it is an additional project over and above HS2. Now, of course, the city leaders of the Midlands and the north are very anxious to have additional investment over and above HS2, so, of course, they are making the argument for it. I happen to think that, particularly in the case of east-west rail linking up the major cities of the north, that there is a strong case for it, but it is not a case integral to HS2.

The Chairman: Were you concerned that the benefits would largely be felt in London and the London economy? We have heard from some witnesses in cities outside of London that
this will suck economic activity down to London; for instance, Birmingham becomes a commuter city. Was that a concern of yours?

\textbf{Lord Adonis:} You have got the city leaders of Birmingham and Manchester coming to give evidence to you, Chair. Put that question to them and you will get a very, very sharp answer to this view that having improved connectivity with London is somehow going to suck economic activity into London. I was very influenced in my thinking on this by a professor at the LSE, who said that effective 21st century cities are both very powerful centres of production, but also of consumption. The great cities of the Midlands and the north have huge assets in terms of consumption; they are desirable places to be; they have in many cases a very high quality housing stock, particularly for professional people—large Edwardian and Victorian housing stock—and they have very successful and acclaimed cultural institutions. I see Lord Shipley, a former leader of Newcastle City Council here; he would be able to wax eloquent about the value of the great cities of the north-east as centres of consumption as well as centres of production.

The idea that because the trains get faster to London everyone is going to decamp to London, is not a plausible proposition; it is certainly not one held by the leaders of those cities, nor is it one held by the leaders of second cities, which have been served by high speed lines in other countries, not one of whom, when I have met them, said that they thought that they would have been better off without the high speed line.

\textbf{Q120 Lord Shipley:} It has rarely been mentioned in any of our hearings, and has not been today: are you satisfied that rail linkages by high speed with Scotland are going to be satisfactory?

\textbf{Lord Adonis:} I heard one of your last witnesses saying that the majority of the track mileage on the TGVs is off the high speed line. The 2010 plan, which the present Government has maintained, is to run the high speed trains to Scotland off the conventional line on the west coast and east coast to Glasgow and Edinburgh, which would give a very substantially shorter journey time of about an hour in the case of both the West Coast Main Line and the East Coast Main Line. That is taking the journey time to between three and a quarter and three and a half hours between Glasgow and London and Edinburgh and London, which is a big improvement on the status quo. The building of the high speed line all the way through to Glasgow and Edinburgh will clearly have to be something for beyond the early-2030s, because the traffic would be significantly less than south of Manchester and Leeds.

\textbf{Lord Shipley:} Does that include freight traffic? Because obviously there is not a new line, so actually increasing the amount of freight that is moved by rail is going to be more limited. Do you think that kind of connectivity matters or might it be that air takes over a lot of the growth in freight mileage?

\textbf{Lord Adonis:} There is still quite a lot of spare capacity on the West Coast Main Line and the East Coast Main Line north of Manchester. The East Coast Main Line is more problematic actually; as you know, the East Coast Main Line south of Newcastle suffers from significant issues of congestion. We were not looking at this, but it may be that the case for building out on the east coast further north than Leeds is stronger.

\textbf{Lord Lawson of Blaby:} You were somewhat dismissive about benefit-cost ratios, but I do not think you were arguing that they should be disregarded altogether; they are obviously a significant metric that has to be taken into account. What is the lowest benefit-cost ratio you would consider acceptable?
Lord Adonis: The rule of thumb in the department is that a project with a BCR of less than 2 is either weak or there would need to be significant additional factors to be taken into account to make it a project that is likely to be supportable. HS2 was above 2.

Lord Lawson of Blaby: If it turned out to be below 2 then you would not want to go ahead.

Lord Adonis: I did not say that. I said there would need to be significant additional factors to be taken into account, but it has been above 2.

Q121 The Chairman: Two short questions: do you think that the Department for Transport is sufficiently resourced to carry out HS2 and all the other projects it has got on? Are you satisfied that there is enough co-ordination across Government as a whole to deliver the benefits of HS2?

Lord Adonis: A separate HS2 company has been established. I know that has been significantly enhancing its capacity over the last two years. The critical thing to my mind is the leadership of the project, like all projects, and like all organisations, with weak leadership they are unlikely to thrive. I was very concerned in the period after 2010 that there was very weak project leadership for HS2. The arrival of Sir David Higgins, who is one of the best major project managers in the world, and was the previous Chief Executive of Network Rail, along with Simon Kirby, is giving this project the strongest possible leadership; to my mind that is the crucial resourcing that it requires. Quite how large the project teams need to be, and at what stage you engage substantial new construction partners, and all of that, is very much a secondary consideration, which Sir David and Mr Kirby will take.

The Chairman: Lord Adonis, thank you very much indeed for a most interesting session.

Lord Adonis: Thank you, Chair.
Ampthill Square Tenants and Residents Association—Written evidence

Counting the Costs: An assessment of the extent of social and environmental impacts resulting from High Speed Two terminating in Euston

SUMMARY
The purpose of this report is to highlight a range of significant negative impacts accruing to communities in the locality of Euston, its approach and the cutting northwards to Parkway – the HS2 Ltd Community Forum 1 (CF1) area - as a result of the construction of HS2

Time and resource constraints have resulted in the authors concentrating their efforts on just some of the many impacts, delineating the extent and duration of imposed resultant disruption and the likely catastrophic impacts these will have on the well-being of local people.

The report also urges that the social and environmental impacts to the reluctant ‘host’ communities accruing from the construction of the HS2 terminus at Euston are properly evaluated and quantified and that these significant costs to LB Camden and its communities, which are estimated to be in the region of £1bn and indeed could exceed that amount, are properly accounted for and incorporated into the debit side of the business plan for HS2.

The report aims to highlight the extent of costs externalised to individuals such that they are subsidising the costs of railway construction through significant personal financial losses and reductions in well-being to levels that are completely unjustified.

Fundamental to our argument is the belief that HS2 Ltd have failed to properly evaluate the costs of bringing HS2 into Camden, a densely populated high value area of Central London. Intrinsic in this belief is that the very real needs of many thousands of individuals living within reluctant ‘host’ communities have not been considered and their concerns treated as irrelevant.

The arguments set out in the submission are supplemented with custom-generated maps, charts and tables within the Appendices together with a clear underlying methodology for data collection.

Ampthill Square Estate is situated directly north-east of Euston station and shares its western boundary with the cutting wall to the Euston Approach. Its geographical location makes residents of the 365 housing units particularly vulnerable to negative impacts from the construction of HS2.

About the authors
Since moving to Ampthill Square Estate twenty-five years ago, Fran Heron has been a community. She has been active in the local Tenants and Residents Association for many years and currently chairs the Camden Town District Management Committee, an umbrella group of elected TRA representatives working in partnership with LB Camden to improve all housing related services and the quality of life of residents. Fran has no formal qualifications apart from long experience and enthusiasm.
Louise Fletcher, an Ampthill Square resident of three years, worked for 30 years as an Earth Scientist. In her professional acquired many years experience in working and analysing map data.

The authors wish to acknowledge the invaluable help provided by John Fletcher for patiently proof reading, editing and formatting this document.

1. **Background**

1.1. The origin and progress of plans for High Speed Two (HS2) will be familiar to the Committee and will not be repeated here. It is, however, appropriate to mention that, since the announcement by the then Secretary of State for Transport, the Rt Hon Justine Greening, on January 10th 2012 that the Government had made the decision to go ahead with Phase One of HS2, a long shadow has been cast over many lives in Camden. This escalating gloom is most acutely felt by communities living in closest proximity and radiating outwards from Euston Station, the station approach and the railway cutting northwards to Parkway tunnel.

1.2. Intervening years have compounded fear and uncertainties within communities with regard to the future. With passing time and as the scale and duration of the proposals become clearer this anxiety has become more profound. Large numbers of people will have their property and lives blighted. The authors will attempt to illustrate the extent of just some of these.

2. **Costs v Benefits**

2.1. The Government claims that HS2 ‘is the most significant transport infrastructure project in the UK since the motorways were built in the 1950s and 1960’ and is driving the project relentlessly forward into the centre of our lives. The scale and duration of the works are unprecedented and the HS2 juggernaut proceeds inexorably with minimal democratic accountability. The London Borough of Camden unanimously believe that the negative impacts and disadvantages flowing from HS2 far outweigh the limited future benefits and have consistently opposed plans for Euston. This view is widely shared by communities in the Borough.

2.2. It is also widely held that HS2 Ltd. has failed to properly assess the costs of bringing HS2 into Euston, a high density high value urban area of central London. In so doing they have completely failed to count the considerable resultant social and environmental impact on communities in Camden.

2.3. The benefits that will accrue from HS2 are so far in the future as to be considered irrelevant. Homes and jobs will not be delivered for over a decade at the earliest and probably considerably longer. Most construction jobs will not be filled by local people (who will bear the brunt of construction) but will be imported.

2.4. The authors concur with a growing body of concern that the benefits of HS2 have been grossly overstated while the opportunity costs and debit side of the equation have been largely ignored. This study aims to highlight just some of the externalised social and environmental costs heaped onto the people of Camden. The Pan Camden HS2 Alliance has stated “We have always urged that a project of this size and claimed importance should be subject to scrutiny and testing in a properly independent and public inquiry. We are
increasingly dismayed by the extent of potential patronage that could be exercised by HS2, the Department for Transport and by other bodies. We believe this is damaging and corrosive to our democracy.”

3. **Opportunity Costs**

3.1 Many local people are sceptical of the stated benefits of HS2 as a concept and believe the overall cost of around £50bn is totally inappropriate for just 330mls of new railway that will benefit only an estimated 0.26% of the population. The annual statistics of Office for Rail Regulation show that the large increase in passenger loads (predictable following the significant investment in extensive upgrading of the WCML) is slowing down and demand now appears to be flat-lining. HS2 Ltd.’s business case is predicated on a 2% year on year increase in passenger loads for long distance services which looks increasingly less likely. With the cost of fares being prohibitive to many and the rapid evolution of media technology, video conferencing and the like, the demand trend for long distance travel may well reduce in future years.

3.2 The figures below illustrate the disproportionate amount of the annual rail budget dedicated to the construction of HS2. Given the size of the National Debt, the austerity regime of the present Government aimed at significantly reducing public spending, on-going cuts to council budgets translating into loss of services and what many would consider more vital spending priorities for the benefit of the many rather than the relatively few, the prioritisation of HS2 is questioned by significant numbers of the population.
Fig 1. Statistics illustrating disproportionate rail spend on HS2

<table>
<thead>
<tr>
<th></th>
<th>2015/16-2020/21 transport spending plan *</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS2</td>
<td>£16,052,000</td>
</tr>
<tr>
<td>Network Rail</td>
<td>£22,471,000</td>
</tr>
<tr>
<td>Total</td>
<td>£38,523,000</td>
</tr>
<tr>
<td>HS2 length</td>
<td>330mls</td>
</tr>
<tr>
<td>UK Network</td>
<td>9,789mls</td>
</tr>
<tr>
<td>(Electrified)</td>
<td></td>
</tr>
<tr>
<td>HS2 proportion of budget:</td>
<td>42%</td>
</tr>
<tr>
<td>HS2 proportion of UK Network</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

*Statistics quoted from HM Treasury document “Investing in Britain’s Future CM 8669 June 2013

3.3 The table above shows clearly that HS2 will consume almost half (42%) of the total annual rail budget, including London Transport, for the next five years. As HS2 annual projected spend increases with time, this proportion of spend is likely to be repeated or indeed increased for the foreseeable future.

3.4 While the UK is planning what many consider to be an over-specified over hyped high speed line, less than half the UK rail network has been electrified, a large proportion of its stations are not fully accessible and many stations are unmanned and have no public conveniences or adequate shelter or seating for the use of those waiting for trains. This is a national disgrace.

4. The Camden Setting
4.1 Camden is a thriving, bustling, dynamic and vibrant place to live, work and visit. It is home to over a quarter of a million people within the 22 sq. km of the borough.

4.2 The economic health of Camden is good with an annual GVA of some £21bn and is growing from strength to strength such that it is currently the third largest economic driver in London; with only the City and the London Borough of Westminster demonstrating stronger economic prosperity. In achieving this level of economic prosperity the tourism industry is a significant factor. Camden is packed with visitor attractions, the British Museum, the British Library and Camden Lock Markets being amongst the most popular. In short, Camden is a great place to live, work and play.

4.3 Camden also has a long and glorious history built on railway development and boasts three of the ten mainline termini in London, Kings Cross, St Pancras International and Euston are all situated within a 1km stretch of Euston Road in the heart of Camden.

5. This train will terminate at Euston
5.1 So said Justine Greening when, as Secretary of State for Transport, she visited King Cross to cut a ribbon and beat a hasty retreat. But not before she told a journalist that ‘the decision to terminate HS2 at Euston is set in concrete’.

5.2 The well-respected Institute of Economic Affairs has published several papers critical of HS2. In their critique ‘HS2: the next government project disaster?’ Which they published in 2011 the authors discuss the cost implications of the termination of HS2 in Euston.

5.3 ‘............... the decision to terminate HS2 at Euston has very negative cost implications. The last five miles (just 4% of the total length will incur hugely disproportionate share of the scheme’s overall costs. While the time savings will be negligible. The combined cost of expanding and rebuilding Euston station and tunnelling to Old Oak Common will constitute an estimated 22.5% of the base construction costs (DfT, 2010b)

5.4 “At the time of writing” the authors suggested “the share of additional costs such as compensation to property owners, is likely to be at least as large, suggesting an overall cost for the last five miles of around £4bn.”

6. **HS2 Cost Exclusion and lack of supporting evidence**

6.1 Aizlewood and Wellings consider the case for HS2 is ‘fatally flawed’ and that significant costs have not been factored into the cost-benefit analysis. They cite as just one example, an estimated £68 million will be paid to the main train operating companies (TOCs) as a result of disruption (DfT, 1010b).

6.2 Aizlewood and Wellings go on to warn that ‘a further flaw is the under-developed framework for considering risk ... (and) No attention has been paid to the impact of pricing policy on levels of uptake in demand for HS2’ (Comment on pricing policy addressed later).

6.3 The gross over-valuation in assessing business time ‘lost’ while travelling on long distance rail journeys underpins the business case (such as it is) for HS2. The premise travel time is wasted time has been debunked thoroughly as it is clear that a great many rail travellers use their journey time productively. Following criticism of the unrealistic hourly rate (equivalent to a salary in the region of £70K per annum) used in calculating ‘lost time’, the exaggerated hourly rate was subsequently significantly reduced. However, this reduction did not alter the business case one iota since HS2 Ltd. roughly doubled their estimated forecasts of potential business travellers generating barely a ripple radiating outwards to suggest either gross incompetence in HS2 Ltd.’s forecasting methods or alternatively a deliberate attempt to deceive by creative accounting.

6.4 It is worth pointing out here that the supporting research for much of HS2’s analysis and costing in the Environmental Statement is either missing or partial. The Environmental Statement was also badly referenced so that finding one’s way through the many volumes comprising the ES was time-consuming and frustrating. Compared with supporting documentation produced by Transport for London relating to the Northern Line extension and the Crossrail Hybrid Bill the Environmental Statement for HS2 demonstrates the lack of appropriate rigour applied to supplementary research by HS2 Ltd.

6.5 In 2011 the estimated cost of £34bn to construct HS2 was said by the IEA to be equivalent to £1000 per UK income-tax payer, the majority of whom will derive no benefit from it (p4 Exec Summary).
6.6 With the significant and ongoing increase in costs to £50bn this now equates to approximately £1,600 per UK income-tax payer.

7. Old Oak Common to Euston

7.1 The table below attempts to set out the disproportionate costs associated with the last five mile stretch of HS2 into Euston:

**Fig 2. Cost related to OOC to Euston via various options for Euston station**

<table>
<thead>
<tr>
<th>ESTIMATED COSTS OF BRINGING HS2 FROM OLD OAK COMMON (OOC) TO EUSTON</th>
</tr>
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<tbody>
<tr>
<td>Distance</td>
</tr>
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<td>----------------</td>
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</tbody>
</table>
| London to Birmingham | 110 miles/177km | 100% | £15.8bn-
| Old Oak Common to Euston (based on Option 1 baseline) | 5 miles/ 8.5km | 4% = 22.5% bcc | £4bn* |
| Old Oak Common to Euston (based on Option 8 HB scheme) | 5 miles/ 8.5km | 4% = 22.5% bcc | £3.8bn |
| Old Oak Common to Euston (based on Level Deck Plus) | 5 miles/ 8.5km | 4% = 22.5% bcc | £8bn** |

*Figures from IEA report ** Figures supplied by TfL

*The IEA estimate that it will cost in the region of £4bn - almost a quarter of the Phase 1 budget – to construct the last five miles from Old Oak Common to Euston

**Headline costs of land/compensation, road/utility works, including London Underground station and over station deck, track works (including dive-under) and risk contingency in the region of £6bn. Tunnelling works to OOC around £50m per km per tunnel, plus additional £100m for each portal, plus risk/contingency in region of £2bn giving a total or around £8bn.

7.2 This disproportionate sum should be cause for concern and appears to reinforce the widely held local view that the decision to terminate HS2 in Euston is based not on sound economic rationale but rather on a speculative land grab from which platform HS2 Ltd/Network Rail and/or the Department for Transport can generate optimum profits. Pan Camden HS2 Alliance summarised these concerns “We are concerned that Section 47 of the Hybrid Bill provides for extraordinarily wide ranging powers of land acquisition in connection with development opportunities. We consider these to be excessive and unjust. Exercise of these powers could inflate the apparent economic benefits of HS2, as its costs would be depressed by expropriation without adequate compensation.”

7.3 Similar calculations for Option 8 contained in the Hybrid Bill reduce costs by £0.8bn but as later discussed this option is felt to represent the worst scenario for Camden and its communities.

7.4 Attempts to extrapolate IEA’s estimates to the proposed Level Deck Plus scheme would suggest that the costs from OOC to Euston will rocket. But even this figure, in the
region of £8bn, does not capture the enormity of social and environmental impacts that will ensue.

8. **Link to HS1 abandoned**

8.1 Until March of this year when the Secretary of State for Transport, Patrick McLaughlin, announced his intention ‘... to take the necessary steps to remove the link from the Bill and withdraw the safeguarding of this section of the route ... ’, it was widely accepted that Camden would face as much as 80% of the negative impacts associated with the construction of Phase One of the HS2 project.

8.2 Since the proposals for the HS2-HS1 Link proved to be unfit for purpose and have bitten the dust, the scale of impacts to Camden need to be revised down from the 80% figure. However negative impacts remain concentrated on Camden and it seems likely the Borough will still suffer between 70%-75% (educated guesstimate!) of all negative impacts associated with HS2 Phase 1. HS2 Ltd. have saved around £1bn by scrapping the current Link but it is likely that a more suitable future Link replacement between HS2 and HS1 will prove more expensive.

8.3 With the demise of the much reviled and ridiculed proposals for the Link, among a range of negative impacts, the over-hanging dark shadow threatening the viability of the Camden Lock Markets has been lifted as has the predicted travel chaos that would have ensued, for this we are truly grateful.

9. **Station Design**

9.1 Since 2012, HS2 Ltd. have produced two entirely different station designs and a third is in the process of evolution and scheduled to be launched for consultation early in December 2014. This is likely to result in another bout of ‘indigestion’ over the turkey for a second year as the consultation period is likely to extend over the Christmas and New Year holiday period once again.

9.2 The first variant of station design, Option 1, known as the ‘baseline’ option, was launched with great fanfare in January 2012.

9.3 In July 2013, the Rt Hon Patrick McLaughlin, Secretary of State for Transport, scrapped the Option 1 (baseline scheme) for Euston station on the grounds that (1) it was too expensive at £2bn (up from £1.2bn in January 2012) and (2) it would not be completed in time for the opening of Phase 1 scheduled for 2026 (though a putative completion date is not known).

9.4 The Baseline option was substituted by the variant Option 8 contained in the Hybrid Bill now under consideration. This design is locally dubbed the ‘Cheapskate Option’, retaining part of the old 1960’s station structure with the new HS2 extension bolted on to the side.

9.5 Both these options require a similar large land-take of almost 7 hectares and significant levels of demolition of residential and commercial premises. Both LB Camden and local communities have complained bitterly that the current station solution is the worst of all worlds causing all of the harm and providing few benefits. The costs to the community in social and environmental terms are similar but of less duration with Option 8.
However Option 8 is technically little more than a glorified canopy above new platforms thus preventing significant compensatory over station development - a 'plus' benefit providing much-needed homes and jobs.

10. **Level Deck Plus**

10.1 As late as March 2014, yet another scheme was launched and is currently under development. At the behest of and integral to the ambitious plans envisaged by Sir David Higgins, Chairman of HS2 Ltd, is a massive over-station and over-slab commercial and mixed use development to ‘maximise’ opportunities at Euston. Few of these are likely to accrue to the local communities.

10.2 In answer to a direct question at the initial meeting with community representatives on Regents Park Estate in 2012, Alison Munro, the then chief executive of HS2 Ltd, estimated just 3% of jobs created would be filled by people from local communities. HS2 is an Engine for Unemployment rather than Growth, at least in the short to medium term in the Euston area. According to the HS2 Ltd.’s Environmental Statement relating to Community Forum 1 (CF1) 3090 jobs will be lost or relocated in Euston alone (ES CF Area p. 171 10.04.31). Although differing greatly, all three design options require a similar ‘land grab’ and thus a similar level of disruption. The key factors are the scale and duration of the construction works.

10.3 The table below (Fig 3) illustrates the key issues related to several station alternatives.

10.4 NB. The authors have made every effort to be accurate but it is not easy to obtain definitive figures so that those used in the table are indicative only and subject to amendment.

10.5 The authors also support the suggestion of the Pan Camden HS2 alliance that “Alternative means of accessing Euston have been proposed (notably by Lord Berkeley). We urge that an independent body should carefully and dispassionately examine such alternative options along with the case for not building a link into Euston (but rather having the main London hub at Old Oak Common).”
Fig 3. Comparative criteria and indicative costs re Euston station alternatives

<table>
<thead>
<tr>
<th>KEY CRITERIA RELATED TO VARIOUS OPTIONS FOR EUSTON STATION</th>
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<tbody>
<tr>
<td><strong>Option 8</strong> (In Hybrid Bill)</td>
</tr>
<tr>
<td><strong>Level Deck Plus</strong> <em>(in development)</em></td>
</tr>
<tr>
<td><strong>Double Deck Down2+</strong> <em>(Within current width footprint ref scheme)</em></td>
</tr>
<tr>
<td>Estimated Cost</td>
</tr>
<tr>
<td>Estimated Completion Date</td>
</tr>
<tr>
<td>Estimated Land required</td>
</tr>
<tr>
<td>Compulsory Purchase</td>
</tr>
<tr>
<td>Excavated spoil m³/ HGV trips</td>
</tr>
<tr>
<td>Over Station Development opportunities</td>
</tr>
</tbody>
</table>

* DDD2+ refers to a reference scheme for a station built within the current station width footprint presently being developed but the concept on which it is designed is adaptable.

11. Comparable large infrastructure projects?

11.1 St Pancras International is often cited as an example of an iconic terminus and comparable with HS2. St Pancras station was constructed on the existing width footprint and constrained by far less urban development since the site was adjacent to the Kings Cross largely derelict railway lands and therefore easier to construct. Work started in 2001 and St Pancras International was completed in 2007 (6 yrs) at a cost in the region of £800m (up from an initial £310m)\(^{Wiki}\).

11.2 Crossrail I (XR1), the 73-mile east-west rail line across London and currently under construction, is another example of a huge rail infrastructure scheme. XR1 was commenced in 2009 and is due to be operational in 2018 (9 yr construction). Over a third of its length is in tunnels under central London thus having far less impact on surface urban fabric. XR1 is cited as one of Europe’s largest railway and infrastructure projects and is expected to cost f £14.9bn. Unlike the very limited connectivity of HS2, XR1 will enable a vast rail network to operate seamlessly through the capital.
11.3 Neither of the above rail infrastructure schemes are in reality comparable, in terms of duration nor scale of disruption, to HS2 which is unprecedented in the UK.

11.4 Among others, Transport for London and the Greater London Authority consider Euston station has insufficient capacity to cater safely for the additional passenger throughput forecast due to HS2. To satisfy safety and capacity needs for onward dispersal of increased passenger volumes by London Underground both TfL and the Mayor of London state that Crossrail 2 is vital in this respect. Thus, not only do communities face several decades of station construction followed by an unknown number of years extended disruption generated by construction above/around the station, but on the back of HS2, Crossrail 2 cometh causing yet a further period of disruption to residents and businesses, the latter largely in the St Pancras and Somers Town ward. Given the levels of congestion witnessed around Euston, especially on Friday afternoons, it is difficult to see how the road network will cope with the volume of traffic generated by construction of HS2.

12. Illustrating the extent of impacts

12.1 The authors have identified key impacts associated with construction of HS2 in Camden. These fall into two main categories: tangible and intangible. While the former attract recognised mechanisms for calculating financial loss the latter, although nonetheless significant to health and wellbeing, are obviously more difficult to quantify.

12.2 Although not an exhaustive list the following have been identified as key criteria many of which are considered in the document referred to below:

- Loss of residential and commercial property ASK DAVE
- Loss of land permanently through CP and temporarily, albeit for decades through HS2 Ltd.’s use for construction compounds
- Lost time via travel delays on all modes of transport particularly in and around the Euston area (outside the scope of this document but subject to be researched via a future study)
- Loss of amenity, parks, open space, playgrounds and sports facilities
- Health and wellbeing – (outside the scope of this document but subject to be researched via a future study)
- Costs to Camden – (not currently available but opportunity costs translate into lack of in excess of £1 million of service provisions)

12.3 LB Camden commissioned an analysis of HS2’s cost to Camden – which estimated costs of £1.1bn in 2013. The costs associated with the removal of the Link and those outside of CF1 need to be disaggregated from this total which cannot be easily undertaken as individual costs are not itemised. However this colossal sum provides a ball park figure of the level of costs incurred in Camden.

13. Affected wards

13.1 It is unlikely that any ward of Camden will totally escape a level of impact from HS2. Bloomsbury is directly impacted due to its proximity south of Euston Road as is adjacent Kings Cross ward. Camden Town with Primrose Hill, Hampstead and Kilburn wards will be impacted as a direct result of construction of the significant structures misleadingly named ‘vent shafts’ which conjure up little more than a large ‘chimney-type’ structure when in fact they are huge complex buildings.
13.2 The three most severely impacted wards facing significant multiple negative impacts from HS2 construction are (in order of maximum impact):
- Regents Park ward
- St Pancras and Somers Town ward
- Camden Town with Primrose Hill

13.3 A map showing expanded Euston footprint, construction compounds, utility diversions and HGV routes is appended as Appendix 1. 

14. Measuring impacts – the ‘zone’ approach
14.1 In many of their calculations the authors have used as measurements zones of 60m, 120m and 200m from the station, cutting wall, similar to those used in rural areas, in order to allow a certain amount of comparative analysis. In our calculations we have estimated impacts up to approximately 200m either side of the station, approach and cutting walls. This would compare with measurements used to attract a level of compensation within rural areas.

14.2 Methodology: The authors have taken Euston and its approach and the Camden Cutting as epicentres from which multiple adverse impacts will radiate outwards across the Borough. It is likely that impacts will be experienced in adjacent Boroughs but this study has confined itself to looking at some of the impacts on Camden communities within the CF1 zone. Data from HS2 Ltd. and Office for National Statistics (ONS) were loaded into QGIS, a Geographical Information System program. Using the shape files from HS2 and additional base map information, 60m and 120m buffer zones were constructed. The Census data from the ONS is summarised into tables covering geographic areas called Operational Areas (OA). By calculating the area of the OA that intersected the Buffer zones, estimates of population and households within each of these zones were calculated and the census data could be calculated within each of the buffer zone. Please see Appendix 2 for more details on methodology and Appendix 3 for a compilation of charts and tables.

15. Rural and Urban – All together in the HS2 soup
15.1 Whilst it is clearly not reasonable to make direct comparisons with rural areas, within Camden communities there is a deep sense of righteous indignation and indeed fury at the scale of injustice being perpetrated on urban dwellers. The sheer amount and duration of disruption is unprecedented. Urban communities do not expect to enjoy the same levels of peace and tranquillity nor rustic idyllic landscapes as country dwellers. However, people in Camden (and other urban areas) will face at least comparable (if not more) disruption in many instances: e.g. from traffic congestion and delays, potential loss of trade, businesses and jobs, increased air pollution (already breeching EU regulations in Camden), noise, vibrations, light pollution, etc.

15.2 The authors feel that it is necessary to highlight the gross injustice being perpetrated on urban dwellers. While three ‘buffer’ zones (60m, 120m and 200m) exist in rural areas which attract differing levels of compensation, none exist in urban areas. Compensation is only paid to those whose homes or businesses are being compulsorily purchased. Significant impacts to property values and quality of life over a protracted period literally count for nothing since they attract a zero level of compensation. This effectively means
that individuals are being forced to subsidise the construction costs of HS2 through personal financial loss and/or reduction in their overall health and well-being.

15.3 These losses are compounded as thousands of Camden citizens are simultaneously robbed of valuable public amenities including sports facilities, playgrounds, parks and open space which all contribute to the health and well-being of local people.

15.4 Indeed, Kier Starmer, former Director of Public Prosecutions, considers that the failure of HS2 Ltd. to assess the cumulative impacts of HS2 breeches human rights legislation.

15.5 The authors will attempt to illustrate the extent of impacts and externalised costs involved in Camden although time constraints will not allow this assessment to provide a monetary value.

16. Community Issues

16.1 From its inception there has been no effort made to balance the needs of various HS2 Stakeholders. Corporate needs have been viewed as paramount; HS2 Ltd. and DfT have all configured their land, platform and functionality requirements in the various briefs issued; Network Rail has identified its requirements in terms of minimising disruption to present and potential future passenger services with an enhanced ‘passenger experience’ offer and the maximisation of profit from retail and food outlets.

16.2 Meanwhile, the social, environmental and financial ‘needs’ of reluctant ‘host’ communities are treated with impunity. Attempts to minimise harmful impacts have been conspicuous by their absence. The detrimental impacts on thousands of lives are viewed as irrelevant. Pan Camden HS2 Alliance has described this as “realisation of the economic benefits claimed will impose health and other costs on some of the poorest sections of society (particularly around Euston) and these costs should be accounted for properly.”

16.3 Local communities have been incensed that throughout the limited discussions between HS2 Ltd. and various communities, the ‘passenger experience’ trumps all other considerations while the very real impacts to the host communities are ignored in any cost benefit analysis. Tangible and intangible costs do not figure in any debit calculations.

16.4 There has been no attempt to quantify the social and environmental impacts associated with terminating HS2 at Euston. The authors are attempting to make reasonable assumptions with regard to costs related to property and land loss and, crucially, the uncompensated losses incurred by externalising costs and impacts onto individuals who then effectively subsidise the building of HS2 through personal loss. The Pan Camden HS2 Alliance has summarised these concerns as “The Strategic Case is silent on the community impacts: in the main these are adverse impacts of the construction and operation of the railway on the host communities. A study carried out on behalf of Camden Council highlighted costs in excess of £1bn to the Borough and its businesses.”

16.5 One could question the rationality of intent to run normal services in and out of Euston throughout the construction period. HS2 Ltd. and the DfT have conspicuously failed to properly assess social and environmental costs of railway expansion in Euston. To add insult to injury, the DfT have consistently refused to even contemplate reimbursing communities most seriously impacted. In their own words, the DfT describe HS2 as the largest infrastructure project ever undertaken. Its cost and duration are of a scale unknown
in the UK. There is no precedent for just compensation. Camden people should not be
sacrificed on the altar of questionable national interest (the business case remains
unproven). If the nation cannot afford to compensate personal losses incurred, then the
nation cannot afford to build HS2.

17. **Uncompensated loss**
17.1 In Camden it is likely to be less traumatic to have one’s home compulsorily
purchased than to live in close proximity to decades of disruption. While neither option is
attractive to most people who ‘invest’ much time and effort into ‘home-building’ the former
attracts financial compensation while the latter does not.

17.2 The Home Loss Payment is an extra sum (up to £47K) paid in recognition of the
trauma involved in home loss and is payable only to home-owner living in rural areas. This is
bizarre.

17.3 In Camden hundreds of council tenants with security of tenure face losing their
homes. These families could reasonably expect to remain in their homes for life if they so
wished and now face being forced to move, often against their will, in fear of the future,
away from their strong community ties and social networks. They will receive a home loss
payment of up to £4,700 – an absolute pittance which will probably not even cover the
costs of replacement floor covering and curtains.

17.4 Natural justice would seem to dictate that any home loss payments should be based
on how long one has lived in one’s home rather than one’s tenure. It is equally (if not
more) traumatic for poor people to be forced out of their homes as it is for more affluent
owner-occupiers who are likely to have more options to cushion the loss. A number of
tenants facing home loss have lived in their homes for forty of more years and planned to
spend the rest of their days there.

17.5 Compensation is based on outdated 19th century case precedent and is largely
inapplicable to 21st century living.

18. **Demographics**
18.1 Key statistics
- >11,000 - the number of people living within 200m of the railway.
ZERO - The number of people eligible for any compensation.

**Fig 4. Approximate number of persons in the vicinity of HS2**

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 60 m of track</td>
<td>2,724</td>
<td>1,122</td>
</tr>
<tr>
<td>Within 120m of Track</td>
<td>6,169</td>
<td>2,551</td>
</tr>
<tr>
<td>Within 200m of Track</td>
<td>11,167</td>
<td>4,615</td>
</tr>
</tbody>
</table>

- 136 local authority tenants will be eligible for the sum of up to £4700 as a Home Loss
  Payment irrespective of the length of time they have lived in their homes.

- 46 lease holders will face a shortfall of around £200,000 each to purchase replacement
  properties.
• This represents a total of £920,000 of externalized financial loss.

• Homeowners could be eligible for the Exceptional Hardship Scheme, but to date very few applications have been successful.

• Those aged 60+ in the 2011 Census will be 75+ for the completion date of 2026 and 83+ for the completion date 2034. All those aged 60+ can expect the remainder of their lives to be seriously impacted. This will be applicable to approximately 824 persons who live within 120m of the proposed rail.

• Those aged 0-4 in the 2011 Census will be 14-18 for the completion date of 2026 and 23-27 for the 2034 competition date. This means that all of their formative years and education will take place in the shadow of HS2. Approximately 403 persons aged 0-4 live within 120m of the proposed railway.

• There are approximately 1511 persons under the age of 20 who live within 120 m of the proposed HS2 railway. These children and young adults will lose access to local play and sports facilities.

• By multiplying the number of persons living with 120 meters of the track by the duration of the construction we can calculate the man years impacted by the continuous disruption of their lives, see Fig 5 below:

**Fig 5. Population Negatively Impacted by HS2 Construction**

<table>
<thead>
<tr>
<th></th>
<th>Within 120 M of Tracks or Station Assume 9 years Construction</th>
<th>Within 120 M of Tracks or Station Assume 17 years Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Man-years</td>
</tr>
<tr>
<td>Age 0 - 4</td>
<td>403</td>
<td>3,631</td>
</tr>
<tr>
<td>Age 5 - 19</td>
<td>1108</td>
<td>9,975</td>
</tr>
<tr>
<td>Age 20 - 44</td>
<td>2901</td>
<td>26,107</td>
</tr>
<tr>
<td>Age 45 - 64</td>
<td>1133</td>
<td>10,193</td>
</tr>
<tr>
<td>Age 65 +</td>
<td>624</td>
<td>5,613</td>
</tr>
<tr>
<td>Total</td>
<td>6169</td>
<td>55,519</td>
</tr>
</tbody>
</table>

This represents a staggering figure of over 100,000 man-years (or 1.26 million man-months) of disruption for people living with 120m of the proposed railway.

19. **Employment and Business**

19.1 In the Environmental Statement HS2 Ltd. states that over 3000 Jobs in Euston alone will be lost or relocated. HS2 is trumpeted as being an Engine for Growth. Much increase in employment opportunities is scheduled much further down the line. If HS2 Ltd. or another body has not carried out a route-wide analysis of job losses attributed to the construction of HS2 the authors recommend this should be done.
19.2 Small businesses in and around the Euston area will almost certainly be hit by loss of passing trade during construction. This is particularly apposite to small businesses and other associated traders in Drummond Street who estimate up to 80% of their turnover relates to passing trade related to Euston station. The viability of Drummond Street unique Curry Quarter serving delicious and affordable Asian cuisine is at stake.

19.3 At least sixteen businesses, many of them with a long history of serving the local community are affected. It is estimated by one restaurant owner that between 150-200 people, mainly Asian, are employed in these businesses (approximately 50% full time and 50% part time). Most have families dependent on their wage packets. If not already produced, a full assessment needs to be undertaken to determine the likely economic impacts and viability of Drummond Street's unique Curry Quarter. Drummond Street Curry Houses are famous across London and the UK.

19.4 No financial assistance is being provided to small businesses and restaurateurs whose livelihoods are under threat as are the jobs of a significant number of Asian employees. The Drummond Street cluster of Curry Houses has a value over and above the financial business assessment there is also a social and cultural dimension. The authors recommend that Drummond Street Traders should be the subject of an in-depth study which would surely highlight externalisation of significant financial costs to individual small businessmen and their employees.

19.5 If all the properties within the safeguarded area are demolished the value of commercial premises lost could reach £335 million (HS2’s cost to Camden page 13) this figure relates to Euston and its surroundings only.

20. Housing
20.1 Time constraints have prevented the intended inclusion of additional statistics relevant to buffer zones extending to 200m and 300m distance from the station, approach and cutting. These are in the process of production and will be available on request.

21. Property Blight
21.1 Quantifying the level of property blight directly attributable to HS2 is complex and clearly outside the scope of this study. However, such losses will plainly be considerable and that due to the proximity and duration of HS2 represent significant individual personal loss that is externalised to home-owners should they wish or need to relocate.

22. Housing Tenure
22.1 Housing tenure across Regents Park and to a less extent St Pancras and Somers Town ward has quite a strong north south split with the majority of social housing concentrated in the south of both wards with private housing being by far the predominant tenure in the north of the wards, particularly so in Regents Park ward with some fine Nash housing located to the west of the cutting along Park Village East and three and four storey mainly Victorian terraces and semi-detached properties in streets running parallel to the cutting along its east flank.

22.2 It is in the southern part of Regents Park ward where all demolition is scheduled to take place. With the exception of Stalbridge House, a block of 32 privately owned homes and small pockets of private housing in and around the Drummond Street area, the tenure south of Granby Street Bridge is almost universally council stock. The majority of
households rent their homes from LB Camden while 25% are leasehold, former council housing properties being purchased on a long lease. A proportion of these are landlords who rent out their properties privately.

22.3 The owner occupied and privately rented stock is largely north of Granby Terrace Bridge on both sides of the cutting up to Parkway although a number of former council homes are privately owned which are sub-let

22.4 Some interesting statistics emerge from the tables and charts (Appendix 3).

23. Loss of housing

23.1 Many thousands of families needing affordable homes are on the Camden Housing waiting list. While LB Camden have made efforts to increase social housing stock, lack of finance and space to build makes this difficult. As a result, the loss of any social housing units in Camden has serious implications for those in housing need.

23.2 HS2 plans the demolition of 215 homes with a further 250 being at risk. Of these 136 are council tenants, 46 are leaseholders while the remainder social homes and the remaining 32 are privately owned. Of the 46 leaseholders as previously a number of these are landlords who sub-let their properties privately.

23.3 LB Camden continues to argue with HS2 Ltd. that the proximity to highly disruptive construction works for the proposed duration renders an additional five housing blocks uninhabitable including one of the twenty-storey tower blocks on Ampthill Square. HS2 Ltd. refuses to agree a definition of ‘habitability’. The reticence of HS2 Ltd. to agree such a definition is not about their lack of understanding of the impacts which they themselves describe in many cases as ‘significant negative impacts’.

23.4 Despite what some would describe as profligate spending on premises and taxis for their own staff, the emotional safety of those facing demolition falls into the category of minimising mitigation costs. Accepting a widely agreed national definition of ‘habitability’ to which LB Camden subscribe would likely require re-housing 250 additional households. Alternative accommodation would be required for at least the period of the more disruptive works likely to be a large proportion of the build duration.

23.5 To their credit, LB Camden have insisted that all replacement homes must be built in the local area to minimise the disruption to individuals and their social networks. This is to be applauded. However, of necessity rebuilding in west Euston and nearby will further reduce the areas of green space in the locality. At best the reductions in housing stock due to demolition can be accommodated nearby but the opportunity to increase stock and reduce the misery of a corresponding number of families on the waiting list is removed. The latter results in financial costs to the public purse for temporary housing costs. Additional less quantifiable but often considerable emotional costs accrue to families in terms of extending personal hardship from unsuitable housing. Together these ongoing costs are likely to be considerable. Because of time constraints, calculation of these is not possible at this time. While some or all of these costs may or may not be included in other assessments, the authors consider there is a need to clearly set out the costs incurred by the public purse and opportunity costs associated with demolition and replacement of homes locally and an attempt should be made to quantify loss of well-being and resultant increased stress.
23.6 In the study “HS2’s cost to Camden” document relocation costs are assessed to be in the region of £318.1 million (p9) with a further £20 million estimate of loss of development opportunity (p9)

24. Leaseholders

24.1 Leaseholders having exercised their Right to Buy council homes, face a far from satisfactory compensation package. HS2 Ltd. is prepared to compensate them in the normal way. However, this sum falls many thousands of pounds short of that necessary to purchase a similar sized property. In its submission, LB Camden states:

“... the value gap between an ex-local authority flat and a private flat is estimated to be around £200,000.

24.2 This effectively means that many of those who have invested in their homes and neighbourhood will not be able to afford to remain nearby without paying a heavy price to do so. Effectively HS2 Ltd. are forcing leaseholders out of Camden or into debt to the tune of several hundred thousand pounds through no fault of their own.

25. Dragging corporate feet

25.1 Clearly, the loss of homes due to significant demolition locally is a cause of major concern for those facing home loss. The impacts will fall not only on those required to relocate to replacement homes but also to those who will spend longer time on Camden Housing waiting list due to reduced numbers of social housing available.

25.2 HS2 Ltd. were offered the chance to purchase seventy units of housing under construction locally to replace some of those they plan to demolish. This offer was made well over a year ago and the sale has only very recently been agreed despite LB Camden pressing for an agreement. Clearly this is good news and means that some replacement homes are now provided for. Unfortunately, this agreement does not provide comfort to families facing home loss as no decisions have been made as to who will get priority housing in the new development should HS2 in its current or emerging plans be constructed.

25.3 HS2 Ltd. have tunnel vision where consequences of their actions are concerned – behaving as if irrelevant and making little or no effort to ameliorate the results of their actions. HS2 Ltd. are judge and jury over mitigation outcomes holding, as they do, their invaluable Get Out of Jail Free card that allows them to decide what is ‘reasonably practicable’.

26. Loss of Public Open Space and Public Amenities

26.1 Access to natural environment within urban area is a prerequisite to health and wellbeing. Similarly, access to playgrounds and sports facilities for children and young people is vital for healthy development and general fitness and an important resource in tackling the national epidemic in obesity. These ‘green’ spaces also attract older people to parks to sit and relax and ‘engage’ with life around them. Such exercise and engagement helps to keep senior citizens mobile and healthy in mind and body and reduce isolation. Removal of urban green space, parks and gardens, playgrounds and sports facilities will have a serious negative impact in terms of health and wellbeing and is likely to put additional financial burden on local health services.
26.2 HS2 Ltd. plan to fell up to 200 mature trees in the vicinity of Euston destroying the natural setting and benefit, both physical and emotional derived from trees. Destruction of much loved and environmentally friendly natural assets will interfere with micro-climate and CO2 exchange thus negatively affecting air quality. Killing trees on such a scale is viewed locally as nothing short of environmental vandalism.

26.3 In a relatively small area of 120mt from the track, children and young people will lose multiple valuable leisure and sports facilities as listed:

- Playground in St Pancras Gardens playground - permanent
- Playground in Hampstead Road Open Space - permanent
- Playground on Ampthill (probable reduced access long-term)
- MUGA sports facility at St James Gardens – permanent
- MUGA sports facility on Ampthill (probable reduced access long-term)
- Open Space at Euston Gardens – long term
- Park and Gardens at St Pancras Gardens – permanent
- Community Hall (Silverdale) on Regents Park – permanent
- Community Hall (Ampthill) probable reduced access – long term

26.4 It is understood that HS2 Ltd. have a statutory obligation to replace lost open space and recreational facilities. There are no plans to replace and relocate any of these facilities until after the completion of Euston station which at best will be nine years and could be seventeen years. All contribute to health and well-being and the cumulative impact of loss of these facilities represents a significant loss to Camden communities.

26.5 The Barker Review of Housing Supply 2001 places a value on Urban Core Open Space of £54,000 per hectare per year (now £77,920 adjusted for inflation). The following areas will be lost in Camden for the duration of construction:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>St James Gardens*</td>
<td>2.5</td>
</tr>
<tr>
<td>Euston Gardens (East and West)</td>
<td>1.5</td>
</tr>
<tr>
<td>Hampstead Road open space</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Cost to Camden

<table>
<thead>
<tr>
<th>Time</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 9 years</td>
<td>£3,085,632</td>
</tr>
<tr>
<td>Over 17 years</td>
<td>£5,828,416</td>
</tr>
</tbody>
</table>

*The loss of St. James Gardens will be permanent, the authors do not know how to calculate the loss of such an amenity to the community.

27. Construction Compounds

27.1 The two major construction compounds and 8 satellite compounds will occupy approximately 2 hectares of land. Coupled with other land lost this amounts to approximately 0.1 km². In addition these compounds will form barriers which will affect pedestrians particularly causing significant detours. The length and time to negotiate such detours could well deter people, especially the elderly, from undertaking frequent trips to shops or social visits. These detours will also have a detrimental effect on school children from Regents Park getting to and from schools in Somers Town in terms of additional journey length but also potentially on safety.
27.2 HS2 Ltd. plans to site a satellite compound within Ampthill Square housing estate. Though no details are forthcoming it seems likely that since Barnby Street, the southern access to the estate, is to be ‘stopped up’ access will be restricted to associated HS2 commercial and HGV vehicles causing loss of estate parking for the duration, and likely restricted access to play and sports facilities and open space for many years. All these impacts reduce amenity directly, not only to 365 households on Ampthill, but for others from local areas who take advantage of the facilities.

28. Air quality
28.1 Air quality is already poor and breaks EU regulatory limits of pollution along Euston Road. Demolition, excavation and construction on the scale planned together with the level of HGV trips to remove spoil and other commercial vehicles adding to congestion and exhaust fumes from idling engines must increase pollution in an already highly polluted area. This can only have a detrimental effect on health of impacted populations and there is likely to be an associated detrimental impact of health, particularly respiratory disease. Though not caused by air quality, associated noise and vibrations will inevitably increase the incidence of stress related illness.

29. Conclusion
29.1 Camden communities face significant cumulative impacts from HS2 that will prevent the quiet enjoyment of their homes and threaten jobs and business.

29.2 Despite the extent of the negative impacts and the unprecedented duration of the construction period, these remain unquantified and do not appear in the HS2 business case. The report gives just a flavour of the range of uncompensated losses incurred by reluctant ‘host’ communities.

29.3 Camden people should expect to receive a fair deal for all the inconvenience and devastating impacts they face during the extensive construction period. If the Government cannot afford (or chooses not to afford) to compensate people for personal losses incurred as a direct result of HS2, then it cannot afford HS2. Expropriation should not lead to profit for the expropriator.

Bibliography


September 2014
Appendix 1: Map of Community Forum 1 Area Euston and Approach Construction Impacts of HS2
Appendix 2: Census Analysis Methodology

1) Digitize Polygon which includes HS2 Option 8 Station, HS2 Approach and the current cuttings
2) Create Buffer Polygons which are 60m, 120m and 200m larger

3) Overlay the ONS Output Area boundaries over the Buffer Polygon. In this example, it is the 120m Buffer Zone.
4) Only look at the portion of the OA areas that lie in the Buffer Zone. Also delete the uninhabited areas (Tracks, station, etc)

5) Calculate the areas of the OA and the percentage that is contained in the Buffer Zone.

6) Download census data from the ONS in a spreadsheet and then calculate the percentage that would be included in the buffer. For example calculating all usual residents that live within 120 m of the station or tracks.

<table>
<thead>
<tr>
<th>OA</th>
<th>OA Area (m²)</th>
<th>Area within 120m Buffer (m²)</th>
<th>% of OA in the 120m Buffer Zone</th>
<th>All usual residents</th>
<th>All usual residents within 120 meters of station or tracks</th>
</tr>
</thead>
<tbody>
<tr>
<td>E00004173</td>
<td>61974</td>
<td>5351</td>
<td>8.63%</td>
<td>609</td>
<td>53</td>
</tr>
<tr>
<td>E00004203</td>
<td>24480</td>
<td>15867</td>
<td>64.82%</td>
<td>319</td>
<td>207</td>
</tr>
</tbody>
</table>

7) Repeat for all of the OA which are wholly or partially in the Buffer Zone and sum the results.
Appendix 3: Compiled Charts and Tables

1) Comparison of Tenure by Households located in the 60m and 120m buffer zone

Ampthill Square Tenants and Residents Association
Written evidence
### Ampthill Square Tenants and Residents Association

**Written evidence**

#### Table: Age Distribution

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2034</th>
<th>2035</th>
<th>2036</th>
<th>2037</th>
<th>2038</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 0-4</td>
<td>2034</td>
<td>2035</td>
<td>2036</td>
<td>2037</td>
<td>2038</td>
<td>2034</td>
</tr>
<tr>
<td>Age 5-19</td>
<td>2034</td>
<td>2035</td>
<td>2036</td>
<td>2037</td>
<td>2038</td>
<td>2034</td>
</tr>
<tr>
<td>Age 20-44</td>
<td>2034</td>
<td>2035</td>
<td>2036</td>
<td>2037</td>
<td>2038</td>
<td>2034</td>
</tr>
<tr>
<td>Age 45-64</td>
<td>2034</td>
<td>2035</td>
<td>2036</td>
<td>2037</td>
<td>2038</td>
<td>2034</td>
</tr>
<tr>
<td>Age 65+</td>
<td>2034</td>
<td>2035</td>
<td>2036</td>
<td>2037</td>
<td>2038</td>
<td>2034</td>
</tr>
</tbody>
</table>

#### Pie Charts:

1. **Population within 120 m of HS2 Option B Tracks or Station**
2. **Population within 60 m of HS2 Option B Tracks or Station**

#### Impacts of 9 years of construction

2. **Comparison of Age by Population located in the 60m and 120m Buffer Zones and Time**
Impacts of 17 Years of Construction

3) Comparison of Age by Population located in the 60m and 120m Buffer Zones and Time
Comparison of Ethnic Groups by Population in the 60m and 120m Buffer Zone
Housing: Household's accommodation is either overcrowded, with an occupancy rating of less than 1 or shared dwelling, or has no central heating.

Health and disability: Any person in the household has general health problems or is long term sick.

Education: No person in the household has the highest level of qualification (see highest level of qualification) and no person aged 16-17 is a full-time student.

Employment: Any member of a household not a full-time student is either unemployed or long-term sick.

A household is deprived in a dimension if they meet one or more of the following conditions:

<table>
<thead>
<tr>
<th>Deprived in 4 dimensions</th>
<th>Deprived in 3 dimensions</th>
<th>Deprived in 2 dimensions</th>
<th>Deprived in 1 dimension</th>
<th>Not deprived in any dimension</th>
</tr>
</thead>
</table>

5) Comparison of deprivation by households located in the 60m and 120m buffer zone.
1. Background

The Hybrid Bill received its second reading in the House of Commons in December 2013, following HS2 having published its Strategic Case document and a plethora of so called supporting economic documents in October 2013.

None of these documents showed any hard facts regarding the demand for high speed rail (i.e methodically calculated passenger numbers meaningfully explained), nor the capacity calculations relating to either the existing classic network or the high speed network.

Despite this lack of fundamental information provided by HS2 Ltd, the House of Commons voted in favour of the Hybrid Bill by some 446 to 36 even though there were only around 70 members of the Commons being present at the debate. This is because all parties currently support HS2 and the associated Hybrid Bill was effectively voted through with a three line whip being applied to all three main parties.

This was despite the HS2 proposal receiving highly critical reviews from the Commons Public Accounts Committee (which were published) and the Government’s Major Project Authority’s highly critical report of the HS2 project, which the Government has repeatedly refused to make public despite repeated FOI requests and an instruction from its Commissioner to do so.

HS2 has all the pre-requisites for major misallocation of substantial public expenditure that this country can ill afford, especially against an economic background facing the UK with UK governments running repeated annual budgetary deficits which are forecast to increase UK national debt to just under £1.5 trillion by 2015.

The purpose of this document is to bring to the Select Committee’s attention specific shortcomings in the business and economic case for HS2 which collectively have grossly overstated the forecast demand for passengers using HS2, over stated the financial benefits that arise from that demand whilst understating the economic losses that will arise from this project.

These factors have combined to produce unrealistic and unattainable BCRs that were so readily quoted by Members of the Commons during the Hybrid Bill debate in December 2013 and which show that there is, in reality no economic justification to continue with this project.

What is required is a fresh and fully transparent economic assessment of line capacity, and train capacity in respect of current and future rail demand that reflects the different categories of rail user demand e.g. commuter, long distance commuter, business and leisure, rather than a generalised whole demand approach.

In addition transparent modelling approaches are required to determine demand within each category, with proposed transparent solutions to each which show how the forecast demand for each category of rail user is addressed and which in turn filters through to the whole.
Such assessments and solutions must be unconstrained by our politicians’ apparent need for increased speed at any costs (paid for by the UK taxpayer) which have severely limited the options so far considered.

Reference is made throughout this document to the following HS2 publications:-
In October 2013 HS2 published the following documents:-
The Strategic Case for HS2 (October 2013, 153 pages)
The Economic Case for HS2 (October 2013, 96 pages)
The Economic Case for HS2 – Assumptions Report (October 2013, 70 pages)
The Economic Case for HS2 – Rick Analysis (October 2013, 28 pages)
The Economic Case for HS2 – The Y Network and London – West Midlands. (February 2011, 62 pages)
HS2 Document headed Demand for Long Distance Travel (April 2011, 16 pages)
High Speed Rail – London to the West Midlands and beyond Demand Model Analysis (February 2010, 172 pages)
ONS Data on Real GDP Growth since 1950
Office for National Statistics Report 7/11/2012 Labour Market Theme (Real Wage Growth)

2 Is there an economic case for HS2?

2.1 Demand for HS2 (Part 1).

Presented in this section is evidence taken from HS2Ltd’s documents which show unexplained and contradictory statements about the forecast rates of passenger growth and the resultant forecast passenger demand that underpin the benefits claimed by HS2.

These demonstrate that the economic case for HS2 is based upon over estimated or highly inflated forecast passenger numbers travelling To/From London over the next 20 + years.

The three statements shown below are taken from October 2013 documents. These outline the basic premise underpinning HS2’s approach to passenger demand forecasting and hence deriving from those numbers, the benefits of associated with the project.

Paragraph 5.5.9 of the October 2013 Economic Case states what HS2 claims to drive the demand for HS2.

5.5.9 Increases in demand for travel are not just driven by growth in GDP. They are also driven by the growth in the UK population.

Paragraph 5.1.1 confirms that HS2 accepts that demand growth has a significant impact on the economic case for HS2.

5.1.1 The rate of demand growth has a significant impact on the economic case for HS2,
Paragraph 5.1.2 confirms that HS2’s approach to forecasting demand in the October 2013 documents is based upon an earlier document headed The Economic Case for HS2 – The Y Network and London – West Midlands which was published in February 2011.

5.1.2 Our general approach to forecasting demand growth remains as set out in the original February 2011 Economic Case.
In short, HS2 Ltd’s forecasting of future passenger demand is driven largely by UK economic growth (specifically GDP growth) and population growth, and GDP per capita growth. HS2 Ltd state that passenger demand has a significant impact upon the economic case for HS2 project. Therefore, if passenger demand is deemed high, the benefits accruing to the HS2 project will be high, but conversely, if passenger demand is low, so too the benefits.

2.2 Demand doubts arising from the October 2013 documents - Over Emphasised - Over Optimistic BCR projections

The October 2013 Business Case and Economic Case documents amount to a restatement of many assertions and assumptions made in earlier versions of the HS2 Ltd’s documents from 2010 and 2011.

The October 2013 documents over emphasise the potential of HS2 by showing apparent significant and favourable BCRs, which are based on modelling scenarios which are simply not used in the standard appraisal methodology required by the DfT.

Much of the content of these documents is presented as tables and figures depicting BCR rates in excess of 3, 3.5 or 4 or more, which have been modelled upon assumptions that are not consistent with the standard appraisal methodology. These give the impression that this project is economically sound whereas it is anything but!

Paragraphs 1.2.6 and 1.2.11 as show the BCRs calculated using the standard appraisal methodology, and these are presented as simple statements rather than eye catching figures.

1.2.6 Using the standard approach, the point-estimate BCR of the whole network (including Wider Economic Impacts) is estimated at 2.3

1.2.11 Figure 2 shows the same analysis for Phase One. The standard approach generates an estimate of the BCR, with wider economic impacts, of 1.7

The BCR in figure for Phase One also includes WEIs.

Paragraphs 1.3.4 and 1.3.5 below, show the apparent impact on project BCR’s over and above the standard appraisal BCR where HS2 Ltd have modelled higher passenger demand volumes than would normally be allowed within the standard appraisal methodology.

1.3.4 The series of graphs in Figure 3 show that modest changes to the demand cap can lead to significant changes in the benefit cost ratios, with much higher likelihoods of the scheme being high or even very high (BCR>4) value for money. Setting the cap at a higher level would result in the cap level being reached later than 2036.

1.3.5 A 10% increase in that level results in the cap being reached in 2040 with a point estimate BCR of 2.8 and a very high probability of the BCR being in the high or very high value for money categories. A 39% increase results in the cap being reached in 2049 with a point estimate BCR of 4.5 and an even higher probability of the BCR being in the high or very high categories. Under these longer-term demand growth scenarios the point-estimate BCR lies between 2.8 and 4.5.

Unfortunately, HS2 Ltd fail to show in the same document what the impact upon the standard appraisal BCR is where forecast passenger demand decreases by the amounts
stated in those paragraphs. So for example, would a 10% reduction in demand lead to a BCR of 1.8, or worse still a 39% reduction in demand lead to a BCR of between 0.5 and 1.0?

If HS2 Ltd are modelling a spread of forecast passenger volumes, they should model the impact upon BCRs of both increases and decreases equally and present the findings openly.

Beyond the observations outline above, the October 2013 documents provide little hard numerical evidence in respect of forecast passenger demand and the problems in the current network associated with that demand; the forecast future demand for travel without HS2 and similarly with HS2, that HS2 Ltd’s conclusions that HS2 draw in support of its proposal.

**2.3 Contradictory Passenger Growth Rates**

Paragraph 29 of the Strategic Case for HS2 shown below states the assumed growth rate in long distance passenger numbers.

29. Looking forward, the increase in the number of standing passengers could be dramatic. The HS2 Economic Case models future long-distance passenger demand to increase at a rate equivalent to 2.2% per annum – and then to stop growing altogether in the mid 2030s.

Also shown below is paragraph 3.2.18 of the Strategic Business Case, which shows assumed annual growth to be 5% pa.

3.2.18 For intercity travelers the trains are less suited to accommodating standing passengers, passengers travel with more luggage and there is a weekend as well as a daily peak pattern of demand to be accommodated. For this market, the upgrade would add an extra intercity peak train and would provide full length 11-car trains across the whole fleet. Our estimates of peak demand assuming 5% annual growth indicate that the extra seating capacity created would be used up by 2020. In other words, for every extra seat provided for intercity travelers, an additional passenger would be travelling. When this situation is reached, in the Department’s view, there will be no practical prospect of further enhancement. And by 2028, at this rate of intercity demand growth, there would be as many passengers as seats across the evening peak hour, which in practice means serious levels of overcrowding.

These two statements appear to be contradictory. HS2 Ltd state they have forecast demand at an annual growth rate of 2.2% but then appear to apply a 5% annual growth rate in order to “demonstrate” the inadequacy of the current proposed classic rail enhancements to meet so called forecast demand.

What would the match of intercity seats to passengers at peak time be if the growth rate of 2.2% had been applied? In presentational terms, these calculations produce a bias toward HS2 instead of an objective comparison, which could show that HS2 isn’t necessary at all – especially as HS2 Ltd’s methodology for forecasting passenger demand, as will be shown later, is based upon population growth and income growth figures that exaggerate passenger growth.

**2.4 Over-stated and inaccurate forecast passenger numbers – October 2013 documents**
Throughout the October 2013 documents produced by HS2 Ltd, only once in the HS2 Economic Case in October 2013 does HS2 Ltd state forecast demand (in terms of forecast number of passengers) predicted to use the high speed service. This is shown in paragraph 2.1.2 on page 69 of the Economic Case.

2.1.2 Phase One includes the longest section of track without a station between Old Oak Common and Birmingham Interchange. This section will be capable of handling 18 trains per hour in each direction and is expected to carry 138,000 passengers a day from 2036. This will rise to over 240,000 passengers a day in 2036 once the full network is complete.

HS2 Ltd show no information regarding the methodology behind the calculation of passenger numbers, but it would appear from the statement that in or from 2036 HS2 is forecast to carry both 138,000 and 240,000 passengers each day.

Clearly both forecast volumes cannot be true for the same year, so which one is it? What is the rationale behind the numbers and how are the forecast volumes spread during the day for each day of the week and each hour of the day, specifically from and to each city that HS2 links?

It is the spread of passenger demand throughout the day (and across the week) and by the category of travel (ie. Commuting, Business, Leisure, etc) both within each region and between each region that determines overall passenger demand and the suitability of the HS2 proposal (and other classic rail solutions) in meeting that demand, not some unqualified total demand prediction that HS2 Ltd have presented.

In this respect, HS2 Ltd’s strategic and economic cases present little specific data to justify their high speed rail proposal.

Outlined is the data that is absent from both the Business Case and the Economic Case but provided by the 2010 National Rail Travel Survey. This data helps put rail travel into a context that is missing from the HS2 Ltd documents. It also highlights the impression given by HS2 Ltd that the high speed rail solution proposed by them solves all capacity problems caused by commuting, business and leisure travellers, when the proposed high speed rail solution only deals with long distance intercity rail travellers which actually makes up a very small proportion of the whole passenger demand for rail transport.

Figure 2 shown below is from the 2010 NRTS survey and shows a typical spread of passenger demand throughout the day. The NRTS also states that on a typical day commuting to and from work or education accounted for the biggest share (63 per cent) of all these journeys. Business trips represented 13 per cent and leisure travel 24 per cent of all journeys.

HS2 Ltd assume that passenger demand for HS2 will be split 30% for business users and 70% for other reasons – mainly leisure (paragraph 3.3.13 – The Economic Case for HS2 February 2011), but makes does not include commuting. Consequently, the demand forecasting methodology used by HS2 Ltd should focus on the 37% of all rail journeys that according to the NRTS are not commuting. From the economic case for HS2 and associated documents, it is far from clear which rail journeys have been included in the HS2 Ltd’s forecasting methodology but the passenger volume forecasts suggest that HS2 have included numbers for commuting.
Shown below is Table 3 from the same NRTS survey that shows the proportion of rail journeys undertaken within and between each region.

The proportion of inter regional journeys from those regions linked to HS2 can be summarised as follows:

Only 8% of West Midlands (Birmingham) rail journeys go to London and 1% of London rail journeys go to the West Midlands.

Only 10% of North East rail journeys go London and less than 1% of London rail journeys go to the North East.
Only 5% of North West rail journeys go to London and 1% of London rail journeys go to the North West.

Only 6% of Yorkshire and Humberside rail journeys go to London and 1% of London rail journeys go to Yorkshire and Humberside.

Of the regions linked to HS2, East Midlands region has the highest number of rail journeys to London at 21% but still only 1% of London rail journeys go to the East Midlands.

These inter regional relationships suggest that passenger demand for long distance travel to London far outweighs travel from London to those regions, indicating the economic shift of the UK economy; and secondly, the proportions of inter-regional travel versus rail travel as a whole is comparatively small.

This further highlights the need for clear demand segmentation in HS2 Ltd's approach to forecasting passenger demand, rather than a whole demand assessment, so that a wrong solution isn’t promoted at the expense of solutions that deal with the real problem. Unfortunately, HS2 Ltd haven’t done this.
2.5 Demand doubts arising from the February 2011 and April 2011 Documents

Referring to the documents The Economic Case for HS2 – The Y Network, London – West Midlands (published February 2011) and the HS2 document headed Demand for Long Distance Travel (published April 2011), HS2 Ltd produce information which suggests how the forecast of demand have been derived, even though the resultant numbers may appear contradictory.

The methodology HS2 Ltd have used to predict future passenger demand lies in the use of the PDFH and the model known as Webtag in which HS2 Ltd state that the two key criteria the model uses to forecast future demand are GDP growth change and population growth change.

Shown below are is paragraph 6.3 and Table 4 from the April 2011 document, although this latter document only refers to the London – West Midlands section rather than the full Y network.

6.3 We forecast that in 2043, approximately **136,000 passengers** would travel on HS2 each day (42.6 million each year) on the section between Birmingham Interchange and Old Oak Common. A further **14,000 each day** would use classic compatible trains without travelling on the high speed
line itself. The numbers of predicted daily trips between a selection of city centres and London with and without HS2 are shown in Table 4. These are the total number of (one way) rail trips which originate within a city council area and not the total number of passengers using the station in each city. So for example in 2043 with HS2 20,900 people would make a rail trip between zones covering Greater London and the city of Birmingham.

**Table 4 Average Daily Rail Demand, between London and city council areas 2008 and 2043**

<table>
<thead>
<tr>
<th>London – city council area</th>
<th>Demand 2008</th>
<th>Demand without HS2 2043</th>
<th>Demand with HS2 (London - West Midlands) 2043</th>
</tr>
</thead>
<tbody>
<tr>
<td>London – Birmingham</td>
<td>6,600</td>
<td>15,200</td>
<td>20,900</td>
</tr>
<tr>
<td>London – Manchester</td>
<td>6,000</td>
<td>14,900</td>
<td>18,100</td>
</tr>
<tr>
<td>London – Liverpool</td>
<td>2,400</td>
<td>5,500</td>
<td>7,100</td>
</tr>
<tr>
<td>London – Glasgow</td>
<td>900</td>
<td>2,400</td>
<td>5,900</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15900</strong></td>
<td><strong>38000</strong></td>
<td><strong>52000</strong></td>
</tr>
</tbody>
</table>

If Table 4 is the forecast of passenger demand with HS2 using Webtag, where does the figure of 136,000 passengers stated in paragraph 6.3 come from? Which one is correct? Furthermore, paragraph 4.5 shows the growth rate for long distance rail trips up to the project year 2043 is 1.9% pa.

4.5 Overall we forecast the total number of long distance rail trips will grow by 95% or by 1.9% per year on average in the 35 years between 2008 and 2043. This is lower than recent growth on franchised long distance rail operators which saw the total number of trips more than double in the 15 years between 1994/95 and 2009/10. We forecast that across all modes of transport, the growth rate will be slightly slower at 1.4% on average between 2008 and 2043.

**Applying the annual growth rate of 1.9% pa to the current demand of 15,900 shown in Table 4 above produces a demand forecast of 31,300 and not 38,000 (demand without HS2), or 52,000 (demand with HS2), or indeed 136,000 (demand stated in paragraph 6.3).**

This suggests that HS2 have overestimated demand by anything from 21.4%, or 57.1% or over 300% and provides no clarity on where and how HS2 have obtained forecasts of 52,000 or 136,000 passengers.

It is a concern that the forecast of 136,000 passengers shown in the April 2011 document is very close to the forecast of 138,000 passengers shown in paragraph 2.1.2 in the October 2013 Economic Case and which HS2 Ltd has stated was in turn based upon the February 2011 Economic Case.

**2.6 Demand doubts arising from the February 2010 Documents**
HS2 Ltd have acknowledged that the February 2011 Economic Case forecast fewer passenger volumes compared with the original 2010 Economic Case, and as such yielded lower BCRs.

However, that document demonstrated similar in consistencies in its passenger forecasts to the 2011 Economic Case. Is this an example of making the same mistake twice? In the original document High Speed Rail – London to the West Midlands and beyond, Demand Model Analysis, which was published by HS2 in February 2010, HS2 Ltd presented Table 10.2a.

The forecast of daily number of passengers to/from London by 2033, but without HS2 is shown in a copy of a table taken from page 89 of that document.

<table>
<thead>
<tr>
<th>To/from London</th>
<th>2008</th>
<th>2033</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham</td>
<td>8,300</td>
<td>20,500</td>
</tr>
<tr>
<td>Manchester</td>
<td>7,300</td>
<td>20,300</td>
</tr>
<tr>
<td>Liverpool</td>
<td>2,900</td>
<td>8,200</td>
</tr>
<tr>
<td>Glasgow</td>
<td>1,400</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19900</strong></td>
<td><strong>55000</strong></td>
</tr>
</tbody>
</table>

From Table 10.2a, by 2033 the number of passengers forecast to travelling to/from London has increased by 35100 or by 276% over the period and this was based upon an annual growth rate of 3.6% pa.

However, paragraph 10.2.3 shown below shows forecast passenger demand with HS2 as being 146,000 passengers per day.

**10.2.3 These improvements in travel time and experience would attract significant numbers of passengers onto the high speed trains. Around 145,000 would use HS2 itself – providing faster journeys to London. A further 15,000-20,000 passengers would use classic compatible trains without travelling on the high speed line itself. These journeys are between places such as the north of England and Scotland where HS2 classic compatible services replace the existing classic rail service.**

So how does a forecast of passenger demand of 55,000 passengers using classic rail become 145,000 passengers using HS2 alone. This level of demand represents an increase of over 700% implying annual passenger growth rates of nearly 8% pa, compared with the stated 3.6% pa.

Figure A2.2 below is taken from the 2010 Demand Model Analysis document.
Figure A2.2 shows the impact on BCR of reductions in the forecast passenger numbers due to lower passenger growth rates.

Paragraph A2.2.5 from that same document explained Figure A2.2 as follows:

**A2.2.5** Figure A2.2 shows how sensitive the business case is to the assumptions on the growth in background demand for rail travel. It assumes that background demand will still reach the level we currently forecast for 2033, but assumes this will be achieved at a later date (i.e. slower growth). If growth were just 25% slower than currently projected (i.e. 2.7% per annum instead of 3.6% per annum), the BCR for scheme opening at the end of 2025 (excluding wider economic impacts) would drop below 1.5.

The 2013 documents contain no similar analysis. However if the passenger growth rate of 2.2% pa HS2 Ltd stated in the Strategic Case for HS2 in paragraph 29 was applied to Figure A2.2, the 2010 BCR would reduce to below 1.25.

This compares with the BCR of 1.7 for Phase One that HS2 Ltd stated in paragraph 1.2.11 of the 2013 Economic Case which according to HS2 Ltd is based on fewer forecast passengers compared with the 2010 Economic Case.

3. Demand doubts arising from the PDFH and Webtag Methodology itself

In this section, key elements of the PDFH and Webtag models are critiqued. In doing so, it should become apparent that the demand forecasting methodology itself has a bias that will overstate forecast demand. As a result of the over estimation of passenger demand, the benefits arising from HS2 are similarly exaggerated and will therefore be unattainable.

3.1 Ticket Pricing Assumptions – Impact upon Demand

The methodology used to determine passenger demand for HS2 and revenue volumes arising from that demand assumes that the price of tickets for high speed rail will be broadly the same as that for classic rail.

HS2 have never publicly stated in their documents precisely what the pricing levels are. However, analysis of ticket pricing from Ashford International to London reveals that in the captive daily commuter market, travelling into London at peak times and not using season tickets reveals that high speed rail tickets using HS1 to St. Pancras are priced at a premium.
of between 18% and 30% above the classic rail ticket prices into London Bridge and Cannon Street. HS2 Ltd’s assumption in this respect is not founded in commercial reality.

HS2 have not tested the pricing assumption in their demand forecasting model, and so have not determined the impact of existing ticket price differentials between classic rail and high speed rail. Furthermore, HS2 between Birmingham and London will not offer the short distance commuting volumes that HS1 currently offers because there will no stations south of the Birmingham Interchange and north of Old Oak Common.

The forecasting methodology does assume that demand for high speed rail travel will be affected by rail ticket price increases over the period specified in the business case. The central pricing assumption is that ticket prices will increase by RPI+1% pa throughout the appraisal period.

Whilst the October documents do not report any sensitivity analysis on forecast passenger demand due to changes in ticket price growth, below is a statement from the February 2011 document The Economic Case for the Y Network.

7.2.18 If rail prices increase, then the benefits decline. If rail fares increase by RPI + 2% (instead of 1%) through to 2043, then demand on the railway would be 24% lower. Assuming that demand is capped at this lower level the result is that the number of passengers on HS2 would fall, leading to lower benefits and revenues overall (despite the higher fares). This would mean the BCR excluding WEIs falls to 0.9.

The central assumption regarding broad parity in the pricing of tickets for high speed rail versus classic rail is deeply flawed and flies in the face of UK and international evidence, leading to an over-estimation of demand for high speed rail and benefits arising from it.

3.2 Assumptions about the pricing of bus/coach travel versus high speed rail travel – Impact upon Demand

The forecasting methodology used by HS2 Ltd has an inbuilt bias in its assumptions regarding the future cost of bus travel/coach travel.

Paragraph 2.2.14 (Page 10) of The Economic Case – Assumptions Report 2013 states that future fare increases for bus travel will rise at RPI+2% pa. This compares with the stated assumption underpinning the business case for HS2, that rail fares on HS2 will increase only at a rate of RPI+1% pa.

This assumption makes bus travel increasingly uncompetitive relative to high speed rail travel and inflates the demand for HS2. Consequently the number of forecast passengers (and hence the financial benefits arising from that demand) are exaggerated by the model. If parity between the two modes of transport is established by assuming that rail fares will increase at the same rate as bus/coach travel (i.e. RPI+2%) it has already been shown that demand for rail will decrease by 24% (see paragraph 7.2.18 above) leading to a BCR of 0.9.

Given that the cost drivers (e.g fuel and labour) that lead to higher bus/coach operating costs (and hence fare inflation) would tend to be same as those driving rail costs (and hence fare inflation), the assumption made by HS2 Ltd is unrealistic. The assumption unchallenged leads to bias in favour of high speed rail travel and inflates unrealistically demand for HS2.
3.3 Assumptions about GDP Growth—Impact upon Demand

The forecasting methodology assumes that GDP growth is a central driver of demand for high speed rail. The methodology assumes that as GDP grows, the population feels wealthier and therefore expresses that wealth on travelling more, particularly on high speed rail.

The Economic Case published in October 2013 uses forecasts from the OBR. The GDP growth average is 2.5% pa over the period 2015-2018 with average CPI inflation at 2.0% pa over the same period. Real GDP growth is therefore around 0.5% pa. The methodology uses notional GDP growth which overstates the forecast of passenger demand.

The table below shows average UK real GDP growth per annum over each decade since 1950.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Average Real GDP Growth in Decade</th>
<th>% change from previous decade's Average Real GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s</td>
<td>2.817%</td>
<td>-</td>
</tr>
<tr>
<td>1960s</td>
<td>3.521%</td>
<td>25.0%</td>
</tr>
<tr>
<td>1970s</td>
<td>2.567%</td>
<td>-27.1%</td>
</tr>
<tr>
<td>1980s</td>
<td>2.725%</td>
<td>6.2%</td>
</tr>
<tr>
<td>1990s</td>
<td>2.815%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2000s</td>
<td>1.944%</td>
<td>-30.9%</td>
</tr>
<tr>
<td>2010s</td>
<td>0.983%</td>
<td>-49.5%</td>
</tr>
</tbody>
</table>

Source ONS Historical Real GDP growth

Against this trend in decreasing annual rates of real GDP growth, the forecast real growth rates in GDP for 2015-2018 at 0.5% pa would appear consistent, and further highlights the in-built tendency of the forecasting methodology used by HS2 Ltd to overestimate forecast passenger demand using notional changes in GDP.

The exaggeration in forecast passenger demand based on GDP growth is further compounded by the fact that GDP growth cannot be a central driver of future demand. The central driver of demand must be annual growth in real disposable incomes. Statistical evidence from ONS shows that in the period 1986 to 2011, real wages for full time employees grew by 62% for the average wage over that period. In that same period, real GDP for the UK grew by 86%.

Real growth in wages in the last 25 years is 28% lower than real growth in GDP over the same period and as the above table on real GDP growth rates since 1950 shows, the trend for real GDP growth is declining.

This trend is confirmed according to a recent assessment on the UK economy by Ben Broadbent, Deputy Governor of Monetary Policy for the Bank of England, who was recently reported in the national press confirming that low pay growth is here to stay. Since 2009 real pay levels have fallen by 1% even though GDP is now growing at over 2%.
There is now statistical evidence and informed authoritative economic opinion about the UK economy that shows the central modelling assumption about GDP growth being capable of producing realistic passenger demand forecasts is invalid. Consequently, there is a very real risk that the forecasts for HS2 produced by HS2 Ltd will significantly overstate the expected number of passengers, and hence the financial benefits arising from those passengers.

3.4 Assumptions about Population Growth—Impact upon Demand

The forecasting methodology assumes that Population growth is also a central driver of demand for high speed rail. The methodology assumes that as population grows, more people will travel, particularly on high speed rail.

The assumptions about population growth feed into the GDP per capita calculations (both definitions used by HS2 Ltd) to determine forecast passenger numbers and VoT predictions are shown in Table 2-1 from HS2 Economic Case – Assumptions Report

Table 2-1: Regional population growth used in rail demand forecasts – PFMv4.3

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth in Population from 2010</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2026</td>
<td>2036</td>
<td></td>
</tr>
<tr>
<td>North East</td>
<td>3.3%</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td>North West</td>
<td>7.6%</td>
<td>9.3%</td>
<td></td>
</tr>
<tr>
<td>Yorkshire &amp; Humberside</td>
<td>7.5%</td>
<td>13.4%</td>
<td></td>
</tr>
<tr>
<td>East Midlands</td>
<td>13.2%</td>
<td>19.4%</td>
<td></td>
</tr>
<tr>
<td>West Midlands</td>
<td>9.9%</td>
<td>13.5%</td>
<td></td>
</tr>
<tr>
<td>East of England</td>
<td>13.1%</td>
<td>20.5%</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>17.8%</td>
<td>25.0%</td>
<td></td>
</tr>
<tr>
<td>South East</td>
<td>8.7%</td>
<td>13.9%</td>
<td></td>
</tr>
<tr>
<td>South West</td>
<td>7.4%</td>
<td>13.6%</td>
<td></td>
</tr>
<tr>
<td>Wales</td>
<td>6.4%</td>
<td>9.1%</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>5.4%</td>
<td>5.9%</td>
<td></td>
</tr>
<tr>
<td>Great Britain</td>
<td>9.8%</td>
<td>14.5%</td>
<td></td>
</tr>
</tbody>
</table>

Superficially, the figures in the above table would suggest significant population growth in the regions that HS2 would serve. However, the figures do not reveal the share of GB population residing in each of the regions over the forecast period, nor do they show the age distribution of the populations over the same period.

The table below which is based on 2009 ONS Population Statistics Tables 10.1, 10.2, 10.6, 10.11 and 10.15 shows the share of GB population in 2009, and 2028 and the change in share due to population growth over the two periods.

The table shows that in the West Midlands, North East and North West regions, population is forecast to increase but share of overall population is forecast to decline relative to the East, South East, London and the South West regions, regions which in large part will not be using HS2. This impact has not been assessed on forecast demand.
The impact of age distribution within the regional population forecasts have not been considered by HS2 Ltd in determining forecast passenger numbers. The table below (Table 9 from the NTRS 2010) shows the age distribution of passengers using rail travel. This was reported in the 2010 National Rail Travel Survey Report.

<table>
<thead>
<tr>
<th>Region</th>
<th>Under 16</th>
<th>18 – 19</th>
<th>20 – 24</th>
<th>25 – 34</th>
<th>35 – 44</th>
<th>45 – 59</th>
<th>60 – 64</th>
<th>65 – 69</th>
<th>70 or over</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuting</td>
<td>1</td>
<td>7</td>
<td>14</td>
<td>26</td>
<td>24</td>
<td>25</td>
<td>2</td>
<td>0.39</td>
<td>0.24</td>
<td>100</td>
</tr>
<tr>
<td>Business</td>
<td>0.18</td>
<td>1</td>
<td>8</td>
<td>20</td>
<td>27</td>
<td>37</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Leisure</td>
<td>1</td>
<td>10</td>
<td>13</td>
<td>16</td>
<td>15</td>
<td>24</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>10</td>
<td>13</td>
<td>23</td>
<td>22</td>
<td>26</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>100</td>
</tr>
</tbody>
</table>

Percentages do not sum to 100 per cent due to rounding.

Source: 2010 National Rail Travel Survey Report

This shows that less than 10% of GB total journeys were undertaken by people aged 60 or over, with 3% of journeys being undertaken by people aged 70+. The age range that accounted for most travel was the 25 – 59 age groups accounting for 71% of total travel, 75% of the commuting travel, 84% of the business travel and 55% of the leisure travel. The table below shows an analysis of population growth from the ONS by age group.
This table shows the population, for the key regions which HS2 Ltd state will drive demand for HS2 (West Midlands, North West, North East, Yorkshire, East Midlands), the size of the 25-59 age group in 2033 (when phase 2 opens) that accounts for most rail journeys, will be smaller than it was in 2012, especially in the North East (-7.45%) and the North West (-4.70%).

The table also shows that the age group 70-90+ will increase by an average 66.5% by 2033. Of the numbers of people 70 – 90+ age group, on average 45.7% of this group are 80-90+. This is significant, because the 80-90+ age group occupy a very small proportion of rail travellers. The increase in population in this age group will not compensate for loss of passenger demand due to the reduction in size of the 25 – 59 age group; nor will the disposable income of the 80-90+ age group be able to compensate for the loss in revenue associated with reduced size of the 25-59 age group.

This latter point is significant because state pensions (and other annuities) on which this age group relies are increased annually by the rate of CPI. HS2 have assumed that the price of high speed rail tickets will increase by RPI+1%. On average CPI runs at about 1% point below RPI meaning that CPI (equivalent to RPI -1%). This means that real ticket price increases are equivalent to RPI+2%. According to paragraph 7.2.18 of the February 2011 Economic Case for the Y Network this level of price increase will decrease demand by 24% and BCR will be 0.9.

Consequently, HS2 Ltd’s forecast passenger volumes are significantly overstated by their methodology, and because those forecast passenger volumes are too high so too are the financial benefits claimed by HS2 Ltd.

### 3.5 Assumptions about the calculation of Value of Time saved calculations

HS2 Ltd attributes a significant proportion of the economic case for HS2 to the Value of Time (VoT) saved by passengers using high speed rail.

The methodology used to determine VoT relies upon GDP per capita (Economic Case – Assumptions Report, paragraph 3.4.1). However, the GDP per capita definition used for VoT calculation is NOT the same as the GDP per capita definition used to determine passenger forecasts.

The latter shown in Table 2.3 shows GDP per capita for Great Britain to grow by 23% by 2026 and 47% by 2036. The former shown in Table 3.2 shows GDP per capita for the UK
(on a different definition) to grow by 31% by 2026 and 60% by 2036. The relative difference between the two is 35% by 2026, and 28% by 2036.

Consequently, the financial benefit attributed to VoT savings may be exaggerated by a corresponding 28% to 31%. This is not an insignificant discrepancy and very probably overstates the financial benefits associated with the economic case.

3.6 Conclusion regarding HS2 Ltd Passenger Demand Forecasting

All the factors highlighted in the preceding sections indicate very strongly that HS2 Ltd’s approach to forecasting passenger demand in support of high speed rail is flawed, and full of contradictions. The forecasting methodology as applied by HS2 Ltd shows a bias in favour of its chosen solution to a rail capacity issue that has not been logically and methodically made out.

The forecasting methodology has design flaws that results future passenger numbers being overestimated and, because the financial benefits flow from those passenger forecasts, will overstate or exaggerate the financial benefits arising from the project.

It is no coincidence that, when HS1 used exactly the same passenger forecasting methodology that HS2 Ltd have used, HS1’s original passenger forecasts over-estimated actual passenger numbers by two fold.

When HS1 was planned predicted annual passenger demand was forecast to reach 20m by 2010. In 2013 actual passenger volumes have just passed reached 10 m.

There is a very real danger this will be repeated for HS2.

4. Finally – the Missing Cost Element s of the Business Case

4.1 Costs of HS2 including Environmental Costs NOT covered in the Business Case

Paragraph 7.2.12 outlines HS2 Ltd’s approach to claiming economic benefits that have arisen and which have been enabled by HS2 and using such to add to the business case for the project.

7.2.12 There will be an uplift in land value resulting from the new line. We are considering the implications of this. Where there is a case for a contribution to the project – whether it is core project support, land, or aligned investment – we would expect those parties to contribute. Such contributions will help emphasise the importance of the project to the regional economies that will benefit from the capacity and connectivity improvements that HS2 will deliver. (Strategic Case for HS2 October 2013)

What is missing however, and in particular reference to land values is an acceptance on the part of HS2 Ltd, that land values in general, but specifically residential property values of buildings near to the line, will diminish in value.
For most ordinary people, the personal or family wealth is tied up in the value of land and residential buildings. As property values decrease, so does personal and family wealth. This wealth loss is an economic loss (or cost) and should be included in the business case.

Paragraph 4.10.9 states HS2’s approach to the latter. Paragraph 4.10.9 summarises the approach adopted by HS2 Ltd.

4.10.9 In terms of property, the Government is committed to compensating fairly those who are affected by HS2. There will be a generous and wide ranging package of measures which go beyond what is required by law.

The legal framework that determines “fair” compensation is set by the Compulsory Purchase Act and the Land Compensation Act 1973. Neither of these two Acts compensates owners of land and buildings for the long term loss in land value that occurs to land situated near to the HS2 railway line, where previously no such line existed. Numerous academic studies in the UK and from around the world have attempted to calculate the impact on land values (principally residential property values) due to noise levels associated with large infrastructure complexes e.g. roads, rail and airports).

There is now a considerable body of academic evidence that shows a strong correlation in permanently diminished property values in properties located nearer to major noise sources (especially where previously no such noise sources existed), and that these effects are felt at distances much greater than the 300m distance stipulated in the 1973 Land Compensation Act. These studies have produced NDIs (Noise Depreciation Indices) which show the average loss in property value (as a % of transacted property prices) per increased measure of noise (dBA).

These studies, which measure property values in relation to measured noise levels in the vicinity of existing noise sources, provide a clear indication of the expected permanent relationship of noise levels from a new source (such as HS2) to residential property values in areas where previously such a noise source did not exist (such as HS2). Outlined in the table below, is an estimate of the economic losses borne by residential householders situated along the HS2 route. The estimate is approximately £1.25 bn and residential householders are currently not compensated for this loss.
Estimate of Economic (Wealth) Loss in Residential Property Values due to Noise emitted from HS2 trains

<table>
<thead>
<tr>
<th>Regions affected by HS2 route (upto 1 km from line)</th>
<th>Average Regional Price</th>
<th>Ave Number of houses affected</th>
<th>Ave value drop per House</th>
<th>Regional Loss in Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>£362,699</td>
<td>34286</td>
<td>£8,705</td>
<td>£298,449,463</td>
</tr>
<tr>
<td>Outer Metropolitan</td>
<td>£273,998</td>
<td>34286</td>
<td>£6,576</td>
<td>£225,461,211</td>
</tr>
<tr>
<td>Outer South East</td>
<td>£217,534</td>
<td>34286</td>
<td>£5,221</td>
<td>£178,999,406</td>
</tr>
<tr>
<td>East Midlands</td>
<td>£149,714</td>
<td>34286</td>
<td>£3,593</td>
<td>£123,193,234</td>
</tr>
<tr>
<td>North West</td>
<td>£141,276</td>
<td>34286</td>
<td>£3,391</td>
<td>£116,249,966</td>
</tr>
<tr>
<td>West Midlands</td>
<td>£154,690</td>
<td>34286</td>
<td>£3,713</td>
<td>£127,287,771</td>
</tr>
<tr>
<td>Yorks &amp; Humberside</td>
<td>£139,775</td>
<td>34286</td>
<td>£3,355</td>
<td>£115,014,857</td>
</tr>
<tr>
<td>North</td>
<td>£119,702</td>
<td>34286</td>
<td>£2,873</td>
<td>£98,497,646</td>
</tr>
</tbody>
</table>

Source: Nationwide House Price Index Bulletin 2014 Q1  
Total Loss £1,283,153,554

| Assumed NDI rate (Ave of Aircraft Studies)* % per dBA increase | 0.80%  |
| Assumed No. of Residential Dwellings affected by Noise | 240000 |
| Average Noise increase at each Residence (No. of dBA increase in Noise) | 3 |

* See Appendix of Academic Studies

It is matter of urgent public policy, not just for HS2, but for future infrastructure projects (eg. Airports, fracking sites etc) that compensating property owners fairly for these losses is discussed and resolved.

It is simply not acceptable that this matter is simply ignored because true economic costs of infrastructure projects are understated, and the public at large begin to sense an avoidable economic injustice that diminishes personal and family wealth.

There are also public finance matters that arise from this issue. As land or house prices incur stamp duty at certain thresholds, lower property values due to increased noise levels will impact upon the amounts of stamp duty raised by the exchequer each year, compared with a situation without HS2.

If the estimate of the number of properties affected by HS2 is correct, then HS2 affects just over 1% of the current housing stock in England and Wales. This is not an insignificant number from a national perspective, and from the perspective of the individual affected, the wealth losses they face are significant and should be ignored no longer.

4.2 Impact of HS2 on Existing WCML Franchise and future Revenue stream

The economic case does not take into account the impact of HS2 passenger volumes which are forecast to transfer from the WCML franchise. The business case assumes that 65% of HS2 passengers will switch from WCML. Such a transfer will have a significant impact upon WCML franchise revenue streams over the period of the business case, and will, more than
likely, reduce its contribution to Government revenue. This cost should be looked into and built into the benefit:cost ratio along with the other elements raised in this submission.

September 2014
1. The Associated Society of Locomotive Engineers and Firemen (ASLEF) is the UK’s largest train driver’s union representing approximately 20,000 members in train operating companies and freight companies as well as London Underground and light rail systems.

2. ASLEF believes enhancing the capacity of Britain’s inter-city rail network is of paramount importance to the economic and social future of the UK.

3. The British Rail network is running at capacity. Over the past few years rail ridership has been at record highs with more distance being travelled by rail than in any other era in peacetime. We are travelling 10 billion miles a year more than we did just one decade ago.

4. The growth on the main two north to south routes in the UK is also extraordinary. Between 2008/09 and 2009/10 the West Coast Mainline increased the number of passenger journeys it took by 15.8% and passenger kilometres by 18%.

5. The East Coast Mainline is one of the busiest lines on the rail network and there is insufficient capacity on parts of the line to deal with all the requirements of passenger and freight services currently, without considering growth.

6. Sustainable economic growth relies on the ability of people and goods to get around. Figures quoted by Credo Group for Invensys Rail which showed that every £1 invested in rail by the government generates an additional £1.30 from the private sector – in other words investment in transport has a stronger multiplier effect than other sectors of the economy.

7. Network Rail’s Route Utilisation Strategy explains that “the West Coast Main Line is nearly full to capacity. The market for travel between London and Manchester is expected to grow at the fastest rate, with passenger demand expected to increase by as much as 61 per cent.” It also states that “this RUS therefore supports the development and implementation of a high speed network initially between London and the West Midlands, but also to Manchester and beyond. We believe that this is the best way to free up capacity on the West Coast Main Line and are delighted the Government is committed to the project.”

8. A report by Heathrow airport has claimed that a lack of capacity at Heathrow is costing the UK economy £14bn a year in lost trade. A simple way to deal with this is reduce the need for domestic aviation.

9. According to the EU, Heathrow’s congestion problems could be eased by cutting domestic and European flights, while demand for new runways could be suppressed by building new rail networks. The former EU transport commissioner, Siim Kallas, has announced a series of green transport goals. He stated "if we are successful in creating new railways they can take over short-haul airline connections. It makes it easier for the runway issue."
10. By linking to Heathrow airport, domestic connecting flights which use Heathrow as a main hub for international journeys will be reduced. It is important to remember that travel by HSR produces one-quarter the emissions of an equivalent trip by air, taking into account the average loadings typically achieved on each mode.

11. For HS2 to truly achieve its full potential in terms of its economic benefits, it is essential that rail freight is considered when looking at the many new paths which will become available on the East Coast and West Coast Mainlines.

12. It must be remembered that the rail freight sector directly contributes £870 million to the UK economy and supports output of £5.9bn. The benefits of rail freight fall outside the railway balance sheet but benefit the road network and the economy by removing or reducing:
   - £772 million per annum in congestion costs
   - £133 million per annum in road infrastructure costs
   - £68 million per annum in CO2 costs
   - Pro-rata 42 road deaths at a value of £78.8 million

13. Research already carried out by ARUP (A global firm of consulting engineers) and Volterra (Economic Consultants) had shown that a ‘Y-shaped’ network travelling from London to Birmingham, where it would split with one arm of the ‘Y’ heading to Yorkshire, could provide between £1.5bn and £3bn of productivity benefits to the economy, in addition to transport benefits of around £29bn.

14. Their research estimates that linking the Sheffield City Region the Leeds City Region, and the “Three Cities” of Derby, Nottingham and Leicester as part of a national high speed rail network would connect an area of 6.7 million people and 3 million jobs. Existing connections to the Tees Valley and Tyne and Wear City Regions would provide access to a further 2.2 million people and 0.9 million jobs.

15. They estimate the scheme will create 40,000 jobs and economic benefits of £43 billion.

16. For HS2 to truly meet its economic potential, it must link to HS1. This enables Birmingham to be a little over three hours from Paris, and Manchester and Leeds around 3 hours 40 minutes.

17. ASLEF firmly believes that the UK has no choice other than to build a new railway line. Our network is at capacity and there is no sign that the increase in usage is going to die down. Not creating the extra capacity offered by HS2 would not only be turning our back on additional economic benefits, but would also constrain current economic growth.

18. We also recognise that HS2 will create economic benefits due to higher speed journeys between our cities, additional capacity and more rail freight taking congestion off our roads. There are also benefits not covered by this investigation, in terms of social benefits and reduced carbon emissions. Transport spending leads to growth across our economy. Recent KPMG analysis of construction expenditure in
the coming years shows that £66.2 million is forecast to be spent on transport projects. This equates to 57% total spending. Transport underpins all of the UK’s industries. We’re at capacity on the railway. The wider economy desperately needs the benefits HS2 will bring.

September 2014
William Avery—Written evidence

1. Introduction

1.1. I am totally in favour with the principle and practice of investment in the infrastructure of the UK and working towards the equal distribution of the wealth of the nation, while at the same time preserving the character and uniqueness of the various regions and communities.

1.2. There are people for whom only the urban vibrancy of London and the other major cities are the place to live and work and there are also people for whom the very opposite is preferred.

1.3. People who chose to live in remote areas cannot expect the same availability of services as those who chose to live within or close to conurbations.

1.4. There is also a balance to be struck by society between forcing people to move to where there is employment or in the case of the elderly, closer to the services that they need as they get more dependant, and artificially creating employment or extending the reach of support services, both at disproportionate cost to the tax payer.

1.5. The key to improving the prosperity outside London and the south east is better communication between cities and their surrounding communities and fostering a spirit of cooperation rather than competition between cities. For instance, the journey time by train from Leeds to Manchester is only a few minutes quicker than by road except in the rush hour and it is only 60 miles hence HS3 proposals.

1.6. If the amount of money spent to date by the government on HS2 and the human resource and energy had been directed at those places which do not currently have a fair share of the national cake, a significant dent could have been made in tackling the problem and improving the lives of many people by now instead of the promise in many years’ time.

1.7. In my daily business dealings I am constantly having meetings with many people using the internet to link up rather than public or private transport. In my opinion, there will always be a place for face to face but most of the time, provide there is a good internet connection Skype works fine. So the message is get high speed broadband with low contention ratio to all as a priority so people can work virtually from anywhere.

2. Is there an economic case for HS2?

2.1. No.

2.2. Originally the main driver for HS2 was shorter journey times from London to a few cities to the north of the country and that as a result those northern regions would become more prosperous. I fail to see how a few minutes off a journey could possibly achieve this effect. If anything it would simply make it easier for people to
come to London. Furthermore, it is not the northern cities where the real inequality lies but the smaller towns, villages and rural communities and HS2 will not assist these communities recover. Since shorter journey times will not achieve the objective HS2 is a waste of national resources.

2.3. The government has now shifted the emphasis for the justification for HS2 to increasing capacity. It is much more cost effective to increase the capacity of the existing network by a combination of increase and frequency and length of trains in conjunction with the removal of existing bottlenecks in the system. This was demonstrated by study carried out by the independent think tank the New Economics Foundation. They proposed a £33bn package of investment including major upgrades to the East Coast and West Coast main lines; regional rail enhancements; investment in urban mass transit and bus networks; and improvements to cycling and walking infrastructure. These investments would still leave funds to extend the roll-out of super-fast broadband essential to facility virtual meetings.

2.4. As the country comes out of recession the argument that the construction of HS2 will bring create much needed employment evaporates. The UK construction industry is reaching full capacity so the only effect of HS2 will be the importation of resources to achieve the construction and mostly focused in the south east which needs it the least. Better to spend less where there is spare capacity and unemployment.

3. Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?

3.1. Yes. There are many examples. For instance, over 30 destinations will receive fewer, slower or no services to London after HS2 under current plans, due to the cost savings from the existing network which the HS2 business case requires. This means that these communities will suffer and the associated cost should be included in the business case. Another example is HS2 has ignored the economic impact on communities on the route. Chiltern District commissioned Peter Brett Associates to carry out an assessment which just for the Chiltern District came to £170m. Extend this assessment to the whole length and the cost that has been left out of the calculation is very significant.

4. What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?

4.1. None directly as a result of HS2 as the current service meets demand with spare capacity which can be enhanced over the years. It is important to realise that in order to keep the current services running as they are at the moment major works are required. If the capacity improvements are carried out concurrently, the additional disruption would be minimal.
4.2. Actions now by the government focused on improving the interconnection of regional centres but without bypassing intervening settlements will have the greatest impact in increasing mobility of people to travel to work.

5. Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?

5.1. Yes London will be the main beneficiary. In my opinion HS2 is more likely to have a detrimental effect as it will simply make it easier for business people to travel to London. It will not and is not intended to be a tourist route so most people will derive no benefit.

5.2. The one possible benefit, assuming good connection into the rest of the national network and HS1, would be if HS2 could take significant freight traffic. However, since the current proposals do not provide for such connections, the opportunity to ship at speed from the midlands into Europe is lost. In any event, if such connections to the existing network were improved access to markets in Europe would be enhanced.

6. How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?

6.1. The track etc. should be transferred to Network Rail and the trains and operation of the service franchised in the same way as the rest of the network. Users of the track should be charged fees to fully cover the maintenance plus an amount to ensure that the whole project and operation is cost neutral to the public over the long term.

7. Should travellers pay higher fares on HS2 than other lines?

7.1. Yes

8. Does the prospect of HS3 affect the economic case for HS2?

8.1. No. HS3 stand on its own merits and is just the sort of project that will have much greater benefit to the northern cities especially if it links Newcastle through to Liverpool via Leeds and Manchester.

September 2014
Summary

This paper expresses concerns that the HS2 phase 1 Route 3 is damaging to the local Aylesbury Economy, Amenity and Social needs. The loss of the Golf Club will result in redundancies, tax losses for HMG and impact the hundreds of member and people making use of this excellent local facility.

HS2 is not fully priced/costed and it undermines the National, Regional and Local benefits and is for the Aylesbury people and visitors a significant disbenefit.

Since 2011 the Aylesbury Park Golf Club has become aware of the losses from the Route 3 Phase 1 alignment to the company, employees and users as well as to the many people who visit to enjoy the sport and pastimes and leisure facilities within the land owning of the Ernest Cook Trust Estate including this Golf Course and Football and playing fields located alongside Coldharbour Aylesbury and the A418 Oxford Road and the River Thame.

There are omissions in the HS2 budgets of sections or works and their costs and this is a significant issue. How many extra £billions should the Lords and other authorities recommend be added to the £50 Billion declared. For example the use of a tunnel under the Golf course and the A418 and Rover Thame will greatly reduce the damage and impacts as well as enable the people to continue to enjoy the uses of the amenities and facilities.

Questions with answers:

1: Is there an Economic case for HS2?

1,1: At the moment there is not a convincing case because the reviews by the House of Commons select committees were only partial overviews of different scopes and aims. There was not a comprehensive peer debate with specialists on the HS2 scope and the reasoning options were curtailed or not included. There are a range of significant consequential problems which were not included in the select committee deliberations, involving, by way of example, the full costs to local authorities of replacing amenities and the economic local costs of losing the Golf Course and Club.

1,2: The full costs of the HS2 project and its consequential cost impacts are not all included, ranging from increased public travel delays on the M4, M40, A4, A40, A41 and A413 and local county roads. The HS2 planned tunnelling infrastructure is very expensive due to the route through the Chilterns and the further tunnelling that communities and the Aylesbury Golf Club are requesting to be agreed will increase the total budget above the current budget significantly.

1,3: The very extensive land to be taken and lost from farms over the next decade is very wasteful. This loss has to be added to the economic costs as these are not currently all included. There are significant owner and tenant compensation issues to be resolved, which will greatly increase the costs above budget. Some large housing development land schemes are being devalued due to the direct severance impacts of HS2 land take. HS2 is drawing development investment away from businesses.
1,4: UK Rail Networks should be improved for both the long and short journeys but HS2 has not been fully involved in these matters, except from the narrower consideration of WCML. This has led to inadequate consideration of the aims of a rail route for middle England and particularly what the populations of west of London to Banbury require most. HS2 falls short of wider rail services needs.

1,5: The selection of the HS2 route alignment that Secretary of State Hammond decided in 2011 was not undertaken by using a full comparison of the detailed construction cost and environmental losses/damages, for all route options. HS2 Route 3 Phase 1 is considered by local communities to be the wrong route on grounds of the total damage, extensive Chiltern and Urban/Sub-urban tunnelling and other infrastructure costs for a one track each way route when there are alternative alignments with shorter tunnels and better user patronage. Hammond did not demand sensible local tunnels.

1,6: The omission of the large gauge HS2 to HS1 link is the loss of an essential rail connection and is a total budget misrepresentation, a recurring theme. Cross Rail 2 is needed and a percentage should be added to the overall costs in the assessment of HS2 and ranked in the National priorities.

2. Is there the need for better National investment priorities to address backlogs?

2,1: The HS2 investment decision has now been shown to be wrong in terms of National priorities. There was never an overall assessment of the full project and so the House Of Commons select committees have missed and overlooked some of the core issues.

2,2: The HS2 Community Forum Meetings were rendered ineffective in assessing economic impacts and this was ignored by the Hybrid Bill debate in Parliament in November 2013. It is not known what influence the petitioning procedure will have in reversing damage, but there is a lack confidence by the public with the narrower remit and HS2 aim to rush the petitions using a group process. The Department for Transport have taken the decision to proceed regardless and are controlling the procedure to justify a poor investment. They have the protection from the UK Judicial processes which the public used to try and raise concerns.

2,3: There is no aggregated log of all the escalating and missed costs and betterment requests. The House Of Lords Committee Economic Affairs inquiry will have welcomed relevance if it considers the HS2 project fully and diligently is not a further incomplete review that the House Of Commons Select Transport Committee, Environment Committee and the Public Accounts Committee not to mention the Treasury Select Committee were, by being partial in their scopes.

2,4: The Chairman of the City Growth Committee is considered to be wrong when he says the UK economy is on a roll with the Governor of the Bank of England saying we are only half way to recovery. The trade gap in June widened to £9.4BN. There is still a problem with the National Deficit despite what we were told 3 years ago, by Secretary of State Hammond. Furthermore the National debt keeps rising and wages are flat lining. The Golf Club has held wages flat for over three years.
2.5: The Prime Minister will be aware of the problems facing the nation which HS2 exacerbates. The Prime Minister has adopted the poor rail investment project left behind by Labour Lord Adonis. The Prime Minister has made a decision without examining all options and the consideration of the growing list of National priorities. How can an investment of this magnitude be wise for such narrow contribution to a small populations when:

The waiting list at hospitals is longer than ever and sport reduces the cost impacts.

Growing road accidents and congestion with more wasted consumption of fuel and delays increase due to shortage of road construction.

3: Should the strategic case for HS2 published in 2013 by the Department for Transport (DFT) and the analysis from HS2 have taken into account any other factors in making an Economic case for the project?

3.1: The key matters addressed in question 1 are very relevant. Network Rail, Crossrail, TFL, Heathrow Airport and the main city road authorities were insufficiently involved by DFT/HS2 in establishing a coordinated plan, assessments in competition with the vital road and motorway requirements. Urban road tunnelling for motorway and trunk roads were not included but are needed. Conflicting demands for urban and suburban surface and subsurface spaces have not been determined, for example from west London across Camden.

3.2: The HS2’s expected range of the benefit cost ratio are not acceptable because the benefit reported is too low with too many omissions from the scope exclusions, such as the impacts of people not being able to use the Golf Club, on the loss of employees and on the adverse welfare and health impacts of people, old and young now using the Course. These way of life cost changes are omitted.

4: What are the likely Economic benefits of HS2 to the Midlands, to the North of England and to Scotland?

4.1: Development of High Speed Rail without a comprehensive rail route linking plan fails to determine and assess the wider benefits for rail users and localities. The regeneration of the main city stations are likely to cost billions of pounds per site and these developments cannot be justified on speculative guess work and requiring such additional route costs.

4.2: What is meant by including Glasgow, Edinburgh, Aberdeen and Inverness without the track upgrades and costs? What about Wales and the South West England? The cost estimates for a High Speed network for the United Kingdom is projected between £500 Billion and £1 Trillion. A backlog of new roads and lane demands similarly multi billion pound projects as congestion and accident rates are now rising with extreme delays and losses. M4, M40, A4, A40 and local roads are inadequate.

5: Might some parts of the UK suffer Economic disadvantage from HS2?

5.1: HS2 has a total negative impact on the outer west of London Boroughs and Buckinghamshire. The negative impacts cannot be satisfactorily costed on a locality basis according to leading Economists. How can you assess the Economic and Environmental destruction of 100 miles of this geographically small country? Aylesbury Park Golf Club and people suffer economically from HS2.
6: Is London likely to be a main Economic beneficiary of HS2?

6.1: The HS2 project will attract people to commute more from the North, whereas the outcomes should be the reverse, but businesses will not relocate to the North. The Ex-Mayor of London suggests London is at its maximum population currently. It is not practical or effective to increase the people in and commuting to and from London into the future. The corridor along the WCML could benefit from realignment alongside the WCML near Tring with a reduction in total tunnelling costs.

7: How might the expected benefits of HS2 to the National Economy be realised?

7.1: This can only be achieved with a major reappraisal of the sections of HS2 in the North and also those in the Buckinghamshire/London areas. Reappraisal will most probably address medium distant commuting as a priority and realign the route(s) near Tring to deliver local/regional user benefits.

8: How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

8.1: As there is only one track each way for the HS2 route and the main cities connected are well served by rail currently, HS2 will not be a significant revenue generator because of increasing cost and rail services competition.

9: Should travellers expect to pay higher fares on HS2 than on other lines?

9.1: HS2 cannot attract the most fare paying passengers unless pricing is competitive. This would require massive government subsidy to compete with the Chiltern Line and WCML. Is this what the nation requires?

9.2: Power up grades can increase the maximum train path capacities on the WCML and on the ECML which would further the competition for HS2 and its train operator more effectively.

9.3: People complain about the ticket price increases currently. The HS2 services will be much more expensive with Government wanting to increase debt recovery from passengers, leading to more increases and complaints and migration to the lower priced routes.

10: Does the prospect of HS3 affect the Economic case for HS2?

10.1: Yes it demonstrates that a single track each way long distance passenger route is unattractive compared to a multipurpose rail corridor with two tracks each way providing more reliability and better operating resilience.

10.2: Surely a route alongside the WCML near Tring and the new proposed Crossrail 2 gives better passenger connections. This would achieve much more rapid developments and at realistic costs.
11: Concluding opinions

11.1: The current HS2 proposals will not come close to meeting the Governments aspirations as judged by local economic growth for local communities and amenities along the route.

11.2: HS2 proposals are fundamentally inefficient offering limited connectivity, unable to deliver either the necessary economic or environmental benefits in terms of emissions reductions and being needlessly intrusive and losing the Club by following unsuitable expensive rural alignments.

11.3: HS2 must be fundamentally reconfigured to maximise connectivity and passenger demands. Emission reductions and other benefits must be achieved through comprehensive, interregional integration with the existing rail network. Environmental intrusions are not minimised as far as practicable by following existing transport corridors and avoiding the ‘Golf Club/Course’ alignment especially when requiring large scale surface land excavations when local tunnelling is feasible.

Annex of issues for consideration impacting the Local Economic evaluations.

A1. Segregation or Integration into Network Rail’s routes and stations.

The apparent presumption without supporting rationale that the new High Speed Railway must be effectively segregated from the existing railway is very questionable. This limits the communities that will benefit from HS2 and it also limits the reduction of possible environmental problems. The Government should compare and explain the integrated and segregated approaches.

A2. Limited regional and commuter connectivity.

There are no connections with the existing rail network for a length of over 160km. This lack of integration and resilience will massively compromise its environmental performance. The route does not provide the Javelin rail service potential of HS1.

Far more connections and therefore superior integration, resilience and environmental performance are possible for a London, West Midlands High Speed Line routed along and close to the existing corridors. Connections to the existing network could be located much more frequently serving wide catchment areas and commuter populations.

A3. Alternative rail services and route requirements.

HS2 Route 3 Phase 1 precludes routes and stops for Javelin services which would benefit the East West Route connectivity. The East West line will be excellent; but its value would be badly damaged without stations for local commuters. The East West cost benefit ratio is 4 or 5 times better that proposed for HS2. HS2 fails massively short of the Treasury’s cost benefit requirements.

This Government plans to force through the HS2 project with unsound financial and transport assessments and divert resources from more immediately necessary operations and projects.
The proposed HS2 interchange with Crossrail services along the GWML to Old Oak Common effectively predetermined the very intrusive HS2 route alignments from London to the West Midland. The HS2 preferred Route 3 Phase 1 alignment has prevented fair consideration of other transport routes such as near the M40, and M1 and the M6. Lower environmental impacts could be achieved and would serve the Home Counties and East Midlands with shorter city centre to city centre journey times at less cost and damage more economically and effectively than HS2.

HS2’s excessive focus on the extreme speeds along the straightest high speed line that they chose to develop has determined the limitation of their consideration of better value for money options. It would surely be better to increase the capacity and connectivity of the rail network as a whole. A high speed network should be the conduit for all express intercity passenger traffic along particular corridors, so that the existing main line can be dedicated to slower speed freight and local passenger traffic. This demands close alignment and interconnection between High Speed lines and Classic lines but cannot be achieved with the current Chiltern aligned HS2. The population centres to be bypassed by HS2 including Stoke, Coventry and Milton Keynes will continue to consume capacity on the West Coast Main Line rendering the HS2 route irrelevant to thousands of commuters.

The Government has over estimated the value of each minute saved on a HS2 journey by failing to accept in 2011 that laptop computers and mobile phones do enable people to use time spent on a rail journey more productively. Economic benefit can accrue from configuring a High Speed Rail network to reduce the time for the inter regional journeys, which HS2 has neglected which would help to integrate the existing network.

The Government has greatly underestimated engineering costs for the extreme speed rail operations as Japan found in practice. The required near straight alignments make it difficult if not impossible to follow existing transport corridors or the folds and flat sections of land, where environmental damage would be is minimised. The failure to use curves dictated rural alignments with much greater impacts outside existing corridors and population centres. The result is there are more sensitive areas such as the SSSI’s and ancient woodland now requiring expensive tunnelling for mitigation but not likely to obtain this mitigation.

**A4. Mitigations.**

All necessary environmental mitigations that must be employed to make the route acceptable to the communities which HS2 passes and generous compensation packages that must be made available to alleviate losses suffered may not be affordable. A tunnel under the Course will save it. Effective mitigation in sensitive areas with tunnelling will increase costs but is needed. Payment for land losses is being resisted by HS2, as is proper compensation for estates, amenities, farms and businesses.

The best mitigation against the environmental impact of High Speed lines is to follow existing transport corridors. Insufficient attention was given to making use of existing transport corridors as the primary environmental mitigation due to the singular objective or highest speed across undulating land. For the Golf Club saving the courses for people to use near Aylesbury is very important.
The regulatory requirements have been handled badly with the lack of professional planners and checking processes omitted. The route option selected should have been the one that best balances the benefits of a new High Speed line against its costs and environmental impacts. The Government has been presented with alternatives that both achieve greater benefits and have lesser environmental impacts but there was not the process to weigh the economic costs fully. As such the Government selection of the current HS2 proposals seems illogical to the Golf Club, local authorities, communities and people, perverse and in apparent contravention of its own planning legislation.

August 2014
Preface:

1. "There has always been an assumed link between the quality of the transport infrastructure and economic growth, yet that link has been difficult to demonstrate even after more than 50 years of research."\(^\text{16}\) It is likely that economic growth leads to the need for investment in transport infrastructure and not the other way round. Assuming that investment in transport infrastructure will lead to economic growth is therefore risky. There is agreement however that investment in transport infrastructure could facilitate economic growth and other economic benefits, where the other economic conditions are supportive. However, it should also be noted that investments in transport infrastructure may not lead to economic growth per se, but it is likely that it will only lead to a redirection of development.

2. Investment in transport infrastructure should primarily yield transport benefits. Such benefits, if taking place, will be realised through improved accessibility, or connectivity (for the purpose of this submission these can be seen as synonyms). In the case of HS2 where there is transport infrastructure in place (both rail and road) improved accessibility or connectivity will largely be a factor of increased capacity and change in travel time.

3. Investments in High-Speed Rail (HSR) are increasingly justified through economic benefits, and while there might be such benefits (usually very difficult to measure), basing for the decision for HS2 solely on these economic factors is risky.

4. With this in mind we discuss below the economic case for HS2 considering in turn: Speed, Capacity, Connectivity - the main transport benefits categories, and then the Wider Economic Benefits (WEB) and Image benefits.

Introduction:

5. Demand for rail in UK is rising, in part due to the HS1. But according to the latest EU statistics, rail in the UK accounted for only 7.4% of passenger-km travelled on land in 2011, slightly higher than the EU27 average at 7.0% and lagging far behind Switzerland with 17.5%.

6. The EU27 rail statistics does not provide clear evidence that increase in HSR ridership translates into an overall increase in rail ridership at the country level, and the evidence are mixed with wide variations across countries. Between 1995 and 2011, rail ridership increased 35% in Denmark and decreased 38% in Greece, but neither of these countries have invested in HSR.\(^\text{17}\) Over the same period, rail ridership increased 60% in France and decreased 7% in Italy, and both these countries have invested heavily in HSR.

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Speed:

7. The economic case for HS2 relies largely on time savings (about 60% of the user benefits). These savings result from increasing the average speed of travel – station to station, and are only partly influenced by the maximum operating speed (250mph for HS2). More important is the number of stations on the route (the main attribute of connectivity – see below), the alignment, and part of the route where maximum operating speed can be achieved. At the same time, the designed maximum operating speed is a central factor in the cost of any High-Speed Rail.

8. Passengers are not only concerned with travel time station to station, but with the travel time door-to-door in which the station-to-station time or speed is only one part. As speed increases, often by reducing the number of en-route stops, the access travel to the HSR station becomes longer for many passengers and more time consuming. Using the HSR is then either not worthwhile or less attractive. It is not only the number of stations that is important but also their location, and this again forms the main element of connectivity (discussed below).

9. There is evidence suggesting that throughout history humans devoted about one hour a day for travelling. Thus, as technology allowed faster travel, it was distance that increased and travel time did not decrease. This has resulted in modes of transport like HSR increasing the amount of travel (distance) with various economic, environmental and social consequences.

10. Furthermore, the assumptions that travel time is a 'waste of time' could always be questioned, even more so today. Given the level of comfort on board HSR services, travel time can be a 'useful time' – to work, socialize and other things. The potential to use travelling time by HSR substantially increased with developments in wireless communications and the laptop, iPhone, etc. It is not the amount of travel time that is critical but its quality and the extent to which that travel time can be used for a range of activities.

11. If travel time is not a complete 'waste of time', the value of reducing it diminishes. The 60% benefits from travel time savings depend on the value of every 'wasted' minute of travel. But if some travel time can become 'useful time', especially for those travelling on business, travel time savings will play a reduced role in the economic justification for expensive infrastructure like HS2.

12. The value of travel time savings also depends on the level and nature of demand for travel. Without getting into details, much of the travel time savings benefits depend on the forecast of the number of passengers and whether they travel for business or leisure purposes. There is much uncertainty and a range of values in the forecast demand for HS2 have been used, as reflected in the literature.

13. Achieving higher speeds is costly, and when the 150mph threshold is exceeded, the economic benefits may be questionable.
Capacity:

14. Lack of capacity was the main reason for the developing the HSR in Japan, France and recently in China. This is also the main motivation for HS2, even if the debate often focuses on cutting journey travel time by increasing speed. Speed is critical in this respect as it allows running more trains per unit of time. Providing capacity, to meet future demand for rail travel, should be the focus of assessing the economic benefits from HS2 – this is what HS2 is being built for.

15. There is a debate on whether the planned 18 trains per hour at peak period is technically feasible. In this debate the cost of building HS2 to serve peak demand is neglected (the crowding problem), and there is a risk of 'over-designing' HS2 when off-peak periods are considered. While important, the cost of addressing a problem limited to very certain periods of the operating day needs to be given more attention.

16. The lack of capacity will occur at the intermediate stops along the WCML, which HS2 (Stage 1 in particular) is intended to enhance. Milton Keynes is a prime example and is currently benefiting from a very high frequency of rail service (to London for example) due to the high demand for rail travel between Birmingham and London. Some of this demand will be shifted to HS2, and there might not be enough demand to maintain the current frequency of service from Milton Keynes to London. HS2 will release capacity on adjacent lines, but little analysis has been carried out on how this capacity will be used as part of the whole network – the low and high speed networks have been seen to be separate rather than as two parts of the same rail system.

17. The HS2 and HS1 high-speed network would require substantial share of the resources allocated to rail transport for maintenance and operation. There is a risk that these will come at the expense of the conventional network, with the consequence that the quality of service will deteriorate and in turn adversely affecting the demand for rail.

18. Since HSR in the UK will cover small part of the rail network. HS2's increased capacity and improved level of service will likely be for a relatively small share of the rail 'cities' in the UK. It also depends on how HS2 and HS1 are integrated with the rest of the rail and transport networks (see below).

19. If speed is not so important (as travel time savings may have a lower value), the economic case for increasing capacity through other measures should be given more attention.

20. Service reliability becomes more important, and increased investment (in HSR) permits greater reliability provided that there is excess capacity. But, fast trains conflict with slower trains (also reducing capacity by the need to increase headway between trains), resulting in fast trains requiring a dedicated track to provide the benefits of higher speeds, and this is costly. If slow and fast trains share the same stations (platforms), the planned time table becomes more complex and more susceptible to disruption and delays, thus affecting reliability. Increased speed can affect reliability positively and negatively.
Connectivity:

21. Connectivity refers the ease of getting from origin to destination, and speed here plays a role, but the average speed door-to-door and ease (or inconvenience) of transfer between modes is more important. Furthermore, connectivity refers to the ease of getting to many destinations from a particular origin.

22. The nature of HSR, and HS2, suggests a low number of intermediate stations along the route, as each stop can ‘cost’ up to 15 minutes\(^\text{18}\). The downside of providing too many stations (to increase access to HSR services) is evident on HS1, where Eurostar is being forced to stop some of its services between London and the Channel. Two stations in London, in relatively close proximity (and where one of them is not Heathrow) and two in Birmingham are thus questionable in terms of the economic case.

23. To maximize accessibility and connectivity of HSR services, access to HS2 stations is critical. This mainly relates to station location and the integration of the station with the rest of the transport network.

24. With respect to station location the two generic options are city centre and city outskirts--the benefits a city centre location offers are the disadvantage of the outskirt station location and vice versa\(^\text{19}\).

25. The integration of the HSR station with the rest of the network can be considered at three levels: local/urban, regional and national/international\(^\text{20}\).

26. At the local level, it is the integration with the rest of urban public transport that is critical, and the lack of such integration has proved to be an obstacle in achieving the forecast demand levels at city outskirts station location (e.g. in Taiwan).

27. At the regional level, integration with the conventional rail network is most critical, as rail will be the main feeder of traffic for HSR. An integrated rail-HSR services means that the station should be shared, otherwise the penalty of transferring between stations (even if only a few hundred metres apart) can erode most accessibility and time savings that HSR can offer. The location of the Birmingham HSR station, not at New Street station (but next to it), will severely reduce the integration with the conventional railway and connectivity with all those places that New Street station is serving\(^\text{21}\). The recent suggestion to create a hub at Crewe\(^\text{22}\) to integrate with the rail and road network follows this logic, but it can encourage use of the car at the expense of local public transport.


\(^\text{20}\) Ibid.


\(^\text{22}\) Mentioned in the Higgin’s report.
28. HSR is a strategic long-distance mode of transport but is limited to distances of up to around 1000km, as long as there are no natural barriers (sea, mountain) in its way. By providing a HSR station at a large international airport, HSR can provide connectivity to the world. Building a spur line to Heathrow airport (and not making it a through station on the line) is like building Birmingham station next and not at New Street station. It will mean bearing the high cost (of connection to Heathrow, or city centre location respectively), but without getting the full benefits. An airport-station at Birmingham International is not a substitute due to the small size of the airport, and the airport station is not planned at the airport but nearby, far enough to force passengers to use another mode of transport to transfer between the station and airport.

29. Connectivity has featured in the HS2 debate very much through the objective of 'bringing the regions closer'. This reduces the geographical separation between the South (London) and the North (Newcastle, Leeds, Manchester, Liverpool, etc.), and thus the economic disparities between these regions. HS2 will bring those cities closer in terms of rail travel time, city centre to city-centre, but the effect of it might only be further strengthening the South at the expense of the North. In Paris and Madrid there seems to have been concentration of activities in the capital cities after the HSR networks in those countries opened, and this was at the expense of the secondary cities. London is probably in a similar position as the dominant city. London and the South East provide the headquarters for 66 out of the FTSE 100 largest companies, while the area in England north of Birmingham host only six. With improved connectivity to London there is a risk that these companies will move to London rather than companies in London moving North.

30. HS2 will improve connectivity between London and the North and this connectivity must be further enhanced by giving due attention to integrating HS2 (stations) with the rest of the transport network. This will certainly bring the South and the North closer, but there is a risk that this will only further strengthen the South and increase the South/North divide.

Wider Economic Benefits (WEB)

31. Urban regeneration, employment, agglomeration benefits are the main wider economic impacts that might result from constructing HS2. The Department for Transport has estimated that HS2 would create 3,100 permanent jobs in operating the new railway and around 24,600 temporary jobs (excluding the supply chain) during construction. There might also be up to 400,000 jobs in additional developments in areas close to HS2 stations. These estimates were based on a report prepared for the Core Cities Group by consultants (Volterra/Arup, 2011, p2). These estimates raise a question arises, as to whether investment elsewhere in the economy – in improving

25 House of Commons, 2013, para 34……
26 The cities concerned are Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham, and Sheffield.
and developing the conventional rail network or investment outside the transport system (e.g. in education) – would provide similar or greater employment benefits.

32. A considerable amount of research has been carried out on the agglomeration effects, mainly with respect to intra-regional changes, and the key question here is whether they are also found on an inter-regional scale (Graham and Melo, 2010). The argument here is that improved connectivity within a city or region can compound the benefits of agglomeration by making spatial economic transactions more efficient through mechanisms such as sharing, matching and learning (Duranton and Puga, 2004). The difficulties here are both in the specification of the relationships and then in measuring them, and the implied causality (including the strength of the statement – whether better connectivity causes higher output or productivity). Graham and Melo (2011) have examined long-distance travel flow in Britain to provide an indicative assessment of the potential order of magnitude of agglomeration benefits from long-distance transport improvements, namely travel time reductions. They infer from this to the likely effect of HSR, and conclude that (p:15) "even in the best case scenario for the improvement in long-distance travel times and the market share of classic and high-speed rail, the potential order of magnitude of the agglomeration benefits is expected to be small." They qualify their conclusion by saying that their analysis refers to the domestic market but "benefits could also arise from improved connections to continental Europe (e.g. Paris, Brussels, Amsterdam, etc) by linking HS2 to HS1" (ibid). However, Higgins (2014) in his recent paper suggested some changes to HS2, and he raises objections to the proposed link between HS1 and HS2, and as mentioned above the connection to Heathrow.

33. In contrast, Chen and Hall (2011) have put forward a case for arguing that improvements in rail travel time can result in wider economic benefits, even if these are not quantifiable. When examining the effect of introducing HSR services on some trunk routes in the UK – the entering into service of the IC125 (which meant 125mph maximum speed or 200kph) and IC225 (which meant 225kph maximum speed or 140 mph) in the late 70's and early 90’s respectively – they found that "substantial and demonstrable effects in aiding the transition to knowledge economy within a 2hr travel limit of London, thus helping to generate renewed economic growth, but the effects have not been automatic or universal" (p. 703). Furthermore they conclude that "cities connected to a new HST[R] could seize opportunities which non-HST cities will not be able to seize" (ibid). The implications for HS2 are clear. First, it cannot be assumed that HS2 will automatically bring wider economic benefits upon completion, as Graham and Melo (2011) indicate and second, that if it will bring such benefits it will be for a selected number of places that are probably already in the process of economic development, and thus HS2 could facilitate economic development, not create it.

34. The UK is certainly lagging behind France, Spain, Germany, Japan and China in terms of HSR development. In comparison to these countries, the UK rail network is perceived as old, crowded and unreliable (at least this is the view domestically, very much portrayed in and by the media). This could reflect, it is argued, on the whole image of the country and on its attractiveness for foreign investment and companies. The speed
of the HSR is central in the image of rail, but exceeding the current standard of 350kph maximum operating speed (and even exceeding 250kph) is not likely to be paid back by the image such enhanced speed might create. If trains run at record speed on one or two lines but the rest of the network is still 'old, crowded and unreliable' the image of Rail UK might not change at all.

Conclusions:

35. There is a strong case to meet future demand for rail transport with more capacity including the WCML, and rail has a strategic role to play in UK inter-city transport network. However, HS2 is unlikely to provide the best value for money from the investment made, and the decision should not only be based on the economic case, as this is a high risk strategy with a very long return on investment period. Indeed, it may not even provide such an economic return.

36. There is a need to reconsider its main characteristics namely its speed, number of stations, their location and their integration with the rest of the transport network, so that a strong transport case and then an economic case can be made for it. This requires a vision for the role of the railways in the overall UK transport strategy, and within that the role for HSR needs to be established.

September 2014
William Barter—Written evidence

West Coast Main Line capacity issues

1. Introduction

1.1. I am a self-employed consultant dealing with rail operations and planning, and have worked on many major investment projects both with British Rail and since entering consultancy. I have also studied the theory of capacity and operations planning, publishing a number of papers on the subject, and now teaching it as a Lead Tutor for the Institution of Railway Operators.

1.2. I have followed your proceedings with interest, but am concerned that much of what you have been told so far about capacity is incomplete and at worst misleading. Some comments on station locations for which I have no qualifications except those of a regular rail user are also offered.

2. What is capacity anyway?

2.1. The Institution of Railway Operators defines Network Capacity as:
   “The number of trains that can be incorporated into a timetable that is conflict-free, commercially attractive, compliant with regulatory requirements, and can be operated within the laid-down performance targets in the face of prevailing levels of Primary Delay”.

2.2. Key components of this definition to note are:
   • It reflects not simply the number of trains that can flow along any one line without stopping, but the realities of creating a timetable for a mixed-use railway, with a mix of fast and slow or stopping trains, the complexities of junctions between lines, and the constraints of the termini;
   • It recognises that unless capacity is provided more or less at the times when people wish to travel, and to the places where they wish to go, within a train service that offers competitive journey times and service frequencies, it might as well not exist;
   • It reflects the fact that an intensive train service is exposed to the risk of knock-on delays when anything does go wrong. Whilst essentially this is a further factor in the commercial attractiveness of the service, performance targets are set by the regulatory authorities.

2.3. A further factor to be considered is the number of people, or payload of goods, that can be accommodated on each trains.

3. What is the capacity problem on the West Coast Main Line?

3.1. The capacity problem facing the West Coast Main Line has a number of different aspects apart from capacity on trains for long distance passengers:
   • Numbers of trains for commuters into London
   • Frequency of links between intermediate locations
   • Numbers of trains for commuters into other cities
   • Availability of paths for freight services.

3.2. Finally, if you accept that performance is an aspect of capacity, then by definition the WCML is above capacity now, as it is failing to meet its performance targets.
**Long distance**

3.3. The West Coast Main Line (WCML) between London Euston and the West Midlands, North West and Scotland has been the subject of major investment to increase both capacity and speed in recent years. The most recent upgrade of the WCML increased services from Euston to both Manchester and Birmingham from a half-hourly pattern to run every 20 minutes. Provision of additional coaches has increased train lengths from 8 to 9 cars, and then to 11 cars on the busiest trains. The result is that load factors are (2013) around 57% for the 3-hour morning peak arriving at Euston. This does not of course mean that the recent capacity increases were unnecessary, as without them load factors would around 85%, which given inevitable imbalances between trains implies overcrowding being experienced. Inevitable in the early years after a major capacity increase load factors will be diluted, as capacity is created in “lumps” but demand changes more smoothly.

3.4. It can be said that capacity on trains for long-distance passengers is available in the short term, but contrary to assertions that long-distance demand growth is flat, DfT figures show that InterCity West Coast (in practice meaning Virgin Trains) arrivals at Euston in the 3-hour morning peak grew by more than 8% between 2012 and 2013.

**London commuter**

3.5. Outer suburban commuter services are currently severely overcrowded. Figure 1 shows publicity material produced by the suburban operator for evening peak services from Euston. It will be seen that throughout the busiest part of the peak, 12-coach trains, the maximum that the route can accept, are used on all services. Despite this, severe overcrowding is indicated. Platforms 9 and 10 at Euston cannot accept trains of this length, so no train that uses one of those platforms can be formed of 12 coaches. Trains of 12 coaches shown as working pre-peak services are not wasted as might be thought – they return to Euston to form peak trains.

3.6. Although from December 2014 some extra commuter trains will run, by increasing their speeds to match those of the InterCity trains more closely, housing developments in Milton Keynes, Bedfordshire and Northamptonshire will continue to drive demand for commuter services, not just to London but to other regional centres such as Watford and Milton Keynes.

**Intermediate flows**

3.7. Significant intermediate flows of traffic remain badly served, due to limited station stops by the fast trains. For instance:

- If travelling from Milton Keynes to Birmingham Airport (served by Birmingham International station), as only one of the three Euston – Birmingham trains per hour calls at Milton Keynes, one is typically faced with a choice of arriving too early for a flight, or cutting things uncomfortably fine. On landing, the risk is of just missing a train, and having to wait 59 minutes for the next. This makes rail uncompetitive with road for what should be a natural rail journey, avoiding congested roads.

- If wanting to commute from a West Midlands location such as Coventry to Milton Keynes, the situation is even worse, as just at the time when the commuting opportunity is required, the train that would in a normal hour link Coventry and Milton Keynes does not stop at either, so as to achieve a once-a-day “headline” journey time from Birmingham to London of 72 minutes.
3.8. The obvious solution is to put more stops into the fast trains, or run additional interurban trains for locations such as those between the West Midlands and Birmingham. However, apart from the extension of journey times for through passengers, the WCML timetable is an intricate structure with stops at stations falling into gaps between other trains that stem from, for instance, junction working elsewhere, so that opportunities for further stops without reduction in the train service do not exist. There is not now the available capacity on the track to run additional trains specifically for the inter-urban markets.

Other commuter services

3.9. A similar situation is found for commuters into Birmingham and Manchester over routes shared by long-distance trains. The actual number of trains run falls far short of the theoretical capacity of the routes, through mixing local stopping trains and long-distance limited stop trains. Opponents of HS2 have attempted to talk down this effect on the basis that there are few long-distance trains arriving at these cities during the morning commuter peaks, but this neglects:

- That the evening peaks are typically the most constrained, as the local and long-distance peaks tend to coincide in the evening;
- The few long distance trains, as the “odd ones out”, consume capacity out of proportion to their numbers.

3.10. The released capacity benefits of HS2 apply equally in stations. Just as they consume disproportionate amounts of capacity en route when mixed with slower services, so the long-distance trains consume capacity at stations out of proportion to their numbers, as they take longer turnrounds than local trains, and being longer than local trains even occupy platforms that could take two if not more local trains.

Freight

3.11. Due to occupation of the Fast lines by the InterCity trains, relatively fast suburban trains have to use the Slow lines. This reduces pathing opportunities for freight trains which would naturally use the Slow lines to run between the yards at Wembley and the Midlands and North West via Northampton.

4. Alternative solutions to the capacity problem

4.1. Of the five aspects of the capacity problem identified above, HS2 addresses them all. This may seem paradoxical, but the point is that a new route for long-distance trains leaves the existing railway free to cater for commuters, freight and regional travel, in addition to offering the benefits of dedicated capacity and reduced journey times for long distance travellers. There is not in fact much wrong at all with the WCML as a commuter, interurban or trunk freight route – it has stations where people live, and junctions where freight trains need to join and leave it. The problem of the WCML is that, to the detriment of those roles, it is being used primarily as a long-distance line for high speed limited-stop trains. And for that task it is not very good at all, for instance achieving speeds that became standard on the Great Western main line nearly 40 years ago only by use of tilt, which adds weight to the trains, reducing their energy-efficiency, and presents a potential source of failure.

4.2. Capacity is the reason for building new infrastructure; the overall benefits are greatest if that new infrastructure is built for high speed, long-distance trains. By contrast, an alternative investment focused directly at commuter, local or freight services, would address only one of the range of capacity issues.
4.3. Given the overcrowding of commuter services, a new commuter line has sometimes been suggested. This would incur much of the costs of HS2 for a fraction of its benefits, as tunnelling to create a route out of London would be required to much the same extent, with the added cost of underground stations, whilst even outside the tunnel section, stations would inevitably be peripheral to conurbations, to avoid loss of housing and generating noise nuisance in urban areas.

5. Why not upgrade the WCML?

5.1. The WCML has already been the subject of major investment to increase both capacity and speed in recent years:
- The most recent upgrade of the WCML increased services from Euston to both Manchester and Birmingham from a half-hourly pattern to run every 20 minutes;
- The maximum train speed has been increased to 125 mph through use of tilting trains to get the most out of the historic alignment;
- Junctions and stations have been remodelled to remove bottlenecks;
- Provision of additional coaches has increased train lengths from 8 to 9 cars, and then to 11 cars on the busiest trains.

5.2. As a generalisation, over recent decades the railway infrastructure and the train service have evolved together, with service opportunities being taken up where capacity exists, and the most obvious bottlenecks eased. The result is that capacity and usage are pretty well in balance across the whole network, with no remaining clear pinchpoints which if addressed would unlock significant amounts of additional capacity.

5.3. Possible further infrastructure work has been suggested, particularly by 51M, and consisting in essence of items not pursued in the last upgrade as too expensive or too difficult. But it is striking how small the outputs now are for each suggested scheme – even the construction of a whole new section of line to bypass Stafford would create only one additional path per hour in practice, as other elements of the route such as termini and the most congested section South of Rugby would become binding. Most notably, there would be no benefit for, and even possibly a negative impact upon, other types of service on the route.

5.4. Upgrading a route is sometimes spoken of as if it involved simply downloading a piece of software to upgrade a computer. In fact any serious attempt to extract more capacity from the WCML or most other trunk routes in the UK would have to involve provision of all of:
- Improved signalling,
- Additional tracks,
- Grade-separation of junctions;
- Remodelling and expansion of stations, especially termini in London and other cities.

5.5. I believe it has been suggested to you that the European Rail Traffic Management System (ERTMS) would increase capacity so as to render new infrastructure unnecessary. This is simplistic. The effect of ERTMS might well be to reduce the line headway, but this would only have capacity benefits where trains follow each other at the same speed (as they would on HS2). Where, as is typical for a mixed use railway, there is a difference between the running times of fast and slow or stopping trains, it is this speed differential that reduces capacity and ERTMS would have no effect on that loss. Reducing the line headway, even if feasible, would simply leave
other constraints such as termini and junctions as binding. Such marginal benefits as there might be would be best taken in the form of extra buffer time between trains than as capacity for extra trains. In fact, if, as has also been suggested to you, ERTMS through cab signalling allows the speed of the fastest trains to be increased, thus widening the speed range on the line, the effect on capacity would be negative.

5.6. An alternative investment focusing simply on long-distance seats per hour by adding capacity to trains, as also proposed by 51M, has no benefits for commuter, interurban or freight users. It is ironic that 51M focus upon current long-distance load factors as an argument against HS2, but then present an “alternative” that does nothing except add further to long-distance capacity. By concentrating on loadings leaving Euston, it also neglects that, of the evening peak trains, a number call at Milton Keynes “to pick up only” - my observations suggest that passengers joining at Milton Keynes add about 10% to the load of these.

5.7. In view of the range of capacity issues, it would be rational for 51M to argue that additional capacity on long-distance trains should be used to reduce the numbers of long-distance trains on the network e.g. reverting to a half-hourly service to Birmingham and Manchester, so as to run additional local trains, but I have not heard their spokesmen suggest this.

5.8. A summary of the effects of HS2 and of the 51M proposal on the range of markets served by the WCML and wider network is given as Figure 2.

6. Station locations

6.1. I have used above the argument that the WCML should focus on commuter and interurban travel as it has stations in existing conurbations. HS2 has been criticised on the basis that its stations are not in conurbations.

6.2. However, of 30 stations proposed to be served by HS2 trains in Phase 2, 21 are exactly the same stations as served by the equivalent services today (for example Warrington, Glasgow, York, Newcastle, and including Euston and Manchester Piccadilly in this group). They thus have the same access times as now, and the same feeder services, except that HS2 can be expected to be a catalyst for improving local feeder services.

6.3. Other stations can be characterised as:

- Pure interchange stations (1) – Old Oak Common, to take people off HS2 and onto Crossrail for the West End, City and Docklands, not to mention South-East London via Abbey Wood. This transforms the overall journey, particularly for Docklands which currently involves two interchanges on tube lines that are crowded now.

- New stations close to city centres (2) – Birmingham, Leeds. These are in fact both as close to their city centres as are the existing stations. The issue is interchange with local rail services at the existing station, but unless that station could be expanded, then a new location is inevitable. Note however that Birmingham Curzon Street is adjacent to the existing Moor Street station and so actually introduces a new set of interchange opportunities.

- Out of town hubs (4) – There is a need to distinguish between Birmingham Interchange and Manchester Airport on the one hand and Toton (East Midlands) and Meadowhall (South Yorkshire) on the other. The first two have clear reasons for being where they are, for interchange with airports. Then, Meadowhall (not by any stretch of the imagination “in the wilds of Yorkshire”)
is already an established transport interchange and traffic objective, fed by three existing rail lines, a tram line and numerous bus routes, making it a more effective location to serve e.g. Barnsley and Rotherham than a central Sheffield station would be.

6.4. This leaves Toton as questionable, and indeed it does seem to be being questioned. But I would mention that passengers joining long-distance trains have probably not travelled from a city centre but from the suburbs for which such a location may be more convenient than driving into and parking in a congested city centre. And my experience of travelling to Derby and Nottingham is that I am heading not for a city centre but for a business park on the outskirts, which would also be more conveniently served by a station such as Toton or indeed the suggested alternative location at Breaston.

6.5. Characterising HS2 as having only “out of town” stations is therefore false, and where stations are “out of town” they give the opportunity to serve markets overlooked by current services.
Figure 1: 2014 Suburban crowding from Euston

<table>
<thead>
<tr>
<th>Departure</th>
<th>Destination</th>
<th>Number of Carriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1554</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1605</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1613</td>
<td>Northampton</td>
<td></td>
</tr>
<tr>
<td>1624</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
<td>1634</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1646</td>
<td>Crewe</td>
<td></td>
</tr>
<tr>
<td>1650</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1654</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1705</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
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<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1713</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1724</td>
<td>Crewe</td>
<td></td>
</tr>
<tr>
<td>1730</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
<td>1734</td>
<td>Watford Junction</td>
<td></td>
</tr>
<tr>
<td>1741</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1746</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1751</td>
<td>Northampton</td>
<td></td>
</tr>
<tr>
<td>1805</td>
<td>Crewe</td>
<td></td>
</tr>
<tr>
<td>1812</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1813</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1821</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
<td>1829</td>
<td>Northampton</td>
<td></td>
</tr>
<tr>
<td>1834</td>
<td>Bletchley</td>
<td></td>
</tr>
<tr>
<td>1840</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1849</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1852</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
<td>1905</td>
<td>Tring</td>
<td></td>
</tr>
<tr>
<td>1913</td>
<td>Birmingham NS</td>
<td></td>
</tr>
<tr>
<td>1924</td>
<td>Milton Keynes</td>
<td></td>
</tr>
<tr>
<td>1934</td>
<td>Tring</td>
<td></td>
</tr>
</tbody>
</table>

** Note: Times may have been updated since this data was released on 11 May 2014. To find out more, you can visit the website www.londonmidland.com.
## Figure 2: Broad comparison of HS2 and 51M proposals

<table>
<thead>
<tr>
<th></th>
<th>51M</th>
<th>HS2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journey times – long distance</td>
<td>None. 140 mph running hinted at but not costed and negative impact on capacity disregarded</td>
<td>Major especially between Birmingham and northern cities</td>
</tr>
<tr>
<td>Journey times – London suburban</td>
<td>None – possibly negative due to “altered stopping patterns&quot;</td>
<td>Significant improvements possible to Milton Keynes, Northampton and Rugby</td>
</tr>
<tr>
<td>Service frequency – long distance</td>
<td>One additional train per hour suggested but almost certainly not commercially viable in view of capital works required to enable it</td>
<td>Major – 18 trains per hour to and from London on HS2 in addition to redesigned services on classic routes focusing on intermediate stations</td>
</tr>
<tr>
<td>Service frequency and capacity – outer suburban</td>
<td>None over and above the 2014 timetable</td>
<td>Additional outer suburban services e.g. for Milton Keynes are a key raison d’etre of HS2</td>
</tr>
<tr>
<td>Service frequency and capacity – inner suburban</td>
<td>None costed or enabled by costed items, 8-car operation remains for some trains unless Euston rebuilt</td>
<td>Planned and costed rebuilding of Euston enables 12-car operation on all London Midland trains</td>
</tr>
<tr>
<td>Improved access to central London</td>
<td>None</td>
<td>HS2 interchange at Old Oak Common allows one-change journey to City and Docklands on new fast high-capacity Crossrail service</td>
</tr>
<tr>
<td>Access to Heathrow</td>
<td>No change</td>
<td>One-change interchange at Old Oak Common into Heathrow Express and Crossrail services to Heathrow</td>
</tr>
<tr>
<td>Benefits for intermediate stations on WCML</td>
<td>None</td>
<td>Significant opportunities to increase service levels, e.g. Milton Keynes – Birmingham, once fast through trains transfer to HS2 allowing others to make station stops</td>
</tr>
<tr>
<td>Benefits for other routes – North of Birmingham</td>
<td>None</td>
<td>6 trains per hour between Birmingham and northern cities with radically reduced journey times under Phase 2. Phase 2 also introduces completely new services from Birmingham Interchange (railhead for large area South and East of Birmingham) to NE/NW/Scotland</td>
</tr>
<tr>
<td>Benefits for other routes – ECML, MML</td>
<td>None</td>
<td>HS2 Phase 2 provides additional capacity on those corridors allowing redesign</td>
</tr>
</tbody>
</table>
Glossary

**Conflict-free**: Network Rail describes the capabilities of the national rail infrastructure in its published “Planning Rules” for timetables. These lay down items such as the minimum acceptable time separation between trains whether following each other along a stretch of line or taking opposing (“conflicting”) routes at junctions. A timetable that complies with the Rules is said to be conflict-free, and compliance is a minimum requirement for operation of a punctual train service.

**Primary Delay**: Delay caused as an immediate consequence of an incident or failure, e.g. to a train stopped at a red signal due to failure of that signal. This contrasts with Secondary Delay, which in such an example would occur if that train then caused delay to another train later in its journey through now not occupying its compliant, conflict-free path. Intensity of operation is a key factor in the extent to which Primary Delay generates Secondary Delay.

November 2014
Chris Belk—Written evidence

1. With the benefit of hindsight it is now clear that the economic case and the
   dominant funding priority accorded by government to HS2, as it is currently
   planned, is seriously flawed at a fundamental level

1A First, the Phase One route needs to be changed

Initially the route selection process for Phase One required that very high speed was the
overriding design priority ahead of the need to minimise cost, risk and damage to property
& the environment. More recently the speed priority dominance has been replaced by the
need for increased capacity and the generally accepted need to shrink the “N/S Divide” --
but the opportunity to reroute Phase One to remove the cost and damage
legacy of speed optimisation at all costs has so far been ignored. A root and branch
route redesign of the London/Birmingham section will, alone, greatly improve the economic
case for HS2.

1B In addition, however, the funding priority accorded to HS2 is no longer
   justified

Today it is widely accepted that there is a direct relationship between the average GDP per
capita and urban population size and therefore that closing the Region/London economic
gap means adopting policies that will stimulate/facilitate the growth of the urban population
in and around the UK’s major regional cities (aka metropolitan agglomeration).

1C The link between urban population growth and GDP has been demonstrated and
   quantified by Professor Geoffrey West’s urban city scaling laws which show, for example,
   that if the urban population of a city doubles then GDP per capita can be
   expected to increase by around 15% (a figure supported by extensive field research of
   the major metropolitan cities in the US & Europe)

1D The fundamental requirement for accelerating the much needed urban
   agglomeration with its derivative growth in GDP per capita is to adopt a
   strategic policy priority of pre-emptive, upfront investment in quality passenger
   transport connectivity within and around the major metro cities.

   Note improved inter-city connectivity and capacity – the role of HS2 - remains
economically important but no longer dominant.

1E The London transport funding gap needs to be closed

To put the above in context, it is clear that the high quality and extent of transportation
connectivity, within Greater London and its inner urbanised commuter belt, underpins
London’s dominant & continuing economic success. Today (with few exceptions) you can go
to most places from most places at reasonable cost with reasonable convenience.

Significantly this ubiquitous connectivity depends very extensively on the historical and
continuing expansion and improvement of the rail networks in priority to roads

   Note 1 London’s reliance on rail is likely to endure even in the coming driverless car
era – see later – because driverless cars are likely to be focused on making the
existing essential car journeys more palatable - in an even more populous London
Note 2. In world terms London’s internal transportation connectivity is “gold standard” (maybe the best) and it is the critical foundation underpinning London’s continuing economic success.

If London’s connectivity excellence has been achieved because, for a long time, London’s share of transport spending per capita has been very much larger than in the regions (an order of magnitude and more in some regions) and London’s transport planning is “joined-up” multi-mode achieved through Transport for London. The recent IPPR report claims that the current National Infrastructure Plan allocates funding for London to be circa £2700 per capita and that the North East’s share is only £25 per capita! The quantum has been officially challenged but the wide differential has not.

If this regional funding disparity with London needs to urgently redressed if policy makers truly want to substantially reduce the London/regional divide. But not at the expense of metropolitan London which, in the interests of the UK’s economic health needs to continue its ongoing GDP/per capita growth. This means that many of London’s planned or actively mooted rail projects still need to progress (eg CrossRail2).

Net net, because of London’s historical funding domination, all the major urbanised cities in all the regions have comparably poor transport connectivity within and around their respective urbanised areas. Consequently they are over-reliant on cars and they all need a very large & sustained increase in public funding for transport connectivity, particularly rail projects focused on stimulating and facilitating the much needed urban agglomeration. Alongside this investment requirement is the need to replicate TfL (Transport for London) in all the major urbanised city regions so that all agglomeration transportation planning and governance takes place at the local level throughout the UK.

Public funding for transportation connectivity and increased capacity, particularly for rail, between the major urbanised cities (including London but not focused on London) has to remain an important priority, particularly where the journey times are particularly poor – eg between the Pennine divided major cities in the North and the much neglected NE.

Consequently total public funding for transportation projects (particularly rail) over at least the next 10-15 years needs to increase very substantially indeed - combined with a rigorous & objective prioritisation process, with each part of a redesigned HS2 taking its prioritised place. Central to the prioritisation process needs to be each project’s expected contribution to the overall strategic objective of facilitating urban agglomeration. This strategic objective should apply to all the major metropolitan cities with each aiming to progressively get as close as possible to London’s ubiquitous connectivity.

Note, any investment in new or re-modelled rail stations will stimulate/facilitate surrounding urban agglomeration and its resulting GDP growth. This consequential agglomeration effect is not exclusive to HS2 stations!

Consequently to gain the optimum economic benefit from future rail investment projects means that the priority position that HS2 currently enjoys
is no longer economically valid and instead the following strategic priorities need to be adopted

First, regional urban connectivity projects that will stimulate/facilitate agglomeration short and medium term

Secondly, connectivity projects that similarly serve the London metropolis

Thirdly, inter-city connectivity projects (including the major metro cities to/from London).

Note this category should include HS2 re-designed - not HS2 as currently planned (see later)

2. Next, the progressive technical evolution and commercial availability of self-drive autonomous vehicles will have a radical (often unpredictable) impact on transportation planning and funding priorities and this can no longer be ignored in making future investment decisions. The absence of this component in the current economic justification of HS2 is a very serious flaw – particularly since the project has such a long construction timescale

2A Over the last 6/12 months the progress and potential of self-drive autonomous vehicles has emerged from being a relative obscure topic and into the generic public domain – and several pro-active government initiatives have been initiated eg Milton Keynes pods, Vince Cable’s three city trial programme etc

It’s clear that this far reaching combination of leading/new technologies will be highly but positively “disruptive” just as the internet has been (and still is). The needed technologies so far identified (circa 8) are sufficiently technically and commercially advanced that, today, three things are relatively certain

2B First, the technology will, at some point, be delivered in a commercially acceptable way (eg robust & price competitive) and that fully autonomous vehicles will become pervasive in the UK and the developed world. It’s also generally accepted that pervasive adoption will radically alter how we plan and invest in transportation projects. The forecasts of when this tipping point will be reached range from 2030 to 2045. This timing alone argues for the immediate review of all transportation projects and prioritising those with shorter build times and with faster urban agglomeration payback.

2C Secondly, many of the potential benefits are already identified, They are very attractive and very substantial (and the list grows) – 90-95% reduction in road accidents, radical reduction in elderly and disabled isolation, increased vehicle capacity on the existing road network (double or more on motorways and dual carriageway trunk roads), virtual elimination of city traffic jams, etc etc.

2D Thirdly, in common with all disruptive technologies, is the unpredictability of how the benefits will be delivered - other than they will come from a myriad of not yet conceived, innovative and disruptive business models with varying degrees of commercial success.(cf the internet).This poses a major political dilemma for politicians and for the risk averse civil servant culture
2E Transportation investment decisions over the next 20/30 years will therefore be difficult. **Risk management will favour shorter timescale projects with relatively speedy ROIs.** Similarly longer projects will need to be divided into more “bite sized” sub-projects, each of which become operational upon completion to deliver worthwhile benefits eg a redesigned HS2.

2E One important benefit delivered by driverless cars/lorries will be the substantial improvement in fuel efficiency which, when combined with manufacturers’ already ongoing incremental improvements in engine efficiency (both petrol & diesel), **will move the passenger journey cost equation in favour of cars.** Furthermore if, in practice, it becomes cheaper and sufficiently convenient to hire a driver-less car when needed rather than own one, **then car travel could become cheaper still.**

3. **Dividing a redesigned HS2 into operational Phases each delivering justifiable economic benefits**

3A Clearly a very long timescale project like HS2 needs to be structured so that the multiple impacts of driver-less vehicles as they progressively unfold can be accommodated. For example split the redesigned HS2 into four sequential phases (each then split into sub-projects) as follows

**Phase One** – The trans-Pennine “megatropolis” Phase consisting of Manchester/Leeds (HS3); Leeds/Sheffield; Sheffield/Manchester Airport (using the Woodhead tunnel say); Manchester Airport/Manchester. **Creates the trans-Pennine megatropolis (with all the consequent major agglomeration benefits) and where all HS trains are efficient through trains (Ring-rail)**

**Phase Two** – Manchester/Liverpool; Leeds/Newcastle (bringing Teeside in from its transportation investment freeze); Manchester Airport/Stoke; Sheffield/Nottingham with Derby loop back to main track to form another rail ring

**Phase Three** – Stoke/Birmingham/Birmingham Airport/Derby. Creates a larger northern ring

**Phase Four** - Birmingham Airport/London

3B The Phases are sequence numbered in the order of their passenger volume resilience in the driver-less car era. Phase One would probably be very durable with an ongoing metropolitan reliance on trains like London. Phase Two is potentially similarly durable - integrates with the trans-Pennine megatropolis to become part of the “**Powerhouse of the North**”. Note the road network from Leeds to Newcastle is comparatively 2nd class.

3C Phases Three and particularly Phase Four may succumb to the lure of the driverless car and may never be needed. Additionally to already mooted upgrades to the WCML and Chiltern Main Line, short/medium term capacity strains could be further ameliorated by the adoption of driverless train technology. Finally if Phase Four (Midlands connectivity to London) is eventually priority justified to proceed then, as noted at beginning of this submission, it should adopt the cheapest least damaging route, provided the minimum speed is say 140 mph.
3D The bottom line is that the potential impacts of driverless vehicles can no longer be ignored in all the government’s transport planning from now on - including objectively re-evaluating HS2

4. Irrespective of the above, the design of HS2, as currently planned, is seriously flawed and all the issues listed below need resolving to enable a phased redesigned HS2 to take its rightful place in the funding prioritisation process

4A The ITC’s (Independent Transport Commission) Occasional Paper published in March this year entitled “Capturing the Value of High Speed Rail. Learning from Europe: The Lille Symposium 2014” highlights the largest flaw in the current design, namely all the stations are in the wrong location

4B One of the key messages from the Symposium Report was the importance of continuity in the HS rail network, with the rail route running through city centres rather than concluding in terminus stations plus the need for HS stations to be closely and conveniently integrated with local transport systems and the importance of “convenience” to passengers by providing a frequent, affordable, reliable and comfortable service.

Two key specific insights from the visits were

When planning HS stations, it is essential to consider optimal integration of all modes of transport. The interrelation between modes is complex, involving collaboration between multiple bodies. Public transport integration must be considered from the outset when planning a HS rail line and its stations,

Planners should think of HS rail as part of a network not just as a single line. HS rail provides new links within a national rail network that should link all cities directly served with each other. Terminus stations are an out-dated concept to be avoided. [Note the use of ring rail route topology referred to earlier solves this problem]

4C So, all the redesigned HS2 stations need to be “Through Stations” and they need to be city centre located so as to be conveniently and comprehensively integrated with the local and regional rail networks (and other transport modes).

4D None of the currently planned HS2 stations meets all these three criteria – ie city centre located, through stations, fully and conveniently integrated with the existing local transport system, particularly local rail

4E Much more attention should have been paid by the DfT & HS2 Ltd to French and Dutch experience. For example at a speech at the National Railway Museum’s annual dinner on 23rd May 2013, the SNCF President Guillaume Pepy made the following observations

“Finally, he [M Pepy] said that high-speed lines should connect with other lines and other transport modes. He rued that France had built its TGV routes as if they were independent lines, and had stations with no regional connections to rail or other passenger transport. This should include connections to airports, as it would be a failure not to, Pepy argued. He had
earlier told guests that door-to-door travel must be the answer, rather than station-to-station. Trains must connect to urban public transport, he said and rail must market such products….”

The Growth Taskforce should already have concluded that All HS2 Stations are in the Wrong Place to Stimulate Maximum Economic Growth & to Minimise Operational Costs - and therefore Fares.

4F The following table starkly exposes the fundamental weaknesses in the current design

4G Note, the parkway type stations build outside of cities along the route will not stimulate economic growth and in economic terms they are simply ‘White Elephants’. They will not attract very much economic activity unless the neighbouring city centres are overflowing in the manner of London – which is not the case in our Northern cities. The demand for improved rail service lies in the city centres of Sheffield, Nottingham, Stoke on Trent and Derby not at locations 10 miles away. Whilst a small proportion of people may find a parkway station more convenient than driving into the city centre at rush hour to catch the London train. Parkway stations effectively drive business and tourism away from the cities they are meant to serve.

<table>
<thead>
<tr>
<th>Station</th>
<th>Through Station</th>
<th>City Centre</th>
<th>Fully Integrated with local network</th>
<th>See Detailed Station notes below table</th>
<th>All three conditions essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leeds</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Distance from Leeds Central Station</td>
<td>Fail</td>
</tr>
<tr>
<td>Sheffield</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Parkway Station</td>
<td>Fail</td>
</tr>
<tr>
<td>Toton</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Parkway Station</td>
<td>Fail</td>
</tr>
<tr>
<td>Manchester</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Will HS3 make it into a through station</td>
<td>Fail</td>
</tr>
<tr>
<td>Crewe</td>
<td>Yes</td>
<td>No</td>
<td>Yes?</td>
<td>Small Town Not a City</td>
<td>Fail</td>
</tr>
<tr>
<td>Birmingham</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Distance from New Street Station</td>
<td>Fail</td>
</tr>
<tr>
<td>Euston</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Needs HS1 link to become a through station</td>
<td>Fail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Station</th>
<th>Through Station</th>
<th>Air Terminal</th>
<th>Fully Integrated with local network</th>
<th>See Detailed Station notes below table</th>
<th>All three conditions essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham Airport</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>NEC complication</td>
<td>Fail</td>
</tr>
<tr>
<td>Manchester Airport</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Manchester Airport City</td>
<td>Fail</td>
</tr>
</tbody>
</table>

4H In addition there is absolutely no commercial need for designing HS2 to accommodate 400 metre trains. Simply, building HS2 will effectively double the capacity of both the East Coast and West Coast main lines. We are unlikely to need that much more capacity for long distance travel until decades after HS2 is completed. Platforms at stations serving the
existing inter-city network are typically around 250 metres long and most (maybe all) cannot be extended to accommodate 400 metre trains which severely limits the HS2 designers’ ability to provide the essential closely integrated city centre connectivity to the existing network.

4J Finally, as pointed out at the start of this submission, the route for HS2 Phase One should be the proposed redesigned Phase Four route focused on minimising cost, risk and damage to property & the environment. The added benefit will be to eliminate the now unnecessary public objections that are impeding progress.

5. To conclude there is no sound economic case to spend £50bn on HS2 as it is currently planned. The foundation assumptions are wrong and the detailed plans and their economic justification are fatally flawed as set out above.

The author has a considerable body of evidential material supporting the above which is freely available on request.

*September 2014*
1 From my analysis of the HS2 October 2013 Economic case calculations\textsuperscript{27} I have identified issues that fall into four categories,
   \begin{itemize}
   \item Errors and omissions in the application of the HS2 economic evaluation.
   \item The assumptions related to passenger demand growth.
   \item The lack of consideration of property blight, system resilience, safety and security.
   \item The expected economic benefits, their distribution and the KPMG study\textsuperscript{28}
   \end{itemize}

2 I conclude that the HS2 case presented to Parliament portrays a very optimistic view of the project and that it will probably not improve the UK economy. My review has highlighted the dependence of both the UK's economic sustainability and the HS2 economic case on future productivity improvement which is assumed by both the OBR and the DfT to increase at 2.2%/year.

3 This assumption is based on the past trend between 1971 and 2008 however since Q4 2005 to Q1 2014 UK productivity improvement has been zero.

Summary

4 The capital cost to Government of HS2 phases 1&2 is £50bn (£2011)\textsuperscript{29}; central Government’s capital budget available for all investment in 2013/14 was £42billion\textsuperscript{30}. HS2 represents more than a year’s worth of Government investment. UK productivity has been static for the last 8.5 years\textsuperscript{31}, sound investment to improve productivity is critical and failure to make the right decisions in the next few years may do irreparable harm to the UK economy.

5 Correcting and adjusting three significant errors/omissions in the HS2 economic case analysis and adding borrowing costs changes the Benefit Cost Ratio (BCR) of HS2 Phase 1 from 1.4 to 0.5 (0.6 with Wider Economic Benefits WEBs) and the BCR of the full HS2 Scheme from 1.8 to 0.6. (0.8 with WEBs). This analysis is based on HS2 Ltd calculation spreadsheets\textsuperscript{32} and can be replicated by any project economics analyst.

6 The forecasts of HS2 passenger demand assume that because of journey time reductions it will generate a 38% increase of new rail passengers who would not otherwise have made the journey\textsuperscript{33}. There is no evidence in the UK or France to indicate that this increase will occur. If these new journeys do not occur the BCR of the full scheme with WEBs falls from 2.3 to 0.8 even if the other errors and omissions identified are not corrected.

7 Property blight, system resilience, safety and security have not been considered in the evaluation, these risks will reduce the BCRs further but more importantly they represent potential threats to life, health and wellbeing for thousands of people.

\begin{itemize}
\item \textsuperscript{27} HS2 Ltd - Economic Case report and calculation spread sheets (Oct 2013) \url{http://hs2.org.uk/news-resources/economic-documents}
\item \textsuperscript{28} KPMG – HS2 The regional economic impact (11 Sept 2013) \url{http://www.kpmg.com/uk/en/issuesandinsights/articlespublications/pages/hs2-regional-economic-impact.aspx}
\item \textsuperscript{29} HS2 Ltd - Economic Case calculation spread sheet Phase 1 & Full network costs (Oct 2013) \url{http://hs2.org.uk/news-resources/economic-documents}
\item \textsuperscript{30} HM Treasury Public Expenditure Statistical analysis 2014 (1 August 2014) \url{https://www.gov.uk/government/collections/public-expenditure-statistical-analyses-pesa}
\item \textsuperscript{31} Office of national statistics – Labour market statistics (13 August 2014) \url{http://www.ons.gov.uk/ons/datasets-and-tables/data-selector.html?dataset=lms}
\item \textsuperscript{32} HS2 Ltd - Economic case calculation spread sheets (Oct 2013) \url{http://hs2.org.uk/news-resources/economic-documents}
\item \textsuperscript{33} HS2 Ltd - Economic case report page 82 App. 5.2 (Oct 2013) \url{http://hs2.org.uk/news-resources/economic-documents}
\end{itemize}
The HS2 economic case for the full HS2 scheme presented in Oct 2013 equates broadly to an increase in GDP of about £2 billion/year from 2033 less than 0.25% of the £990bn UK real GDP growth (based on 2.2% productivity growth rate) that is required for economic sustainability and is assumed in the Office of Budget Responsibility - Fiscal sustainability report July 2014\(^{34}\). If the next ten years of central Government investment is in projects similar to HS2 it will add just 2.5% of the required growth.

If I am correct in my identification of errors and omissions HS2 will cause a GDP reduction of £1 - £2 billion/year. A few years of Government investing in un-productive projects will very effectively undermine the forecast of productivity growth and the UK’s economic sustainability.

In contrast to the actual HS2 economic case the Sept 2013 KPMG report\(^{35}\) predicts that HS2 will improve GDP by £15 billion/year in 2036. HS2 Ltd draws attention in the HS2 economic case to the fact that “The analysis necessarily assumes direct causality between connectivity and productivity, but it has not been possible to provide evidence for this causality”\(^{36}\).

By publishing the KPMG report as part of the HS2 submission to Parliament the DfT have directed attention away from the details of the HS2 economic case analysis. I am not aware of any recognised independent authority that has carried out a detailed evaluation of the HS2 Oct 2013 analysis and taken the view that it is adequate or accurate. I am aware that a number of oversight bodies have serious concerns about the HS2 analysis. These were referenced in the Parliament Library HS2 April 2014 Research Paper 14/24\(^{37}\).

### Errors and omissions in the economic evaluation

The Oct 2013 HS2 economic case shows Benefit Cost Ratios (including WEBs) of 1.7 for phase 1 and 2.3 for the full scheme, these equate to £2011 present value net gains of £11.5 billion and £39.5 billion which in turn equate broadly to improved actual GDP gains of about £0.7 billion/year (£2011) from 2026 for phase one and about £2 billion/year (£2011) for the full scheme.

My assessment of the analysis and detailed calculations has identified a number of errors and omissions in the calculations and assumptions that are not in accordance with the normal DfT guidance.

While the benefit streams linked to average earnings have been escalated through to 2093 the related cost escalation stops in 2036\(^{38}\) this is a basic error, when corrected it reduces the BCR for phase from 1.7 to 1.5 and the full scheme from 2.3 to 1.7.

In the Oct 2013 HS2 Economic Case the proportion of passengers assumed to be business passenger has been revised upwards from the 2012 work. It is not consistent with current

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\(^{38}\) HS2 Ltd - Economic Case calculation spread sheets (Oct 2013) [http://hs2.org.uk/news-resources/economic-documents](http://hs2.org.uk/news-resources/economic-documents)
bi-annual National Passenger Surveys\textsuperscript{39} or the annual National Travel Surveys\textsuperscript{40}. The figures are based on computer analysis of ticket type correlations derived from 2001 and 2004 survey data adjusted for, among other things, changes in car ownership, this work has been carried out by Atkins to help HS2 Ltd improve the economic case and is not used as the basis for any other UK rail investment decisions \textsuperscript{41}. When adjusted to reflect previous HS2 Ltd assumptions that were broadly consistent with NPS and NTS data, the BCR for phase 1 reduces from 1.7 to 1.5 and the full scheme from 2.3 to 2.0.

16 Prior to and throughout the HS2 analysis the DfT have maintained that it be assumed that business passengers are not able to work on trains and that therefore all time saved will benefit their employer and the economy. There is strong evidence (including that commissioned by the DfT) to shows that business people are productive on trains. With the assumption that 60\% of any time saved is beneficial the BCR for phase 1 reduces from 1.7 to 1.2 and the full scheme from 2.3 to 1.7.

17 DfT guidance requires that interest charges (borrowing costs) are included in the analysis; it states that if alternative arrangements have not been identified it should be assumed that typical Network Rail borrowing costs apply\textsuperscript{42}. Adding borrowing costs at a level consistent with those incurred by Network Rail\textsuperscript{43} reduce the BCR for phase 1 from 1.7 to 1.0 and the full scheme from 2.3 to 1.0.

18 The combined effect of these changes is to reduce the BCR of phase 1 from 1.7 to 0.6 and the full scheme BCR falls from 2.3 to 0.8. These BCRs equate to 2011 present value net loss of about £11 billion for the full scheme. Expressed in annual terms (£2011) over a 30-year evaluation period from 2027 to 2056 these would broadly equate to GDP loss/year of £1 billion (£2011) for the full scheme.

19 In addition in Jan 2014 DfT made changes to the evaluation period. Previously the DfT rail industry evaluation period has been 30 years from first operation. If an investment is not expected to make a satisfactory return within 30 years it should probably not proceed. The HS2 analysis used an evaluation period of 60 years making it inconsistent with previous rail project evaluations. If a 30 year evaluation period from the startup of phase 1 is used the BCR for phase 1 reduces from 1.7 to 1.0 and the full scheme from 2.3 to 1.2. The HS2 evaluation period goes 30 years longer than the Office of Budget Responsibility predicts economic forecasts. If there are any positive cumulative net benefits from HS2 they will occur after 2063, the end date of current fiscal sustainability forecasts.

The assumptions related to passenger demand growth

20 Office of the Rail regulator (ORR) statistics\textsuperscript{44} show that in 2012-13 there were 31 million rail journeys between London and the areas to be served by HS2\textsuperscript{45}. HS2 Ltd’s computer

\begin{itemize}
\item \textsuperscript{39} National Passenger Survey Spring (25 June 2014) [http://www.passengerfocus.org.uk/research/publications/national-rail-passenger-survey-nrps-spring-2014-main-report]
\item \textsuperscript{40} National Travel Surveys 2013 2014 (29 July 2014) [https://www.gov.uk/government/publications/national-travel-survey-2013]
\item \textsuperscript{41} HS2 Ltd - Revised base year calculations Atkins Technical notes 20, 24 and 27. Not published by HS2 Ltd but obtained via an FOI request for which HS2 Ltd have not provided a reference number. Available on request from Bluespace Thinking Ltd.
\item \textsuperscript{42} DfT Webtag guidance Unit A5.3. page 8 para. 4.1.2 [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/275405/webtag-tag-unit-a5-3-rail-appraisal.pdf]
\item \textsuperscript{43} Network Rail - Annual Accounts 2013 [http://www.networkrail.co.uk/publications/annual-report-and-accounts-2013/2013/network-rail-limited]
\item \textsuperscript{44} CBRE HS2 Blight study 2010 [http://assets.hs2.org.uk/sites/default/files/inserts/blight-study.pdf]
\item \textsuperscript{45} Office of the Rail Regulator Regional usage profiles London (April 2014) [http://dataportal.orr.gov.uk/displayreport/report/html/48f60d64-fc12-4391-8ddf-025b9e0f47b3]
\end{itemize}
simulations predict that by 2036 the number of journeys will increase by 80% from 2010 to 52 million if HS2 is not built. The analysis predicts that if HS2 is built 4 million journeys will switch from road and air to rail and an additional 20 million new rail journeys (a 38% increase) will take place because of shorter journey times, giving a total of 76 million journeys to/from London. The comparable assumptions of growth in interregional (not to or from London) journeys predicted to take place on HS2 routes are about 50 million journeys including 13 million new journeys giving an overall total of 126 million journeys/year.47

21 It is the additional 33 million new journeys that provide the increased fares revenue, the wider economic benefits and 26% of the time saving benefits that create the BCRs.

22 If these new journeys do not occur the BCR of the full scheme with WEBs falls from 2.3 to 0.8 even if the other issues with the analysis discussed above are not corrected.

23 The case for these “new journeys” is buried in the computer analysis and is based on detailed theoretical correlations of assumed GDP growth, population growth and journey time reductions to travel demand. These “new journeys” assumptions can be compared to the impact of HS1 on journeys to Europe and the HSR domestic routes to Kent. A comparison with the French TGV system can also help indicate whether these HS2 assumptions are reasonable.

**Comparison with HS1, Eurostar and domestic services.**

24 ORR statistics show that there has been no increase in rail journeys to Kent as a result of High Speed Rail (HSR). The number of rail journeys to/from other regions to/from Kent reduced between Nov 2007 (the start of HS1 operations) and 2008, up until 2012/13 growth has been below the average for the rest of SE England and below the increase seen between London and the proposed HS2 served areas.

25 Euro Tunnel statistics show that there was a 10% increase (850,000 journeys) in Eurostar passengers between 2007 and 2008 however they were not new journeys, they correspond to a 900,000 passenger reduction in Euro Tunnel shuttle car and coach passengers. From 2007 to 2010/11 Eurostar passenger growth was the same as that seen to/from London on other intercity routes, the growth in Eurostar to 2012/13 has been below that seen on other long distance services to/from London. From 2008 to 2013 growth in car and coach passengers using the Eurotunnel shuttle service has been three times the Eurostar growth rate.

26 There has been considerable growth in UK long distance rail journeys over the last 10 years and it is the extrapolation of this growth that provides the base “without HS2” growth forecasts, there is no UK based evidence to suggest that HS2 will create a further 38% increase in “new journeys” if it comes into operation.

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46 CBRE bond spread sheet 2012  


48 Office of the Rail Regulator Regional usage profiles London (April 2014)  

49 Eurotunnel Traffic figures.  
http://www.eurotunnelgroup.com/uk/eurotunnel-group/operations/traffic-figures/
Comparison with the French TGV system

27 The populations of France (66 million) and the UK (64 million) are similar as are the GDPs/capita, in 2004 the UK had 13% higher GDP/capita but in 2013 it was 2% lower. The population density of France is 103 people/km² the UK is 257 people/km².50

28 In 2013 there were 127 million journeys on the TGV system51 of which about 100 million were domestic, in the UK there were 127 million journeys on Long distance rail services52.

29 The TGV system serves the 50 million regional population of France through 250 stations and the 10.4 million population of Paris via 5 twin track routes to 4 stations it also links Paris directly to London, Brussels, Basel, Frankfurt, Luxemburg and Milan. The TGV system in France is more than three times the size of HS2 phases 1&2 which plans to serve a regional population of about 20 million and the 8.3 million population of London through 1 twin track line to a single station.

30 The French take 200 million overnight trips within France annually, UK residents make just 105 million overnight domestic trips however the UK makes 57 million international overnight trips of longer duration, about 11 million of which are by air to Spain, the French take 25 million overnight trips to non-French destinations. Both France and the UK have a similar number (22 million) of overnight domestic business trips.53

31 Given these statistics it seems very unlikely that the HS2 a system serving a market that is less than 40% of the size of the TGV will have 126 million passengers by 2036. It is equally unlikely that if the duration of all the current UK long distance rail trips could be magically halved people would take 63 million (50% of 127 million) more long distance rail journeys. This, in simple terms, is the underlying assumption on which the HS2 forecasts are based.

32 While the total journey time would remain the same how would people afford to pay for the trips? How would they get the time off work or during work for the activity at the destination? In the case of HS2 what will they do in London, Birmingham, Manchester and Leeds? Because this is where the analysis predicts most of the 126 million journeys will go.

33 If there were 126 Million journeys/year on HS2 the single twin track coming into London will be a restriction. It is only the AM and PM 3 hourly peaks that actually add useful capacity as virtually all UK trains are underutilized at other times. With 16 trains/hour and train capacity at 80% utilization, during the weekday three-hour morning peak into London HS2 will transport 29,000 passengers or 7.2 million passengers/year. In Paris with 5 twin tracks the TGV capacity is obviously far greater.

The lack of consideration of property blight, system resilience, safety and security.

Property blight

34 The DfT have not taken property blight into account in either the economic case or in assessing the social impact of the scheme. They have three studies that try to establish the extent of blight the first by CBRE in Dec 201054 indicates that it maybe about £5bn for

52 Office of the Rail Regulator Passenger rail Usage http://dataportal.orr.gov.uk/browse/reports/12
phase 1, the other studies by CBRE in Aug 2012\textsuperscript{55} and by PWC in 2013\textsuperscript{56} only look at rural properties up to 500m from the line these studies show blight of about £1.2bn for this limited area, this is probably broadly consistent with the original CBRE study.

35 The true impact of blight is not however this £5bn loss of value by property owners, for which they will not be compensated, but the impact on elderly property owners and others who are unable to sell their property and are hence unable to move to a more appropriate home as they need greater health and social care.

System resilience, safety and security.

36 In deciding to take the trains from three existing long distance rail lines onto one twin track and to have half of the trains not compatible with ordinary lines the resilience of the system will be reduced dramatically. Any blockage on one of the track between London and Birmingham will quickly cause extreme disruption. It would be foolhardy to route all UK gas, oil or electricity through single pipes or cables, or to site a major airport where there were not alternative emergency landing options but this is what is proposed for long distance rail travel without study or consideration.

37 Given that the trains will have a converging speed of about 450mph safety will be paramount, as of January 2014 HS2 Ltd did not have a safety management system in place and the DfT, HSE and the ORR had not assessed whether the system could be operated safely\textsuperscript{57}. In evidence to the Transport Select Committee senior executives from SNCF and Eurostar stated that 12 trains/hour was the maximum that they were safely running on a single TGV track, they were surprised that HS2 Ltd were planning on 18/hour although the October Economic case is now based on 16 trains/hour.\textsuperscript{58}

38 Clearly any security breach onto the line could have catastrophic consequences and repeated problems may well result in loss of public confidence to use the services with significant economic impact. It is usual in a major project where security risk is significant to look at worse case scenarios, to adjust the design to mitigate against them and to assess the probability of an adverse event occurring, so far this work has not been carried out.\textsuperscript{59}

The expected economic benefits, their distribution and the KPMG study\textsuperscript{60}

39 The HS2 economic case in para. 5.3 shows that the single year gross benefits of the scheme in 2036 are expected to be £2.05bn (£2011) distributed £726m (£87/capita) to London, £303m (£54/capita) to the West Midlands, £342m (£48/capita) to the North West £225m (£42/capita) to Yorkshire & Humberside and £752m (£25/capita) to other regions, it is

\textsuperscript{55} CBRE bond spread sheet 2012 

\textsuperscript{56} PWC Property bond cost report 2013 

\textsuperscript{57} FOI responses Jan-April 2014 from HS2 Ltd, the DfT, the ORR and the HSE all advise that HS2 Ltd do not have a safety management system or a risk register and that discussion between the regulatory authorities with regard to HS2 had not taken place. On 21\textsuperscript{st} Oct 2014 the ORR advised that they plan to meet internally in Oct 2014 following which they plan to meet with the HSE. However they also advise that the responsibility for terrorist related safety is with the DfT Transport Security Division.

\textsuperscript{58} Transport Select Committee High Speed Rail Nov 2011 Ev20 Qs 83 & 84 
http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/1185ii.pdf

\textsuperscript{59} FOI responses Jan-April 2014 from HS2 Ltd, the DfT, the ORR and the HSE all advise that HS2 Ltd do not have a safety management system or a risk register and that discussion between the regulatory authorities with regard to HS2 had not taken place. On 21\textsuperscript{st} Oct 2014 the ORR advised that they plan to meet internally in Oct 2014 following which they plan to meet with the HSE. However they also advise that the responsibility for terrorist related safety is with the DfT Transport Security Division.

\textsuperscript{60} HM Treasury Public Expenditure Statistical analysis 2014 (1 August 2014)
difficult to see how these HS2 Ltd figures can be interpreted other than to say London is the greatest beneficiary and that HS2 will increase rather than close the economic gap.

40 These figures do not take into account the fares to be paid, which will be in proportion to the benefits distribution and the subsidy cost to Government collected through taxes and the interest to be paid by Government on borrowing the additional £50bn. Once allowance has been taken of these costs, if the HS2 analysis is correct, the benefits will be less than half that reported. If my analysis is correct the benefits will be negative but the distribution of loss will be distributed across the whole UK.

41 In contrast to the HS2 economic case the Sept 2013 KPMG report predicts that HS2 will improve GDP by £15bn/year in 2036\(^{61}\). However HS2 Ltd draw attention in para 8.1.25 of the HS2 economic case to the fact that “The analysis necessarily assumes direct causality between connectivity and productivity, but it has not been possible to provide evidence for this causality”\(^{62}\).

42 Like other analysts I have reviewed the KPMG work and also the original KPMG analysis on which it was based that was carried out for the rail industry lobby group Greengauge 21. As well as the fundamental lack of evidence for the base assumptions the work fails to allow for the availability of skills, office space, connectivity to international locations, proximity to existing industry and commercial expertise or facilities, climate and the many other facets that impact on GDP growth. An informed understanding of the KPMG method and the fact that it produces a prediction of GDP growth 7.5 times higher than any recognised analysis methodology indicates that it is not a useful contribution to the overall analysis.

43 By publishing the KPMG report as part of the HS2 submission to Parliament the DfT have directed attention away from the official HS2 economic case analysis.

Conclusion

44 HS2 was first proposed for the benefits of shorter journey times between cities this was then changed to the need for more capacity, in both scenarios it has been suggested it will significantly improve the UK economy and close the N-S economic divide. The major economic issue that the UK is facing is the lack of productivity improvement; with the exception of the property and finance sectors there has been no material growth in non-earnings related GDP since 1997. HS2s predicted contribution to this growth is miniscule. The chance that the UK economy will return to and maintain an average annual 2.2% productivity growth rate to 2093, as assumed in the economic case, is minimal, a situation that is slowly becoming recognised by the economic community\(^{63}\).

45 Even without the errors and omissions identified HS2 is not a worthwhile investment, with them it makes no sense. Alternatives as proposed by 51M and others will be far better for the economy.

August 2014

Malcolm Griffiths
Bluespace Thinking Ltd.

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\(^{62}\) HS2 Ltd - Economic case report page 60 Para. 8.1.25 (Oct 2013) http://hs2.org.uk/news-resources/economic-documents

About the author.

With over 25 years experience in major infrastructure projects development, economic analysis and strategic investment decisions I have served on the Boards and Management Committees of more than 10 major infrastructure owners and operators. I have attended the Cabinet Office - Top Management Programme, The Parliament Industry Trust - European Study Programme for Industrialists, the Executive Management Program at Penn State University and the JMW “Manager of the Future” Programme for Senior Managers, all of which emphasis the critical importance of making strategic decisions based on sound economic analysis, a thorough understanding of the objectives and full evaluation of the alternatives.
Andrew Bodman—Written evidence

Introduction

This report has been prepared as input to the House of Lords review of the economic case for HS2

Executive summary

1.1 This is a summary of the main points made in this response:

- Rail investment should be made where the growth is the largest and where there is the most significant shortage of capacity – London and the South East area
- While the West Coast Main Line is nowhere near the top of the priority list, there are a number of ways its capacity can be enhanced much sooner and at far less cost than building HS2
- The realistic benefit cost ratio for HS2 is such that it should not be chosen to receive any investment.
- The section of HS2 between London and Birmingham will be full (in terms of train paths) when the phase two section to Manchester and Leeds is opened which is a further strong reason why it should not be built
- There are several significant costs for HS2 which have been omitted from the Government’s economic case; including them will almost certainly increase the cost of the project to approximately £200 billion. Cost overruns could take the total even higher.
- The Midlands and North of England will be disadvantaged by HS2.
- Fares on HS2 will be higher than those for classic rail.
- An improved east-west transport infrastructure between northern cities will be beneficial.
- The Treasury Select Committee and Public Accounts Committee have both expressed serious concerns about the case for HS2.
- There is no economic case for HS2 when the calculations are made realistically.

Is there an economic case for HS2?

Passenger growth by region

2.1 The Government has finite financial resources and therefore it is essential that it spends taxpayers’ money prudently and where it is most needed. Long distance rail travel has shown almost no growth for the last two years while rail travel in London and the South East continues to grow significantly.\(^6^4\)

### Passenger Journeys (millions).

<table>
<thead>
<tr>
<th>Year</th>
<th>London &amp; South East Operators</th>
<th>London &amp; SE Annual Increase</th>
<th>Regional Increase</th>
<th>Long-distance Increase</th>
<th>Virgin Trains</th>
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<tr>
<td>2004-05</td>
<td>704.5</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2005-06</td>
<td>719.6</td>
<td>15.1</td>
<td></td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>2006-07</td>
<td>769.6</td>
<td>50</td>
<td>276.5</td>
<td>99</td>
<td>19.8</td>
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<tr>
<td>2007-08</td>
<td>828.3</td>
<td>58.7</td>
<td>285.9</td>
<td>103.8</td>
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<tr>
<td>2008-09</td>
<td>854.3</td>
<td>-26</td>
<td>302.7</td>
<td>109.4</td>
<td>5.6</td>
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<td>2009-10</td>
<td>842.2</td>
<td>-12.1</td>
<td>303.9</td>
<td>111.7</td>
<td>2.3</td>
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<td>917.6</td>
<td>75.4</td>
<td>318.2</td>
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<td>2011-12</td>
<td>993.7</td>
<td>76.1</td>
<td>341</td>
<td>125.3</td>
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<td>2012-13</td>
<td>1032.9</td>
<td>39.2</td>
<td>341.1</td>
<td>127.8</td>
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<td>2013-14</td>
<td>1107.8</td>
<td>74.9</td>
<td>350.8</td>
<td>129.2</td>
<td>1.4</td>
</tr>
</tbody>
</table>

| Increase over last 5 years | 253.5 | 48.1 | 19.8 |

2.2 It is worth noting that the annual increase in rail passenger numbers in the London and South East area has been greater than the total number of passengers carried on Virgin Trains (which serves the West Coast Mainline) in seven out of the last eight years\(^\text{65}\).

2.3 One consequence of this continued rail passenger growth is that more than 120,000 passengers have to stand on trains into London during the morning three hour peak every weekday, according to the latest Department for Transport data\(^\text{66}\). They are rail commuters, and across the country commuters make up more than half the journeys on the rail network.

2.4 By 2018 the improved Thameslink programme is scheduled to be completed with Crossrail following one year later. Both schemes are most welcome and will make a very big difference to travel to and within London. However these two schemes will by no means address all of London’s rail travel issues.

2.5 Waterloo station receives the second largest number of standing passengers during the morning three hour peak: 27,996\(^\text{67}\). It is served by South West Trains and with the exceptions of Guildford and Wimbledon, its passengers will see no direct benefits from either Thameslink or Crossrail.


2.6 Liverpool Street station receives the fourth most standing passengers during the morning three hour peak: 12,150. It is served by Greater Anglia, and with the exceptions of Cambridge, Romford and Ilford, its busiest stations will see no direct benefit from these two previously mentioned projects.

2.7 There are other London stations whose trains experience many standing passengers in the morning three hour peak e.g. Victoria, which will receive no direct benefit from Crossrail or the improved Thameslink programme.

2.8 By contrast, Virgin and East Coast trains have the least standing passengers of all the train operating companies serving London during the morning three hour peak, i.e. they are the least overcrowded.

<table>
<thead>
<tr>
<th>Train Operator</th>
<th>Average % passengers standing AM 3 hour peak 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>London Overground</td>
<td>51</td>
</tr>
<tr>
<td>South West Trains</td>
<td>28</td>
</tr>
<tr>
<td>c2c</td>
<td>27</td>
</tr>
<tr>
<td>Southern</td>
<td>24</td>
</tr>
<tr>
<td>London Midland</td>
<td>21</td>
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<tr>
<td>Southeastern</td>
<td>19</td>
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<tr>
<td>First Capital Connect</td>
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<td>First Great Western</td>
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</tr>
<tr>
<td>East Midland Trains</td>
<td>13</td>
</tr>
<tr>
<td>Greater Anglia</td>
<td>13</td>
</tr>
<tr>
<td>Chiltern Railways</td>
<td>7</td>
</tr>
<tr>
<td>East Coast</td>
<td>0</td>
</tr>
<tr>
<td>Virgin Trains</td>
<td>0</td>
</tr>
</tbody>
</table>

2.9 Over half of Virgin’s Pendolino train sets have been lengthened from 9 to 11 carriages, with all the additional capacity being standard class. On their remaining Pendolinos, there is a programme to replace one first class carriage on each train with a standard class carriage to better match supply and demand.

**West Coast Main Line expansion**

2.10 To provide significantly more growth on the West Coast Mainline, there are alternatives to HS2 which can be introduced sooner, at far less cost and less disruption.

2.11 Most rail lines serving London have limited capacity for additional trains. Nonetheless Network Rail agreed to allow Great North Western Railway Company to run a total of 12 additional rail services per day from London to Blackpool and Leeds from 2017 and 2018.

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Spreadsheets RAI0212 through to RAI0215

respectively using the West coast Mainline (WCML)

2.12 London Midland’s Project 110 will provide three additional trains in the morning peak and five in the evening peak from later in 2014 to provide greater capacity for commuters.

2.13 The Optimised Alternative proposed by 51M would increase the number of train paths available on the WCML by addressing pinch points at Ledburn junction, between Brinklow and Nuneaton and at Colwich Junction. The construction of these enhancements would not cause lengthy disruption and their costs would be insignificant compared to HS2.

2.14 Network Rail has planned or commenced work in the Stafford area which will increase capacity on the WCML by four trains per hour when completed in 2017.

2.15 If Virgin trains were permitted to stop at Milton Keynes to let off and pick up passengers at peak times, then London Midland trains would become less crowded on this commuter section of the West Coast Main Line. This change requires zero investment.

2.16 The London and the South East area is not going to receive the investment it needs to reflect its ongoing rail passenger growth. Yet the West Coast Main Line, which has some of the least overcrowded trains and has several opportunities to accommodate more train paths, is going to have more than £50 billion spent on a line to relieve its supposed overcrowding. It makes even less sense when you are aware that 86% of rail journeys to London are made from the south and east of the capital.

2.17 The latter analysis correlates with the stations whose trains carry the most standing passengers during the morning three hour peak. They are in descending order London Bridge, Waterloo, Victoria, Liverpool Street and Fenchurch Street which primarily serve destinations to the south and east of London.

**Benefit cost ratios**

2.20 The economic case for HS2 is poor with a benefit cost ratio of 1.4 for phase one or 1.8 for phases one and two combined (wider economic impacts excluded). There are many other transport projects with more favourable benefit cost ratios.

2.21 However the HS2 benefit cost ratios are misleading for a number of reasons. The calculations assume that all time spent on trains is non productive and that any journey time savings created by reduced rail journey times will provide economic benefits through increased work. As any rail traveller will know, many people do work on trains whether by use of a laptop, smartphone or by reading reports. The benefits of shorter journey times used as part of the benefit cost ratio calculation are entirely specious.

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70 [http://www.alliancerail.co.uk/gnwr/](http://www.alliancerail.co.uk/gnwr/)
72 [http://www.51m.co.uk/wp-content/uploads/2013/08/ch1.pdf](http://www.51m.co.uk/wp-content/uploads/2013/08/ch1.pdf)
73 [http://www.networkrailmediacentre.co.uk/content/detail.aspx?ReleaseID=8073&NewsAreaId=2](http://www.networkrailmediacentre.co.uk/content/detail.aspx?ReleaseID=8073&NewsAreaId=2)
74 [http://dataportal.orr.gov.uk/browsereports](http://dataportal.orr.gov.uk/browsereports) From an analysis of the spreadsheets provided for each of the eleven separate regions
2.22 The calculations also assume that there will be no ticket price premium (compared to classic rail) for users of HS2. As train tickets from Ashford to London cost 20% more than their classic rail equivalents and high speed rail tickets in Europe are typically 70% more expensive than their classic rail alternatives\textsuperscript{76}, this assumption also appears to be without foundation. With higher priced tickets, the actual numbers of HS2 passengers are likely to fall well short of those forecast, which in turn will adversely affect revenues.

2.23 There are also costs which have been omitted from the business case which will be discussed in the next section (3.1 onwards). When these three issues are taken into consideration, the benefit cost ratio falls to less than 0.5, i.e. for each pound spent there will be a return of 50 pence or less\textsuperscript{77}. That is not an acceptable return, particularly for a project costing £50 billion or more.

\textbf{Lack of expansion capability}

2.30 When making a substantial investment, it is necessary to consider over how many years there will be a suitable return. In the case of HS2 it has a designed in bottleneck which will prevent further growth once phase two is operational.

2.31 The International Union of Railways has advised that it is not safe to run more than 16 trains per hour at speeds of 350 kph\textsuperscript{78}. The Environmental Statement shows that 18 trains per hour are expected to be run on the main section between London and Birmingham at up to 360 kph once phase two becomes operational in 2032/3\textsuperscript{79}. Higher speeds require greater stopping distances necessitating greater intervals between each train.

2.32 Therefore there is no expansion capability for additional train paths seven years after HS2 becomes operational. These might be needed to serve additional destinations such as Heathrow or to provide more frequent services to certain destinations. This major constriction appears to be a very significant oversight for a line with a claimed £50 billion price tag. The Victorians built lines which could accommodate growth for more than 150 years. Atkins, a contractor for HS2, pointed out this potential bottleneck in 2008\textsuperscript{80}. So HS2 will create the very problem its supporters use to criticise the West Coast Main Line within seven years of opening.

\textbf{Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?}

3.1 The strategic case for HS2 excludes a number of costs some of which are very significant.

\textsuperscript{76} http://stophs2.org/news/6107-rail-ticket-prices-premium-hs2
\textsuperscript{78} http://www.greengauge21.net/wp-content/uploads/Final-Report-Appendices-B-1.pdf See figure 2
\textsuperscript{79}https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259491/Volume_1_Introduction_to_the_Environmental_Statement_and_the_Proposed_Scheme.pdf See Figure 13
\textsuperscript{80} Report by Atkins “Because Transport Matters. No longer available on the internet. See page numbered 22.
Interest payments
3.10 As the national debt currently stands at £1.3 trillion[^81] and Network Rail has a debt of £34 billion[^82], it will be necessary to borrow to construct the HS2 lines and provide its rolling stock. Interest payments on the HS2 debt could reach £2.3bn per year based on current low rates of interest. The calculation is based on a total cost for HS2 of £50 billion and interest being paid at the same rate as that by Network Rail in the 2012-13 financial year[^83]. If the debt is paid down, then obviously the interest payments will reduce; debt can only be paid down if the line is profitable. On the other hand, interest rates are likely to increase as they are currently at an all time low.

3.11 In July 2010 a World Bank report cautioned that governments planning high-speed rail systems “...should also contemplate the near-certainty of copious and continuing budget support for the debt”[^84].

3.12 A conservative estimate for HS2 interest payments over a sixty year period could be £30 billion pounds. To put this into context, the construction cost of HS1 was £6.2 billion but the National Audit Office estimated the full cost to the taxpayer would be £10.2 billion by 2070[^85]. Part of the additional amount is caused by the inclusion of interest payments.

Subsidy
3.20 It is understood that Spain spends nearly $2 billion[^86] on high speed rail subsidies annually and Germany more than $1 billion per year[^87]. Japan is another country which appears to subsidise its high speed rail despite it having the highest rate of rail use in the developed world[^88].

3.21 An on-going subsidy of £1 billion or more per year for the next 60 plus years is an unnecessary and unwanted millstone for taxpayers. A subsidy will be required because passenger revenues will fail to match projections. A study of more than 250 infrastructure projects by Bent Flyvbjerg of Oxford University showed that there is a tendency to overestimate passenger forecasts by more than 100% on rail projects[^89].

Power supply - national
3.30 Many HS2 trains will draw up to 22.5 MW, which is over four times the rated power of a Pendolino train. At any one time, there could be up to 54 HS2 trains running when Phase two becomes operational (2032/3). It has been estimated that the power needed to support all these trains running (1600 MW) will necessitate the building of an additional power station of the size of Hinkley Point C. The cost of such a power station would be £16 billion, and it could take ten years or more to get suitable approval and to build such a

[^81]: http://www.telegraph.co.uk/finance/economics/10849333/Interest-bill-on-UKs-1.27-trillion-debt-to-hit-1bn-a-week.html
[^82]: http://www.transport-network.co.uk/Network-Rail-joins-public-sector-bringing-a-34bn-debt-with-it/10865#.VAhFglam3wl
[^89]: http://oxrep.oxfordjournals.org/content/25/3/344
It is well known that we have very little spare generating capacity in the UK at present and a significant number of power stations are due for decommissioning in the next ten years.

**Crossrail 2**

3.40 The forecast number of passengers wishing to use the Underground at Euston station during the morning three hour peak hour is likely to increase from 9,910 in 2012 to 41,340 by 2041 – a fourfold increase, according to the HS2 Environmental Statement. A significant proportion of that increase will be the result of HS2 services. Of the Underground lines serving Euston, the Northern line is the second most used and the Victoria the sixth most used line. In terms of the average number of journeys per mile the Victoria is by far the most intensively used Underground line.

3.41 The existing Underground lines will clearly be unable to handle such additional volumes of passengers. As HS2 will be unable to operate without Crossrail 2, HS2 must contribute to most or all of its cost, rather than hoping Transport for London will pick up the whole bill or even decide to build it.

**Property Compensation**

3.50 HS2 Action Alliance has estimated that approximately 98% of homeowners living within one kilometre of the proposed route will not be properly compensated. Some individuals will experience losses in the value of their property measured in tens or hundreds of thousands of pounds. Others cannot sell their properties and have been declined under the Exceptional Hardship Scheme (EHS). So far, just 148 properties have been bought under the EHS scheme, and the average value of each property through this scheme has been £595,707.

3.51 There are 486,000 properties within 1km of the proposed route. If you assume an average loss per property of £50,000, then the currently uncompensated loss amounts to £23.8 billion. Alternatively if you assume the average loss per property is £100,000 then the uncompensated loss amounts to £47.6 billion.

3.52 The currently proposed compensation scheme will not reimburse the property owners for these losses in the vast majority of cases. So some may argue that there is no need to include this compensation costs in the HS2 economic case as the Government does not intend to compensate for the majority of the property losses. However, if these property owners are not compensated, then they will be collectively subsidising the HS2 project by £23.8 billion or more for no satisfactory reason. It is a cost that has directly arisen from HS2, and in a fair society these property owners would be compensated in full.

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Table 18
[http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/traffic/Vol_5_TA_London_assessment_CFA1-3(Sec6b)_Part4_wm.pdf](http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/traffic/Vol_5_TA_London_assessment_CFA1-3(Sec6b)_Part4_wm.pdf) Table 6-124
93 [http://www.hs2.org.uk/developing-hs2/property/compensation-currently-available.html](http://www.hs2.org.uk/developing-hs2/property/compensation-currently-available.html) Values as at 01/08/2014
94 HS2 Action Alliance Property Compensation Consultation Response 04/12/2013
Cost overruns
3.60 Large infrastructure projects inevitably have a risk of cost overruns. They occur due to unforeseen circumstances or mistakes in the cost forecasts. The analysis of infrastructure projects referred to earlier found an average cost overrun of 44.7% on rail projects.95

3.61 The costs for HS2 do contain an allowance for cost overruns (contingency) which varies between 10 and 41%. However, it is simply an estimate and it is impossible to say in advance whether these allowances will be sufficient, particularly when only 60% of the phase one route has been surveyed97 and very little of phase two. Even if the whole route had been surveyed, it would not prevent unexpected issues occurring which add to the cost of the project. We have not attempted to estimate the size of these possible cost overruns.

3.62 A recent example of cost overruns comes from the programme to electrify the Great Western Main Line. The likely cost has increased from £1.0 to £1.5 billion (a 50% increase) according to the Network Rail Chief Executive and the cost of each connection to the national grid has increased from £20 million to £50 million.98 This makes the HS2 phase one construction cost contingency of 24% look distinctly inadequate.99

3.63 A significant part of the phase two route to Leeds crosses over previously used coal mines while part of the phase two route to Manchester crosses salt mines in Cheshire. These are both areas where subsidence occurs which may well lead to additional costs during construction or subsequently. The phase two construction cost contingency (optimism bias) of 52% may turn out to be insufficient.100

3.64 It is not clear why there are such differences in the cost per mile between the phase one and phase two sections of the route:

<table>
<thead>
<tr>
<th>HS2 Construction Costs excluding contingency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction cost excluding contingency (£millions)</td>
<td>Miles</td>
</tr>
<tr>
<td>Phase One</td>
<td>15,510</td>
</tr>
<tr>
<td>Phase Two</td>
<td>12,470</td>
</tr>
</tbody>
</table>

3.65 It is acknowledged that the phase one route (as planned) will contain almost 29 miles of tunnels which is considerably more than that proposed for phase two. However, that alone cannot explain the phase two construction cost per mile being half the amount for phase one. Bearing in mind that HS1 cost almost £92 million per mile to build101 (approximately 20

95 http://oxrep.oxfordjournals.org/content/25/3/344
96 http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf See 7.3.2
98 Modern Railways September 2014 Pages 28-29
99 http://www.hs2.org.uk/news-resources/economic-documents Appraisal spreadsheets, full network, Phase One and Full Network Costs, Construction Profile
100 http://www.hs2.org.uk/news-resources/economic-documents Appraisal spreadsheets, full network, Phase One and Full Network Costs, Construction Profile
years before HS2 phase two is scheduled to be built), it is virtually certain that the construction costs for phase two have been grossly underestimated.

3.66 Cost overruns can also occur due to controls not being tight enough. It is concerning to note that there have already been two separate occasions when HS2 costs have been reported as exceeding budgets. Most recently the average overspend with contractors was 86\%\(^\text{103}\). That is before the start of any construction work.

3.67 Other costs have been identified which have been omitted from the strategic case, but the individual amounts are smaller than those noted above.

3.68 Costs summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS2 construction costs plus trains</td>
<td>£50 billion</td>
</tr>
<tr>
<td>Interest payments</td>
<td>£30 billion</td>
</tr>
<tr>
<td>Ongoing subsidy</td>
<td>£60 billion</td>
</tr>
<tr>
<td>Power supply</td>
<td>£16 billion</td>
</tr>
<tr>
<td>Crossrail 2</td>
<td>£14 billion</td>
</tr>
<tr>
<td>Property compensation</td>
<td>£23.8 billion</td>
</tr>
<tr>
<td>Cost overruns</td>
<td>£???</td>
</tr>
<tr>
<td><strong>Total (excluding cost overruns)</strong></td>
<td><strong>£193.8 billion</strong></td>
</tr>
</tbody>
</table>

What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?

4.1 The economic benefits of HS2 to the Midlands, North of England and Scotland are likely to be negative. Professor John Tomaney indicated to the Transport Select Committee in 2011 that if HS2 does create any regional regeneration then the most likely beneficiary will be the capital i.e. London. This was the expected outcome from a study he had made of the effects of high speed rail in several other countries\(^\text{103}\). A BBC Newsnight programme reached similar conclusions\(^\text{104}\). There has not been a single independent report which reaches a different conclusion.

4.2 An analysis in France, which has had a high speed rail service for more than thirty years, shows that the headquarters of 82\% of the CAC 40 companies are based in Paris\(^\text{105}\). That hardly suggests that high speed rail has encouraged regional regeneration.

4.3 The BBC Newsnight programme referred to above also noted that some of the companies that had moved to Seville, served by high speed rail, had been financially incentivised to do so.

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\(^\text{103}\) [http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/writev/rail/m14.htm](http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/writev/rail/m14.htm)

\(^\text{104}\) [http://www.bbc.co.uk/news/uk-22441169](http://www.bbc.co.uk/news/uk-22441169)

\(^\text{105}\) [http://beleben.wordpress.com/2014/03/19/the-london-guarantee/](http://beleben.wordpress.com/2014/03/19/the-london-guarantee/)
4.4 The idea that HS2 is going to bring about an economic regeneration of the Midlands and North is a myth based on reports paid for by the Department for Transport or HS2 Ltd. For example the KPMG report produced in 2013 used methodology which made Robert Peston’s (BBC economics editor) “jaw fall to the floor”\textsuperscript{106}.

4.5 Most people would accept the notion that the average wage level is higher in London than in other parts of the UK. Similarly the average house price is higher in the capital than in other parts of the United Kingdom. Some people choose to live outside London and commute to the capital simply because housing is cheaper in the Home Counties. It would therefore make no economic sense for someone to live in London and work in Birmingham or Manchester, as this would provide a low wage and a high cost of housing relatively speaking.

4.6 As HS2 is an extremely expensive solution to a supposed problem, the Midlands and North will be worse off than if the money had instead been spent on rail improvements for local travel. More than 12,000 rail commuters currently have to stand at peak times on their journeys into cities such as Manchester, Leeds, Liverpool and Birmingham although their numbers are obviously fewer than in London\textsuperscript{107}.

4.7 It should also be borne in mind that while extra capacity will be freed up on “classic” rail, it does not follow that extra services will be run for commuters. According to the Assumptions Report (October 2013), no additional services are expected to be run, following the introduction of HS2, on these typical commuter journeys\textsuperscript{108}:

- Cheltenham to Birmingham
- Coventry to Birmingham
- Leamington Spa to Birmingham
- Barnsley to Leeds
- Doncaster to Leeds
- York to Leeds
- Leeds to Manchester
- Liverpool to Manchester
- Stockport to Manchester
- Chesterfield to Sheffield

4.8 It should be noted that classic trains will cover 20 million fewer kilometres per year following the introduction of HS2\textsuperscript{109}.

\textsuperscript{106} http://www.bbc.co.uk/news/business-24047047
\textsuperscript{108} http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%20assumptions%20report.pdf See sections 5.1 and 6.4
\textsuperscript{109} http://www.hs2.org.uk/news-resources/economic-documents Appraisal spreadsheets, full network, Phase One and Full Network Costs, Train km Summary
4.9 It would be disingenuous to suggest that development will automatically take place near to a newly built high speed rail station. Ebbsfleet station on the HS1 line in Kent has been open for almost seven years. In March 2014, Chancellor George Osborne suggested building a garden city at Ebbsfleet. That implies that local development has not taken place in the area since the HS1 station opened in 2007. Stations on high speed lines have not automatically brought about local regeneration.

**Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?**

5.1 There will be no economic beneficiaries from HS2 as it is likely to provide a benefit cost ratio of 0.5 or less when calculated realistically. This scheme should not go ahead for the very reason it provides a negative return on investment. London may benefit in as much as some people may more easily be able to travel each day from Birmingham or Manchester to work in London. But it is questionable whether that is a benefit and it is questionable whether the Government should be assisting people who choose to live so far from their place of work.

5.2 The whole country will be disadvantaged as £50+ billion is a disproportionate amount of money to spend on one supposed problem. It would be preferable to spend the money on projects which provide a much better rate of return. Some would question whether we should be spending such vast amounts of money when the UK Government has a debt of at least £1.3 trillion.

**How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?**

6.1 If HS2 is built, it will inevitably be in competition with the West and East Coast Main Lines as well as any flights from London to Manchester, Leeds, Edinburgh and Glasgow.

6.2 If the question is asking whether the franchise should be separate from the franchises running the West and East Coast Main Line franchises, we have no views on that.

**Should travellers pay higher fares on HS2 than other lines?**

7.1 HS2 passengers will have shorter journey times than classic rail passengers, so it would be perfectly reasonable to charge them more for their tickets.

7.2 Furthermore the costs of providing the service will be considerably higher and these costs need to be paid for by the HS2 rail passengers, not the taxpayers. HS2 will have higher leasing costs for its trains, greater maintenance costs and greater electricity consumption. The cost of constructing the tracks needs to be paid back and there will be the ongoing interest charges on the debt used to build the lines.

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7.3 A ticket from Ashford to London costs 20% more by HS1 than by classic rail. The corresponding ticket price premium in Europe for high speed trains was found to be 70% greater on average in 2012\textsuperscript{112}.

**Does the prospect of HS3 affect the economic case for HS2?**

8.1 HS3 or a similar scheme, which improves both capacity and speed of east west travel between the major conurbations in the North of England, is a very worthwhile project. Its name is something of a misnomer as it will not technically be a high speed line. The Northern Hub project which is currently underway is a first step in this direction. It and HS3 are exactly the kind of projects which Professor John Tomaney encouraged in his response to the Transport Select Committee on the subject of high speed rail.

8.2 HS3 would greatly benefit the North of England; by contrast HS2 would disadvantage northern cities as well as being a financial millstone for the whole country for many decades.

**Conclusion**

9.1 The Government and HS2 Ltd have made numerous claims for HS2; unfortunately very few of them are supported by independent evidence. There is no economic case for HS2. The Treasury Select Committee\textsuperscript{113} and Public Accounts Committee\textsuperscript{114} share similar views concerning the case for HS2.

9.2 HS2 would be one of the largest projects (financially) in which the Government has ever invested during peacetime which makes it all the more critical that it has a sound economic case.

9.3 It is most concerning that the Government is not investing enough in transport where the growth is consistently the greatest (London and the South East area) and the greatest overcrowding currently occurs, but instead chooses to invest where the trains are the least overcrowded and there are means of providing additional train paths.

9.4 It is also extremely concerning that the HS2 project is likely to cost very much more than the £50 billion claimed and the total could be as much as £200 billion. Coupled with the grossly overstated benefits, there is simply no economic case for HS2.

*September 2014*

\textsuperscript{112} \url{http://stophs2.org/news/6107-rail-ticket-prices-premium-hs2}
\textsuperscript{113} \url{http://www.telegraph.co.uk/finance/economics/10361565/Treasury-Select-Committee-calls-for-HS2-review.html}
\textsuperscript{114} \url{http://www.parliament.uk/business/committees/committees-a-z/commons-select/public-accounts-committee/news/high-speed-2-report/}
### Appendix of Academic Studies on the Impact of Noise Levels on Property Values

#### Table relating to Road Noise Levels

<table>
<thead>
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<th>Author</th>
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<th>Study Area</th>
<th>Title</th>
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<th>B</th>
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Additional studies subsequent to Bateman Study
Baranzini and Ramirez, 2005 Study of Road Traffic Noise, Geneva 0.65
### Table 5-4: Hedonic pricing studies of loss in property value from Aircraft Traffic noise (% depreciation in house prices per 1 dB(A) increase in noise level)

<table>
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<tr>
<th>Author</th>
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<th>Study Area</th>
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**Refined Average**

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Additional studies subsequent to Bateman Study

- Nelson, 2004, 23 Airports in Canada and USA, 0.67
- Baranzini and Ramirez, 2005 Study of Aircraft Noise, Geneva 0.66% - 0.79%
- Nguy et al, Study at Beijing Airport, Range 1-05% - 1.28%
List of Academic References in shown in the above Tables

Source References in respect of the Bateman & Nelson Studies on Property Value Depreciation due to increased Noise Levels

Batement et al 2001

Road (R) or Air (A)
REFERENCES applicable to Tables 5.2 (Road Noise) and 5.4 (Air Noise)


A Gaurin, J.-F. (1976). Residential property values: an evaluation of the impact of aircraft noise on property values


A Vaughan, R. J. and L. Huckins (1975). The economics of expressway noise and pollution abatement, P-5475, Santa Monica, Ca.: Ballinger.


References Nelson Study


Post Nelson Study References

Andrew Bodman—Supplementary written evidence

Review of oral evidence from DfT and HS2 Ltd 28th October 2014

David Prout (Department for Transport) and Alison Munro (HS2 Ltd) provided oral evidence to the House of Lords Economic Affairs Committee regarding the Economic Case for HS2 on 28th October 2014. What follows is a review of some of the statements and assertions that they made. In a number of cases their remarks appear to be misleading or incorrect. Independent evidence does not correlate with many of the claims made. Many would consider it more useful to review what has happened in other countries rather than relying on models to provide projections. 27 references have been used to support the points made in this review.

Q64 response: “As far as phase 1 is concerned, we are clear that we will come in on budget of £21.4 billion”.

A study of more than 250 major infrastructure projects in 20 countries by Bent Flyvbjerg of Oxford University found an average cost overrun of 44.7% on rail projects [1].

The cost of electrifying the Great Western Main Line (work currently underway) has increased from £1.0 to £1.5 billion (a 50% increase) according to the Network Rail Chief Executive Mark Carne and the cost of each connection to the national grid has increased from £20 million to £50 million (a 150% increase) [2]. This electrification work, which should reach Cardiff by 2017, was originally estimated to cost £600 million [3].

The claim made appears to be open to question.

Q64 response: “We have not made decisions on phase 2 yet, but what we are absolutely clear about, and what the Chancellor made clear to David Higgins, the Secretary of State, and I when we saw him a week or two ago, is that the budget is the budget. “

The phase two route has not been finalised, and therefore has not been fully surveyed. The route currently crosses a salt mining area in Cheshire and previously used coal mining areas between Leicestershire and Yorkshire which could increase the costs above those anticipated due to the additional work required to avoid subsidence. There are likely to be many other factors which could use up all of the contingency budget and more.

The construction cost (excluding contingency) for phase one is £121 million per mile while that for phase two is £59 million per mile [4]. Bearing in mind that HS1 cost almost £92 million per mile to build [5] (approximately 20 years before HS2 phase two is scheduled to be built), it is virtually certain that the construction costs for phase two have been grossly underestimated.

Q66 response: “For example, at the moment Virgin would like to put in routes from Blackpool and Shrewsbury direct to London and there is not space for those train paths.”

The additional services requested by Virgin to be run on the West Coast Main Line from London to Shrewsbury and Blackpool have now been approved by the Office of Rail
Regulation and will start operation in December 2014 \(^6\). Mr Prout had indicated that they could not be fitted in. This was a significantly misleading statement.

The West Coast Main Line is able to and will be accepting further train paths. London Midland’s Project 110 will be providing 3 additional trains in the morning peak and 5 additional trains in the evening peak from December 2014 \(^7\).

Network Rail has planned or commenced work in the Stafford area which will increase capacity on the WCML by four trains per hour when completed in 2017 \(^8\).

The 51M Optimised Alternative identified ways of increasing standard class capacity on Virgin Trains by more than 200% through reconfiguring carriage layouts and making three infrastructure changes which would not cause major disruption \(^9\).

**Q66 response:** “The other problem is commuter capacity, and there the overcrowding on commuter trains is much worse than it is on long-distance trains.”

Commuting into London is where the real capacity issues are with 120,000 rail passengers having to stand on trains into the capital during the morning three hour peak \(^10\). It should be noted that 86% of passengers travelling to London by rail do so from the south and east of the city \(^11\). The greatest overcrowding (measured by standing passengers during the morning three hour peak) is found on trains into London Bridge (32,000), Waterloo (28,000), Victoria (14,000), Liverpool Street (12,000) and Fenchurch Street (9,000) stations \(^12\). Trains into Euston had 5,000 standing passengers during the same period.

So Mr Prout has not indicated the direction of travel of the majority of these overcrowded London commuter trains (from the south and east) and has not pointed out that HS2 will do nothing to assist the vast majority of these standing passengers. Furthermore while Crossrail and the revised Thameslink will be of great benefit to London rail travellers, they will by no means address all the London rail commuter issues.

**Q66 response:** “In addition to that, going back to one of your earlier questions on freight, the West Coast Main Line is a mixed-use railway: long-distance intercity trains, short and long-distance commuter trains and freight trains, all muddled up together.”

The West Coast Main Line is four tracked from London Euston to Rugby and this is the busiest part of the WCML. Some other sections of the WCML are also four tracked. Four tracks enable slow trains to be separated from fast trains. It is not correct to suggest that mixed usage causes delays when there are four tracks available.

There are other four tracked main lines in this country and it is standard practice to allocate any one line to either fast or slow trains.

**Q66 response** in relation to demand forecasts: “We are as confident as we can be.”

The study of major infrastructure projects referred to earlier showed that there is a tendency to overestimate passenger forecasts by more than 100% on rail projects \(^1\).

The original forecast for rail passengers using the Channel Tunnel was three times greater than the actual number of passengers \(^13\).
If you believe that premium ticket pricing will be applied for HS2 passengers then this will also reduce passenger numbers from those forecast. High speed train operators do apply a ticket price premium in many other countries, with a typical premium being in the order of 70% in European countries [14]. The Public Accounts Committee challenged the assumption that ticket prices would not be premium priced for HS2 journeys [15].

The omens are not good regarding the dependability of these passenger forecasts. To agree to spend £50 billion or more based on uncertain passenger forecasts is a very big gamble with taxpayers’ money.

**Q69 response:** “We improve accessibility, for example with Euston station where we include a link to Euston Square in our costs provision for improving the underground provision.”

According to the HS2 Environmental Statement, the number of rail passengers seeking to use the Underground at Euston during the morning peak three hours will experience a four fold increase between 2012 and 2041 [16]. Yet no provision is being made for this vast increase in Underground passengers despite the Northern and Victoria lines being the second and sixth busiest lines in the city [17].

There is no doubt that Crossrail 2 will be needed to enable the timely dispersal of passengers at Euston, but it is not part of the HS2 budget.

**Q72 response:** “Logically that would suggest that in terms of the balance of economic growth, the north would benefit more than the south.”

No independent evidence was used to justify the claims that HS2 will help rebalance the UK economy. It would be prudent to take note of the views of Professor John Tomaney who has studied the actual regeneration effects of high speed rail in five countries. His conclusion was that if there were any regional effects then the capital of that country would be the beneficiary [18]. To my knowledge, there has not been a single independent report which reaches a different conclusion.

France has been running its TGV trains for 34 years. 82% of CAC 40 listed companies have their headquarters in Paris. By comparison 66% of FTSE 100 listed companies have their headquarters in London [19]. Therefore high speed trains in France do not appear to have encouraged large companies to leave the capital.

A more reliable basis for determining the likely regional economic effects may be gained from studying the experiences of other countries rather than relying on models of questionable integrity.

**Q74 response:** “That is why we have to build a new Euston station, at huge expense.”

Sir David Higgins decided when he took over the HS2 project that the plans for Euston station were not suitable and that a more comprehensive solution was needed. While the cost of the revised Euston station was described as huge by Mr Prout, it is unfortunate that the actual amount has not been shared with the public or included in the overall HS2 costing.
Q74 response: “If you look at the commercial case, we did not give our detailed workings but we gave the headlines in terms of public subsidy for the operating railway, and what those headlines show is that HS2 will operate at a very substantial operating surplus.”

It is understood that Spain spends nearly $2 billion on high speed rail subsidies annually and Germany more than $1 billion per year. Japan is another country which appears to subsidise its high speed rail despite it having the highest rate of rail use in the developed world.

Some researchers believe that there are only two profitable high speed rail lines in the world: Paris-Lyon and Tokyo-Osaka.

In July 2010 a World Bank report cautioned that governments planning high-speed rail systems: “. . should also contemplate the near-certainty of copious and continuing budget support for the debt”.

The McNulty report found that our rail operating costs are 40% higher than in other European countries. Our existing rail services require a subsidy of several billion pound per year. Operating costs of ultra high speed trains are higher than for those of classic rail, e.g. rolling stock lease costs, electricity consumption, interest payments on debt used to build HS2, track maintenance costs, etc.

As mentioned earlier, it is extremely likely that passenger numbers have been significantly overestimated and therefore ticket revenue will be less than expected. When so many high speed rail services in the rest of the World operate at a loss, is it realistic to expect that the UK will be different?

Q75 response: “Well, you get a lot for your money.”

Sir David Higgins recently indicated that if HS2 was being built in France it would cost one third of the price that it is expected to cost in the UK. N.B. please note the headline differs from the text of the article. Another article suggested it costs four times more to build a high speed line in the UK compared to France.

To suggest that we will get a lot for our money has no credibility.

**************

Finally it may be worth commenting with regard to a question raised at the session on 4th November and has almost certainly been raised previously. Witnesses were asked whether or not they thought there was an overcrowding issue on trains at Euston currently.

A study of the Department for Transport spreadsheet which is attached will show that Virgin trains do not have any standing passengers in the three hour morning peak at any of the stations listed and nor do East Coast trains. The picture is only slightly different in the evening peak. Virgin and East Coast both operate inter city services. Conversely London Midland and London Overground trains do have very high levels of standing passengers. Virgin, London Midland and London Overground are the three train operators serving Euston.
It is evidence yet again that the overcrowding issues that we have on our trains are those serving commuters. A high speed intercity service is not going to address that problem.

November 2014

References

2. Modern Railways September 2014 Pages 28-29
   Appraisal spreadsheets, full network, Phase One and Full Network Costs, Construction Profile, summation of construction costs divided by miles per phase
   See page 4
   See page one
   Paragraph 1.32
    Spreadsheet RAi0212
    From an analysis of the spreadsheets provided for each of the eleven separate regions
    Spreadsheet RAi0213
    Page 6, paragraph 6
    See questions 42 to 50
    Table 18
    Table 6-124
    http://en.wikipedia.org/wiki/Victoria_line
    http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/11071201.htm
    See Question 269 onwards
19. http://beleben.wordpress.com/2014/03/19/the-london-guarantee/

   Page 3
   http://www.adamsmith.org/blog/planning-transport/the-disaster-that-is-hs2/

   Page 1

   Page 5 paragraph 4


Andrew Bodman—Supplementary written evidence

Review of oral evidence from Network Rail and Lord Adonis 11th November 2014

Paul Plummer, Rupert Walker (both Network Rail), Professor Chris Nash and Lord Adonis provided oral evidence to the House of Lords Economic Affairs Committee regarding the Economic Case for HS2 on 11th November 2014. What follows is a review of some of the statements and assertions that they made. In a number of cases their remarks appear to be misleading or incorrect. This is particularly the case when reviewing the disruption effects of constructing HS2 compared to infrastructure changes for the existing line. Similarly the praise provided for high speed rail systems in other countries overlooks many of the significant issues that high speed rail systems face. 27 references have been used to support the points made in this review.

Rupert Walker (16:17): Indicated that alternatives to HS2 had been considered on three occasions. They would generally consist of modest changes providing minor benefits “that in the longer run don’t provide the scale of intervention that will be needed”.

The Optimised Alternative proposed by 51M would more than double standard class capacity on Virgin trains at peak times [1] and increase standard class capacity by 200% at other times [2] using the same baseline as HS2 Ltd.

Virgin trains are the least overcrowded trains serving London during the morning the morning three hour peak based on the number of standing passengers recorded, which was zero [3].

Virgin trains had an average load factor of 52% at peak time evening departures from Euston in 2011 [4]. Since then over half their fleet of Pendolinos has been lengthened from 9 to 11 carriage train sets [5], which will have reduced their load factor.

The annual average growth rate of Virgin rail passengers over the last 4 years has been 4.7% per year (declining trend) while the national growth rate of rail passengers has been 6.0% per year over the same period [6] according to data from the Office of Rail Regulation.

Collectively this begs the question of where is the need the need to provide much greater intercity capacity for West Coast Main Line intercity services? Furthermore the 51M Optimised Alternative would clearly provide the capacity increase being sought.

Lord Skidelsky (16:19): “I don’t know whether these forecasts on capacity take into account different pricing systems but without that they are not very reliable are they?”

This question was not directly answered in relation to HS2. However it has been previously answered at other Select Committees when the Department for Transport advised that they had assumed HS2 ticket prices would be consistent with classic train ticket prices [7].
Rupert Walker (16:22): Mr Walker reviewed the disruption effects of making changes to the West Coast Main Line to significantly increase its capacity compared to the disruption effects of constructing HS2. He said that there would be “lots of disruption [to the WCML] because lots of changes needed to be made”. “Construction of a new line would have less disruptive impact”. “…… Improving the existing railway…. it [would] lead to many, many thousands of weekends of disruption…… over many, many years”.

The 51M Optimised Alternative proposed three infrastructure changes, along with lengthened trains, replacement of one first class carriage per train by a standard class and timetable changes. These infrastructure changes were:

- Providing grade separated junctions at Ledburn (south of Milton Keynes) and Colwich (near Stafford)
- Four tracking the section between Brinklow and Nuneaton (north of Rugby) which is currently three tracked [8].

Creating grade separated junctions is a routine enhancement for Network Rail and has recently been carried out at Hitchin. Another is being constructed at Reading.

There is absolutely no way that these three 51m proposed enhancements would necessitate 14 years of weekend working as has been claimed. Such a suggestion is simply scaremongering and has no foundation.

On the other hand HS2 will cause a very significant amount of disruption for rail and road users for up to ten years for phase one and longer if you include phase two. Euston will become a major construction site for at least nine years and maybe longer [9]. Its total number of platforms for classic trains will be permanently reduced from 18 to 13 and the number of approach tracks for classic trains will be reduced from 6 to 4. This is likely to lead to shorter dwell times for trains at this station and more queuing of trains on their approach to Euston at peak times. It is conceivable that the number of peak time services to/from Euston may be reduced or some diverted to other stations. Passenger travel inside Euston station will become difficult.

Grade separated junctions will need to be constructed for HS2 at Hansacre (near Lichfield) and at three more places for phase two where it will join existing lines. HS2 will cross the existing rail network in numerous places necessitating the construction of bridges, etc.

HS2 phases one and two will make 21 crossings of motorways, 47 crossings of trunk roads and many more crossings of other A roads and smaller roads. Some sections of motorway will need realignment. Some roads will experience more than 1000 additional HGV movements per day to facilitate construction [10]. Some roads will be temporarily or permanently closed.

To suggest that construction of HS2 would cause less disruption than a carefully considered alternative completely defies any rational logic and is also misleading. If the disruption evaluation for upgrading the existing line was made using anything other than the 51M Optimised Alternative then it was entirely inappropriate.

Lord Adonis (16:40): “…… for a ten year programme of upgrading the West Coast Main Line which produced fractional benefits compared to HS2”.
Part of the purpose of the West Coast Main Line project (completed in 2008) was to permit increased running speeds of up to 140 mph by using moving block signalling. However as project costs spiralled upwards, this element was descoped so the top speed became 125 mph. In the final outcome, 75% of the costs were attributable to renewals while some of the remainder covered enhancements. So it would not be appropriate to conclude that this project was about capacity enhancement.

Lord Adonis (17:05): “I did not meet a single mayor of a city, ….. a minister or parliamentarian of any country that has developed high speed rail who told me that if they could have rerun history for the previous twenty years, thirty years or fifty years in the case of Japan, that thought they would have been better off not doing it”.

Existing rail travel in the UK is generally faster than that on classic rail in European countries. So the potential time gains offered by HS2 are less than those achieved in Europe. HS2 does not address our most pressing rail travel needs which are to increase capacity for commuters into London from the south and east of the city.

Let us use France’s TGV as an example of European high speed rail because it has been discussed a few times at this committee and there is more data publicly available in this case. So while the French TGV network has been held up by some as an example of a successful high speed railway, the reality is somewhat different. However France is by no means unrepresentative of countries with high speed rail networks.

- Passenger numbers on the TGV increased by 2% between 2008 and 2012 and fell by 0.7% the following year. In other words growth has peaked for the time being.
- Track access charges for TGV trains increased by 53% between 2007 and 2013.
- The French Court of Auditors (similar to our National Audit Office) has recently described the TGV as being at the end of its life, having over optimistic assumptions on passenger numbers and having unsustainable costs.
- SNCF (the national train operator) and Réseau Ferré de France (their equivalent of Network Rail) have combined debts of 44 billion euro which the French Government considers to be unsustainable.
- SNCF management have acknowledged that they have to change the way they run TGV trains to make them financially viable. The options they are considering include:
  - Reduce TGV activity to just the 40 most profitable main stations – a 50% cut (and as regional services have already been cut to make way for the TGV, this means a big reduction in all rail services.)
  - Massively increase the timetable and decrease the prices of TGV so that it can effectively squeeze out cars and planes.
  - Shift to a ‘low-cost’ TGV, also called ‘Third class TGV’ e.g. with no luggage racks, no food, using suburban stations not expensive inner city ones, no station or train staff, payment for a second suitcase, be there 30 minutes in advance, etc.
- Some travellers consider TGV tickets have become too expensive and consequently choose to use other modes of transport.
- In June 2013 it was announced that 10 new TGV lines on the drawing board would be delayed for at least 17 years.
• Millions of people using commuter lines every day, particularly around Paris, have suffered years of overcrowding, dirty trains and unreliable lines. Guillaume Pépy, the president of the SNCF, said there is an urgent need to increase capacity on these lines. Following a fatal rail accident outside Paris in July 2013, the Transport Minister Frédéric Cuvillier commented that regional lines had been underfunded for many years as investment went to high-speed lines\textsuperscript{[19]}.

• SNCF has also indicated that it will not be able to replace the original TGV fleet until they are almost 40 years old\textsuperscript{[20]}.

• The French accounting system treats taxpayer subsidies as “commercial revenues”. So the French programme’s $1.75 billion “profit” occurs through a $10 billion annual subsidy according to a study by Amtrak in 2008\textsuperscript{[21]}.

High speed rail in other countries has significant financial issues which in many cases may not be evident to the passengers using the network.

Lord Adonis (17:12). “It is not the case that conventional upgrades of existing infrastructure somehow overrun their costs by less than new lines …..”

The cost of implementing the 51M Optimised Alternative is a small fraction of the cost of building HS2. Therefore the cost risk associated with the Optimised Alternative would also be a small fraction of that for HS2.

In addition the 51M Optimised Alternative allows the capacity increases to be provided in steps as demand increases whereas HS2 would be reliant on an industry produced projection of demand more than twenty years into the future with all its associated uncertainty.

Implementing the 51M Optimised Alternative involves building two grade separated junctions and laying an additional line of track over a distance of approximately 7.5 miles\textsuperscript{[8]}. It also involves the purchase of additional rolling stock. The total amount of work is relatively small and the unknowns or uncertainties are very small compared to HS2.

In complete contrast the HS2 project is vastly bigger in size. There are very many uncertainties which include:

• Geological unknowns as survey work for phase one was 40% incomplete for Phase One earlier this year\textsuperscript{[22]} and will hardly have been started for Phase Two as route selection has not been finalised.

• Engineering unknowns in relation to the maximum speed selected (360 kph) which is greater than for any other high speed line in Europe (330 kph).

• Potential electrical issues in relation to the total power requirements and possible imbalance issues\textsuperscript{[23]}

• Passenger demand falling short of the levels forecast

• Classic compatible HS2 trains costing more than the expected amount

• Construction costs for phase two being far greater than forecast. The budget cost per mile for phase two is less than half the budgeted cost per mile for phase one (excluding contingency) and less than the cost per mile for HS1\textsuperscript{[24]}.

• Compensation and mitigation measures totalling more than the budgeted amount

• Etc.
Construction of new high speed lines is recognised to be financially very high risk. In most countries which have high speed rail, their funding for construction has been made by their respective governments. One of the exceptions was the Brazilian Government which made three attempts to find private companies to build a high speed rail line and failed [25]. The two Canadian pension companies that took a 30 year lease on HS1 only did so three years after the full line had gone into operation [26]. No private companies have shown any willingness to invest in HS2 prior to it being a running entity.

**Lord Adonis (17:21).** “The £42 billion does include the cost of all the stations and infrastructure integral to HS2 itself, including London Euston …..”.

When the £42 billion budget was provided (which excludes the costs of rolling stock), Euston was due to have a minimal amount of changes to accommodate HS2. Since then Sir David Higgins has sought a grander rebuild of the complete station. The cost of the rebuilt station has not been made public but there are some worrying suggestions concerning its total cost [27] which is set to be far greater than the amount allowed for within the £42 billion budget. The opening date for the new Euston station could be delayed for some years beyond 2026.

Andrew Bodman

November 2014

References

   Paragraph 1.45

   Paragraph 1.32

   Spreadsheet RA0215


   See questions 42 to 50

   Page 12, Disruption


    Table 7-147 A422 Brackley Road overbridge
Andrew Bodman—Supplementary written evidence


Includes link to press release in English


http://www.thetimes.co.uk/tto/news/world/europe/article3816469.ece


Paragraph 20


Appraisal spreadsheets, full network, Phase One and Full Network Costs, Construction Profile

See page 4


Review of the oral evidence provided on 9th December 2014

Rt Hon. Patrick McLoughlin Secretary of State for Transport; David Prout, Director General, HS2 Group, Department for Transport and Lord Deighton, former chairman, HS2 Growth Taskforce provided oral evidence to the House of Lords Economic Affairs Committee regarding the Economic Case for HS2 on 9th December 2014. An uncorrected version of the transcript of that meeting has been used for this report.

Some misleading statements were made concerning the usage of the West Coast Main Line, its classification and the services likely to be provided on it once HS2 is introduced. The benefit cost ratio for HS2 was undermined and regeneration examples were provided for HS1 in London only. The question concerning the evaluation of alternatives to HS2 was not adequately answered.

Many of the previous misleading claims were repeated and a number of these were addressed in the earlier reviews of evidence provided for the 28th October and 11th November sessions. The points put forward in those two reviews are not being repeated here.

Q218 response: “...... at the moment the West Coast Main Line is the busiest railway line anywhere in Europe.”

By inspection of the 14 December 2014 onwards timetables [1] for Virgin trains, London Midland and London Overground, it appears that 28 trains are scheduled to arrive at London Euston during the morning peak hour on a weekday. By contrast, examination of just four of South West Trains’ timetables [2] shows 39 trains scheduled to arrive at Waterloo during the morning peak hour on a weekday. There are a further eight South West Trains timetables which make use of the Surbiton – Waterloo corridor all of which have trains arriving during the morning hour peak. It therefore appears that the West Coast Main Line (WCML) is certainly not the busiest in the United Kingdom.

A further way of clarifying this situation is to examine data available from the Office of Rail Regulation and Department for Transport which has been reproduced in the following table:
### London’s most used rail stations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterloo</td>
<td>98442742</td>
<td>27998</td>
<td>148</td>
</tr>
<tr>
<td>Victoria</td>
<td>81356330</td>
<td>13647</td>
<td>125</td>
</tr>
<tr>
<td>Liverpool Street</td>
<td>63004002</td>
<td>12150</td>
<td>159</td>
</tr>
<tr>
<td>London Bridge</td>
<td>56442044</td>
<td>31766</td>
<td>202</td>
</tr>
<tr>
<td>Euston</td>
<td>41911706</td>
<td>4782</td>
<td>62</td>
</tr>
<tr>
<td>Charing Cross</td>
<td>40170074</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Paddington</td>
<td>35093628</td>
<td>2484</td>
<td>64</td>
</tr>
<tr>
<td>King’s Cross</td>
<td>29823715</td>
<td>894</td>
<td>47</td>
</tr>
<tr>
<td>Stratford</td>
<td>26377506</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>St Pancras</td>
<td>26046082</td>
<td>1117</td>
<td>68</td>
</tr>
</tbody>
</table>

Euston appears as the fifth busiest London station measured by passenger entries and exits. It is the seventh busiest measured by number of train arrivals in the morning three hour peak. This data makes clear that there are other lines which are busier than the WCML. Furthermore the Gare du Nord in Paris handles 190 million passengers per year [6] which is almost double the number which pass through Waterloo. However this French station serves at least two separate lines.

The above data also shows that there are other lines which carry considerably more standing passengers during the morning three hour peak than those on trains into Euston. Incidentally Euston’s standing passengers were all on London Midland and London Overground trains i.e. commuters, whereas Virgin trains which are long distance did not have any standing passengers into Euston [5]. This again demonstrates that it is commuter trains that are most in need of capacity increases, rather than long distance trains.

**Q220 response:** “I must admit that I find it rather ironic that I can go from London to Paris or London to Brussels on a high-speed train but I cannot go from London to Birmingham, to Manchester or to Leeds.”

The West Coast Main Line, East Coast Main Line, Midland Main Line and Great Western Line are all classified as high-speed lines [7] according to the definitions of the UIC (International Union of Railways). The speed requirement for a line to be classified as high-speed is 200 kph/124 mph in the case of an upgraded existing line [8].

Other countries introducing high speed lines have created significant journey time savings [9]. If HS2 is built in this country, our time savings would be less significant because we already have high speed services on three key northbound routes.

**Q220:** “My question is this: have there been sufficient incentives in place to assess
alternative schemes properly—because alternative schemes were proposed? Have they been assessed properly?"

**Q220 response:** “I do not think there is any project that has had more reports and inquiries into it than HS2. At the end of the day, we still come to the view that the best way overall to increase the capacity is by HS2.”

The question was not answered directly.

A comparison of some of the aspects of HS2 and the 51M Optimised Alternative are provided below.

### HS2 Phase One comparison

<table>
<thead>
<tr>
<th></th>
<th>HS2</th>
<th>51M Optimised Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs £ billion</td>
<td>21.7</td>
<td>1</td>
</tr>
<tr>
<td>Benefit cost ratio</td>
<td>1.4</td>
<td>5.2</td>
</tr>
<tr>
<td>(without WEI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phased Implementation possible</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Elapsed time to introduction</td>
<td>12 years</td>
<td>3 years approx</td>
</tr>
</tbody>
</table>

The 51M Optimised Alternative provides an increase in the number of standard class seats at peak times of 138% compared to the 2007/8 base\[12\]. That fully meets the forecast background growth in peak periods that HS2 Ltd has used.

The 51M Optimised Alternative also benefits from far lower financial risk, much better financial sustainability and much less construction disruption.

London Midland has just introduced several additional trains between London and Milton Keynes/Northampton. There are two additional trains in the morning peak and four in the evening peak along with additional carriages on some other trains. In total the additional trains and carriages provide an extra 139,000 seats per week\[13\].

Additional capacity for commuters could be provided if Virgin trains were permitted to stop at Milton Keynes at peak times to pick up and drop off passengers.

Lastly ERTMS (European Rail Traffic Management System), which will in due course replace line side signalling, will safely allow trains to be run closer together which increases the capacity (trains/hour) of a line.

The last three points listed are each means of providing further capacity on the West Coast Main Line in addition to those put forward as the 51M Optimised Alternative.
In view of the above arguments it appears difficult to reconcile the views put forward by the Secretary of State.

**Q222 response:** “.........and that is at a time when new technologies, working on trains and receiving e-mails on trains have improved the capabilities of travel and what you can do while you are travelling.”

The business case for HS2 assumes that passengers cannot work on trains and therefore any journey time savings lead to increased productivity. These time savings are converted to a financial value which makes up over half of the benefits for HS2.

Yet here the Secretary of State acknowledges that it is possible to work on trains. That completely undermines the (poor) benefit cost ratio for this project.

**Q223:** “Is there any guarantee for the Coventrys or the Rugbys of this world about their position in the future and their maintaining a service as good as the one they have now?”

**Q223 response:** “Definitely. This is an addition; it is not a minus from the services that are available.”

Part of the evidence supporting the business case for HS2 shows that there will be 20.77 million fewer timetabled train kilometres per year on classic rail (phases one and two) [14]. A total of £8.3 billion is expected from savings in classic rail running costs for phases one and two [15]; this is not an annual figure. So there is no doubt that there will be a net reduction in classic train services.

Inspection of the Assumptions report published in October 2013 [16] provides indicative timetables for classic rail services post HS2. These suggest that several stations may have a less frequent service post HS2 and others are likely to have slower train services. The following table shows possible effects on trains to/from London on the West Coast Main Line; similar effects will be seen on the East Coast and Midland Main Lines.
<table>
<thead>
<tr>
<th>City</th>
<th>Current Service (to/from London)</th>
<th>Service post HS2</th>
<th>Service Change Summary</th>
<th>HS2 Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coventry</td>
<td>3 intercity trains/hour, 1 inter</td>
<td>2 intercity</td>
<td>Loss of 1 intercity</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>city trains/hour, 2 intermediate</td>
<td>trains/hour, 2</td>
<td>train/hour and approx</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stops</td>
<td>5 min. longer</td>
<td>journey time</td>
<td></td>
</tr>
<tr>
<td>Birmingham International</td>
<td>3 intercity trains/hour, 2</td>
<td>2 intercity</td>
<td>Loss of 1 intercity</td>
<td>Nil (HS2 will serve</td>
</tr>
<tr>
<td></td>
<td>intermediate stops</td>
<td>trains/hour, 3</td>
<td>train/hour and approx</td>
<td>Birmingham Interchange)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>intermediate stops</td>
<td>5 min. longer journey</td>
<td></td>
</tr>
<tr>
<td>Birmingham New Street</td>
<td>3 intercity trains/hour, 3</td>
<td>2 intercity</td>
<td>Loss of 1 intercity</td>
<td>HS2 service to Curzon</td>
</tr>
<tr>
<td></td>
<td>intermediate stops</td>
<td>trains/hour, 4</td>
<td>train/hour and approx</td>
<td>Street, 3 trains an hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>intermediate stops</td>
<td>5 min. longer journey</td>
<td></td>
</tr>
<tr>
<td>Lancaster</td>
<td>1 train/hour, 3 intermediate</td>
<td>1 train/hour, 8</td>
<td>Approx 53 min. longer</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>stops</td>
<td>intermediate stops</td>
<td>journey time (only</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>direct train is via</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Manchester)</td>
<td></td>
</tr>
<tr>
<td>Carlisle</td>
<td>1 train/hour, 5 intermediate</td>
<td>1 train/hour, 10</td>
<td>Approx 53 min. longer</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>stops</td>
<td>intermediate stops</td>
<td>journey time (only</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>direct train is via</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Manchester)</td>
<td></td>
</tr>
<tr>
<td>Stoke-on-Trent</td>
<td>2 trains/hour (1 non-stop, 1</td>
<td>1 train/hour, 1</td>
<td>Loss of hourly non-</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>with 1 intermediate stop)</td>
<td>intermediate stop</td>
<td>stop train</td>
<td></td>
</tr>
<tr>
<td>Wilmslow</td>
<td>1 train/hour, 1 intermediate</td>
<td>No service</td>
<td>No trains at all</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>stop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockport</td>
<td>3 trains/hour, 2 intermediate</td>
<td>1 train/hour, 3</td>
<td>Loss of 2 trains/hour</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>stops</td>
<td>intermediate stops,</td>
<td>and approx 5 min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>longer journey time</td>
<td></td>
</tr>
<tr>
<td>Chester/North Wales</td>
<td>1 train/hour with 2 intermediate</td>
<td>1 train/hour with</td>
<td>Approx. 25 minutes</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>stops between Euston and Chester</td>
<td>7 intermediate stops</td>
<td>longer journey time</td>
<td></td>
</tr>
</tbody>
</table>
Furthermore, inspection of the same report suggests that several commuter journeys into cities such as Birmingham, Leeds and Manchester are likely to see no improvements in train frequency despite the fact that thousands of commuters that have to stand on trains into these cities on a daily basis now.

**Q223 response:** “…….that investment will make a substantial difference both to the regeneration and the chances of regeneration of Stoke-on-Trent. Again, look at the transformation of King’s Cross and St Pancras and its attractiveness. …..We have Google locating there and we have the Crick Institute being built at the moment, which have been fantastic to the regeneration and lifting the vibrancy of that area.”

It should be noted that the only examples of regeneration provided by the Secretary of State in relation to HS1 are in London. By contrast Ebbsfleet where an HS1 station was opened in 2007 has not seen significant local development or regeneration in the last seven years. Earlier this year the Chancellor announced an investment of £200m to kickstart the building of a garden city near this station [17]. Neither the Secretary of State nor the Department for Transport were able to identify the economic benefits which HS1 has brought to Kent, although the DfT are expecting to produce an interim report at some point in the future.

If the only known regional regeneration benefits arising from HS1 that can be identified seven years after it was opened are in London, it does not make a compelling case that HS2 will bring regional benefits to Birmingham, Manchester and Leeds. The example of Ebbsfleet also suggests that housing or business developments do not automatically take place just because a station for a high speed line has been built, even though Ebbsfleet provides a convenient commuting journey to London.

**Q231 response:** “Can I just say, Chairman, that we are not over cost at Euston. ……….. But as far as the HS2 station is concerned, we are not over budget.”

Michèle Dix (Transport for London) indicated when she was giving oral evidence on December 2nd that the most recent Euston station plans would cost in the region of £4 to £4.5 billion [18]. The aim appears to be to have a station costing in the region of £2 billion. Several sources indicate that planning for Euston station has been paused to allow time to reconsider the situation [19].

There appear to be differences of opinion between Mr Prout and Ms Dix.

**Q231 response:** “…….. you will see that HS1 costs per mile in 2011 prices were £37.5 million. For HS2 we have an allowance at P50 of £43 million per mile and our P95 figure is £47.5 million per mile. If you take HS1 as a benchmark at £37.5 million per mile and our allowance at P95 is £47.5 million, we think our costs are robust.”
The cost per mile figures quoted by Mr Prout are not recognizable. Costs calculated from the spreadsheets supporting the business case for HS2 (October 2013) indicate the following cost per mile data:\[20\]:

<table>
<thead>
<tr>
<th></th>
<th>Construction cost excluding contingency £millions</th>
<th>Miles</th>
<th>Construction cost £millions/mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase One</td>
<td>15,510</td>
<td>128</td>
<td>121</td>
</tr>
<tr>
<td>Phase Two</td>
<td>12,470</td>
<td>211</td>
<td>59</td>
</tr>
</tbody>
</table>

Even without contingency, the costs per mile for HS2 are significantly larger than those quoted by Mr Prout.

It is acknowledged that the phase one route (as planned) will contain almost 29 miles of tunnels which is considerably more than that proposed for phase two. However that alone cannot explain the phase two construction cost per mile being half the amount for phase one. Bearing in mind that HS1 cost £89 million per mile to build\[21\] (approximately 20 years before HS2 phase two is scheduled to be built), it is virtually certain that the construction costs for phase two have been grossly underestimated and are therefore very far from being robust.

**Q233 response:** “Overcrowding is worse at peak times, but there are not enough train paths at the moment to accommodate the amount of demand for freight transport. Freight is constantly trying to get on the lines, and we are unable to give them the space to get on the lines that they want.”

Firstly, some freight traffic currently using the southern section of the WCML is likely to move to the Felixstowe – Nuneaton route as capacity on the latter is increased.

Secondly HS2 trains are likely to reduce the ability of the classic network to accommodate freight trains on certain routes. When HS2 Phase Two becomes operational, there will probably be one less path per hour available between Preston and Carstairs\[16\]. This is a two track section or in other words only one line in each direction. A similar problem is likely to occur on the East Coast Main Line between Northallerton and Newcastle where there will probably to be two less paths per hour available than currently. There may be other sections with similar problems. These numbers may appear small, but it should be borne in mind that there are relatively few freight train paths in use on these particular routes now.

*December 2014*
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    Appraisal spreadsheets, Phase One, Overall BCR Phase One Standard Case

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    Annex

    Page 2


    Appraisal spreadsheets, Full Network, Phase One and Full Network Costs, Train Km Summary

    Appraisal spreadsheets, Full Network, Phase One and Full Network Costs, Cost Summary

    Comparison between sections 5.1 and 6.2 or 6.3


18. http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/economic-affairs-
    committee/the-economic-case-for-hs2/oral/16102.html
    Q193 response

    briefing-minutes-for-review-v2-no-tracks.pdf

    Appraisal spreadsheets, full network, Phase One and Full Network Costs, Construction Profile
See page 4. Excluding any rolling stock costs.
1. Is there an economic case for HS2?

1.1 No HS2 is Poor value for money. There has been no thorough economic and financial review or consultation with the local councils and the residents thereof. It is not maximised for connectivity with other lines. —Only for the very long distance HS2 passengers in part of England.

1.2 As Prof. Douglas McWilliams, Chief Executive, Centre for Economics and Business Research (CEBR), —and former Chief Economic Advisor to the Confederation of British Industry, said before. “Looking at the economics issues dispassionately, the sums don’t add up. CEBR has checked the demand forecasts, the economic case and the financial sums carefully. We are not opposed to high-speed rail in principle. We prepared the economic case for the European Parliament for the PBKAL project (Paris Brussels Cologne Amsterdam London). But our analysis shows three things.

Most importantly and first, the idea that the alternatives won’t provide enough capacity only holds up on the out-dated economic forecasts that the Office for Budget Responsibility prepared before the autumn statement last year. Given realistic economic and rail demand forecasts, that claim is complete nonsense.

Secondly, on realistic growth projections most of the economic case disappears and the financial deficit from the business case becomes much larger.

Thirdly, there are many elements in the official economic case that look dubious. The main economic case was originally dependent on business time-savings. But modern rail, with the ability to plug in computers and increasing WiFi and mobile connectivity, is much more like a substitute office than the rail of the time when the official estimates were made. And by the mid-2030s when HS2 comes in, high-tech teleconferencing will make much business travel unnecessary.

CEBR’s analysis is that the benefit cost ratio is only 0.5 rather than the official and implausible 2.0. The financial deficit, which will require a government subsidy, is likely to be far greater than is predicted. This seems a major waste of money when public spending is cut and taxes raised. If the project goes ahead it will be a triumph for poor prioritisation spin and vested interests over economic good sense.”

http://economia.icaew.com/opinion/hs2

1.3 The recent concerns by Virgin that the Little Red airline between London, Manchester, Edinburgh and Aberdeen is not achieving the passenger demand for commercial viability. The Chancellor and the Mayor of London are electioneering to
restrict London fare rises whilst Tube peak services are worsening on the West London to Central London where it is standing room only daily.

2. **Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project?**

2.1 Yes, the full tunneling costs, as well as all the London costs that haven’t been at all addressed and have been postponed and omitted to reduce reaction to Central London disruption in Camden, and to Heathrow and be incomplete along sections of Phase 1.

**Is the expected range of the benefit cost ratio persuasive?**

2.2 No, much too low. It’s not sufficient to try and distort the BCR when the total ‘planned’ programme cost is too large a percentage of the GDP. The BCR is for a partial HS2 and it reduces further then all the extensions are added. The Phase 1 and Phase 2 BCRs reduce when the scope of all the politicians promises and demands and the further extension is added.

3. **What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland?**

3.1 Construction benefits mainly, which are very short lived. The costs of reaching Scotland will increase from £50 Billion to £200 Billion, and far greater! The commercial failure of the Little Red airline demonstrates HS2 longer journey demand with all the added infrastructure and train costs will be lower than projected and will require significant subsidies to be ‘affordable’ to the passenger. The peak and occasional busy start/end of holiday travel will not sustain or deliver economic benefits that are significant GDP drivers.

**Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?**

3.2 Yes but there are financial shortfalls across these sectors currently and unmet Health Care and the local and motorway demands.

4. **Might some parts of the UK suffer economic disadvantage from HS2?**

4.1 The London Borough of Camden, which pays the most taxes of any UK borough currently, because of their tourist industry in the Camden Town Lock, the London Zoo, the British Library, British Museum, jazz clubs and more, will lose a huge proportion of their income.
4.2 The London roads will be filled with HGVs with construction rubble and tunnel minings. Important roads will be shut making going to work or to shop, very difficult. There will be countless detours making it impossible to access London University Buildings or the UCL hospital by ambulance even! The details have not been produced but omitted for politics.


4.3 Meanwhile in the built up urban areas, will the NHS be able to cope with the steep rises of local and London wide population and pollution affected illnesses, mental breakdowns and dealing with more accidents as a result of construction on, or under, their doorsteps.

With the vermin population besides, moving into homes from their own upheavals, and sewage and local utilities having to be re-routed for the canals and underground rivers?

4.4 Businesses will begin to suffer, as on the HS2 Phase 1 route there will be no commuter stops. A neighbour, a mother, who uses the WCML to commute to and from Euston is one person whose business will fail because of the impact of HS2 works on the WCML. How will she even get to Euston each day, and then to
Birmingham? The WCLM train currently passes our houses near Euston, and it so easy for her daily commute. She does not need the quicker more expensive HS2 service.

5. **Is London likely to be a main economic beneficiary of HS2?**

   5.1 Lawyers, Land Agents and those people within the DFT and HS2 teams are likely to be the main beneficiaries. After the line is completed, London will draw in more of the capital from elsewhere in Britain, reversing the effect HS2 is supposed to achieve. Some rail travelers will benefit with jobs in London whilst living in Birmingham and some who live in London will commute to London, but this is a very small number of all people living between London and Birmingham and is a significant increase on business costs so not for SME’s where the alleged economic and employment growth is required.

6. **How might the expected benefits of HS2 to the national economy be realised?**

   6.1 Construction companies, some landowners and some property developers may benefit. HS2 is an attempt to bring a renewed focus for commercial property investments from overseas funds and the European and for wider investment funds for large commercial properties in London, and a handful of station areas. However, this could only benefit the wider National Economy by changing the route location and purposes of HS2 so that other types of trains could connect better. More directed stimuli are required for cities, besides the HS2 train. Housing and high rise flats do not require HS2 to be stimulated more.

   6.2 In France it was found that all the money went to the larger more important cities when their high speed train routes were built, unless, more money was given to improve the economy of the smaller ones. Only then did a smaller city benefit from high speed rail.

7. **How should HS2 be operated?**

   7.1 As already stated there are some major shortcomings in the design-concept of HS2. The HS2 should have been dual tracked each way, established for for multiple train types, not single tracked each way only for passengers, but also for larger gauge freight which the Network Rail and WCML do not address.

   7.2 HS2 should have had some more stations so commuters can use this line daily.

   7.3 HS2 should also have crossed more of the rail network to enable more routes, people and locations to be serviced, per billion invested.

   **As a franchise in competition with West and East Coast Main Lines?**
7.4 No! This would result in deterioration of all the franchises, because there are limited passenger populations and franchises which are mainly dependent on two daily peaks and season ticket travel.

8. **Should travelers expect to pay higher fares on HS2 than on other lines?**

8.1 No, people will only use it, if like with the TGV in France, the HS2 service is largely subsidized by the Government. The tracks for the High Speed trains will cost much more to maintain. If not properly maintained this may lead to serious accidents. —This reality is another cost to be factored in, as the wider wheel rims of HS2 trains can impact when in other section of Network Rail routes.

9. **Does the prospect of HS3 affect the economic case for HS2?**

9.1 It increases the total investment for a different purpose but competes with another service.

9.2 It demonstrates that a single track each way passenger route is not attractive compared with a multiple purpose rail corridors with two tracks for reliability and repair resilience.

9.3 HS3 requires more distributed catchment in Yorkshire and Lancashire. Without the wider integration with the existing rail network, HS3 simply competes with existing services, as does HS2 but for a more costly service.

9.4 There is presently a genuine need for large gauge freight from Liverpool to Hull, but to be linked to more large gauge routes in the current network. Liverpool 2 will benefit to more the larger containers across Lancashire and Yorkshire but this is limited with not HS2 freight for larger gauge containers to and from France. Crossing London and moving continental freight along the centre of England is a lost opportunity with HS2 and WCML does not have the large loading gauge for continental freight. HS2 failed on UK rail freight.

*September 2014*
British Chambers of Commerce—Written evidence

ABOUT THE BCC

1. The British Chambers of Commerce (BCC) is an influential network of 52 Accredited Chambers across the UK. No other business organisation has the geographic spread or multi-size, multi-sector membership that characterises the Chamber Network. Every Chamber sits at the heart of its local business community, providing representation, services, information and guidance to member businesses and the wider local business community.

2. Representing thousands of companies, amongst which are a huge number of companies dependent on a strong rail network, Chambers of Commerce are well placed to understand the importance of HS2 to the business community.

OVERVIEW

3. Within the Chambers of Commerce network support for HS2 is not unanimous. While the majority of BCC members support the proposed project they are some Chambers that believe planned investment should be spent elsewhere on the transport network. The views expressed in this submission are the BCC’s alone.

4. One of the most crucial factors in enabling business growth is the quality of a country’s infrastructure. Yet detailed research makes it clear that without new capacity, the three North-South main rail lines will effectively be full in the next fifteen years.

5. It is for this reason that the BCC has been a long time supporter of the construction of a new high speed line that will address future capacity constraints. A truly national new line will not only build on the success of the UK’s first high speed railway line, but extends that success across the whole country.

6. The BCC’s response to some of the specific questions in the call for evidence can be found below.

RESPONSES TO SPECIFIC QUESTIONS

IS THERE AN ECONOMIC CASE FOR HS2?

7. We believe there are strong economic and commercial reasons to build HS2. The key arguments that underpin our support are:

   o The UK’s railway network is operating near capacity. As passenger numbers have increased investment has failed to keep up, resulting in delays and creeping inefficiency. Although the network has made huge strides recently with upgrades such as that on the West Coast Main Line and the opening of the UK’s first high speed railway line, the network is still largely based on its Victorian foundations, with limited scope for further modernisation.

   Capacity constraints on the railways mean that even with recent upgrades key sections of the railway will be full by 2030. Piecemeal upgrades to existing routes will
not solve the looming rail capacity crunch. Incremental upgrades hurt business productivity, too, through years of delays and disruption. A new rail line is the only viable solution that fully addresses the capacity question. And this new line should be able to support high speed trains.

- Major infrastructure improvements underpin competitiveness and helps stimulate investment. A project such as HS2 is the best sort of radical infrastructure investment – delivering major supply chain benefits to UK companies of all sizes during the construction phase, and unlocking significant follow-on business investment in towns and cities in the longer-term.

We believe HS2 will help attract investment in the UK economy for many decades to come. Without HS2, all the evidence suggests that the rail network will be strained to breaking point, with overcrowding and delays the norm. There will have to be significant fare rises to deal with the problems of capacity and congestion. There will be never-ending disruption as lines are closed for further piecemeal improvements, particularly at weekends and holidays and there will be more freight clogging our roads, because there’s no room to put it on the rails. The question would have to be asked: is this the sort of country a global company would choose as a place to invest? Will the UK own businesses expand their premises or create jobs, if they can’t get people to work or goods to market? A u-turn on HS2 would be a turning point for the UK economy. It would be a signal that Britain has a poverty of national ambition, satisfied with third-rate infrastructure, and unable to make the most basic of decisions to support economic growth.

- Finally, we believe there are also clear employment benefits to HS2 – during both the construction phase and thereafter. Expert research suggests tens of thousands of construction jobs, and hundreds of thousands of permanent jobs as a result of future business investment. HS2 would also allow the UK to maintain key construction skills in the UK for the long-term – something that has not been done during years of stop-start decision making on infrastructure projects.

**HOW MIGHT THE EXPECTED BENEFITS OF HS2 TO THE NATIONAL ECONOMY BE REALISED?**

8. We have always said that for the full benefits of a new high speed line to be realised it should be a developed into a truly national network that extends to Scotland.

9. We have also long been clear that the full benefits of HS2 can only be achieved if it is other, complementary transport investments – such as the billions being spent now to improve the conventional rail network in all parts of the United Kingdom, as well as planned road investments – are delivered. HS2 and wider transport investment must go hand in hand.

10. We will continue to call for the creation of a fully national high speed network and for increased investment across all modes of transport. But, even the current proposed high speed line – both phase one and phase two – can deliver benefits across the country.

11. Because any new high speed rail infrastructure will be separate from the existing railway system, it will not negatively impact upon the existing network during construction. A dedicated high speed network will also free up capacity on existing routes by allowing
the conventional network to be utilized for more intensive local passenger and freight services.

12. Rail freight, which currently struggles to compete with road transport, will be able to offer more flexible and cost effective operations. By releasing capacity for freight and local services, it is expected that a shift from road to rail will become vastly more feasible.

13. As with HS1, the key economic driver of high speed rail will be the associated agglomeration benefits that such a network will provide, not only to the cities that it serves, but to their wider areas. Greater connectivity, provided by faster and more frequent rail services, will bring businesses closer together. As the reach of businesses increases, production costs will fall as companies are able to access more competing suppliers and a wider pool of labour.

14. High speed rail could also offer significant environmental benefits, especially if it reduces domestic aviation demand. New and more efficient high speed trains emit significantly less carbon per passenger than the equivalent trip by air. As a result high speed rail should be a key driver in the government’s target to reduce carbon emissions.

CONCLUSION

15. Capacity constraints on the railways mean that, even with recent upgrades, key sections of the railway will be full by 2030. This scenario is simply not acceptable. Businesses rely on connectivity and flexibility. It is no longer enough simply to patch over the cracks; a new approach is needed. We believe this must be a new high speed rail network reaching across the country,

September 2014
Residents of Curborough, Lichfield which, in the event of HS2 being built, will be ‘sandwiched’ between the West Coast Mainline and HS2/3 but outside the 1km area currently defined for compensation.

- Is there an economic case for HS2?

No, it’s highly likely that final costs will outstrip current estimates and that predicted use is hugely over-optimistic. Travellers from this area will be unlikely to use the service as there will be limited access (and West Coast Mainline/Virgin already provides an efficient and cost effective service) and HS2 fares will be beyond the reach of all but the business community.

- Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project?

Yes. The current arrangements for compensation for properties only within 1km of the new line is unrealistic and doesn’t take into account the much wider impact of construction work and disturbance which will affect properties well beyond this 1km limit.

When West coast mainline was four-tracked many local property owners/businesses were inconvenienced and out of pocket by ‘unexpected/unforeseen’ road closures which necessitated long and expensive diversions for weeks at a time. No compensation was available because these hadn’t been anticipated in the budget!

- Is the expected range of the benefit cost ratio persuasive?

No, West Coast mainline/Virgin have recently reduced the number of 1st class coaches/seats to enable greater capacity in standard class and this will have a significant impact for the comfort & convenience of passengers. Better analysis of current passenger usage on the West Coast mainline might help to give a clearer understanding of passenger needs now and for the future.

- What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

It’s very difficult to see what these might be at this time. Common sense suggests that only the towns and cities of the West Midlands conurbation will see any real benefit from HS2 and that this will be hugely dependent on the efforts of local authorities and LEPs. Other towns & cities along the route will have to rely on existing rail links. The North and Scotland will become even more isolated from London and the Midlands.
The argument for quicker rail journeys fails to take into account increased and improved technology and therefore the likelihood of fewer ‘business journeys’ in the future as employees are encouraged to work smarter by using video conferencing, etc.

- Might some parts of the UK suffer economic disadvantage from HS2?

Yes, any area without a realistic journey time to an improved rail connection to HS2 will be disadvantaged.

- Is London likely to be a main economic beneficiary of HS2?

Yes, this has happened in France where Lille has lost out to Paris.

- How might the expected benefits of HS2 to the national economy be realised?

The history of HS1 & France’s heavily subsidised TGV suggests that HS2 will be a drain on the national economy. Evidence from Japan suggests that High Speed Rail alone is not enough and that improving existing lines and developing better/new links between major cities would be more cost effective. However, unlike the UK, the majority of Japan’s 128m inhabitants live in a few densely-populated areas and by linking these together, nearly 40m people in greater Tokyo with 20m in Osaka, Kobe and Kyoto, the railway has helped to shift business patterns. HS2 will not do this in UK unless more work is done to improve and integrate existing rail links.

- How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

HS2 cannot be operated in competition with existing West & East Coast Main Lines because, as it stands, it will have limited station stops and won’t link into existing lines.

- Should travellers expect to pay higher fares on HS2 than on other lines?

Yes. Evidence from HS1 and High Speed Rail in other countries suggests it will be more expensive.

- Does the prospect of HS3 affect the economic case for HS2?

No. The economic case for HS2 is out of date and poorly devised.

August 2014
Steve Brown and Marilyn Brown—Written evidence

Evidence to be found under Marilyn Brown and Steven Brown
Buckinghamshire County Council—Written evidence

Introduction

1. This response has been prepared by the Buckinghamshire County Council, Aylesbury Vale District Council, Chiltern District Council and South Bucks District Council hereinafter collectively referred to as “the Buckinghamshire Councils”. Each has submitted a petition to Parliament against the HS2 Bill.

Q1. Is there an economic case for HS2?

2. The Buckinghamshire Councils do not believe the business case for HS2 has been robustly made. The latest business case (or strategic case as it has now been rebadged), included work on economic impacts by KPMG, which was widely publicised in October 2013, and was the fifth attempt at justification for the proposed scheme. It included some significant changes from earlier versions that while they bolster the case, lack an evidential base. It however continues with some major deficiencies in excluding costs and so continues to misrepresent the value for money that HS2 represents (especially the cost of capital and the cost of associated transport developments that are needed to make HS2 accessible by public transport).

3. Local authorities know that when spending taxpayers’ money, it is important to demonstrate good value for money, deliver clear benefits and show that all alternatives have been properly evaluated. Buckinghamshire Councils have reviewed this latest strategic case and believes it fails on all counts. We are not alone in raising concerns; the National Audit Office, the House of Commons Public Accounts Committee and in other detailed reports by economists, academics, think tanks and transport experts and commentators. All have challenged the various business cases put forward to date.

4. The Public Accounts Committee said that the Department for Transport was failing to present a "convincing strategic case" and that its arguments were based on "fragile numbers, out-of-date data and assumptions which do not reflect real life".

5. KPMG claimed that HS2 could - by releasing capacity on the old network; and increasing intercity ‘connectivity’ - boost UK GDP by around £15bn per annum (but only after 2037). The report however used discredited methodology which does not have a robust basis. KPMG also ignored one of the fundamental causes of lacklustre growth in many parts of the UK, which is a shortage of skilled labour due to poor educational levels and of easily and readily developable land. The report was produced at considerable taxpayer expense of £242,000 and also heavily caveated by KPMG itself.

6. Connectivity is still an issue. In Leeds a new HS2 station South Bank area of the city centre is about 400m from the existing station. This will need to be joined to the existing station via a dedicated pedestrian link or moving walkway, which would incur considerable additional expense.

7. HS2 has also been given an amber/red rating by the Government’s Major Projects Authority and was also described as “not good enough” by the chair of the Public Accounts Committee. That report publication was vetoed by the Government, despite the Information Commissioner saying it should be published. Buckinghamshire Councils
believe the anticipated costs of even those items included in the assessment of HS2 will almost certainly rise. Typically, rail projects incur the highest difference between estimated and actual costs, no less than 44.7% on average. Based on the available evidence it seems rail projects are particularly prone to cost escalation.

**Heathrow**

8. The confused rationale of the aims of HS2 is most apparent in the issue of its potential connection with Heathrow. The route was designed to head west to start with because the remit required it to connect in some unspecified way with Heathrow. It then became clear that few people from outside London wanted to go to Heathrow and that Londoners themselves were already well served by the existing rail connections, the Heathrow Express and the Piccadilly Line; which will in any event be improved by Crossrail.

9. Heathrow was left off the direct route. Instead, passengers coming from the North would get there by changing to Crossrail at Old Oak Common. So, the route of the line is determined by the need to connect with Heathrow, but the line will not now directly connect with Heathrow and a spur was planned instead.

10. In August 2014 MPs wrote to the Secretary of State for Transport and acknowledged a previous response from Mr McLoughlin that the Heathrow Spur is not part of the initial preferred route for Phase 2 of the high speed line, calling it “an historic recommendation made by HS2 for which no business case has yet been made.” Mr Hurd MP said, “The Heathrow spur is a line on the HS2 map that needs to be removed. No case has ever been made for it. There are far better options to connect Heathrow to HS2 if the latter goes ahead. Almost £2billion could be saved and used for more generous mitigation and compensation for residents.” In fact the current costing of HS2 does not include the cost of such a link.

Q2. Should the *Strategic Case for HS2* published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?

**Cost of capital**

11. Flouting the DfT’s own guidance, HS2 is assessed without any inclusion of the cost of capital. This is a massive item, a 5% charge on £50bn is £2.5bn each year, and cannot be dismissed through talk of funding HS2 directly out of taxation, or of selling the completed railway into the private sector.

12. Even if paid for out of tax, the money still has an opportunity cost from the borrowing or repayment of debt that is prevented. If sold to the private sector, it is inescapable that the owner will require payments to give a return on the investment – creating a clear cost that must be met from operating revenues and subsidy.
Crossrail 1 extension

13. Previous plans for rebuilding Euston as part of the HS2 plans were dropped when HS2 Ltd realised it would cost £500 million more than they had budgeted for. This was changed, with David Higgins’ report earlier this year arguing that Euston should be rebuilt. It is likely when there are proper plans for this, the cost of HS2 will go up again.

14. In August 2014 the Secretary of State for Transport launched a study into his plan to extend Crossrail 1 to Hertfordshire. He said, "the plan would provide flexibility and reliability while we build HS2 into Euston. It would make it easier to get on with the massive job of rebuilding the station...". It was a frank acknowledgement relating to the enormous impact of rebuilding the station while trying to keep train services running. As with other crucial areas, no element of the cost involved is yet to appear on HS2’s balance sheet. The Mayor of London’s Infrastructure Plan 2050 gives a capital cost of £150m for this work.

Crossrail 2

15. The London transport commissioner, Sir Peter Hendy, also said the arrival of HS2 meant immediate action was needed at Euston station, with a likely 15-year minimum timescale for planning and construction work. He said, "If HS2 gets there before Crossrail 2, there will an awful lot of people walking around [Euston] because they won’t be able to get on the tube".

16. The Crossrail 2 consultation report was published in October 2013. It says that the need for Crossrail 2 is further strengthened by a significant increase predicted in National Rail use on lines through the major London terminals (including HS2 into Euston). The report states, ‘as part of Mayoral policy, Crossrail 2 is a requirement at Euston to accommodate the dispersal of HS2 passengers onto London’s transport network. HS2 Ltd now acknowledges the need to incorporate Crossrail 2 into HS2 at Euston Station though there has been no formal change of remit to date’. So either an extension to Crossrail 1 or Crossrail 2 will be required before HS2 is operational and should have been built into the business case.

HS1/HS2 link

17. The £700m HS2/HS1 link has now been removed from the Bill but the projected cost of HS2 has not been reduced.

Wider Economic Benefits

18. The latest business case revision shows the Benefit Cost Ratio (BCR) for both phases 1 and 2 combined to have reduced to 2.3. The figures include wider economic benefits, which is contrary to Department for Transport (DfT) WebTAG guidance. If these are excluded the BCR reduces meaning phase 1 is actually low value for money on the Government’s own figures (both phases together are just medium).

19. In using wider economic benefits to support the business case, the very substantial cost of the regional economic and transport spending necessary to realise the wider benefits should be included in the BCR but this has not been done. The impact on other
Government spending resulting from HS2 was a key feature of the report published by the Institute of Economic Affairs in August 2013 that suggested the actual cost of the project could be nearer £80bn.

20. The nationally aggregated economic benefits estimated by KPMG are in fact an estimate of the same impacts that are intended to be captured in WEI. Not only are these impacts incorrectly included in the headline assessment, but they are counted twice in the economic case!

Subsidies

21. A subsidy will be required because passenger fare revenues are unlikely to match projections (see answer to Q8). Passengers will also look for cheaper travel alternatives so that could affect passenger forecasts.

Cost relating to mitigating the impacts of the route

22. The strong demands for work to mitigate the environmental impacts of the route have already created additional costs. Since 2011, the Government has added extra tunnels in West London and East Birmingham, and the route to Manchester published in January this year is far from direct, avoiding sensitive areas of George Osborne’s constituency for example. In fact, the estimated capital costs of the scheme have already risen from £33 billion in 2011 to £42.6 billion last year.

23. It is highly likely, given the lack of proper mitigation in the proposed scheme, that the Parliamentary Committee considering the Hybrid Bill will recommend further changes. As part of the Hybrid bill process, Buckinghamshire Councils are putting forward a case for an extended tunnel through the Chilterns Area of Outstanding Natural Beauty, which will have the effect of ameliorating those economic costs, with no significant increase to the combined construction and operational costs of HS2.

24. If the Government claims wider economic benefits in their business case they should also include the wider dis-benefits in any case, such as those that will adversely affect Buckinghamshire. An extended tunnel in the AONB may be cost neutral.

Other costs

25. There are other costs which have not been factored into the business case. The HS2 business case includes a total saving of £8.3 billion for reductions to existing services. If those services are not reduced, the cost of the scheme to taxpayers will rise. Local authorities which are directly and specially affected, such as in Buckinghamshire, are incurring additional costs in responding to the scheme at all levels of local government. These costs are not included in the business case for HS2 but should be.

26. In May 2014, HS2 Ltd’s spending on consultancy contracts was reported as 86% over budget; £188m against a budget of £101m. This does not set a good precedent for HS2 Ltd’s financial controls.

27. There is a precedent for establishing a Community Benefit Fund for affected
communities who will suffer the impacts of large infrastructure projects, which we believe will add further costs to HS2. Hinckley Point Power Station is a recent example where a fund of £12.8m is to be independently administered. Buckinghamshire Councils (along with other affected local authorities) recently wrote to the Prime Minister to make a request for the establishment of such a fund.

28. Wales and Scotland will no doubt also be looking for equivalent Barnett consequential payments, which again adds further costs to the scheme. Mark Barry of the Cardiff Business Partnership said to the Transport Select Committee in 2011, “If you’re a Welsh taxpayer, you’re thinking, we’re going to be paying £1.5bn towards this £32bn scheme, and we’re going to be short changed by 21,000 jobs and the Bristol/South-West region by 40,000 jobs, so we’re thinking that’s not really good enough.” Two years later the KPMG report served to underline this point in a national context.

Value of journey time savings

29. One of the fundamental flaws in all the business cases that have been produced to justify HS2 is overvaluing of journey time savings, particularly of business people. This accounts for over 60% of the transport user benefits claimed for HS2.

30. Despite the DfT now finally accepting that business people do work on trains, their latest valuation chooses to ignore that the time saved through shorter journeys is already productively used. The business case calculates the value of business time savings exactly as previously but now calls it a ‘willingness to pay’ value. However, there is no empirical basis to indicate that businesses would be willing to pay the same rate per minute to save journey time in which their employees are already working (as they are) as they would to reduce wasted time (which it is not). It is clearly nonsensical that a business would value productive time the same as unproductive time. Recalculating the BCR on a more realistic basis demonstrates that HS2 is not a sound investment.

31. The Government has publically shifted their rationale for building HS2 from high speed to capacity however 79% of the claimed transport user benefits were attributed to time savings. This is an increase from the February 2012 business case attributed 55%. This is not consistent with the Government’s rhetoric that faster journeys are not what matter. It is the design for very high speed, which forced the route selection, and which creates the damaging environmental impacts, which are not monetised. Neither are disruption costs during the lengthy construction period of up to 10 years.

Benefit Cost Ratio (BCR)

32. The Government issued its first business case for HS2 in March 2010, which included Benefit Cost Ratio (BCR) calculations for Phase 1 and the full Y route. Official figures show a BCR which has been radically declining, and whilst it rallied in August 2012, it is still near to half the figures published in March 2010.

33. These declining BCR figures contrast with many of the proposed transport schemes which cannot currently get funding from the Department for Transport; road improvements with a BCR of over 10 and the alternative put forward by 51M (see below), which would bring benefits to the whole country and quicker than HS2.
Alternatives to HS2

34. Buckinghamshire Councils are members of the 51m alliance of councils who have carefully scrutinised all aspects of the proposed scheme. 51m published an Optimised Alternative back in 2011 as part of its response to the original HS2 consultation. An independent assessment by Atkins for Network Rail reported that this offered more than £5 of return for every £1 invested. Recently, 51m has gone further, publishing ‘Better than HS2 – the 51m Alternative Infrastructure Investment Strategy’, setting out ways to invest £50 billion to drive economic recovery across the country, delivering jobs and growth now.

35. The alternatives to HS2 were grossly misrepresented in the Government’s strategic case report; it was said they did not provide the required capacity and would significantly disrupt services on existing lines. It stated that, “Network Rail has estimated that this could result in up to 14 years of weekend closures...”. However, in another section it was acknowledged that this is the absolute worst case scenario and is highly unlikely. In reality the largest and most expensive infrastructure works in the package of changes, The Stafford area works, are in slightly different form actually being implemented by Network Rail to achieve exactly the same increases in capacity as required for the 51m solution. Not only does this call into question Network Rail’s pronouncements, but it makes this element a sunk cost, which means that the 51m proposals are commercially viable (and require no subsidy).

36. The report did not suggest what disruption would be caused to the existing network due to the construction of HS2. The only comparison made is on p131 where it clearly shows that the ‘indicative’ number of weekend closures for HS2 (both phases) is 386 whereas the Phase 1 and 2 alternative is 2790. It should also be noted that HS2 has to cross and re-cross the M1, M6, M42, M62 and a plethora of other roads with the disruption that will cause not factored into the business case.

37. The worst disruption caused by HS2 was going to be the rebuilding of Euston while it remained operational. This was an operation that would see services reduced to off-peak levels due to platform shortages. The solution to replacing Euston commuter services with ones running onto an extended Crossrail may largely address the problem, but;

- By itself the Crossrail approach addresses any issues with short and medium distance commuter traffic into London (so that the potentially released capacity from HS2 is not needed)
- Has a substantial cost and will take many years, that will adversely affect the delivery and cost of HS2

Q3. What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

38. The Government claims that HS2 will transform the north when there are strong theoretical and empirical grounds for concluding that such an outcome is highly unlikely.
The failure of High Speed 1 to achieve its aim of transforming East Kent raises serious questions about the ability of HS2 to ‘rebalance’ the UK economy.

39. Doncaster has for some decades had a fast and frequent rail services to the capital but it remains one of the poorest towns in the country (Indices of Multiple Deprivation (DCLG 2010) ranked 39th most deprived local authority out of 326).

40. A group of leading transport economists wrote an open letter to the Secretary of State for Transport which was published in the Financial Times in January 2013. Their view was that the link between improved transport infrastructure and economic growth could not be relied upon as the UK is well connected already, as pointed out in the Eddington report of 2006.

Capacity

41. The Government claims HS2 is the bypass for the nation’s clogged and congested arteries. Latest statistics however show that demand for long distance rail is tailing off and business travel is falling. The intercity route which HS2 serves (WCML) is the least crowded (on Network Rail’s own figures) and it is key commuter routes into our cities that are overcrowded yet HS2 does little to reduce those issues.

42. The report is also premised on substantial improvements to existing services as a result of HS2 freeing up capacity, but the project’s budget includes a provision for substantial cuts to existing services.

43. An assumption in the KPMG report was that the only constraint on commercial activity is transport infrastructure. By assuming that each of the areas served by HS2 had a limitless supply of property, talent and other resources, KPMG was able to argue that the economic benefits of the new line would be £15 billion a year. However, transport expert, Professor Henry Overman, told the Transport Select Committee last year that the economic benefit may be overstated by six to eight times.

Q4. Might some parts of the UK suffer economic disadvantage from HS2?

44. The regions connected to London by HS2 are those most likely to suffer economic dis-benefits, because London is the most economically efficient part of the UK, and transport is to an extent a barrier to competition, which protects the less efficient service activities outside London. To a small extent HS2 will reduce the barrier to competition that distance provides. The expected outcome is that the less efficient businesses outside London will lose market share to London.

45. An example is the performing arts. London has the largest concentration of theatre, ballet and opera. The ability to attend evening performances in London from major cities connected by HS2, is likely to further concentrate artistic activity in London, rather than support its dispersal.

46. The KPMG report illustrated the potential losses to some regional economies from the HS2 high-speed rail link. HS2 would make more than 50 places across the UK worse off such as Buckinghamshire, Aberdeen, Bristol and Cardiff.
47. The report states that Buckinghamshire could be up to £92.95m worse off but Buckinghamshire Councils dispute that figure and believe it will be much higher.

48. As an example, HS2, as currently proposed, will pass through the middle of the Chiltern district. The exposed section of line will be in the Chilterns Area of Outstanding Natural Beauty (AONB). In total, 5.6 miles of line through the AONB, which extends beyond the district boundary, will not be tunnelled.

49. The AONB, which is the closest environmentally protected area to London and accessible by the London Underground, attracts some 55 million visits per annum. It is also an attractive location for people looking to relocate from the city to live and/or start-up businesses. These key factors have helped to establish and maintain a strong and diverse economy, with particular strengths in recreation and tourism, and the knowledge based sectors.

50. Based on the evidence, HS2 will create significant disruption and long term environmental damage to an area considered by Natural England to have “significant national landscape value”. Acknowledging this, the Chiltern District Council commissioned a report to assess the true range and extent of the socio-economic impacts that the construction and operation of HS2 is likely to have.

51. The economic impact to this area will be substantial. Approximately three quarters of Chiltern businesses surveyed consider that delays on the road network during the construction phase of HS2 will negatively impact on movement of goods and services, staff and business trips. Impact to business turnover, productivity and therefore employment is also identified. In addition, it is expected that land take and severance will render many farm and tourism businesses unviable as on-going concerns.

52. In the longer term, once HS2 is operational, 36% of businesses consider that their turnover will continue to be negatively affected, and consequently one in ten business owners are considering a change of location.

53. Based on a conservative estimate, the likely social, economic and health & wellbeing impacts of constructing HS2, and the visual legacy on the landscape and noise that will in some cases lead to blight of properties and businesses, and annoyance to others, the minimum total economic cost to the Chiltern district alone is estimated to be £170.4m (in present value).

54. The narrow approach taken by HS2 therefore fails to identify the “true economic” consequence of the proposed HS2 route to the Chilterns and consequently Buckinghamshire. The full economic impact report is appended as Appendix 1.

**Q5. Is London likely to be a main economic beneficiary of HS2?**

55. Planning Professor John Tomaney has studied the effects of high speed rail on regional regeneration in other countries. He provided written evidence to the Transport Select Committee in 2011 and also provided oral evidence. He concluded that if there are any regional benefits then they are most likely to accrue to the capital so if there is any
regional benefit this is likely to be in London. In 2011 the case for HS2 stated that for Phase I, 75% of new jobs created would be in London.

Q6. How might the expected benefits of HS2 to the national economy be realised?

56. It is unlikely that HS2 will have a net benefit to the national economy. This is because;
   - High speed rail technology will need to be imported. There is no existing design or manufacturing capability in the UK.
   - While the construction of HS2 will generate jobs, it is likely that the alternative uses of money it requires to build HS2 would support more jobs.
   - HS2 will not make businesses more efficient, as time on board trains is productive, so shortening journeys is not an economic benefit.
   - While reducing a barrier to competition so that work will be done more efficiently in London, because of the increasing importance of the internet, video conferencing etc, this is likely to be a marginal effect.
   - Shortening journey times may have benefits particularly to leisure travellers, these are not benefits to the national economy.

57. It is likely that there will be patches of economic growth in the vicinity of new stations. But there is little evidence that this will be a net benefit and not be simply counterbalanced by reduced growth in the ‘hinterland’ of stations. This will also be manifested in increased property prices near the new stations.

58. Some business transport user benefits improve the efficiency of business and so should make business more efficient. However, because on-board journey time savings cannot be expected to increase efficiency, this does not apply. The Wider Economic Impacts assess benefits – including those to the national economy. However, agglomeration effects are very small, and other benefits relate to the cost savings of business, which also do not apply. As a result the standard DfT analysis should predict little economic benefit from HS2.

59. There are also some issues in the KPMG report that have not featured before. References are made about maximising the uplift in land value resulting from the new line. Whilst this may be restricted to the city stations it is quite feasible that consideration is being given to land sterilised by the construction of the line.

60. Clause 47 of the HS2 Hybrid Bill is about compulsory acquisition of land for regeneration or relocation which gives the Government wide ranging powers. It could use these powers for housing or new buildings on a previous construction compound or other land. It also mentions commercial opportunities at the HS2 stations and on land acquired for HS2 construction work. It would appear that the Government could force the sale of land which becomes economically viable as a result of the HS2 project and could use these powers to prop up the case for HS2.

HS2 Growth Taskforce

61. In July 2013 a new HS2 Growth Taskforce was appointed because it must have been apparent by then that the business case on its own did not stack up. The Taskforce
suggested that extensive review and planning of the existing transport network should be undertaken with HS2 in mind, that there should be an emphasis on training people for those jobs which will be specific to the construction and operation of the scheme and that businesses should be supported at a local level so that they could bid for and win contracts.

62. These are good, practical ideas, however, as with most debates on HS2, it comes down to a question of costs. The Taskforce called for the Government to urgently set out, “what costs will fall within the budget for the HS2 railway. That way, local authorities will be able to reprioritise their existing resources and identify how their HS2 Growth Strategies (and HS2-related transport investments) will be funded”.

63. The Government published its response to the Taskforce report in July 2014 and it has not clearly set that out the costs that fall within the HS2 budget. There is still the question of whether these costs are met nationally or locally. This means further expense is required to be committed to HS2 to make the business case stack up. Even if these costs are shouldered at a local level it still means the further diversion of public funds.

64. The response also included 18 recommendations. Recommendation 3 says ‘HS2 Ltd and London and Continental Railways will now develop a full business case’ for a central delivery body. Recommendation 9 says the Government ‘must complete a review of how its transport appraisal methodology quantifies economic benefits’ and have appointed a team of experts to undertake a comprehensive study. Buckinghamshire Councils see these recommendations as yet another attempt by the Government to try and make the business case look more favourable using yet another set of rules.

Q7. How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

65. The KPMG report simply states that “as a consequence of the introduction of the HS2 services, some of the existing rail franchises will need to be redefined”. Buckinghamshire Councils have no other comment to make other than to refer to the most recent franchise renewal of WCML. MPs said a "complete lack of common sense" in the Department for Transport's handling of the West Coast Main Line franchise deal will cost taxpayers "£50m at the very least". The Public Accounts Committee warned the cost might be "very much larger". The committee accused the department of making "fundamental errors" and failing to learn from "previous disasters". The options for the operation of HS2 must therefore be very carefully considered.

Q8. Should travellers expect to pay higher fares on HS2 than on other lines?

66. There has been no announcement on ticket prices. The government says its proposals "assume a fares structure in line with that of the existing railway" and that HS2 could generate sufficient demand and revenues without needing to charge premium fares. However, premium pricing for high speed rail is the international norm. If left to market forces, HS2 will command a premium, as the time saving is an advantage to travellers, so operators of slower services will offer discounted prices.
67. A season ticket for commuters from Ashford to a London terminal using the old route, plus an onward journey on the tube, costs £4,996 a year. That is a substantial sum for a 54-mile journey (about the same as London to Brighton). However, if you want to take the HS1 trains, and save half an hour, the cost rises to £6,360. A commuter paying 40% tax has to earn £10,600 a year just to pay to get into work (not to mention a £700 to £900 a year bill to park at the station).

68. The Ashford example suggests that using HS1 costs 27% more than the fare structure of the existing railway, which is a more reliable indicator of what fares will be like on HS2. The last in-depth study that compared train prices across Europe was in 2009, but Passenger Focus, which commissioned the research, say that the pattern of prices remains the same. It found that a long-distance commuter in the UK typically paid more than £3,100 a year in 2009 and no doubt much more today. Brighton to London is £3,500-£3,800 a year, while Tunbridge Wells to London is £4,130 to £4,750, depending on whether you need an onward Underground journey.

69. The HS1 example also effectively demonstrates the impact of competition on the part of the Channel ferry operators. The effect of competition meant that passenger numbers using HS1 were substantially lower than forecast; a situation that continues to this day. There is every likelihood that train operators will respond to HS2 in the same way, seeking to attract potential passengers to their service.

70. Because HS2 requires more energy, involves greater wear on the rails, and is less tolerant of any change in the geometry of the track, it will cost more to operate and maintain than lower speed passenger railways. Also, if plans to sell-off the infrastructure of HS2 (once built) are implemented, the purchaser will require a commercial rate of return on the purchase that will either need to be covered by the fare or an on-going operating subsidy. As a consequence HS2 can be expected to cost more to run than competing conventional services.

71. However, the economic case for HS2 has assumed that alternative rail routes will all be priced the same, and that different routes will not compete on price – as the different current means of travelling by train between Birmingham and London do (with Virgin Rail providing the fastest service, but London Midland and Chiltern Trains both offering competing – slower – services at lower prices). The result of ignoring price competition is to over-estimate the number of travellers who will opt for HS2, and underestimate the demand for the classic rail services – which will make achieving the assumed savings (worth £8.3bn) from cutting such services problematic.

**Q9. Does the prospect of HS3 affect the economic case for HS2?**

72. In June 2014 the Chancellor announced his intention to progress HS3; east-west links across the north. In August 2014, five Northern City Councils published the ‘One North’ report in response to Sir David Higgins’ call for transport proposals so that the north can ‘get the best out of HS2’. While it has been claimed that HS2 would ‘rebalance the economy’ for the last four years, now it is claimed that actually spending money in the north of England will create a ‘Northern Powerhouse’, with the claim that improved East-West links give the same benefits of HS2 for a fraction of the cost.
73. Unlike the £50bn earmarked for HS2, the £10-15 billion One North package calls for investment in an integrated multi-modal transport, in roads, inter-city rail, regional rail and digital infrastructure. The One North report suggests the speed of a new Trans-Pennine route would be 125mph, the same as the current West Coast Mail Line, half the design speed of HS2.

74. The Government and taxpayer will bear the debt of HS2 for many years, as it has been for HS1. This will be in addition to Network Rail's current debt of just over £30 billion. Interest payments alone for HS2 debt could reach £2.3bn per year, based on the current low levels of interest rate.

Appendix A – Link to Report by Chiltern District Council referred to in Para 51

http://www.chiltern.gov.uk/CHttpHandler.ashx?id=5392&p=0

September 2014
Camden Town Unlimited—Written evidence

Is there an economic case for HS2?

Camden Town Unlimited (‘CTU’) campaigned against the proposed HS1-HS2 link on the basis that its construction would have caused more economic harm than benefit, but supports HS2 overall on the basis that the project will provide increased capacity to the UK’s already over-subscribed rail network and better connectivity between London and cities in the Midlands and the North. One of the primary economic strengths of HS2, from CTU’s perspective as a leading Business Improvement District, is its potential for local economic growth spurred by the creation of key transport hubs at strategic stations along the proposed route.

Euston Station, which is located within CTU’s boundary area, faces the positive prospect of full-scale redevelopment in order to accommodate access for HS2. Euston’s development alone offers the prospect of a once in a generation opportunity for the Camden area that could lead to a significant increase in local employment, business revenue and tourism. This could feasibly see a complete reconfiguration of the station that promotes better pedestrian permeability and leads to increased footfall to the businesses located to the north of the current site, such as those on Camden High Street.

The regeneration potential around each station site along the route is therefore significant when the metropolitan areas that benefit are considered collectively.

Might some parts of the UK suffer economic disadvantage from HS2?

CTU believes that HS2 will provide the metropolitan areas it directly serves with an economic advantage in terms of improved connectivity to business markets and population centres. The level of advantage that HS2 can provide to each area will largely depend on the extent to which local authorities and national government plan for HS2 in conjunction with local businesses and the bodies that represent them. There is a natural role for Local Enterprise Partnerships and Business Improvement Districts to play in this preparatory process as organisations that are tasked with improving business conditions in their areas. Cities where there is close cooperation between local businesses and HS2 delivery bodies will therefore gain more of an economic advantage than cities where the voice of local business is marginalised.

CTU recognises that some cities which will not be served directly by HS2, such as Stoke-on-Trent, are concerned that they will suffer an economic disadvantage as a result of the line’s opening. Whether this concern is realised will again depend largely on the extent to which local businesses are consulted with in planning for HS2. The allocation of “classic compatible” HS2 services able to reach destinations on the existing rail network, and the harmonisation of local transport networks with HS2 could negate many perceived economic disadvantages. However, on both of these matters the voice of local business will need to be heard to ensure that connectivity is planned in a way that will support their specific needs.
Is London likely to be a main economic beneficiary of HS2?

If the “main economic beneficiary of HS2” is defined in terms of the monetary value of increased GVA or as a share of the nation’s GDP, London will naturally stand out due to its already high value in both categories. However, CTU does not believe that HS2 will benefit London at the expense of other cities. CTU believes that HS2 could help cities in the Midlands and the North gain a greater share in London-based business activity.

For example, Camden is home to one of London’s largest clusters of Creative and Cultural Industries (CCI). These businesses generate 25,000 to 49,000 jobs and £424 million to £849 million in business turnover for industries linked to their supply chain. Approximately 15,000 to 29,000 of these extra jobs generated are based outside of Camden, and between £254 million to £509 million of the added business turnover is spent outside of Camden.115

As the experience of France’s high speed rail network has shown, placing a city within an hour of the capital not only increases business travel but also daily commuting between the cities.116 By bringing businesses in the West Midlands to within 49 minutes of Camden, and businesses in Manchester to just over an hour from it, CTU believes it will be easier for industries and professionals in these regions to link into the supply chain of Camden’s CCI cluster and share in the jobs and turnover it generates.

Thus, HS2 and its associated regeneration projects will likely boost already thriving industries in London, but it will also increase the potential for other cities to benefit from London’s economic growth.

How might the expected benefits of HS2 to the national economy be realised?

As stated in response to the question above, CTU believes that HS2 has the potential to help multiple regions share in the benefits of one region’s economic growth. If this potential is to be realised, businesses will need to be made aware of the businesses and industries that they could potentially work with in different regions. Inter-regional trade fairs and business showcases could facilitate this, and Business Improvement Districts and Local Enterprise Partnerships are naturally well suited to lead on these. Above all, local business representative groups will need to adopt a mindset of intercity and interregional collaboration rather than competition, recognising HS2’s ability to spread growth across regions.

September 2014

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115 London Borough of Camden, Creative and Cultural Industries in Camden. Pg 3.
Dr Paul Carter—Written evidence

Reply from Dr Paul Carter, consultant paediatrician and editor of the Hamstall Ridware parish magazine

- **Is there an economic case for HS2?**

  I can see the economic case for providing employment, especially if materials are sourced largely from the UK. However, I do not see any evidence of an economic case for a North, South rail link, especially given the cost and the environmental damage. The link will only serve to further enhance London as a centre of economic activity for the UK and thus have a negative overall effect. It is of particular concern that a major report into the consequences of HS2 has been suppressed by the government.

- **Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?**

  The case against HS2 and the very careful reports to this effect should have been published and given equal weight alongside the government’s case for HS2.

- **What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?**

  As someone who lives in the Midlands, I see no benefit whatever to myself for having HS2 as I already have a world leading service from Lichfield Trent Valley with Stafford and Birmingham International as attractive alternatives. All stations are more accessible than the nearest proposed HS2 station. The countryside will be effectively devastated by the train running through virgin territory and obliterating several villages, not to mention the noise pollution and the negative environmental impact of the 10 years of construction.

- **Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?**

  Everyone will be encouraged to go to London and the economic advantage will be maximum for those living in Manchester and Leeds, whilst the Midlands will gain nothing apart from the employment offered during construction and people looking after terminals that effectively only serve those living further north or south.

- **How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?**

  It would be a total disaster to consider putting a new rail link in competition with the current infrastructure. This country needs more than anything else an integrated transport policy which looks at local transport and coordinated transport across different modalities (rail, air road and cycle). All too often journeys are effectively...
impossible by public transport as the connections are not available, and to put any new infrastructure in competition with the existing infrastructure would make a mockery of our country. Any new rail link where ever sited only makes sense if it is an integral part of a managed functional network.

- Should travellers pay higher fares on HS2 than other lines?

The cost of transport is already high, and the need for transport will continue to diminish as IT becomes more of a way of life. In the West Midlands there is a significant threat to existing services from the existence of the proposed HS2 link. There will be very little time advantage even for those living near the station who take HS2 and thus no advantage in a higher fare. Whilst HS2 is an un-needed and inappropriate investment, to then ensure that it will not be fully used by pricing it further out of the market would be totally inappropriate.

- Does the prospect of HS3 affect the economic case for HS2?

If the North of England had the quality of infrastructure that so greatly needs, and HS3 might be advantageous here, this could eventually strengthen the case for linking a new vibrant region better to the south, but this is very much the order in which the development and the economic argument should be developed.

I regularly commute 120 miles to London in one hour and 10 minutes by train. I also regularly commute 120 miles to Hull. This would take me 5 hours by the fastest available train service at present, and takes me over 2 hours by motorway causing considerably more pollution than my train journey to London. The most important communication infrastructure developments in the UK will be to bring back branch lines and to improve links between non-London population centres and to ensure that any network is integrated as its main thrust, rather than building it on so-called “competition”.

*July 2014*
Chiltern Ridges (HS2) Action Group—Written evidence

1. Chiltern Ridges (HS2) Action Group

Chiltern Ridges (HS2) Action Group (CRAG) represents the communities living in the Chiltern Ridges in Buckinghamshire between Hyde Heath in the south and Kings Ash in the north. This is a very beautiful part of the Chiltern Area of Outstanding Natural Beauty. HS2 Limited’s “Proposed Route” runs on the surface from the exit of the Amersham Tunnel at Mantles Wood next to Hyde Heath through to the viaduct at Durham’s Farm, near to Kings Ash, and beyond towards Wendover. It will have a major impact on the communities in this area and on the landscape and its environment.

2. Introduction

We wish to submit the following evidence to the House of Lords Economic Affairs Committee Enquiry regarding The Economic Case for HS2 as set out by the Department for Transport in October 2013 (“the Economic Case”).

The members of our community are having their lives permanently damaged by the HS2 project which gives them no net benefit whatsoever. Any positive benefit that might filter through from countrywide economic effects in the future is massively negated by:

- permanent damage to the environment that we live in,
- appalling disruption and loss of social and economic cohesion in the community during the seven years of construction, and
- property blight which makes our ability to move away, in practice, impossible. For many there will be a permanent loss of value in their homes and only about 2% of the owners of affected properties receive any compensation.

If HS2 were vital for Britain’s future and there were no other alternatives to it, then the hardship and losses would be more bearable. However there are alternatives and the Economic Case is fundamentally flawed. How can our members support a project which relies for over 50% of its benefits on the assumption that business travellers do not work on trains. This is the economic analysis of the Mad Hatters Tea Party. It severely undermines the credibility of the DfT and the Government which promotes it.

3. Summary of Conclusions

3.1 The Economic Case significantly overstates the benefits arising from time saved because it assumes that business travellers do no work on trains. It includes as a benefit the value of 100% of time saved by business travellers using HS2. However it is clear that business travellers on trains work during significant amounts of their travelling time. This assumption in the Economic Case must be changed. The percentage of time saved, which would on a train be spent working, should be assessed from reliable research, and excluded from the benefits.
3.2 The alternative to HS2, 51M Optimum Alternative for uprating the WCML ("51MOA"), is capable of providing the required capacity at a very significantly lower cost than HS2. The Economic Case should not be compared with the "do minimum" case, which is artificial and has unachievable levels of crowding, but with a realistic comparator such as 51MOA. On this realistic comparison Crowding effects are no longer an issue - 51MOA would not suffer from crowding - and the crowding benefit included in the Economic Case should therefore be deleted.

3.3 The demand forecasting for HS2 is too ambitious. The forecast is over a long period, unsuitable for the model used particularly since it is inelastic and ignores price competition. A more conservative approach, possibly related to forecast population growth, should be used to avoid the severe over estimates which contributed to many more years of operating losses on HS1 than was originally forecast.

3.4 The benefits from wider economic impacts, included in the Economic Case are also over ambitious and the report by KPMG used in the Economic Case has been widely criticised.

3.5 For comparative purposes the Economic Case should take into account the cost of capital in accordance with Network Rail’s practice.

3.6 HS2 is clearly not “green” in particular because its requirement for high speed leads to far higher usage of energy than conventional trains. The consequent requirements for more energy generation capacity should represent a cost in the Economic Case. In addition the decimation of the landscape by HS2 should be represented and costed in the Economic Case.

3.7 The Economic Case takes no account of 'local costs and dis-benefits' caused by HS2. These include costs such as travel delays during eight years of construction, and visitor spending loss and health and wellbeing impacts over the 60 year life of HS2. Chiltern District Council has estimated the local costs and dis-benefits of HS2 in the Chiltern District alone at £170million. Such costs for all areas affected by HS2 should be included in the Economic Case.

3.8 Un-compensated blight is ignored in the Economic Case. These are costs to the country and lead to reduced expenditure. Such costs should be included in the Economic Case.

4. Benefits from Journey Time Saving

The Economic Case assumes that about a half of the benefits of HS2 (£30 billion) arise from journey time savings. The bulk of the value of journey time savings is comprised of journey time saving of business travellers and the main components of the calculation of this saving are:

a) The hourly salary rate,

b) The proportion of total travellers who are business travellers ("the Business Traveller Proportion"), and

c) The value of journey time reduction for business travellers.
i) Hourly salary rate and the Business Traveller Proportion

The Economic Case, compared to the earlier version of it, reduced the hourly salary rate from £47.18/hr to £31.96/hr. but increased the Business Traveller Proportion from 28% to 38%. This increase of the Business Traveller Proportion led to an assumed fourfold increase in business travel. However the National Passenger Survey of Spring 2013 gives no evidence of any increase at that date and supports the 28% level. The lower salary rate and the increased Business Traveller Proportion resulted in the overall benefit remaining nearly the same as it was in the previous economic case.

The new hourly salary rate is inflated in line with GDP for 60 years to 2093. However the HS2 train drivers’ salaries are inflated to 2035 and then capped. So the treatment of benefits and costs is inconsistent leading to artificial enhancement of benefits. If they were treated consistently the Benefits Cost Ratio (“BCR”) of the Economic Case would reduce by 0.4 for Phase 1 and 0.5 for Phase 2.

ii) The value of Business Traveller Journey Time (“BTJT”) saved.

The Economic Case makes the assumption that 100% of BTJT saved is productive business time saved and it represents the largest benefit category in the Economic Case. But as any train traveller knows businessmen do work on trains and as Broadband and mobile connections improve it will become easier and cheaper for them to do so. BTJT saved is not 100% unproductive but the Economic Case assumes that it is. If the BTJT saved were 50% productive the BCR would be reduced for Phase 1 by 0.4, from 1.4 to 1.0, and for the full Y by 0.5, from 1.8 to 1.3. If the BTJT saved were 100% productive the BCR would be reduced for Phase 1 by 0.7 to 0.7 and for the full Y by 0.9 to 0.9.

iii) BTJT affected by Crowding.

The alternative to HS2, the 51MOA, is capable of providing the required capacity at a very significantly lower cost than HS2. The Economic Case should not be compared with the “do minimum” case which is artificial and has unachievable levels of crowding, but with a realistic comparator such as 51MOA. There is no Crowding in 51MOA and the crowding benefit included in the Economic Case should therefore be deleted.

5. Crowding Benefits

Crowding benefits reflect that HS2 would be less crowded than the “do minimum” comparator. The benefit used in the model increases because there are more rail business travellers and because the de-crowding benefit is assumed to relate to the higher business value of time being £31.96 rather than the individuals rate previously used of £6.04.

As mentioned earlier the 51MOA is capable of providing the required capacity for business and non-business travellers and would cost far less than HS2. There is no rationale for accruing this benefit for HS2 as compared to 51MOA.
6. **Demand Forecasting**

The Economic Case forecasts growth in demand for long distance travel of 2.2% pa. up to 2036.

We understand that the model used is only suitable for short term forecasts of up to 10 years rather than the 25 years the DfT are assuming. The model is a fixed elasticity model and does not take into account price competition from other lines and modes of transport which can affect revenues and usage. Surely a more cautious approach to demand should be taken given the massive overestimate of demand made in planning HS1 leading to many years of operation with unused capacity and operating losses.

7. **Wider Economic Impacts ("WEI")**

The Economic Case includes work undertaken by KPMG considering the WEI ("the KPMG Work"). Regarding this work:

i) KPMG recognises that it does not have a firm statistical foundation

ii) Professor Henry Overman, Professor of Economic Geography, LSE, states that technical flaws in the KPMG Work cause the results to be overestimated by 6 to 8 times.

iii) The KPMG Work was not peer reviewed by the Analytical Challenge Panel before being published.

iv) The widely publicised parts of the Economic Case and the Press releases regarding it, only included the BCR which included the WEI, being 1.7 for Phase 1 and 2.3 for the Y network. The BCR excluding the WEI, ie the core standard BCR, being 1.4 for Phase 1 and 1.8 for the Y network, were excluded from such publicity.

8. **Financing Costs**

The Economic Case does not take account of the cost of capital. Why is this cost excluded when Network Rail’s capital projects do include a cost of capital? How can it be fairly compared to alternative projects unless such a cost is included?

9. **Greenness and Environmental Damage**

The Economic Case is promoting an infrastructure project which is not "green". 95% of HS2's passengers are predicted to move from less polluting modes or are new additional journeys. Furthermore HS2 is designed to travel at speeds of 360 km/hr which will use 3 times as much energy as trains travelling at the current intercity top speed of 200 km/hr. For the sake of its design speed HS2 is designed using straight direct routes resulting in the decimation of several areas of outstanding natural beauty. If such speed constraints were dropped, alternatives, such as the 51MAO, could provide the required capacity inflicting far less damage on our environment and at far less cost to the taxpayer.
10. Local Costs and Dis-benefits

The Economic Case takes no account of 'local costs and dis-benefits'. Chiltern District Council is just one local authority through which HS2 will pass. It has estimated the local costs and dis-benefits of HS2 in the Chiltern District area at £170million. There are many other Districts up and down HS2’s route which will be similarly affected. All such costs should be included in the Economic Case.

11. Uncompensated Blight

Un-compensated blight is ignored in the Economic Case. Such costs are and will be absorbed locally by thousands of property owners. These are costs to the country. For instance they reduce the ability of blight sufferers to borrow funds for business and or pleasure purposes and hence reduce GDP expenditure. Such costs should be included in the Economic Case.

September 2014
Chiltern Society—Written evidence

Contents
- Introduction and Executive Summary
- Analysis of the Government’s Economic Case for HS2
- Alternatives to HS2

Introduction
There are a number of considerations in examining the Economic Case for HS2. There is the case as presented by HS2 Limited for the Government to support HS2. The latest case for HS2 sets out a ‘do minimum’ case which includes some upgrades and the Northern Hub.

There are also alternative proposals, which need to be considered, as these deliver the same or more capacity as the current HS2 proposal. Further at a substantially lower capital cost

The overall conclusion drawn from an examination of the October 2013 Business Case is that it is based on an optimistic view of each and every aspect. Examples are

- Demand for long distance travel is expected to continue to grow at 2.1% per annum, whereas the long term growth rate has been approximately 1% and for the last three quarters demand has been flat.

- Revenue is expected to grow at RPI + 1% for the foreseeable future, whereas the Chancellor has limited increase for this year and next to RPI.

- Two of the key drivers for HS2, links to Heathrow and to HS1 and the continent have been dropped. However Capital costs have not decreased. No account has been taken of the reduction in demand and income from dropping the continental connection.

- Wider Economic Impacts have been interpreted as Benefits only. No account has been taken of the economic costs to be incurred while the railway is built. A good example is the impact on commuters and long distance travellers arriving at Euston. 40 million people a year use Euston. A delay of 15min each has a substantial economic cost.

- Recently HS2Ltd admitted it had not accounted for the negative impact of the loss of 1350 jobs at Washwood Heath.

A recent paper from Sir David Higgins set out that the economic benefits of HS2 could not be delivered without substantial investment in transport and other infrastructure. None of the costs related to that investment is included in the Wider Economic Impacts.

Our conclusion is that

- HS2’s benefit cost ratio is overstated for both Phase 1 and 2, and for Phase 1 will be less than 1.
• HS2 no longer meets the key principle of connecting the North directly to the Continent

• Currently and for the foreseeable future there is sufficient capacity on the WCML and ECML taking into account some debottlenecking, conversion of first class carriages and using 12 carriage trains. Indeed Network Rail has confirmed that these measures will provide the same additional capacity as HS2.

• The capital available would be better spent on improving the transport infrastructure in the North now to deliver growth in the next five years rather than waiting until 2026 to get to Birmingham and 2035 to get to Leeds and Manchester.

• That a decision should be made on where additional airport capacity will be placed should be made, enabling HS2 to be integrated into the transport infrastructure

• That if it becomes apparent that more capacity is needed, there is a better alternative.

Analysis of the Government’s Economic Case for HS2.
It is useful to start with the summary of the Benefit Cost Ratio as set out by HS2 in October 2013. This summarises the key elements to be considered in assessing the efficacy of the assumptions used to establish the ratio. This paper will examine the elements making up

• Transport User Benefits
• Wider Economic Impacts
• Capital Costs
• Operating Costs
• Revenues
### Benefit Cost Ratio

<table>
<thead>
<tr>
<th>Benefit Cost Ratio</th>
<th>Oct 2013</th>
<th>Oct 2013</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Phase 1</td>
<td>Phase 1&amp;2</td>
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<tr>
<td>£bn</td>
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<td>£bn</td>
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<tr>
<td>Transport user benefits</td>
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<td>Loss of Indirect Taxes</td>
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<td>Net Transport Benefits</td>
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<tr>
<td>Wider Economic Impacts</td>
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<tr>
<td>Net benefits including WEIs</td>
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<td>40.5</td>
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<tr>
<td>Operating costs</td>
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<td>22.1</td>
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<tr>
<td>Total Costs</td>
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<tr>
<td>Revenues</td>
<td>13.2</td>
<td>31.1</td>
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<td>Net cost to the Taxpayer</td>
<td>16.7</td>
<td>31.5</td>
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<tr>
<td>BCR without WEIs</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>BCR with WEIs</td>
<td>1.7</td>
<td>2.3</td>
</tr>
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</table>

### Transport Users Benefits

This is the biggest source of benefits in the BCR, far outweighing Revenue, which one would expect to be the more predictable of the benefit streams. Transport User Benefits are split between Business and Leisure Users. It is doubtful that there will be any direct benefits for commuters.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Full Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved access</td>
<td>1.094</td>
<td>0.021</td>
<td>1,115</td>
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<tr>
<td>Reduction in crowding</td>
<td>4.068</td>
<td>3.446</td>
<td>7,514</td>
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<tr>
<td>Improvements in Interchange</td>
<td>0.810</td>
<td>3.336</td>
<td>4.146</td>
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<tr>
<td>Reductions in waiting</td>
<td>3.508</td>
<td>4.573</td>
<td>8.081</td>
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<tr>
<td>Reductions in walking</td>
<td>0.404</td>
<td>0.926</td>
<td>1.330</td>
</tr>
<tr>
<td>Reductions in train journey time</td>
<td>11.518</td>
<td>19.489</td>
<td>31.007</td>
</tr>
<tr>
<td>Greater reliability of HS2</td>
<td>2.624</td>
<td>2.872</td>
<td>5.496</td>
</tr>
<tr>
<td>Benefits to road users</td>
<td>0.568</td>
<td>0.594</td>
<td>1.162</td>
</tr>
<tr>
<td></td>
<td>24.594</td>
<td>35,257</td>
<td>59,851</td>
</tr>
</tbody>
</table>

These figures were all calculated before the decision was made to drop the link to HS1 and the Continent. Improved access, Improvements in Interchange, reductions in waiting, reductions in walking and reduced train journey times are all impacted by this. For passengers from Birmingham and beyond, this means arriving at Euston and transferring to St Pancras International, a walk of approximately 10min. These figures all need to be revised.
**Improved access**
This ignores the impact of bringing HS2 into Curzon Street in Birmingham, where there will be at least a 15min walk to get to New Street, for onward connections, and most of the business centre.

**Reduction in crowding**
Recently on the WCML, a number of trains were lengthened from 9 coaches to 11. The impact of this has been to reduce the overall loading to approximately 35%, thus on most trains there is no overcrowding, so there is no benefit. The only trains leaving Euston that are at capacity are those leaving just after 7pm, when reduced fares come in. Trains leaving before 7pm have low utilisation. With the use of flexible pricing, overcrowding could be virtually eliminated.

The arguments that this would reduce crowding on commuter trains is fallacious as HS2 does not stop at stations catering for commuters.

In addition the low utilisation of first class carriages gives the opportunity to convert carriages to standard carriages thus increasing capacity. Further the ability to lengthen existing trains to 12 carriages demonstrates that increases in demand can be catered for.

**Reductions in waiting**
See general comment at the beginning of this section.

**Reductions in walking**
See general comment at the beginning of this section

**Reductions in Train Journey times**
The savings here rely on assumption by the Department of Transport that business people are unproductive on trains. This assumption was brought forward from valuing savings in car travel, where is clear that travel time in a car is generally wasted. For train travel this is patently fallacious, as one only has to travel on intercity trains to see the majority of business people are either using their laptops or their smartphones. This is confirmed by the fact that the UK has the highest number of WiFi enabled carriages in Europe, currently more than double any other country in Europe.

It would be reasonable to assume that the first and last fifteen minutes of a journey would be wasted with setting up and closing down files etc, but this would apply equally to a journey of an hour or two hours.

With regard to leisure travellers, the perceived pattern of behaviour is to look for the cheapest travel options. For most leisure travellers today a train journey would be considered a novelty to be enjoyed rather than as short as possible.

Taking into account both business people and leisure travellers, the majority of their travel time savings should therefore not be monetarised.

**Greater Reliability of HS2**
There is no doubt that travellers put a value on reliability, particularly business people. However there is evidence that they are prepared to spend more time travelling if they are guaranteed to arrive on time. In the 1980s Swissair had the reputation as the most punctual
airline in Europe, and consequently high capacity utilisation. However that punctuality was achieved by having flight times which were typically 20 min longer than their competitors. This adds additional doubt as to the value of time savings on journeys.

**Benefits to Road Users**
These are remarkably low. However they should probably be eliminated altogether with HS2s reliance on Parkway stations. i.e. out-of-town stations which will either rely on or encourage the traveller to use his car to access the station.

**Capital Costs**
Since these figures were published, Sir David Higgins has recommended and the Government has accepted that the connection to HS1 and the Continent should be dropped. This apparently provides capital savings of £700m However Sir David also indicated that the ratio of on-costs used needed to be increased to be similar to that used for delivering the Olympic Games. This left no reduction in the overall costs, despite dropping what was considered to be an essential link.

In effect the Capital Cost of HS2 has been increased by £700m in 2011 pounds.

The other area of Capital Cost, which has been conveniently overlooked relates to electricity. The high running speeds of HS2 (360kph) consume 4 times the power of running a conventional train at 200kph. The country is already perilously close to the safety margin needed between energy demand and generating capacity. Phase 1 will need the output of a medium sized power station to supply its demand for power and Phase 2 will require at least a further power station. At a conservative estimate of £1.25bn per station, it is clear that the capital cost of HS2 is understated.

**Operating Costs**
The operating costs include both the costs of operating HS2 and the existing railway, but assume a significant reduction in the operating costs of the existing railway, mainly through reduced services. However HS2 seeks to claim benefits from reduced crowding and waiting times for commuters. If commuters are to benefit from a move of capacity from the existing main lines, there will an increase in the operating costs of those lines, which should be included in HS2’s costs if HS2 claims the benefits.

**Revenue**
Revenue is determined by a combination of

1. Demand
2. Level of fare increases

Overall demand has stabilised recently. In addition for this year and next year, fare increases have been limited to RPI + 0%. If this is to be the new reality, HS2 Ltd has substantially overestimated revenues.

**Demand**
Long Distance Rail Travel in the UK has over the long term grown at approximately 1% per annum. However the pattern of growth varies from year to year. There was substantial growth in rail travel after the upgrade of the West Coast Main Line, due to the reduction in travelling time, improved reliability, and the additional travel times for air travel, caused by the tightening of security measures. Virgin Trains maintain that they have captured 65% of
the travel between Manchester and London. HS2 Ltd accept that there will be little or no transfer from the airlines, showing just 1% of demand transferring from air.

Recently, long distance rail travel has shown no growth for three quarters.

This is hardly surprising with the development of technology enabling meetings to take place virtually, and the increased control of travel expenses by employers.

**Fare Increases**

HS2 have predicated fare increases based on the policy of increasing regulated fares by RPI + 1%. The Chancellor has recently thrown this assumption into doubt, announcing a second year of rail increases of RPI +0%. Such a reduction continued for 20 years would reduce the revenue in Year 20 by 24.2%. The overall impact on revenue even in £2011 will be substantial.

They have also ignored the fact that first class travel is reduced, due to austerity measures implemented by business and government. NB Civil servants and MPs are no longer refunded for first class fares.

**Wider Economic Impacts**

This is supposed to recognise the impacts from the development of HS2, which are not directly attributable to the building of the railway itself.

This has been interpreted by HS2 to mean Wider Economic Benefits. The major identified benefits relate to

- Creation of jobs in the area around stations
- The effects of better communications between businesses stimulating economic growth

**Creation of jobs in the area around stations**

There is no doubt that a new station will have the impact of attracting businesses to take advantage of improved communications. However the question that is not addressed is ‘Where do these jobs come from?’ The evidence from France and Spain is that the larger economic unit attracts the majority of new jobs, with the transfer of regional offices into the larger economic unit. Thus a number of companies headquartered in Lyons relocated to Paris. There is a secondary effect, which is for businesses in the region around the city with a new station to move to that city. Lille, where I have worked, is an oft quoted example of a city which has benefitted. It is true that the centre of the city has been rejuvenated. However the areas around Lille, including the Pas de Calais have lost considerable employment. The conclusion is that the majority of the ‘benefit’ is illusory.

**Effects of better communications**

There is good evidence that improved communications encourage businesses to relocate and to prosper. A good example is the M4 corridor, where from Heathrow to Swindon and in between, there has been significant growth over the past fifty years. However one needs to look at the interconnectivity to see the secret of success. The M4 provides easy access and egress every 10 to 12 miles. HS2 is proposing, in Phase 1, 4 stations with a distance of at least 70 miles between Old Oak Common and the Birmingham Parkway station, with
nothing in between. It raises the question of how much connectivity is really being created. Interestingly, Sir David Higgins identified this, when he set out the need to connect HS2 to existing local transport systems, and the need for significant expenditure on local infrastructure to achieve this. The Chancellor subsequently raised the subject of HS3 a high speed line to link Leeds and Manchester, however in the small print it says to examine the feasibility of such a line.

**Disbenefits**

As well as benefits there are negative Wider Economic Impacts. The construction period will have a considerable impact on a substantial number of people along the line.

Both commuters and long distance rail passengers will be impacted by rebuilding Euston Station. There is no evidence that this cost has been included. 40m passengers use Euston each year (source: Network Rail). At an average salary of £50,000, and spending an extra 15min travelling, this at an annual cost of £280m for a period of 5 years, adds £1.4bn to the costs.

Road users will be similarly disrupted along the route. Not only will business people driving to work be delayed, but parents delivering children to school. None of these disbenefits have been accounted for. A recent study for Chiltern District Council showed losses due to delays, amounting to £120m during the construction period.

Recently HS2 Ltd admitted that the loss of 1350 jobs at Washwood Heath had not been brought into consideration. There is also the impact on the businesses employing these people. At average of £27,000 pa this equates to £36.5m in a year for salaries alone.

**Conclusion**

Above we have reviewed the major components of the BCR. In virtually every area HS2 Ltd has been optimistic in its assumptions.

- The benefits from improved access, reduction in crowding, reductions in waiting and reductions in walking have been overstated
- The valuation of time savings for travellers is grossly overstated, through ignoring that business people do not work on trains
- Capital costs are understated through omission of the cost of new generating plant required to power the railway.
- Using lower operating costs, but claiming the benefits of reducing crowding etc.
- Revenues are overstated due to an optimistic assessment of demand, failure to consider competition, and overstating the rate of increase in fares.

All of the above will lead to a reduction in the BCR to below 1.0 for Phase 1 and 1.1 for Phase 1&2.

**The alternatives to HS2**

There are two properly developed and costed alternative proposals to HS2.
1. The HighSpeedUK proposals developed by Colin Eiliff, a railway engineer
2. The optimised alternative from 51m

Both of these deliver at least the same capacity as HS2.

**HighSpeed UK**
This proposal is for a new high speed railway developed on a spine and spur principle, integrated into the existing railway. It follows the M1 as the spine. This substantially reduces the environmental impacts

This is in contrast to the HS2 proposal, which leaves local transport authorities to integrate local transport with HS2. Further you will see it delivers High Speed Services to many Northern cities thus eliminating the further expenditure proposed by the Chancellor to build HS3. It claims to deliver

- 25% cost savings over HS2
- 40% time savings over the entire intercity network
- Minimised Environmental damage through aligning with Motorways
- A balanced national rail network.

The details can found here [http://www.highspeeduk.co.uk/home.html](http://www.highspeeduk.co.uk/home.html)

**Optimised Alternative from 51m**
51m is a group of 18 County and District Councils opposed to HS2.

Their proposal is to upgrade the existing railway both the West Coast Main Line (WCML) and the East Coast Main Line (ECML).

NetworkRail has conceded that it will deliver the same capacity as HS2

The proposal consists of three main elements
- Lengthening the trains from 9 carriages up to 12 carriages
- Conversion of at least one first class carriage to standard class. Debottlenecking the existing railway, mainly through grade separation of fast and slow lines

The advantages of this approach are
- it can be incremental, meaning that upgrades are made when demand indicates they are needed.
- It delivers increased speeds as line separation takes place, thus reducing travel time
- The cost is estimated at £8bn compared to £50bn for HS2, including train sets.

These notes help to explain the impact
Network Rail have recently increased a number of services to 11 carriages.

12 Carriage sets can run on all lines except to Liverpool, where the cost of extending platforms would be too expensive.

Currently there are 4 first class carriages per 9 carriage trains. However, cost controls, particularly by Government, have reduced the demand for first class travel. Conversion of one or two first class carriages substantially increases capacity.

The proposal can be reviewed on this link.
www.51m.co.uk/wp-content/uploads/2013/08/ch1.pdf

NB this report is slightly out of date, but illustrates the points highlighted by Sir Rod Eddington in his 2006 Transport Study for the Government, that it is better to invest in upgrading the existing system than investing in large projects with speculative benefits, as these are unlikely to yield high returns. (recommendation 12)
http://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/

September 2014
Q256 The Chairman: Mr O’Neill, thank you very much for joining us. I am sorry we are starting a few minutes late, but I hope you found the session with Sir David as interesting as we did. Can I just start off by reporting some evidence that we received from Emile Quinet, the French transport economist? He said that if you evaluate the economic benefit of the TGV, it largely accrues to Paris. It is the capital city that wins the day. Would you not have that concern: that it would suck more economic activity down to London? We have heard in the previous session that some have suggested that Birmingham will simply become a commuter city for London. If that is the case, it will be difficult to fulfil the ambition your growth commission has of stimulating growth within the Northern Hub.

Jim O’Neill: Can I just say quickly, before I answer the question specifically, that I am doing this with three things in my mind? First, most of my experience is as a macroeconomist. Secondly, I am also the chair of the City Growth Commission, which, if you are not aware, has now formally finished, but it lives on, given the topicality of many of the issues. Thirdly, in a probably much less relevant way than either of those two, I am somebody from Manchester who has been up and down from Manchester to London for more than 30 years. Yes, I would sympathise with that.

The Chairman: When you had your growth commission, did you consider the relative impact of HS2 on the north and on London?

Jim O’Neill: Before I accepted the role of chairing it, I inquired as to whether those that were proposing the commission had a view as to the importance of HS2 to our commission. The answer was, “Why is that so important?”. I said, “Well, I predict it will probably be the
first question I get asked when I have a press conference. For that reason, we probably, if possible, should have a stance”. Listening to some of what you discussed earlier, knowing that a number of northern cities were in favour, it was not entirely clear to me—and this is why I said the three things earlier—why, especially from a macroeconomic perspective, it was so clearly beneficial.

When we got into the work of the City Growth Commission, it certainly seemed to me that if you are going to spend what is 2.5% of current GDP, it might not be the most efficient thing to do, certainly not in terms of the purpose of the City Growth Commission, which looked and lives on to look at things to try to promote stronger urban growth outside of London—not at London’s expense, I quickly add. It did not and it still does not strike me as being clearly that beneficial.

The Chairman: We have had quite widely divergent opinions from economists who have been witnesses, but we have much more of a consensus on local connectivity—the agglomeration effect, if you like—which London benefits from enormously, appearing to be a very strong driver of economic growth.

Jim O’Neill: Relatively early on in our process, we went around the country having hearings, and at the one we had in Manchester I was shocked—I had and still have a lot of ignorance about many of these issues around the country—to hear how they are still debating electrification of some of the lines between northern cities. That really solidified in my mind that if we were trying to pursue interventions that may have some influence on these hugely powerful trends that have gone on for decades of London strength relative to elsewhere, we had to think about pretty bold things. It seemed obvious to me that, when you have what I have weirdly ended up describing as ManShefLeedsPool and all those urban areas within that area, a population similar to the size of London, an absolute minimum thing is to connect them all in a vastly better way than they are today or in a way that was even being thought about until we suggested it.

Q257 Baroness Blackstone: I just want to ask you a question in relation to your position as a macroeconomist. Given the fiscal constraints at present, do you think, as a macroeconomist, it makes sense to spend £50 billion on this project? If you do not, could you tell us why you think the Treasury has agreed to put this sort of money aside for it?

Jim O’Neill: Oh dear. As I said earlier, 18 months ago, just ahead of the City Growth Commission starting, it did not seem to me from a risk management perspective, at a time of preserving our credit rating and effectively undertaking that sort of fiscal stimulus on the official balance sheet, that it was that wise. In terms of the clear macroeconomic benefits, I thought it was questionable.

Baroness Blackstone: Do you still think that? Do you still question the wisdom of this investment from that point of view?

Jim O’Neill: Now, this links with a question that was asked earlier. With the very enjoyable experience that I had of chairing the City Growth Commission, I think that if one were going to have the luxury—sorry, let me give you two answers. As one of the very experienced local authority experts said in our debate about this when I raised this subsequently, the reality is that once there is some vague coalition of national leadership about some big project, why waste time trying to pull it apart, because it is not obvious that you would get something else as an alternative. That sounded like quite an interesting view from somebody who has probably spent a lot of time on some of these kinds of issues, and I emphasise that I have not. It still seems to me to be a large amount of money, and certainly
with my cities growth hat on—I was always working on £42 billion, but I have heard you all say £50 billion now—

**The Chairman:** That was in 2010 prices.

**Jim O’Neill:** I said to the Core Cities Group that if you divvied up £42 billion between what was seven at the time—that has now expanded as a group, of course—you could probably find greater mutual economic benefit from that. Of course, from a macroeconomic perspective, since then one of the most intriguing things, despite the economy cyclically recovering so well, is that the fiscal position has not because of the uncertainties about an apparent decline of the tax base, so the issues would be even stronger.

**Baroness Blackstone:** Is it not a bit of a cop-out to say that there are no other alternatives that might be better projects to spend this money on, as you were implying just now?

**Jim O’Neill:** Why is it a cop-out?

**Baroness Blackstone:** Because clearly if you give enough consideration to it, there are alternative infrastructure projects to HS2.

**Jim O’Neill:** Take the Northern Hub. I do not know the latest estimates, but from the numbers that I have seen coming from the group that has put that together, it is much less. In terms of influencing the growth trend of the UK, if you had to choose between the two, it would be better.

**Q258 Baroness Wheatcroft:** Were you intrigued, as I was, to hear Sir David talk about the fact that London was very good at lobbying, and maybe the north should make its voice better heard? I thought it was a strange thing to say, particularly as he then referred to national infrastructure and to east-west as some sort of add-on that was not part of national infrastructure. Do you think that what he was implying, really—that everything that goes on in this country is London-centric, including the thinking—is at fault, and conjures the view that national infrastructure has to be about London?

**Jim O’Neill:** I chuckled quite a bit when I heard that question and some of the answers. I will say a perhaps slightly odd-sounding thing to start with. One of the interesting things that we found, going through the commission, is that trying to encourage many local authorities to be more ambitious and to think outside of their comfort zone was one of the really enjoyable aspects of it. For other reasons or things that we have been involved in, I think we are actually going through that process. It has become so popular to say that I think it is justifiable. The Greater Manchester thinkers about these things are quite bold. I would imagine that some people involved in London councils would question whether, while decisions might be being made in London, they are necessarily benefiting London more than the regions. I do not know.

From my experience, it may reflect my home bias, but I think that the local authorities that are the most bold and that articulate the case the strongest, as we have seen in the past six to nine months with the Chancellor’s response, get an ear.

**Baroness Wheatcroft:** You very much made the case for the Northern Hub and connecting those cities. Do you think that as part of the localism agenda and maybe delivering that that municipal bonds might be something we should be looking at?
Jim O'Neill: Definitely. It did not get as much attention from our proposals as I thought it might, and it was in my mind straight from the start that that would appear to be a logical idea to pursue.

Baroness Blackstone: Have you had any response from Government about that?

Jim O'Neill: Less interest in that than some of our other ones. When there has been discussion, it has been due to concerns about the credit rating, which is intriguing, given the earlier question.

Q259 Lord May of Oxford: I have an implausibly extreme suggestion to put to you, which will probably amuse you, I do not know.

Jim O'Neill: That sounds exciting.

Lord May of Oxford: We have just had, as you know, I think quite a good session. Nonetheless, the more I have learnt about HS2, the more I feel that—this bloke we just had was not an example—many of the people involved in it I would not trust to mow my lawn, much less build a big thing like HS2. I am rather taken with your report, where you say you first worried about the thing being all concentrated on this and that your focus was really more on the second phase and thinking broadly about connectivity between the major northern cities, via faster train things, as being a much more useful thing to do. I find that a very persuasive argument.

If I were the supreme dictator and in charge of all this, I would be connecting up all the cities there first and letting them get down to London however they wished to. I would have turned the whole thing upside down. I wondered what you thought of the probability of that happening, because unfortunately I am not. I would be a much better supreme dictator than the current Government.

Jim O'Neill: I have two comments. I think I heard David Higgins say that his guess is that you could not get legislation through until 2021. I have no knowledge of the British legislative process, but that was extremely worrying and disturbing to hear, in my opinion.

I should add, as an important thing, that a number of northern cities get quite irritated with me when I say, with the clarity that I hope I just had a minute ago, that doing things, connecting all these places together, is in my judgment way more important than them to London faster than it is today. They get quite annoyed with me, because they want both. Maybe they think they are not going to pay for it either. In my judgment, if the purpose is to think about helping those urban areas to grow more, and if it is done just in its own right or to balance the contribution to national GDP, it would be great if it was done the other way round, in my view. A lot of people get very annoyed with me saying that.

Lord Monks: On the point that was raised by Baroness Wheatcroft about bonds, which was in your report, you mentioned that the Government have not nibbled a little bit at that idea. What about the northern cities themselves? Is that something that they are pressing hard for? Are they looking to re-establish the old days of municipal bonds, which my mother and father and others used to invest in, and so on?

Jim O'Neill: I would say that it is something they are supportive of and in favour of—not banging the table about, for reasons I am not entirely sure about, but certainly in support of and would welcome.

Lord Monks: But not banging the table, not putting it up as their priority.
Jim O'Neill: What has, of course, become the thematic concept of our time is this so-called earn-back model, which is quite complex in some parts, so much so that I am still not entirely sure I fully understand that much of it, but it is where they get some grant or relief now for more autonomy over expenditure that they pay back later. There are two things. With that, the whole notion of a combined authority has become so popular that many local areas are wanting to become combined authorities, because they know that is the only way of getting an ear.

It might well be that the focus on municipal bonds as a realistic thing to do has been lost in the practical reality that this is the theme of the moment. It is a little surprising to me that there was not more banging of the table about that.

Q260 Lord Monks: My other question is about this north-south versus east-west debate that we have been having. How would you react to this question? The overwhelming economic logic is that London and the south-east of England are the growth part of the country, which, with sinews, can spread out and spread its influence, particularly, perhaps, as far as Birmingham, and that the northern connections are between places that, frankly, are not very successful. They have limited ambitions, which I think I heard you say at some stage in the past was the case; I do not think it is the case so much now. They had a lousy 20th century, with the collapse of their staple industries, and only got going in the 1990s, I would say.

What are the economics of spending a lot of money connecting cities that, on their own, need a big subsidy from the south-east of England? As you see in existing stations, the smart train is the one going to London. That is the long one, the one with 12 carriages, is it not? The others—

Jim O'Neill: They probably have two on.

Lord Monks: They have two on, going to Leeds, and are not always full. It would be very nice to see what Lord Lawson calls a northern Crossrail, but the economics of it are perhaps even shakier than they are of HS2.

Jim O'Neill: Let me say three things in response to that, perhaps sounding initially not necessarily connected. The first and most important thing, going back to the mindset of myself as the chair of the City Growth Commission, is that I acknowledged at the outset that there are very powerful forces, which have been going on for a long time, that are very beneficial to London, and in some cases at the expense of other urban centres. I often describe London, as some of you are aware, as being the BRIC capital of the world. I think this is a remarkably fantastic time for London’s role in the world, as the world’s best located major city, and it is very difficult and it may not be very wise to try to stop those things, because it is great for London and it probably spreads out help for the nation.

The second thing is that, with that in mind therefore, if you are tasked with looking at things to help other urban areas, you have to think a bit if not necessarily unconventionally then certainly boldly and a bit out of the box. Connecting the two together, among the many reasons why London is doing so well is, of course, the sheer agglomeration benefits that come from virtuous circles of transport, young people, ideas. The thing that slightly started me on this path, reflecting my background, is that on occasional visits to Manchester to give talks about various matters over the years I have noticed that there were more people from Liverpool in the audience, where in the early days there would not, so there is some sort of thing developing between these places in a way that 20 years ago would not.
I might be incorrect, so apologies if this is the case, but I am conscious of something that I think I heard Mr Higgins say. Unfortunately, we got this data after we had finished our final report. There is quite a rise in commuting going on between Manchester, Leeds, Sheffield and Liverpool, in particular going into Manchester and Leeds from both those cities, but especially from Leeds and Sheffield. Those things are going on already. In my judgment, influenced by my history in markets and finance, the best interventions are when the trend has turned or is turning, so you have some things going on there that in the past, with the challenges you describe, were not. If it were not for feeling things like that, I would have been more reluctant to support such ideas, for the reasons your question said, but it seems to me, if you can explore non-too-expensive ways of trying to boost connectivity between those very closely geographic urban centres, you can probably get some agglomeration benefits that otherwise you cannot.

Lord May of Oxford: It is worth remarking that there are some excellent universities there—

Jim O’Neill: A just as important part of our recommendations as the transport thing was this—

Q261 Lord Griffiths of Fforestfach: I wonder if you can comment on something that has come up in the evidence we received. On the one hand, people have come and said, especially from Government so on, “We have done cost-benefit analysis. Cost-benefit analysis says that this is a positive return”. When you go back to exactly what the cost-benefit was, a lot of it was about how much travel time was saved and so on, and you begin to feel that if we are really talking about the growth of the north and so on it gets a little flimsy. However, they are saying, “We follow the best methodology we can”. Then there are other people who, when questioned, although they would not start saying this, in the end you have to conclude are really saying that it is a punt—that frankly cost-benefit can take you so far. Cost-benefit is great when you have a discrete project over a short period of time, like any private investment proposal, but when you are talking about 60 years and, as we heard earlier today, a national transport strategy within which you should be fitting anything, this is not something, in my judgment, that cost-benefit analysis was ever really intended to solve. Let me just say there is a strain of thought that says, “Frankly, this is really a punt”, and if you are relying on the economic case to do it, it is quite hard to really say this is a cast iron economic case. What is your response to that?

Jim O’Neill: I am going to do the dreadful economist thing and answer you in a different way. When we looked at ideas for the City Growth Commission that we would end up formally recommending in our final report, our premise was: could it improve the long-term growth potential of the UK economy? We were not looking at any of the individual cities. We defined 15 metro areas outside of London, but we wanted to do it in the context of: whatever cost or money might be spent, would it boost the long-term growth rate? In fact, we ended up suggesting that if things could be done to have all these 15 areas growing at the rate that London had grown, the UK’s national growth trend could be increased by 0.2%, up to 2030. That still seems to be the right framework. That would be the way that I would look at something like that. You would want to look at the whole rationale behind HS2, if I had been involved in it—and let me reiterate that I have never really looked at HS2 itself at all, other than in the context of the reasons I gave—in that context. I would say in that regard that we spent some time on this, as we did in our discussions with policymakers, including the Treasury, and luckily there are now some signs of flexibility or shift on that, because of the very powerful focus on it from the Chancellor, in my view. So much analysis
is done on: “It is going to cost X. That means that is going to come from somewhere else”, and there is not really any focus on any supply-side benefits that might come, which is why we were deliberately eager to pursue it that way. But I would not have approached HS2 with a standard cost-benefit analysis, full stop.

Lord Lawson of Blaby: I think the way you have just spoken about it really is totally fanciful.

Jim O’Neill: Some might say economics is totally fanciful.

Lord Lawson of Blaby: Well, economics is dodgy, but we do not have time to go into a critique of macroeconomics. We can do that some other time maybe, in some other forum. But regarding the idea of thinking the cities of the north grow at the same rate as London, it is fine to say the cities of the north have not fulfilled their potential. Maybe there are ways in which transport can help there. In particular, I would have thought—incidentally, you have not mentioned these—there are the freight links along the north, with the importance of the ports, of Liverpool in the west and Hull in the east, and getting goods to the ports. But the fact is that this is chalk and cheese. The cities of the north are British cities. London is not a British city. London is a global city located in Britain. If global growth is likely to be greater than UK growth, it stands to reason that it is more likely than not that London will grow faster than the north. Whatever you do with railway trains is not going to change that. It is a fundamental factor of the nature of London. As I say, it is not really a British city at all. Is it not really completely fanciful to put it in the terms in which you have put it?

Jim O’Neill: I agree with everything you have said, apart from that last phrase. As I said earlier, I think of London as being the BRIC capital of the world, and it is a fantastic time for London’s position in the world. However, does that mean one should not do anything to try to influence the future of non-London urban growth?

Lord Lawson of Blaby: No. I said explicitly that we should think of what can be done to improve the efficiency and effectiveness of the great northern urban centres, but you said that if the north could grow as fast as London, why should it not, and somehow what you were about was designed to achieve that. What I am saying is there is a fundamental reason why that comparison is false.

Jim O’Neill: I am conscious of you guys having homes to go to and things to do, but I am happy to pursue anything you want to in this regard. Let me say three things about that. First of all, there is a difference between size and rates of growth. We did not just look at the north. People often think that we looked at the north, because the Chancellor took up a lot of our ideas and is running with them for the north, and it has obviously become a focal point. But we identified the 15 largest populated metro areas outside of London, which included Glasgow, Edinburgh, Belfast and the other 12. Bristol is a very interesting place, where we had one of our hearings. Bristol has a higher GDP per capita and gross value added, as it is described, than the average of the UK. It is a very successful city. In the past couple of years, some of these places have grown by more than London. It does not necessarily follow, just because London is in this great position of benefiting from the world, which I agree with, that it is necessarily always going to grow by more than all these other places, not least because it does not.

Secondly, very importantly, transport, the east-west and what has now become One North, was one of our important recommended interventions, but it certainly was not the only one. Just as important, in my opinion, is thinking about the knowledge base coming out of the northern universities. The other thing that has followed from the interest in them is
what people call the northern answer to the Crick. It is the idea of this collaborative research institute, which is going to be Manchester-based again. That is just as important, in my judgment, as the transport links. Devolving the whole skills responsibility is especially important, and of all the things that people focus on in devolution, that one in our judgment was the most easy to recommend devolving away from Whitehall. There is also a whole host of other things, so it certainly was not just about transport, but transport would be an important part of it.

Q262 Lord Carrington of Fulham: I found Sir David Higgins’ evidence very interesting, but one of the things I found most interesting in it was his throwaway line that he was moving HS2 up to Birmingham. There may be other reasons, but the only reason he gave was, of course, that the property prices in Birmingham were half the value that they were in King’s Cross, which told me that what he was really doing was not tapping into a skill base in Birmingham that did not exist in London but going for a cheaper cost base in Birmingham—in other words connecting Birmingham into the greater economic area of London. It did seem to me that that rather jibed with what we have been hearing about the potential impact of HS2—that effectively, as some people say, it will bring Birmingham into the commuter belt of London, but it is much bigger than that. It brings it into the economic sphere of London, and as presumably it comes to Manchester and Leeds, and you get an hour’s travel time from Manchester to London, as we were hearing, which I must say is a rather shorter commuter time than I thought it was going to be—

Jim O’Neill: I thought it was one hour and 20 minutes from Manchester.

Lord Carrington of Fulham: I thought it was nearer one and a half. Nevertheless, it makes travelling from Manchester to London commutable, and so it effectively will bring all these cities into the whole nexus of the London economic area, and, as we were hearing, the global area. Is that how you would see it working? It seems to me that we are not then creating two economies in the UK; we are potentially creating one economy but based on the London model covering the whole country.

Jim O’Neill: Again, I may have three possibly unconnected responses. I said at the start that I was answering your questions with three experiences, one of which was as somebody who has travelled from Manchester to London and back for more than 30 years, and today two hours 15 seems like the world’s greatest travel compared with what it used to take 30 years ago.

Lord Carrington of Fulham: Absolutely. I remember it well.

Jim O’Neill: It is not entirely obviously to me that reducing that time has done a lot for Manchester. Obviously, it is a lot easier for people to get here than it used to be.

Secondly, and there may be some connection, that is great for those who have education and the capability to participate in that part of life, but one of the reasons why issues like skills are so important, and that part of the City Growth Commission, is what about all those that cannot? Indeed, if you look at some of the things going on in inner Manchester and Leeds right now—I would highlight those two from my limited knowledge as perhaps two of the most successful in the north—there are some positive things going on there that benefit again those who have the right education, the right skill set, but of course there are severely challenged inner urban areas where there is no benefit at all, and they are not going to get any benefit whatsoever from any of these things. It was interesting to hear the unfortunately very brief discussion about the price; one would imagine it is going to be some
kind of premium price, and the potential beneficiaries of that would be quite narrow, in terms of the broader macroeconomic benefit.

Thirdly, I am aware of an economist that works in a macro hedge fund who coincidentally, when we launched the commission, had this very interesting report—I am not quite sure why he was writing about cities—arguing that over the long term HS2 would be a key towards equalising UK house prices. Now, if one could believe that, that would be fantastic; one would think that would be a really powerful consequence.

**Lord Carrington of Fulham:** What I am getting out of a lot of the evidence we have heard, and I value your view on it, is that this is one of those projects where nobody knows what it would do—that nobody really has any idea what effect putting in this high-speed train will have. It is rather like throwing a stone into the middle of the pond. Nobody knows where the ripples are going to go and what impact it is going to have on the banks or anything. It is just: “Put the money in, put the thing in, because spending that amount of money on something like that to produce some good, has it not? Keep your fingers crossed, tuck your trotters up, and trust to luck”.

**Jim O’Neill:** I am not sure how to respond to that. Part of me thinks that maybe we do need a bit more ambition about some of the things we do in this country. Yes, I am very sympathetic to all of that, but to change the supply side of the country, maybe we need bolder things. Whether this one is the right one, as I have made clear, I do not think so.

**Lord Shipley:** I just wanted to pursue the question of the development impact of private sector investment, which it has been said to us will follow where the new track is. There is another school of thought that says that, actually, to have the rolling stock on existing lines can be significant in encouraging people to invest where there is not a new track. Did you do any work at all on the impact of HS2, with its new track, on places like Teesside, Newcastle and the North East, where I come from, Carlisle, Preston, Liverpool and Hull? Much of the discussion taking place around HS2 is talking about Manchester, Sheffield, Leeds and, to a degree, Liverpool, but there are a lot of people living in those other areas.

**Jim O’Neill:** No, we did not. As I said, we did not look at HS2 specifically itself, but its proposal and existence contributed to us thinking about other transport improvements. One thing I meant to say, as we heard from a gathering we had at the Conservative Party conference in Birmingham, is something called Midlands Connect would strike me as quite interesting as well, inasmuch as there is so much focus on One North. We did not look at that; we did not look at HS2 directly in that sense. There is one quick thing to add: I am more than aware of that from a number of smaller cities, including some that you mentioned, that chased me around the country and berated me for not thinking about them in our selection of the 15 largest metro areas—some of them rather well.

**The Chairman:** Thank you very much indeed for joining us, and it was a very interesting perspective on the work that your commission has done, which certainly has quite a lot of bearing on some of the issues that we are going to be reporting upon. Thank you very much.

**Jim O’Neill:** Thank you very much.
Connected Cities—Written evidence

1. Background to Connected Cities

Connected Cities is a coalition of local authorities and businesses based in the Northern regions and the Midlands. It is campaigning for the speedy delivery of High Speed Rail 2 (HS2), which has the potential to transform passenger and freight connectivity across the UK. In so doing it would enable these city regions to realise their immense economic potential, provide a strong and complimentary offer to London and the South East and significantly increase the economic performance of the country as a whole.

The principal cities involved in Connected Cities are as follows:

- Leeds City Council
- Liverpool City Council
- Manchester City Council
- Nottingham City Council
- Sheffield City Council
- City of York Council

With additional participation from:

- Bradford City Council
- Derby City Council
- Hull City Council
- Newcastle City Council

The Connected Cities website provides further information on the group’s activity and can be found here: [http://www.onevoiceforhs2.co.uk/index.html](http://www.onevoiceforhs2.co.uk/index.html)

2. Summary

The following submission provides an overview of the significant economic benefits that HS2 will provide for the UK, by unlocking the untapped economic potential within the regional economies of the Midlands and North. Specifically, the submission advances the following arguments:

- Investment in transport infrastructure is vital for improving connectivity and capacity of both existing and new networks particularly between London, the Midlands and the North of England. This in turn enables significant additional economic activity to be generated both regionally and nationally;

- HS2 is the single most important project capable of meeting this need and acting as a catalyst for additional growth;

- Both legs of Phase 2 must be delivered simultaneously to secure the full economic benefit of the project;
To maximise our international competitiveness the UK must apply a long-term perspective to transport infrastructure investment;

There is a strong correlation between the levels of economic performance and transport investment in London and the South East. Investment into HS2 will confer similar economic benefits to the Midlands and North of England;

Studies show that HS2 could create 60,000 new jobs in the Midlands and North, many of which will be highly skilled;

A new high speed line will serve as a catalyst for significant regeneration in the UK’s city regions;

HS2 will facilitate the creation of expanded economic sectors by better connecting cities and regions with a shared and complementary expertise and economic profile;

HS2, allied to innovative thinking around future investment decisions such as East-to-West rail infrastructure improvements to enhance the current poor rail links between Northern cities, will have agglomeration effects in terms of the economic benefits enjoyed.

3. Transport infrastructure investment is a key driver of regional and national economic growth

History shows that countries that are the most connected, regionally, nationally and internationally are the ones that economically achieve the most. Here in the UK the level of transport investment in London and the South East has consistently helped to underpin the significant economic performance of that part of the country. Similarly, investment in HS2 will provide the potential for major growth across the Midlands and the North of England thereby enhancing the economic performance of not just the regions outside of London, but the UK as a whole.

Data from the Office of National Statistics (ONS) shows that over the last 10 years, the North’s share of economic output has fallen by more than 5 per cent. In part, this is driven by poorer connectivity in the Midlands and North due to sub-optimal transport infrastructure across these areas. Such reductions in performance need to be reversed in order for these regions to play a stronger role in driving the national economy. Indeed the August 2014 One North report states that enhancing connectivity between the North’s city regions and to international gateways and to London needs to be an integral part of any strategy to accelerate economic growth.\(^{117}\)

Public spending per head on transport is £5,426 in London, but only £389 per head in the West Midlands, £1,248 in the North West and £223 in the North East.\(^{118}\) Transport investment in areas outside of London need not be at the expense of the capital as studies show the huge economic boost provided by such projects mean significant additional value will be captured by the exchequer. In the case of HS2 a 2013 KPMG report showed that the

\(^{117}\) One North: A proposition for an Interconnected North; July 2014
majority of the benefits resulting from the project will be realised by the UK’s regional cities, with HS2 providing a £7.8bn boost to city economies outside of the capital.\footnote{2013 KPMG report: HS2 Regional Economic Impacts: \url{http://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Market%20Sector/Building%20and%20Construction/hs2-regional-economic-impact-1.pdf}}

It also argued that HS2 could deliver a boost of £15bn to the UK economy as a whole, with the project set to generate over 120,000 jobs, many of which highly skilled\footnote{ibid}.

With the visitor economy a strong area of growth – representing 9.0% of UK GDP in 2013, rising to 9.9% in 2025\footnote{Tourism: Jobs and growth, the economic contribution of the tourism economy in the UK. Deloitte & Oxford Economics 2013} – the role of HS2 in dispersing visitors and their spend across the country represents an important step in rebalancing the economy.

When broken down into the regions the economic potential of HS2 remains compelling. It is calculated that HS2 will deliver £4.2bn of economic benefit along the eastern section of the route alone.\footnote{Eastern Network Partnership, Arup, June 2011} Individual figures for the city regions show annual increases of economic value resulting from HS2 by 2037 of £0.9bn for Sheffield City Region, £1bn for Leeds City Region and £2.2bn for East Midlands Hub.\footnote{HS2: Driving Forward Growth in the Leeds City Region.} Bringing HS2 to the Liverpool City Region delivers economic benefits of £527m GVA per annum to the UK economy\footnote{Network Rail 2013} (plus a £29m per annum increase in business rates and £179m increase in land values); or rising to at least £8.3bn GVA (60 year NPV) if served by a direct high-speed line.

4. Long term perspective on future connectivity and capacity needs

The UK must apply a long term perspective to decisions over investment in its transport infrastructure. Crucially, it must ensure that transport infrastructure is capable of keeping pace with predicted population growth and increased travel demand. This is particularly the case in relation to rail, which should be viewed as a preferred mode of transport for policymakers, given its low emission profile compared to the automotive and aviation industries. Currently, parts of the rail network are at saturation point, with rail passenger journeys having grown 50% over the last decade.\footnote{Network Rail 2013}

The DfT has estimated that the number of rail trips over 100 miles will grow by 95% by 2043, putting further additional pressure on the existing network\footnote{HS2: Analysis of long distance travel \url{http://assets.hs2.org.uk/sites/default/files/inserts/Demand%20for%20Long%20Distance%20Travel.pdf}}. Network Rail forecasts that the West Coast Mainline, already Europe’s busiest mixed use rail line, will be at capacity...
Connected Cities—Written evidence

by the mid-2020s\textsuperscript{127}. Demand for rail freight is also growing significantly, with the Rail Freight Group reporting that rail freight has grown 56\% in the last eight years\textsuperscript{128}.

As an example of the future growth to be expected, the new Liverpool2 container terminal will see the port’s container throughput rise from 700,000 TEUs per annum to 3m TEUs by 2030. This will help rebalance the economy and move traffic from the Southeast’s crowded infrastructure – 90\% of deep sea cargo enters the UK via the southern ports, whilst 50\% of the market is from Birmingham northwards\textsuperscript{129} . For this growth to happen, the released capacity offered by HS2, including looking at capacity issues north of Crewe, is an important element.

It is clear that additional capacity must be provided to the existing rail network if connectivity is to be maintained and improved. Proposed alternatives, such as upgrading the existing West Coast Mainline, would not add sufficient capacity and would lead to significant disruption and cost. The 2010 High Speed Rail Command Paper from the DfT shows that to achieve half of the capacity benefits of HS2 by alternative means would require major upgrades to Euston, Paddington, Birmingham Moor Street and Manchester Piccadilly in addition to major track and infrastructure works on the Chiltern and West Coast Mainline. The Paper concluded that, despite delivering inferior capacity benefits, this would lead to years of disruption and would in total ‘cost more than a new high speed line\textsuperscript{130}’.

5. Only HS2 meets the capacity need

HS2 is the only project capable of significantly increasing transport connectivity and adding much needed capacity to the UK rail network. By connecting 8 out of the 10 major cities in the UK with a high speed network and releasing significant amounts of capacity on the conventional network, HS2 will open up a vast number of new paths on the existing network. This would have the great benefit of freeing up the local network in Yorkshire as well as creating capacity for speeded up long distance services such as those between Newcastle, Leeds, Sheffield and Birmingham.\textsuperscript{131}

The Yorkshire Rail Network Study states ‘HS2 will release capacity ( on the existing network ) for new services, and this creates the opportunity to provide places such as Bradford with a much better, hourly fast connection with London for example’.\textsuperscript{132} Likewise a study by the Sheffield City Region notes that HS2 affords the ability to modify existing services on the existing network that will confer benefits to the travelling public and freight firms alike.\textsuperscript{133}

\textsuperscript{127} Network Rail estimate: High Speed Rail development: \url{http://www.networkrail.co.uk/improvements/high-speed-rail/}
\textsuperscript{128} Centro, Centro Evidence for All-Party Parliamentary Group for High-speed Rail, written evidence submission to APPG HS2 Rail Capacity Inquiry, 13th March 2012, cited in 2012 APPG for High Speed Rail report into Britain’s Rail Capacity: \url{http://www.appghsr.co.uk/upload/APPG%20for%20High-Speed%20Rail%20Capacity%20Inquiry%20Report.pdf}.
\textsuperscript{129} Superport: Global Freight and Logistics Hub: \url{http://www.liverpoollep.org/pdf/SUPERPORTlowres.pdf}
\textsuperscript{131} One North: A proposition for an interconnected North, July 2014
\textsuperscript{132} Yorkshire Rail Network Study, March 2012 – Metro, SYPTE and Leeds City Region.
\textsuperscript{133} HS2 Timetable Options Study, Steer Davies Gleave, July 2013
6. **Realising the full potential of HS2**

In order to reap the full benefits of HS2, Phase 2 must be completed as quickly as possible, given the considerable benefits that the second phase of the scheme yields. In delivering Phase 2, it is essential that both the west and east prong of the project are built simultaneously in order to ensure that no region on the proposed route is disadvantaged by its delivery. Indeed the One North report states ‘early delivery of HS2 would accelerate the economic stimulus it will bring to the North. Additionally there would be advantages in building the section of the route linking Leeds and Sheffield early’. The Higgins review has already recognised that the economic benefits of HS2 would spread north sooner, if construction were extended to Crewe by 2027, six years earlier than planned.

Careful consideration needs to be given regarding the use of capacity released by HS2 in order to maximise economic benefits, both in terms of increased connectivity for passenger networks and in enabling increased rail freight. Research has identified that the economic benefits from mode shift of road to rail could be up to £2m per return path per annum. Consideration also needs to be given to HS2’s interface with the conventional network – where, for example, a direct rail connection between HS2 and the Midland Main Line would ensure high quality integration with the existing rail network. This would allow classic compatible services to come off the high speed line and serve Nottingham City Centre. Including such connections will increase the utilisation of the Eastern leg of HS2. In particular it will open up the opportunity for much faster connections between Nottingham City Centre to Birmingham and beyond using the high speed line where journey times are currently extremely slow.

However on the stretch of the West Coast between Crewe and Liverpool, the current HS2 proposals will not release any capacity for the expanding freight market and the city region is thus campaigning for a direct link.

7. **Regeneration and reinvigoration of city regions**

HS2 will drive significant regeneration in the UK’s city regions. Indeed it has already galvanised cities into producing exciting plans for major redevelopment opportunities in and around the HS2 station hubs. Delivering HS2 is seen by the cities as a catalyst for regeneration, not simply a means to shorten journey times. All city regions have plans ready for HS2. By way of example, in Manchester plans allied to the proposed HS2 station show a development the size of 200 football pitches are already developed, and the significant regeneration opportunities in areas such as the Southbank in Leeds are clearly recognised.

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134 One North: A proposition for an Interconnected North, July 2014
136 Economics Study: HS2 and the Liverpool City Region, SDG, July 2014
137 East Midlands Councils, HS2 Direct Connections Study Outline Business Case, 18 December 2013
138 One North: A proposition for an Interconnected North, July 2014
139 Manchester Council: HS2 Piccadilly Strategic Framework
It is vital that the recommendation made by the HS2 Growth Taskforce to create an HS2 regeneration and development company is pursued by the government in order to ensure that regeneration opportunities are maximised.

8. Jobs and skills

HS2 will also provide a much needed boost to the availability and accessibility of jobs in the UK’s regions. The unemployment rate in the North East, West Midlands and Yorkshire & Humberside is 10.3%, 8.1% and 8.4% respectively, well above the national average of 7.1% and the 5.3% figure for the South East. HS2 provides one of the greatest opportunities to tackle this issue. The project will support 60,000 new jobs in the Midlands and North of which 5400 station supported jobs come from Meadowhall in Sheffield and 1,600 jobs at the East Midlands Hub.140

A study looking specifically at the Liverpool City Region, with an unemployment rate currently of 9.9%141, identifies an increase in jobs of at least 13,600 from the scheme142, including jobs generated from redevelopment, from agglomeration and from increased tourism visits. If the Liverpool City Region were to gain a direct link, there would be the potential for over 26,000 jobs generated by HS2.

More widely HS2 will also generate 25,000 highly skilled jobs involved in maintaining the line and £25bn worth of contracts, delivering wealth creation across the UK143.

9. Increasing sectoral growth

The economies of the Midlands and the North were built upon strong and specific areas of specialism. Today these areas still exhibit defined specialisms but the aggregate benefit of these are not maximised due to connectivity issues. The greater connectivity that HS2 will deliver has the potential to drive significant development of key industries outside of London, such as medical devices in the north Yorkshire area, the creative economy in Manchester and Salford, the financial sector in Leeds and avail further still of the logistics, knowledge economy and low carbon opportunities offered in Liverpool.

A recent report from Policy Exchange, entitled Silicon Cities, stated that the limited connectivity between the UK’s regional city hubs – with speeds averaging just 46mph between Manchester, Newcastle and Liverpool, in comparison to 77.6mph between Sheffield and London, limits the growth of core industry clusters outside of London. As such, the report makes ‘investing in rail and road infrastructure to better connect northern towns and cities’ one of its key recommendations144. It adds that HS3 should be considered in order to improve this connectivity and drive the development of these economic clusters145. Interestingly the scope for additional value to be generated over and above the

140 HS2: Driving Forward Growth in the Leeds City Region
141 Annual Population Survey April 2013-March 2014, ONS.
142 Economics Study: HS2 and the Liverpool City Region, SDG, July 2014
145 ibid
immediate benefits of HS2 is wide with figures ranging for the Sheffield City Region from a minimum of £300m to £800m of economic value to the area.\textsuperscript{146}

10. East-to-West rail infrastructure

As evidenced above, HS2 will provide a huge economic boost to the UK, particularly the Midlands and North. However both Sir David Higgins HS2 Report and Lord Deighton’s HS2 Growth Task Force Report were clear that significant as HS2 will be, maximum growth will only come if HS2 is seen as part of a wider programme of investment in regional transport infrastructure. Greater East-West connectivity is, for example, essential. Presently only 0.5% of the population of Leeds travels to Manchester and vice-versa.\textsuperscript{147} Bringing the economic hubs of Manchester and Leeds 20 minutes closer to each other would deliver benefits of £6.7bn to the whole of the North of England, with £2.7bn worth of benefits to Manchester and Leeds alone\textsuperscript{148}.

At present, East-West rail journeys in the North take around twice as long as equivalent journeys in the South\textsuperscript{149}, significantly limiting connectivity and economic output. It is reassuring that the Government has committed to investing £70bn in all forms of transport by 2021, with HS2 accounting for £16bn of this\textsuperscript{150}. It is essential that a significant proportion of this spending is focused on Midlands and Northern regions which are in need of improved transport infrastructure.

\textit{September 2014}

\begin{footnotesize}
\begin{enumerate}
\item[146] Sheffield City Region LEP; High Speed 2 Rail Phase 2 Consultation
\item[147] Cllr Keith Wakefield, Leader of Leeds City Council: Will the North follow Scotland for greater power? Observer 31\textsuperscript{st} August 2014
\item[149] London to Reading is a 41 mile journey which currently takes 27 minutes, compared with a 50 minute journey between Manchester and Leeds, despite them being separated by a similar distance (44 miles).
\item[150] \url{https://www.gov.uk/government/policies/developing-a-new-high-speed-rail-network} - note from Gov 25 Nov 2013
\end{enumerate}
\end{footnotesize}
Appendix I – Changes to labour and business activity owing to HS2\textsuperscript{151}

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
City regions & Change in labour connectivity by rail & Change in business connectivity by rail \\
\hline
Derby-Nottingham & 14.7\% & 23.2\% \\
Greater Manchester & 1.4\% & 18.8\% \\
Greater London & 6.9\% & 8.8\% \\
South Yorkshire & 31.8\% & 22.5\% \\
West Midlands & 15.7\% & 22.1\% \\
West Yorkshire & 9.1\% & 19.7\% \\
Rest of Great Britain & 5.3\% & 12.3\% \\
\hline
\end{tabular}
\caption{Average change in connectivity by region in 2017 after investment in HS2}
\end{table}

Notes:
\begin{itemize}
\item[(a)] The estimates show the GDP-weighted improvement in rail connectivity for the model zones within the defined geographies (i.e. the zones comprising the city regions and the zones comprising the rest of Great Britain).
\item[(b)] The estimates are based on train timetable assumptions used in the August 2012 economic case for HS2.
\end{itemize}

Response to Lords HS2 Inquiry

Sent as an interested private individual not representing any organisation

- The Current Proposals In environmental and in more general terms, the balance of benefits and costs appears to not be optimal, basically due to the project trying to achieve two different aims. It would probably be better if these aims - capacity relief on the WCML, and very high-speed (VHS) - were addressed separately.

- Specific Alternatives  
  a) VHS services between London and Birmingham/Manchester/Leeds would probably not achieve a significant extra benefit. These provincial cities are already well within day-return range of London and have the “lions share” of the passenger market vis-a-vis aviation.  

However, costs, both environmental and financial, are high, particularly due to finding a viable route through the NW London suburbs and the Chiltern Hills. The whole route is planned to go through relatively highly populated/developed country.

I understand that a similar project in Belgium/Netherlands (FYRA) involving VHS on relatively short distances through relatively highly developed country has recently been abandoned.

In this country, it seems the only route that would have similar characteristics to most VHS lines abroad is one that links London more directly than with the current proposals to Tees/Tyne/Edinburgh/Glasgow, on an East Coast alignment (with “spin-off” benefits for centres in Yorkshire). The distances involved are such that substantial extra benefit would probably accrue, with new day-return opportunities to substantially alter the balance between rail/aviation (in turn bringing significant environmental benefit).

Such an East Coast alignment might involve upgrading some suitable existing sections, together with some new-build stretches as VHS cut-off/by-pass sections where appropriate. The per-mile costs (both financial and environmental) of this would, I think, be significantly less than for the current proposals.

As a footnote to the above, I was told by a retired senior ex-railway civil engineer that any attempt at building

a VHS line from the Manchester area to Glasgow/Edinburgh would be costly, due to the topography.

b) There may still be need for capacity enhancement on the WCML south of Rugby. If VHS on this line were not necessary, a prime candidate for achieving this more cheaply (both environmentally and financially) might be to bring the ex-Great Central formation back into use. At its northern end, a new stretch could be built, diverging south of Rugby, passing to its west, and joining the WCML south of Nuneaton.
At its southern end, there appear to be three ways to access Central London:

i) via the Metropolitan route to Marylebone; ii) via a rebuilt Ashenden-Grendon link to Paddington; iii) via a new-build link from just north of Aylesbury to Tring and thence to Euston.

A judicious distribution of usage between all three of these might ensure sufficient capacity.

Alternatively, the ex-GC line, as above, could be utilised as a dedicated freight route to the north, again having a “knock-on” capacity relief effect on the WCML.

Also, the current Chiltern Main Line between London and Birmingham via High Wycombe could be enhanced to further relieve WCML capacity.

- A more radical alternative suggested by a friend:-

Instead of capacity enhancement through a VHS line, a new dedicated "piggyback" gauge freight line might be more cost/effective, on a Channel Tunnel / Felixstowe - East London - Midlands - N W England (and perhaps beyond) alignment.

This could convey road semi-trailers and double - stack containers, bringing congestion relief to both West Coast Line and to the M20 / A12 / M1 / M6, etc.

November 2014
Is there an economic case for HS2?

Not currently. There has not been any substantiation of all those scopes of works and changes that are in the context of the project by HS2 and DFT or thorough review by the House of Commons Select Committees, only partial overviews. The process for voting on the HS2 bill was not a debate on all scopes and aspects of the Bill but on process. Not all scopes have been made visible or defined. There has been in and out changes for local politics and these have not consulted on or been converted into economic burdens, with those directly and specially impacted including the local authorities, Highways Agency, Municipal waste handling and disposal companies not involved.

The full costs and impacts are not accounted for as all public transport connections such as the Piccadilly Line over capacity condition, the increased personal road travel costs and delays for the M4, M40, A4, A40 and local roads, all tunnels and unmet needs for tunnelling, all links, all station are not known or included in the economic case.

The delivered costs of extensive land takes from farms and amenities over a decade as parts/areas of HS2 and associated works have to be added and the interfacing connections addressed. There is no model of these costs. Further extensive ground works with additional tunnelling and wide deep cuttings are required to prevent current impacts denying people of amenities and facilities as in the current HS2 alignments and proposals. These additions and not in the estimates and business case.

There is a case for modifying the UK rail networks and improving some short and long journeys but HS2 has not been evolved from the needs but from an narrower deficit in the WCML. This has led to inadequate considerations or the approach and the aims of the route and its rail services provided and number of tracks and stations required for the middle England region and particularly for West London to Banbury region.

The full scopes and implications of the HS2 project need to involve all the separate costs and impacts for Network Rail and for the East West Proposed route from Bicester to Bletchley and beyond. The changes to the Brentford to Southall current freight route will have signalling upgrade and rail to road waste cost increases to include for the route and for 6 London Boroughs and West London Waste Authority. The Princes Risborough to Calvert and East West freight and passenger route upgrades need to be assessed with the full contingent damage costs included and agreed with other Government Departments, National Audit Office and Councils.

There is the need to consider the later phases of work for Heathrow Airport rail (spur(s) and/or loop and the additional infrastructures for the logistics of import and export from several sites of materials including large earth removing and moving.
The basis of route alignment was not undertaken on comparison of costs for each route option and the route options were not each optimised. Route 3 phase 1 has not been optimised for a Chiltern full length tunnel as there are shorter and better alignments from Ruislip to Tring and Buckingham than by Aylesbury which were not considered and which will improve the economic case.

The Javelin services were not included for the near Counties to London and to Birmingham which would have included access to larger population commuter needs.

The around London freight bottleneck was not addressed nor the HS3 Hull to Liverpool and Felixstowe to Southampton requirements.

**Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project?**

Yes the matters indicated in points above for answer to question 1. The DFT rail and airport and main city road and ports groups were not involved sufficiently.

There could have been comparisons based on objective economic outcomes and delivery costs in sections of 40 to 50Km which demonstrated the realistic impacts across for the economic factors of jobs, farming and business losses, impacts on house building areas and the inclusion of benefits from the different routes. The AOS and ES were very narrow considerations and these were not representative of losses but more about small impact considerations such as ancient monuments and know specific locations which were over emphasised compared to the wider community facilities and neighbourhood matters.

The below image represents three different routes for HS2 from Ruislip to Brackley.

The HS2 Route 3 Phase 1 is in red and black. Black being current tunneled sections.

There are two alternatives with different transport and local economic benefits and with different costs to construct and local damages.

The Orange Route is to the West of HS2 and the Green Route is to the East of HS2.

All three are feasible routes but with very different contextual impacts on Buckinghamshire and amenities and the provision of interconnections with the current Network Rail infrastructure for Javelin and intercity and freight rail services.

HS2 Limited and DFT did not compare the economic gains and losses for such 40Km sections of the route.

There was a dismissive approach to the HS2 90 route sections and other 7 routes. This resulted in the dictation of Route 3 with inadequate economic analyses.
Is the expected range of the benefit cost ratio persuasive?

No because it is very low and what is and is not included does not represent the knowns and unknowns.

What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland?

To develop high speed rail and not a comprehensive rail route use plan fails to enable the likely benefits to be evaluated only crude indication can be estimated or guessed. The regeneration and building works for some stations are in the order of a Billion pounds per site and these cannot be addressed in a coarse guess announcement approach as at present.

What is meant by Scotland Glasgow, Glasgow and Edinburgh, Edinburgh or any of those and Aberdeen/Inverness. Why not Wales and South West England also. The estimate for high speed across the United Kingdom is over £550 Billion. This is an unrealistic aim even over a century of development. The reason is that the significant population growth and road demands have currently backlog requirements of similar sums and £1 Trillion of transport infrastructure investment is unrealistic. The population in London is saturating the facilities and space according to the previous Mayor. This is a correct interpretation and the aims of HS2 are said to favour import or people undermining the residential property developments as wages fall. Deflation in London is a significant issue.

Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

They depend on them but there is not the funding for these requirements.

Might some parts of the UK suffer economic disadvantage from HS2?

West London and Buckinghamshire do as was evident from the KMPG questionable assessment.

Is London likely to be a main economic beneficiary of HS2?

Lawyers, Land Agents and those within the DFT and HS2 teams are likely to be the main beneficiaries. London loses due to the additional surface congestion as companies reconsider locating elsewhere due to rising employee costs from disruption and lack of facilities for the families as the construction of the Thames tideway and HS2 and the uncertainties make London less attractive. Take a daily overview of the M4 and M40 A4 and A40 and add HS2 works in inner London and you conclude HS2 and London do not align currently. The buffer stop approach to HS2 Euston is not the answer and as the ex Mayor advised at the time Waterloo and south of London could benefit if the needs for ‘HS2’ and Crossrail 2 were considered together.

How might the expected benefits of HS2 to the national economy be realised?

The HS2 is an attempt to bring focus on commercial property investments from overseas funds and the European and wider investment funds for large commercial properties in
London. Linking this to a rail route is not wise as there is no synergy in the wider areas. Local and regional economic development with greater depth of demand and supply analysis are required.

How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

There is only one track each way and the cities connected are well served currently. This is not a significant income generator as it competes with these lines.

Should travellers expect to pay higher fares on HS2 than on other lines?

Who knows. Likely to be more than less and only for four hours per day. As with other railways peak and non-peak are very different. HS2 does not attract trains currently for all uses and therefore as a franchise for passengers only it has little attraction. If HS2 route is operated as HS1 was there has to be a write down of the investment to make a profit from the operations. The maintenance costs of high speed rail as in Japan are much higher than for traditional WCML or ECML services/routes. The energy costs are also higher within a power shortage window. As with WCML the Railtrack/Network Rail did not include booster transformers and these would increase capacity on the WCML and on the ECML if required.

Does the prospect of HS3 affect the economic case for HS2?

Yes it demonstrates that a single track each way passenger route is not attractive compared with a multiple purpose rail corridor with two tracks and reliability and repair resilience.

September 2014
Dr Chris Eaglen LLB MIET—Written evidence
Eastern High Speed Rail Network Partnership—Written evidence

1 Introduction

1.1 The Eastern High Speed Rail Network Partnership was set up three years ago and is formed of the Local Authorities, Combined Authorities and Local Enterprise Partnerships along the eastern leg of the High Speed 2 (HS2) rail network to work together on the economic case for this significant investment. Previously, the Partnership worked with Lord Adonis and his team when he was Secretary of State for Transport on the initial business case for High Speed Rail and in particular the eastern leg with its transformational impacts for the UK economy.

1.2 Initially, the Eastern Network Partnership was formed to promote the case for the eastern leg of HS2 based on the significant benefits that it will generate for both the UK and the city regions along its route. Following the publication of Sir David Higgins’ report in March 2014, the Eastern Network Partners have updated the economic analysis, which confirms the substantial benefits of high speed rail along the eastern leg from Birmingham to Scotland.

1.3 All of the Eastern Network Partners support HS2 as an essential part of their and the UK’s strategic economic plans for regeneration and growth, supporting transformational economic change and increasing their contribution to the UK economy. The Partners have agreed to continue working both collectively and individually to ensure that all of their areas align policy, planning and investment to make the maximum benefit from this important investment as the HS2 project continues through its legislative and design phases.

2 What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland?

2.1 The Eastern Network Partnership comprises of some of the largest urban areas in the UK outside of London with almost 9 million people and over 3.6 million jobs. With extension to Tees Valley, Tyne and Wear, and potentially Scotland, HS2 will connect 6 large city regions in England, which are also the principal locations of advanced manufacturing in the UK. North – south connectivity has been a longstanding priority for the Eastern Network Partners (pre-dating the proposals for HS2). As well as enhancing connectivity between the north of England/Scotland and London, HS2 will also support long term proposals to improve north-south connectivity along the congested M1 corridor and increase agglomeration between the Leeds, Sheffield, East Midlands and West Midlands city regions.

2.2 The Y shape network has already been compared to alternative HSR networks and proved to have the best overall Benefit Cost Ratio 2.6 (BCR). The eastern leg of High Speed Rail will connect the city regions that are currently geographically close to each other, but because of poor transport links, are separate functionally in terms of their economies, business networks and labour markets. This is partly why improving the connections between these places, produces the highest benefit cost ratio of the different HS2 routes.
2.3 HS2 stations on the eastern leg will be fed by enhanced regional services to spread the benefits of the investment far from the line of route, acting as gateways to their surroundings. Research undertaken by the Partnership has the identified the following key benefits associated with the eastern leg of HS2:

- The benefit to cost ratio of the eastern leg of the ‘Y’ network’ beyond Birmingham is 5.6 - this is the highest for any section of the HS2 network, and represents excellent value for money as measured by the Department for Transport and the Treasury.
- The forecast productivity benefits associated with the eastern leg of HS2 are £2.6 billion.
- 30% of the £4.2 billion in economic benefits for the eastern leg comes from the centres along it being better connected to each other.

2.4 These benefits will manifest themselves as reduced journey times between cities, bringing them closer together. For example, journey times from Leeds to Birmingham will be reduced by 52%, and journey times from Leeds to Nottingham reduced by 54%. Such reductions in journey times will bring city region economies closer together, improving firms’ access to skilled staff, markets, workers’ access to jobs, and support greater sharing of knowledge and expertise between cities.

2.5 Furthermore, HS2 will create space on the railways for more frequent and more reliable regional rail services across the North and Midlands and beyond. It will also help to support regular services to London from places in the Eastern Network Partnership area that do not have them currently as well as freeing up capacity for freight.

3 Do the economic benefits also depend on complementary action by governments, local authorities and Local Enterprise Partnerships?

3.1 The eastern leg of HS2 will create substantial economic benefits along the eastern leg and be a catalyst for change, helping to rebalance the spread of wealth and prosperity between the south east and the north of England. The Eastern Network Partners recognise that in order to maximise the economic benefits of HS2 there is a need for complementary work to take place and for us to work with a variety of organisations including central Government to ensure our areas are “HS2 ready”.

3.2 First and foremost the Partners are clear that investing in HS2 should not be an alternative to investment in the classic rail network, as both are essential and complementary. Interim investment in both the Midland Mainline and East Coast Main Lines will be essential and the benefits of High Speed Rail will only be maximised if it is integrated within a wider rail strategy for improving rail services on existing lines.

3.3 A recent report by the Consortium of East Coast Main Line Authorities estimated that improvements to the ECML could generate economic benefits of around £5 billion. Complementary investment in both the ECML and HS2 could therefore deliver over £9 billion in economic benefits to the UK economy.
3.4 Furthermore, Eastern Network Partners are already planning early investment in local rail and transport networks that will be essential for maximising the economic and social value of the overall project. They are also seeking to develop the necessary skills and expertise to make sure their residents can access the direct job opportunities HS2 offers.

3.5 For example, Doncaster is one of the shortlisted locations for a national high speed college. The private sector-led Centre for Rail And Technical Excellence (CREATE) submitted the bid to government and it was co-ordinated by Doncaster Council and supported by Sheffield City Region Local Enterprise Partnership (LEP) and various other local authorities. This bid recognises the intergenerational skills and employment opportunities and the ability to create a talented and skilled workforce for future projects including the potential for export.

3.6 In the North East work has already been commissioned on the production of a station-specific ‘HS2 Growth Strategy’ for both Darlington and Newcastle, recognising that HS2 services will provide regeneration opportunities around these stations once HS2 is operational. In both cases, the LEP has identified funding to develop these projects further from the Local Growth Fund for a second phase of improvements at Newcastle, aimed at creating an additional entrance that links to developments planned to the south of the station, and to take forward the next stage of the design and development work at Darlington with Network Rail.

3.7 In the Leeds City Region the LEP is keen to work with government to develop an ambitious proposal for a single integrated station and transport hub, including improvements to the existing station, creating an iconic and world class gateway to the city and the City Region. Within the City Region, Bradford, Halifax, York, Huddersfield and Wakefield all have regeneration opportunities that, if we get the connectivity right, will be closely linked with the new station. Similarly, the Sheffield City Region is also seeking to develop an integrated and ambitious Masterplan around the station site, forming a catalyst for the delivery of the SCR Strategic Economic Plan. A connectivity package has been identified for the proposed Meadowhall station and further work is continuing to examine the potential economic contribution of the overall connectivity package, beyond the HS2 scheme. Both the Sheffield and Leeds City Regions are working with Network Rail, DfT and wider rail industry partners on a programme of rail infrastructure connectivity and capacity enhancements to be delivered in Control Period 6 and beyond. Known as the Yorkshire Rail Network Study, this programme will enable enhancements to the congested rail networks across the two city regions to help our transport networks become “HS2 Ready”, as well as deliver up to £12bn of economic benefits in their own right.

3.8 Furthermore, research undertaken for the East Midlands by the Derby, Derbyshire, Nottingham and Nottinghamshire (D2N2) Local Enterprise has shown that the station at Toton will offer significant economic benefits for the local area, although a variety of measures have been identified to ensure that the area takes full advantage of the opportunities presented and maximises the benefits on offer from the station investment. Links to high value rail engineering and system technology companies in this area will help to promote advanced manufacturing and the development and growth of high value export businesses.
3.9 The allocation of local funding to take forward complementary work is a sign of the commitment of the Eastern Network Partners to HS2. It demonstrates quite clearly that the Partners are making strides to be “HS2 ready” and see value in investing to maximise the benefits of this once in a generation transport investment.

4 Is London likely to be a main economic beneficiary of HS2?

4.1 Whilst London is likely to be one of the main economic beneficiaries of HS2 our research and that of KPMG show that the areas along the eastern leg are likely to accrue the greatest benefits. These benefits are derived from better and faster connections between the centres along the whole length of the eastern leg. Journey times on the classic network between London and the Eastern Network Partnership areas are relatively high compared to similar routes and therefore the journey time savings offered by HSR are both significant and important, particularly north of Birmingham.

4.2 As noted above, the benefit to cost ratio of the eastern leg of the ‘Y’ network’ beyond Birmingham is 5.6, the highest for any section of the HS2 network. However, these benefits will only be maximised if it is integrated within a wider rail strategy for improving rail services on existing lines.

5 Might some parts of the UK suffer economic disadvantage from HS2?

5.1 As noted above, the Eastern Network Partners are clear that investing in HS2 should not be an alternative to investment in the classic rail network, as both are essential and complementary. A recent report by the Consortium of East Coast Main Line Authorities estimated that improvements to the ECML could generate economic benefits of around £5 billion. Complementary investment in both the ECML and HS2 could therefore deliver over £9 billion in economic benefits to the UK economy. Furthermore, without such complementary investment in classic line improvements, there is the possibility that HS2 could impair the economic performance of some areas of the north of England.

5.2 For example, because there is no HS2 track infrastructure planned in the North East, there are proposals for HS2 services to run north of Leeds through the North East (stopping at Darlington and Newcastle), using the ECML. Without complementary investment in the classic rail lines the level of service for the North East from classic trains is likely to get worse after the opening of HS2, which will severely impact on the regional economy, the only one in the UK with a positive balance of trade.

5.3 Recognising that early improvements to the ECML north of Leeds are an integral part of ensuring that HS2 will be implemented effectively is crucial, but such improvements come with the added advantage of allowing HS2-related work to be undertaken along the eastern leg more quickly, delivering HS2 benefits to those areas and allowing support for the project to be maintained.

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152 HS2 Regional Economic Impacts, KPMG, September 2013
5.4 We also strongly urge Government to consider how it might accelerate the delivery of the Y network, and provide strong commitment to the full route to ensure that the way in which HS2 is delivered does not cause economic disadvantage to the areas along the eastern leg. Currently, the timeline for the project will not see services or direct transport benefits achieved for the eastern leg for 20 years or more, whereas the western leg cities will gain immediate benefits from the completion of Phase 1.

5.5 A commitment to a “build from the North / Scotland” strategy combined with an appropriate approach to the legislative process could allow high speed rail to be delivered sooner and provide a more certain way to help to address the UK’s economic imbalance. An accelerated programme will provide additional economic benefits to those areas which will access the route last, reducing the economic disparities of the present proposals. As a minimum, the eastern leg should be delivered at the same time as the western leg so that economic benefits are maximised for the eastern leg, so that it is not disadvantaged when compared to the west of the country.

6 Does the prospect of HS3 affect the economic case for HS2?

6.1 Improved east-west transport connectivity as per the One North proposition for a new 125mph HS3 trans-Pennine railway connecting to HS2 along with the earlier delivery of the eastern HS2 leg to Yorkshire will help to create more favourable economic conditions in the North of England.

6.2 Our ambition for the North is to be a dynamic counterweight and complement to London and the South-East economy. Improved transport links are crucial to us achieving this objective. By improving the connectivity through improved journey time reliability, the quality of the travel and shorter journeys, we should improve productivity. For example now commuting between Manchester and Leeds is 40% lower than expected given the physical proximity of the two cities.

6.3 It will be important to ensure that the route is designed to dovetail with HS2, with strong connections to both the east and west thereby enhancing its benefits. On the eastern side it should link into the north-south HS2 line with a delta junction arrangement to allow fast services from northern centres such as Newcastle, York and Hull as well as centres in the Midlands and the south, such as Nottingham, to access the route.

6.4 As highlighted in the One North proposition enhanced East-West connectivity will make the North a more productive and thus better trading partner, which increases the returns to the additional trade that HS2 unlocks. Together improved East-West connectivity and HS2 would be growth multipliers for the North and nationally, with each increasing the impact of the other i.e. there would be a broadening and deepening of the economic benefits that HS2 brings to the North.

6.5 The One North Partners have commissioned some further work to develop the outline business case for the vision outlined in the One North proposition. Initial findings from this work will be available in November and will provide further information on the economic benefits of HS3 and its interface with HS2.
7 Supporting Documents

7.1 In order to provide you with more information on the case for the eastern leg of HS2 we would be happy to provide copies of the following documents which provide more details of the economic analysis:

- The Strength of the Eastern High Speed Rail Network Partnership, Eastern Network High Speed Rail Partnership, August 2014 (http://www.syltp.org.uk/hs2.aspx);
- Keeping the economy on track: Our Manifesto, The Consortium of East Coast Main Line Authorities, July 2014 (http://www.jmp.co.uk/downloads/V6-EastCoastmainline-brochure.pdf);
- North East Rail Statement: Our aspirations for rail improvements and investments over the next 15 years, Association of North East Councils, June 2014;
- Economic Impact of HS2 Infrastructure Maintenance Depot at Staveley, Volterra on behalf of Derbyshire County Council, January 2014 (http://volterra.co.uk/wp-content/uploads/2014/03/ECONOMIC-IMPACT-OF-STAVELEY-DEPOT.pdf);
- Sheffield City Region High Speed 2 Connectivity: Connectivity Study Report, Arup on behalf of the Sheffield City Region Partners, January 2014 (http://www.syltp.org.uk/uploadedFiles/High_Speed_Rail/2014-01-28%20SCR%20HS2%20Connectivity%20Study_FINAL%20%20REV%20C.pdf);
- Maximising the Economic Benefits of the East Midlands HS2 Station at Toton, Volterra on behalf of Nottingham City Council and Partners, November 2013 (http://www.nottinghamcity.gov.uk/article/23115/Rail-Services);
- The Fast Track Scotland - Making the Case for High Speed Rail Connections with Scotland, Transport Scotland, December 2011 (http://www.transportscotland.gov.uk/report/j202923-00.htm);

September 2014
Q216 The Chairman: Secretary of State, Lord Deighton and Mr Prout, welcome to this the ninth meeting and the 19th session of the Committee on the economic case for HS2. We have been quite hard at it for the last few months and we shall be drawing to a close early in the new year, when we will have Sir David Higgins and the benefit of some questions with the Chancellor of the Exchequer. Thank you very much for joining us today. I wonder if I might start.

The value of time has taken up quite a bit of time for the Committee and how the value of time is calculated, because of course it underpins a very substantial part of the benefit side of the analysis of the benefit-cost ratio. The numbers appear to be derived from the survey of car users carried out in 1994. I wonder, Secretary of State, whether you consider that to be a robust basis for making a decision on what is a substantial project.
**Rt Hon Patrick McLoughlin MP**: I have just been passed a note to say that they were re-estimated in 2013, so to go back to 1994 was perhaps slightly out of date. We have revised down our values of time for the 2013 case and the values are consistent with people working on trains. I do not think it is just a matter of value of time as well. We need to look at—and we have looked at—the wider context of time and capacity. There is obviously the time that people use on the train, but there is also the capacity issue, which is one of the most important things as far as the overall case for HS2 is concerned.

**The Chairman**: We will come to capacity at a later stage. When you say they were updated, presumably it was the 1994 numbers. Were they updated on the basis of new survey evidence?

**Rt Hon Patrick McLoughlin MP**: They were re-estimated in 2013. We commissioned the study from the Institute for Transport Studies in Leeds University, which showed that our values of time are consistent with the available evidence, and I am told they were reduced by 33%.

**The Chairman**: I see. One of the issues that have certainly come up is the question of how people use their time. Clearly, in 1994 wireless connectivity was not widely available, if at all.

**Rt Hon Patrick McLoughlin MP**: I do not think it was at all available.

**The Chairman**: It was not available at all. When we see pictures of Secretaries of State and the Prime Minister on the television, they are working industriously in the railway carriage because they have connectivity. To what extent have you been able to take that productive use of time into account in the calculation?

**Rt Hon Patrick McLoughlin MP**: We have been able to take it into account. It has been taken into account in the work that has been done. As I say, I think all the major academics that you have had before you have been accepted the way in which we carried out the studies for the BCR. I would also point out that the new form of being able to work while you are on the train is still a factor. If you had the choice between a long train journey and a short train journey, I think most people would book the shorter train journey.

**The Chairman**: One of the pieces of evidence we had is from the Institute for Transport Studies, which has cast quite a lot of doubt on the theoretical underpinnings of this. I think you have accepted its recommendation that there should be a review of the underpinnings of the value of time. Is that something that the department is currently looking at?

**Rt Hon Patrick McLoughlin MP**: We are constantly looking at any comments that are made by various bodies. Sometimes we are accused of carrying out reports and then being attacked for carrying out such reports, if they come out in a positive light, and attacked for not carrying out reports if they do not come out in a negative light. That is part of the issue of doing a big and— I accept for some people—controversial project like this.

**Q217 Lord Lawson of Blaby**: We were given some evidence from your department that defines the values of time, as far as HS2 is concerned, as, “What people and businesses would be willing to pay for quicker journeys”. How do you know what they are willing to pay and, if they are willing to pay it, why are they not being asked to pay it? Why do you have a massive taxpayer subsidy written in?
David Prout: In terms of the calculation of willingness to pay, what we are after is a measure of how much a business or individual would be willing to pay for the time saved in a journey.

Lord Lawson of Blaby: But how do you know this?

David Prout: We measure it by using a proxy that is based on the average business wages of the people who are using the train service. It is very different for businesspeople from commuter or leisure travel. The value we place on business time is £32 per hour. On commuter and leisure time it is £6 to £7 an hour. In answer to your question, we looked at a whole range of studies of willingness to pay and specifically at how much someone would be willing to pay. From across Europe we produced a table—figure 5.14 in The Strategic Case for HS2—which shows that the proxy value that we used is absolutely smack in the middle of the range of the value for time and willingness to pay studies that have been done by reputable institutions that are used in different transport appraisal processes across Europe.

Lord Lawson of Blaby: I must say that I find that profoundly unconvincing. You look at a number of other studies for which there is probably no empirical support at all. You then put your pen in the middle of those and say, “That is sensible”.

David Prout: Lord Lawson, you have had various economic experts in front of the panel. They have said that they think that the benefit-cost ratio for phase one and phase two is robust and that the WebTAG guidance as used by DfT is world class. That is what the experts think. The way that the department calculates BCRs is widely recognised across the world as being best in class.

Lord Lawson of Blaby: I have heard no evidence—and I have heard a lot of evidence—that seems to me to have any significant empirical basis at all. I find it highly unconvincing for that reason. Anyhow, let us take up the second point I was raising. Suppose that is what they are willing to pay. Why are they not being asked to pay it?

Rt Hon Patrick McLoughlin MP: What do you mean, “Why are they not being asked to pay it”? If you take today’s rail journeys, you find that there are a lot of people who pay for expensive tickets, but if you pre-book and you are in a position to pre-book you can get some very good deals on the railways today. I was a junior Minister in the Department for Transport 25 years ago and I think one of the revolutions that have taken place is the explosion in the rail industry. Twenty-five years ago, the thought that the rail industry would today be moving 1.6 billion passengers a year and that we will have seen rises of 4.6% per annum in intercity travel might have surprised the Treasury, I think, which might have said, “That is cloud-cuckoo-land”, but that is exactly the position we find ourselves in. We find ourselves having to match up to those capacity demands, or not.

Lord Lawson of Blaby: Secretary of State, you slid on from the cost of time to the capacity issue, which I am sure we will come to anyway, but that is not what we are talking about just now. We are talking about the value of time saved and I am still puzzled. Lord Deighton in his very helpful letter to the Chairman said that there is a taxpayer subsidy of in excess of £30 billion. That I think is probably an understatement for reasons we will no doubt come on to, but that does not seem to me to suggest that people are being asked to pay what apparently we are told they are willing to pay.

Lord Deighton: You do not want to talk about the subsidy yet; we are still just talking about trying to justify the willingness to pay.
The Chairman: I think what underpins Lord Lawson’s question is that the economic model, which has been done to calculate the benefit-cost ratio, assumes that nobody pays any more for travelling on HS2 than they will on the classic rail network.

David Prout: That is correct, Chairman. All BCRs need to be based on assumptions. The assumption that we have used for this BCR is that the fare structure that we have today will be the fare structure that we have in future. That shows that using that fare structure, which is not a premium fare structure, you get a positive benefit-cost ratio. In addition, the modelling that we have done, as set out in the commercial case that was published in March, shows that HS2 will operate at a very, very substantial operating surplus, and that as a whole GB rail with HS2 will generate more revenue than without HS2. That is a different thing from covering the cost of capital, which I think is what Lord Lawson is coming to in the end, but it is the choice of the country and the Government of the day as to whether or not they wish to build a new railway line. That is a choice that the Government have made and it will be financed in the same way as many other types of public sector investment are.

The Chairman: Yes. It is a £31 billion call, of course. Thank you very much. Can we move on?

Q218 Baroness Blackstone: Can I come back to the issue of capacity? Some of the information that we have received is inconsistent with some of the things that we have been told. For example, David Prout told the Committee back in October that there was a “number of seats” issue. Yet the information that we received from your department, Secretary of State, showed that in peak times trains coming into Euston or departing from Euston were only 50% to 60% full. What is your take on this? Is there really a capacity problem, given that your department has shown us figures of that sort?

Rt Hon Patrick McLoughlin MP: There are a number of answers to this, but I would point out the first document that was issued on High Speed 2 by the last Government. On page 8, one of the key reasons was, “That over the next 20 to 30 years the UK will require a step-change in transport capacity between its largest and most productive conurbations, both facilitating and responding to long-term economic growth”. The point I am making there is that capacity is not new to this. Capacity has always been one of the big reasons for building HS2.

We have taken a number of measures to increase capacity on the current West Coast Main Line, but at the moment the West Coast Main Line is the busiest railway line anywhere in Europe. Train companies want to operate extra services and they are being prevented from offering those extra services because we do not have the train paths available. In fact, last year Virgin wanted to operate new services from Shrewsbury and Blackpool and it was delayed. We are going to operate those particular services from next weekend, but it has been at a great struggle and we will not be offering the amount of services from those particular areas that we would like to be able to offer.

I go back again to 20 years ago, when there were something like 20 train journeys a day from London to Manchester. Today there are in excess of 45. It is a question of how we provide the extra capacity that is so desperately needed. As I said earlier, we are seeing long-distance demand rising by 4.6% per annum on average over the last five years. Our business case for this has rested on the fact that that increase will only be 2.2% over the next few years. As I say, history and recent precedent shows that it has been far in excess of that 2.5%.
Baroness Blackstone: I still do not follow, Secretary of State, why there is a desperate capacity problem, as you have just put it, when your department tells us—and these are very recent figures—that, as far as capacity is concerned, even on peak trains the trains are only 50% to 60% full. What you are saying does not follow from those figures.

Rt Hon Patrick McLoughlin MP: We have increased capacity greatly—as much as we can—by extending the trains, but that is a short-term answer to a long-term problem. One of the things I have asked Virgin to do—and it has done—is to convert first-class carriages to standard-class carriages on each of the trains. We have seen an increase in capacity of 33% since the peak-hour seats in 2008. We have done what we can in the short term to increase that capacity, but the figures that you are referring to are the peak three hours. In the peak hour, we are already at full capacity.

Baroness Blackstone: No, I am sorry, Secretary of State, these figures are peak-hour figures, according to the advice that we have been given.

Rt Hon Patrick McLoughlin MP: The three hours.

Baroness Blackstone: They are for peak hours, not pre-peak hours. In fact, as I understand it, the trains that are really very full are the first off-peak trains - the first two that come immediately after the less full peak-hour trains. So why do you not use pricing policy to try to spread that load a bit more into the peak trains by reducing the charges that we make for tickets?

Rt Hon Patrick McLoughlin MP: We are trying to. A lot more work is being done on smart ticketing and smart ticketing pricing. It is worth making the point that north of Rugby we have spent £9 billion on upgrading the West Coast Main Line.¹⁵³ When Lord Adonis spoke at Second Reading of the Bill, he made the point that had that money perhaps been spent on HS2 we would not face the problems that we currently have. I think he said that on the Floor of the House.

Baroness Blackstone: I think it is also the case that we would be spending a huge amount more on HS2 than what you have undoubtedly spent in upgrading some of the services north of Rugby. I also wonder whether the investment in HS2 is going to directly help the problems that you just described earlier with trains from Shrewsbury and Blackpool.

Rt Hon Patrick McLoughlin MP: Yes, because it will free up those services. What you are doing is adding massively to the capacity and the connectivity as far as Birmingham, Manchester, Crewe, Leeds and Sheffield are concerned. That will mean that you still have the railway lines that you can offer more services on. It enables us to be able to offer more services from those particular towns and cities, but it also gives us the opportunity to see more freight carried by the railways. One of the other great success stories in the last 20 years has been an increase of freight on the railways of some 60%, which I very much welcome. One of the things that is now putting a curtailment on that is the availability of capacity.

David Prout: Chairman, can I go back to the question of how crowded the trains are? The figures we gave you are averages over the peak hour: 11 trains an hour in the peak hour, and 25 or more trains over the three peak hours. Within that, some trains are more crowded than others. You are absolutely right that the busiest train is the first one at a

¹⁵³ Note by the witness: The £9bn figure relates to the cost of upgrading the entire West Coast Main Line, rather than specifically the section North of Rugby.
lower fare after the peak-hour period, but as was set out in our letter to you, Chairman, the time that we measured the crowding on the trains is also limited. We measure mid-week peaks, we do not measure Friday peaks and we do not measure busy weekend peaks, in order to give the fairest possible representation of the kind of loading that we have. So, yes, over the three-hour peak at the moment—having added 50% to the capacity over the period since 2008—we have a loading of between 50% and 60%. Within that some trains are much more crowded than others. On Fridays and at weekends you can get very crowded trains indeed.

Baroness Blackstone: But the 50% to 60% is an average over that three-hour period?

David Prout: It is an average over those peaks, but it has to be seen against the background of a 50% increase in capacity since 2008.

Lord Deighton: What I think is not argued about is that there is no room for more train paths. I think this is a very valid discussion about how full each train is, but everybody agrees there is no room for more train paths. When I looked at this with my Taskforce, the thing that struck me—and this is a highly qualitative judgment—was that the more the person knew about the railway and how it operated, the more convinced they were that to solve the capacity problem up to Birmingham, this had to happen. As empty as some of the trains may be at some part of the day, we are full with train paths. In certain parts of the day, both long-distance and particularly commuter trains are overcrowded. Given the lead time to put in new capacity, unless we do something about it now in a fundamental way, we are going to have an awful jam between here and Birmingham.

David Prout: I think that is the evidence that Virgin gave you when they came here the other day as well.

The Chairman: You referred to the letter—and thank you for the letter—but for reasons of commercial confidentiality, unfortunately, you were unable to share with us the real numbers so I guess we will have to leave it at that.

Q219 Lord Smith of Clifton: Secretary of State, what sensitivity analysis have you carried out for the values of travel-time savings in the economic case?

Rt Hon Patrick McLoughlin MP: As I say, that has been done by the WebTAG system. We have tested the impact of both higher and lower values of time on the BCR. The research of the Institute for Transport Studies in Leeds has found that the value of time for high-speed rail travel is likely to be higher than the value of time that we have used in the economic case. With a higher value time, even with a pessimistic growth of forecasting scenarios, HS2 is very likely to have a BCR greater than two for the full Y network.

Lord Smith of Clifton: Given the possible problems discussed earlier with the nominal values of time, why in the economic case have you not reflected the outcome of applying a 25% reduction to the value of travel-time savings for non-work travellers?

David Prout: At figure 16, page 39, of the economic case, which is a more detailed version of part of the strategic case, you will see that we model a low-fares scenario, which shows that you get more demand immediately for HS2. If you put the fares down, demand goes up. That means that you meet the demand cap, which is imposed by the WebTAG guidance, earlier than with higher fares. If you then remove the cap, you show that lower fares lead to more demand and basically the same BCR as you have with the standard existing fare

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structure that we have at the moment. As I say, it is set out in pages 39 and 40 of the economic case.

**Lord Smith of Clifton:** When you were defending the quality of some of your cost-benefit studies, you said that they are recognised internationally as best in class. Well, of course, it is a very small class. Not all nations are doing this. It is half a dozen at the most, I should think.

**David Prout:** It is the case that other nations do not do it as well as us, but you had Professor Venables and Professor Overman in front of the Committee in earlier sessions. They have just recently completed a study for us reviewing our guidance on how to do benefit-cost ratios. They come from very different standpoints, as you heard when they appeared in front of you, and their conclusion is that our BCRs are robust and our processes are world class.

**Q220 Lord Shipley:** Can I examine the case around capacity further? It is the issue of how we define capacity. The Department for Transport has said that, despite the West Coast Main Line upgrade, the line has now reached capacity in terms of the number of trains that can operate on the line. It has been put to us that if you had four tracks in the Coventry corridor to allow faster trains to bypass slower ones, you could increase the capacity. In addition, there could be things that you could do on signalling—to have in-cab signalling, for example—to improve capacity in that respect. Why is HS2 the only viable solution to the capacity problem?

**Rt Hon Patrick McLoughlin MP:** Lord Shipley, I am informed that the best of the rail alternatives would only provide 24% more peak-hour seats out of Euston over our committed improvements. We have spent a huge amount of money and time and effort. In fact, if you talked to Sir Richard Leese, he would say that while the work on the West Coast Main Line was being upgraded, over the time that it took to do that it did very serious economic damage to Manchester. I think this was probably true, although I do not want to speak for Lord Adonis, when he first issued his command paper back in 2009 as to the most straightforward way forward.

I would also point out that what you are talking about continually doing is upgrading a system that is now over 120 years old. We have not built a new railway line in this country north of London for 120 years. I must admit that I find it rather ironic that I can go from London to Paris or London to Brussels on a high-speed train but I cannot go from London to Birmingham, to Manchester or to Leeds. We are better connected as far as connectivity is concerned with parts of Europe than we are with our own country. That is part of the reason why—and I think it is a very substantial reason—if you talk to the leaders of Birmingham City Council, Manchester, or Leeds for that matter, they are very insistent that High Speed 2 is the right answer for their regions and their areas. Indeed, when a bit of a question mark was being expressed at one stage, it was the city leaders who came to see the Prime Minister to express their support for this project.

**Lord Shipley:** We had some very helpful discussions with some city leaders when we took evidence in Manchester. Can I go a bit further on the issue? It has been put to us that HS2 has been a solution looking for a problem. My question is this: have there been sufficient incentives in place to assess alternative schemes properly—because alternative schemes were proposed? Have they been assessed properly?
**Rt Hon Patrick McLoughlin MP:** I do not think there is any project that has had more reports and inquiries into it than HS2. At the end of the day, we still come to the view that the best way overall to increase the capacity is by HS2. At the moment we are building a £15 billion railway in London. Nobody complains about that, and I think that people in Birmingham, Manchester and Leeds are saying that we need a major upgrade on infrastructure that HS2 certainly will provide.

**David Prout:** Chairman, if I may, it is important to understand something of the history of the West Coast Main Line to understand why upgrading it is so difficult. The West Coast Main Line is not like the Great Western Main Line or the East Coast Main Line, which were designed for trains that went faster than the trains of the day. They had nice straight railways. They got plenty of space. When the West Coast Main Line was built, it was basically the first railway line between London and the north. It was built to follow the canals. It follows a twisting and turning path following the contours as the canals do, so getting any additional speed on the West Coast Main Line in the first instance is very, very difficult.

Secondly, it was originally built as a two-track main line. When it was upgraded to a four-track main line in the late 19th century, they did it on the cheap. They decided to go from two tracks to four without buying any additional land. That means that where the embankments were originally at the right sort of angle to last for a long time, they were made much steeper in order to make space for the two additional tracks. Where you had cuttings that were originally like this, they were made much steeper to make space for four tracks rather than two. That means that maintaining the West Coast Main Line in itself is a real problem and incredibly expensive, as is doing any significant works when you have four tracks that are crammed together into too little space with no working space around them. That means that when we were upgrading the West Coast Main Line, when you tried to do any work to either of the two central lines you had to close three of the four tracks.

Doing any work on the West Coast Main Line is unbelievably disruptive and there is literally no space to add additional tracks. The embankments and cuttings are unstable. It is hugely expensive. This is why when the West Coast Main Line was upgraded everybody in the industry—and this is long before my time—were of the view that that would get us by for a certain amount of time and then the only solution was to build a new railway. That is exactly what Virgin told you when they appeared before you the other day as well.

**Rt Hon Patrick McLoughlin MP:** Sorry, can I add one thing? I think it is also about the reliability of the system, too. If you think back to just last winter, every railway line had disruptions save one, and that was HS1 because it was built to a modern engineering standard. It was the only railway line that did not have any severe hold-ups because of weather problems last winter.

**Lord Shipley:** Has the calculation of the cost of disruption been fairly done between the alternatives and HS2? Presumably, HS2 will produce some disruption and there will be costs associated with that. Are you confident that those calculations have been properly done?

**Rt Hon Patrick McLoughlin MP:** There will be some disruption in certain areas while HS2 is being built, certainly, but nowhere in the lines of the amount of disruption would that be required for an upgrading of the West Coast.
David Prout: You do not get 18 new trains an hour with upgrading the existing main lines. The only way you get that increase in capacity for intercity journeys and the released capacity for commuter journeys is by building a new railway.

Q221 The Chairman: We received a presentation and a submission from High Speed UK—HSUK. Has that been properly evaluated and compared and contrasted with HS2?

David Prout: I do not know who HSUK are.

Rt Hon Patrick McLoughlin MP: They are the central railway.

David Prout: They are the central railway, are they? Yes, we have looked at the reinstatement of the central railway and it is by no means as simple as HSUK would have us believe.

The Chairman: That may or may not be the case, but have you had the opportunity to review and assess it in detail?

David Prout: The main elements of the central railway proposal were looked at in the 2013 alternative study for the East Coast Main Line.

Q222 Lord Skidelsky: Secretary of State and Lord Deighton, I would like to probe a little further the estimates of growth in long-distance rail travel. The economic case for HS2 says that the growth in long-distance rail travel demand since 1994 equates to an average year on year growth rate over the past 18 years of 4.9%. The economic case forecasts that the demand for long-distance rail travel will rise at 2.2% between 2010 and 2036. Are those two numbers comparable? In other words, is that 2.2% compounded, because otherwise why should there be a decrease over the next period from the increase over the last 18 years?

Rt Hon Patrick McLoughlin MP: I think we gave you 4.6%, not 4.9%.

Lord Skidelsky: Mine says 4.9%.

Rt Hon Patrick McLoughlin MP: Okay. We have taken a very conservative estimate about future growth because we have seen growth at a level that I do not think anybody anticipated at the privatisation of the railways. I come back to what I think has been an amazing sort of growth, and that is at a time when new technologies, working on trains and receiving e-mails on trains have improved the capabilities of travel and what you can do while you are travelling. We have estimated at a conservative estimate but, as we say, over the last few years the increase has been 4.6%. Yes, in answer to the first part of your question, it was a 2.2% compound increase.

Lord Skidelsky: So you are extrapolating but adding a conservative premium? In other words, you are doing an extrapolation but saying, “We are taking a conservative view”?

Rt Hon Patrick McLoughlin MP: Yes.

Lord Skidelsky: The two numbers are comparable anyway.

Rt Hon Patrick McLoughlin MP: Yes.

Lord Skidelsky: That is interesting, because it raises the question of how robust these extrapolated techniques are. I go on to my second question, which is: have you taken into account the increase in capacity of other forms of transport? I know you have other things that you have factored in, like working at home and even working more on trains, but what
about technological improvements in car travel? I mean the development of the automated car and the development of car profiling, both of which could be anticipated to grow in the next 20 years and would not only increase car capacity use for any given road space but would make car journeys more attractive for commuters because they would be able to work in them. I am not saying that these are going to happen, but have they been factored into the estimates of demand for rail travel?

**Rt Hon Patrick McLoughlin MP:** What we have factored in is what we have seen happen. Yes, we have seen greater car ownership, we have seen more car ownership, but we have also seen people wanting the convenience of the train and being able to work on the train. Those things have been factored in, but exactly what the transport picture will be in 25 years’ time is anyone’s guess.

**Lord Skidelsky:** Have you taken evidence from motorcar manufacturers in deriving these estimates as to what possible or even likely developments in motorcar technology will happen over a 20-year period, because this is the period of the forecast?

**Rt Hon Patrick McLoughlin MP:** We would also want to look at what investment we are making in the roads. HS2 is not one issue by itself. It is not the only bit of transport investment that we are making over the next five, 10, 15 years. Last week I announced a massive improvement in the road investment strategy, which is the first time that we have given the kind of five-year plan that we give for Network Rail as to what should happen on the roads. Increasing capacity on the roads is part of what we are trying to do overall to improve the infrastructure of the United Kingdom as a country. I think that has been taken into account. I am not sure that we have taken any evidence direct from motor manufacturers.

**David Prout:** The department as a whole is absolutely up to speed with everything that the car industry is thinking about, and we monitor that constantly. We have a quarterly bulletin in the department on motor technologies. I think the answer to your question about whether we have taken it into account is to be found in the conservative nature of the estimates we make. We are not saying in the benefit-cost ratio that growth is going to continue at 4% or 5% a year. We are saying that it continues at 2.2% a year and does not grow at all after 2036. That is the input for the model that we used for generating the benefit-cost ratio.

**Lord Skidelsky:** To sum up, those models contain an explicit allowance for improvements in motor technology?

**David Prout:** They do not have a line that says, “Reduction in rail demand resulting from improved road technology”, no. But, as I say, our projections are at 2.2% against a 20-year background of 4% to 5%. So I think it is a conservative estimate.

**Q223 Lord Monks:** Secretary of State, I think we are fairly clear who the likely winners are out of this, including London, Birmingham, Leeds and Manchester. What about the losers? What about the ones who do not have easy access to HS2? What about their position and their rail services? We note that the strategic case said that all towns and cities that currently have a direct service will retain broadly comparable or better services once it is completed, but there are only four interchange points, I think, on the HS2 line. There was a statement by Mr Collins, the chief executive of Virgin Trains, that 40% of Virgin Trains’ current revenue from the West Coast Main Line would go to HS2, and whether the rest
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would be profitable he said we would have to look at. Is there any guarantee for the Coventrys or the Rugbys of this world about their position in the future and their maintaining a service as good as the one they have now?

Rt Hon Patrick McLoughlin MP: Definitely. This is an addition; it is not a minus from the services that are available. Coventry is 11 miles from Birmingham International, so it is very close. There will be connectivity into Birmingham International as far as Coventry is concerned and, indeed, the whole West Midlands conurbation. I grew up 20 miles north of Birmingham, so if I think back to being a child, places like Cannock Chase and Hednesford were not served by a railway line. That is now served by a railway line, which is feeding into Birmingham. That has made a tremendous difference to what was basically a coalfield area, and we are seeing a regeneration in those areas as a result of that.

Wherever I go these days as Secretary of State for Transport, the demand is always for more services, better services, not for fewer services. The only way we are going to provide those extra services is by increasing the capacity. I am sorry to repeat myself, but I come back to Blackpool and Shrewsbury. They were being held back for extra services because there was not the capacity. It was not seen as the most profitable or rewarding route to serve. That is the case, and I think the areas that Lord Monks has talked about will see more opportunities because of more availability. I was in Milton Keynes just the other week, and what was interesting about Milton Keynes, I was told, is that not as many but a good number of people arrive into Milton Keynes to go to work as leave Milton Keynes in the morning. It is an incredibly busy station and an incredibly busy growth area. The one thing they want is more faster trains into London, which at the moment it is hard to give them.

Lord Deighton: To give you a bit more background on that, I know you went to Manchester but my Growth Taskforce and I went to all the cities that get a main station and one or two others. The reasoning behind your question is very valid, because the general feedback was that the people from Manchester, Leeds and Sheffield said, “Yes, this is absolutely terrific. Why can you not just hurry up and get on with it?” We also invited to all those sessions people from further out in the regions, whether it was from Wakefield when we were in Leeds, or from Wolverhampton when we were in Birmingham, and the most anxious people were those who wanted to be reassured that they would benefit from the freed-up capacity but also that this would not come with neglect of the road strategy. If you are trying to run a manufacturing business out of Wolverhampton, it is the roads that matter to you, not high-speed rail going to Birmingham and Manchester. What we clearly took away from them is that we had to have an integrated transport strategy that understood what connectivity meant to different parts of the country. HS2 solves certain problems. It gives you a platform for solving others if you make other investments and coordinate the rest of your transport strategy, but it does not in and of itself, without doing these other things, solve everybody’s problems.

Lord Monks: Could I press you just a little on that? If the long-distance trains are taken off the West Coast Main Line, say, to free up capacity, it begins to be a bit of a strain to think that maybe Stoke might keep two fast trains an hour, which it gets courtesy of the fact that it is on the main line to Manchester at the moment, or at least in part apart from its own merits. How robust can that commitment be?

Rt Hon Patrick McLoughlin MP: I would point you to what happens on the Javelin service at the moment in Kent. If you think of travelling down to Canterbury or into other parts of Kent, the Javelin train travels down to Ashford at high speed and then continues on the
conventional railway lines. I must not prejudge decisions that I have not yet taken, but the interchange at Crewe, for instance, following on from David Higgins’ report, would be a very important area following on to services to places like Liverpool, the Handsacre junction if it were to remain in—and, as I say, that decision has not yet been taken—and the Handsacre junction is quite important for feeding Stoke-on-Trent.

I would also point out the A500, the road that serves Stoke-on-Trent where it links into the M6. Only just over that route is the proposal to put Crewe station. I think the development that comes around as a result of that investment will make a substantial difference both to the regeneration and the chances of regeneration of Stoke-on-Trent. Again, look at the transformation of King’s Cross and St Pancras and its attractiveness. Twenty years ago it was not a place that you would imagine any major international research company or major company wanting to locate to. We have Google locating there and we have the Crick Institute being built at the moment, which has been fantastic to the regeneration and lifting the vibrancy of that area.

Q224 Lord McFall of Alcluith: Secretary of State, I was interested in an article that Steve Richards wrote this morning in the Independent about transport. He was talking about his “affluent middle-class” friends and mentioned a well-off couple who wanted to travel to Devon for the weekend but were deterred by the £300 train costs and instead opted for the jammed roads. There was also a couple from the Chilterns who said that the train fares were preposterous. They tried off-peak fares but the rail companies are adept at changing the definition. Why do people in this area feel that they cannot get transport services at decent prices?

Rt Hon Patrick McLoughlin MP: Perhaps they are not that adept at looking or understanding the way the pricing system works. I have not read the article so I am reluctant to comment on an article that I have not read, but there are—

Lord McFall of Alcluith: So these are middle-class people who are a bit thick?

Rt Hon Patrick McLoughlin MP: Lord McFall, those are your words. They were not mine. It is the kind of word that if any Secretary of State dared use it would no doubt end in certain headlines, and I am leaving the authorship rightly at your doorstep on that one. I am just saying that there are lots of opportunities for people to pre-book tickets and get some very, very good deals. Yes, if you turn up on the day and expect to be able to travel, it can be expensive. I presume, by the sounds of the price that you are quoting, that you are talking about first-class tickets.

Lord McFall of Alcluith: It is Steve Richards who is talking about it, but he is talking about people’s perception that they are not getting decent prices overall. Would you contest that?

Rt Hon Patrick McLoughlin MP: I would contest it. I think there are some incredibly good-value deals to have. Indeed, this year we have seen the first new rail card introduced for 25 years; two people travelling together at whatever age get a very substantial discount, not the same discount that is there for people over 60. I think that has been the way in which the rail industry has managed to adapt. You could not turn up to an airport and get on a plane, but if you book last minute on planes they are quite expensive as well. If you pre-book and pre-book early you can get some very good deals.

Lord McFall of Alcluith: I am sure you will be glad to know, Secretary of State, that I have secured my Railcard.
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**Rt Hon Patrick McLoughlin MP:** Oh, right.

**Q225 Lord McFall of Alcluith:** On to the main point, how will HS2 rebalance the UK economy, or will it simply displace activity from elsewhere?

**Rt Hon Patrick McLoughlin MP:** There are a lot of arguments that somehow, by building HS2, all we are going to do is suck all this traffic and passengers into London and it will be great for London and very bad for the regions. What I would say in answer to that is go and talk to the leaders of the regions. Talk to Richard Leese, talk to Albert Bore, talk to Councillor Wakefield, and talk to Julie Dore in Sheffield. Those are the leaders, and in Richard Leese’s case he has been the leader of Manchester City Council for 18 years. As he pointed out to me, he has seen 12 Transport Secretaries during his time. The fact is that they say that this connection is vitally important for their cities to be able to compete. If the assumption behind what you were saying was that we need not worry about the services or the infrastructure outside London, well, I do not buy that. I think it is very important.

**Lord McFall of Alcluith:** No, I will tell you what I was thinking of. I was thinking of Professor Overman when he gave his evidence, when he said that when we come in and regenerate around, say, the new station at Birmingham or Manchester, a lot of the firms that are going to locate there, and the things they are going to do there, were activities that would have gone elsewhere within the Manchester or Birmingham urban areas, so managing that is difficult. That is what I have in mind.

**Rt Hon Patrick McLoughlin MP:** I do not accept that. I think we have to give the cities outside London a chance to attract some of the investment that has been attracted into London. They are areas that will be attractive if they have the right connectivity and transport infrastructure, because they are fantastic places to live.

**Lord Deighton:** I think we have to accept that there must be some displacement activity. It is hard to work out exactly what. Coincidentally, I was in Manchester yesterday with the Chancellor opening the new Manchester City Football Academy, which has been funded by the Middle East and which is partnering Manchester in an extraordinary programme of regeneration, frankly. Without this kind of modern approach to how they build a city that is competitive to London and competitive to other European cities, that was never going to happen.

It might be helpful if I stand back a bit and look at what we are trying to do here. We talk a lot about rebalancing the economy. I think the theory behind this—and it is a problem that all Governments have tried to deal with—is the imbalance in growth around the United Kingdom. The south of the south-east has this extraordinary machine in London, which generates a much higher level of growth than the rest of the country. The challenge is to reproduce the levels of productivity in London and the south-east in the rest of the country.

Over the decades, we have tried a number of ways to do this. We tried propping up ailing industries, which did not work. We have tried relocating chunks of the public sector—look at Northern Ireland as an example—and that does not work as a sustainable model. We are trying to build and support thriving city centres outside London that have the capacity to grow at a much faster rate than they have historically. It is precisely the right model for a knowledge-based economy. It is predicated upon connectivity, both physical and digital, and this is an important part of the physical connection to make it happen. The evidence from the US is that it growing quite strongly now, and you can isolate that to the hundred big
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metro areas around the United States. Growth now happens in cities, and this strategy for investing in our infrastructure is about providing the framework that will allow our big cities outside London to have a decent chance of competing internationally for the kinds of things they need to do to be effective, economic operations. That is what this is about. That is the model you have to think of, and I think you will find it very useful when you talk to the Chancellor. I did not know he was coming, but we have been trying to deal with this problem in the Treasury and figuring out the smart way to get into it. Do you do it from the bottom up or the top down? We have decided to say, “We have to get the growth rate in the north up to where it is in the south”. What do you need to do that? You need to do it around cities and you need to have the infrastructure that can facilitate that. His northern powerhouse concept is a way of forcing us all to think about how to tackle this challenge and put in place the things we need so we can push up that growth rate to get our productivity sorted out in the north.

**Lord Lawson of Blaby:** What you are suggesting, Lord Deighton, is that we need a Crossrail for the north. That is nothing to do with HS2.

**Lord Deighton:** No, that is why we have introduced the concept of HS3 because HS3 essentially is Crossrail for the north. It takes the journey from Manchester to Leeds and makes it look like the journey from Heathrow to Canary Wharf on Crossrail. You are precisely right, but I think that is another part of the infrastructure. To be successful in the UK as a big city, you need great connections into London. That is just the way this economy works and I do not think that sucks anything out. If it does suck everything into London, that certainly did not occur to anybody in London because HS2 is not particularly high up on their list of things to do.

As the Secretary of State has said a number of times, there a couple of things that struck me when we met the private and public sector leaders in all these cities, and one was how important they felt HS2 was to their longer-term future. The second one was how in most cases they thought we would never get round to doing it because everybody only ever invests in the infrastructure in the south, and they just assumed that we were going to take forever to make up our minds. It was quite interesting; the very fact we were there, were talking not about whether we could do it but how we should do it in a way that allowed some of the economic potential to be unleashed in the way I just described for them, was a highly energising discussion to have and the one they have been looking to have for the last 20 years.

**Rt Hon Patrick McLoughlin MP:** If I could follow on from that, I do not think it is HS3 instead of HS2; they are both complementary to each other.

**Q226 Lord Lawson of Blaby:** On that issue, since you have raised it—I make that point, Secretary—the evidence that we had from the TGV in France is that the bulk of the benefit, not all of it but most of it, has gone to Paris. There is substantial evidence with HS2 not that there will be no benefit to the north but that most of it will go to London, whereas the benefit from the Crossrail for the north, whether it is HS3 or something slightly less ambitious, will be overwhelmingly for the north. It does seem to me to be consistent with what you have said and what the Chancellor has said: that that should have a much higher priority.
Lord McFall of Alcluith: Could I add that when you are talking about Crossrail to the north it will be a Crossrail beyond Manchester and Leeds? In other words, we have to factor other places like Scotland into it.

Rt Hon Patrick McLoughlin MP: Let us deal with the other places that we have to factor into it. You mentioned Manchester and Leeds, but I think I need to include Newcastle as well as Hull and—

Lord McFall of Alcluith: Absolutely, yes.

Rt Hon Patrick McLoughlin MP: It is that top part of England that is needed, but then the connectivity into Scotland is very important as well. Indeed, from day one of opening I hope there will be services that go up to Scotland. I talked earlier about what happens at the moment in Kent, with trains going down to Ashford and then continuing on those lines.

Coming back to the point that Lord Lawson made, not to be able to connect into a high-speed system for the rest of the country would put us those northern cities at a disadvantage. If you talk to them, they are of exactly that mind, too. I put that exact question this morning to Richard Leese and his answer was that it is not either/or; it is the fact that we need to address both those issues in the long—

Lord Lawson of Blaby: The question is which is more important at a time of very great public expenditure problems.

Q227 Lord Griffiths of Fforestfach: This afternoon I feel I have heard two stories to justify HS2. One story is through the lens of economic analysis, which is very precise, the estimates of the time saved on journeys and so on. As an economist myself, to start justifying £50 billion on the basis of time saved needs a common-sense check. You seem to be relying on a huge number if you use that framework in which to do it. The second approach we have just heard from Lord Deighton, which is that there is tremendous growth potential, we need to get productivity up in the UK, we need connectivity, and we need agglomeration. All that might be absolutely right, but fundamentally you do not have the narrow economic analysis, and you are telling us that it is a punt. You may be right in your judgment, but fundamentally you are asking us to take a bet.

Rt Hon Patrick McLoughlin MP: I do not think we are asking you to take a bet. I think there are two reasons for us doing this. There is the fact that it leads to greater connectivity. There is our belief that it would give the cities, as Lord Deighton has just made clear, the opportunity to compete. But it is also about upgrading our infrastructure, too; I pointed out earlier the £9 billion on the West Coast Main Line north of Rugby.

Lord Griffiths of Fforestfach: Secretary of State, is that not ultimately a judgment that you make, which is a broad, general judgment? When you come to estimating time saved, you have very narrow economic analysis and a great tradition of cost-benefit analysis and so on, and you can say, “Yes, we are coming up with a benefit-cost ratio”. If you do the other one and say, “We need to upgrade the infrastructure”, you may be absolutely right, but if you are saying somehow that you have an economic case for it, which you can hold up your hand and swear to and say, “Yes, I have total confidence in that”, it does seem to me that you are asking us to take a punt.

Rt Hon Patrick McLoughlin MP: Obviously, one has to look at the economic case and you have to make sure there is an economic case. I think it is worth pointing out that the economic case for the Jubilee Line was 0.9, but without the Jubilee Line I do not think we
would have seen the kind of investment that we have seen in Canary Wharf. The economic case for the underpass, the Limehouse Link, was 0.49. I think without taking that kind of punt—as you might have put it—we would not have seen the kind of transformation we have seen in that area. This is not just on a punt. It is about capacity, but obviously we have to try to make the figures match up because that is what economists like you, Lord Griffiths, ask us about.

**The Chairman:** I am afraid we have a Division. Could I suspend the meeting? We will hopefully be back in five or six minutes.

**Rt Hon Patrick McLoughlin MP:** Okay.

**The session was suspended for a Division in the House.**

**The Chairman:** Thank you for your patience. We can now resume. I think Lord Griffiths was embarking on the second part of his question.

**Q228 Lord Griffiths of Fforestfach:** Thank you, Secretary of State, for what you said about the Jubilee Line and Limehouse Link, and the way in which the assumptions made fell far short of what happened.

The second part of the question is concerned with Lord Deighton and the Taskforce he chaired on the growth coming from HS2, particularly the contributions made in the cities and so on. When we visited Manchester the week before last and heard from the leaders of Manchester, Nottingham, Leeds and Sheffield, the one thing that certainly impressed me was how excited they were about it. They saw real opportunities here. Then they came out and I think revealed only a little of what their wish lists were, which of course were very long indeed. So there are two questions that one inevitably asks. First, how are they going to be funded, because I think the wider economic benefits are crucial to the case you are making? We would like answer to that.

Secondly, transport is clearly at the core of this, but there are so many issues connected with planning, the regions and so on, to what extent have the Government, the Cabinet Office and the key Minister responsible got it right if the benefits are so great? Is there not a need for the Cabinet Office to play a greater role?

**Lord Deighton:** Thank you for that question, which really gets to the heart of some of the issues. I share your frustration with the way our looking at benefits here does not really quite match a transformational project. The more transformational and the bigger the project, the more important the wider economic benefits are, typically. But I think it is an important discipline and guide that we put everything on the same basis. You always begin with a standard cost-benefit analysis, because then you can rank projects and not get too carried away. Of course, we talk about the Jubilee Line and the M25, and we only ever remember the ones that had much wider economic benefits, so I think the retrospective analysis does give you a bit of an optimism bias. I like to think of us as being at the next stage, which is: let us put behind us assessing the costs and benefits, because you can only go so far before you reach diminishing returns, and the real job is how you crystallise the lowest possible costs and realise the biggest possible set of opportunities. Conceptually that
is how you move off from the evaluation analysis to the project delivery. So I think it is important to understand that there is a theory behind it.

How do you go about it and how do you fund it? For me, I am delighted that having created this strategy and empowered these people we are overwhelmed with lots of brilliant ideas to fund. That is a very high-class problem, and we just need to be highly disciplined about choosing which ones to fund and to be creative in funding as many of them as possible in a way that is manageable within the various fiscal constraints that we have. I think process can help with that problem.

There are three or four elements to what you have to do. It was clear to us that this regeneration, rebalancing or growth in the cities has to be locally led. For this project in particular you need the discipline of having a very clear vision locally about what they want out of it, a very clear growth strategy that fits what the cities are doing together with the broader region, and a very specific delivery body that is charged with making all that happen. The regions were particularly keen, though, that they should be supported by the centre, which is probably a function of scars that they have had from past things they have never been able to get done. So they were very keen that we set up a—for want of a better phrase—regeneration body in the centre to support all the regeneration efforts around the cities. We are in the process of setting that up and working out how to capitalise it to give it the financial wherewithal to do some of the investment ahead of the train arriving. I think it goes with the flow of what we are doing in general in empowering city leadership. The Chancellor has already done the deal with greater Manchester, which is always our favourite city and region, saying, “You guys seem to be pretty good. You seem to have a plan. Okay, what extra powers do you need? How can you encompass the broader region? What is a sensible basis for us to devolve more money to go with the power and the plan?” I think the Chancellor has said that he has opened the business to other cities that can come up with a similarly credible way of developing their own local economies. I think it will require some changes as to how they go about planning, but these are all achievable things. What I love about it is that it is unleashing a real appetite to improve the cities just in the way you would want.

Lord Griffiths of Fforestfach: Those transformational benefits come at a cost. We heard least week from TfL that the sheer capacity problems of High Speed 2 delivering more passengers to Euston—a Euston that itself is going to have to be completely rebuilt—would necessitate Crossrail 2 in order to move the traffic around. I think that was a cool £27 billion. So you are absolutely right; it is inspiring in some ways that there are all these projects. On the other hand, some of them are going to be absolutely essential if HS2 is to work and they come at a very great cost.

Lord Deighton: The Secretary of State has the answer to that. I never cease to be impressed by TfL’s capacity to take any single piece of data and use it as justification for Crossrail 2.

Rt Hon Patrick McLoughlin MP: I was merely reflecting a little earlier on, when Lord Griffiths said at the start of his question that the northern city leaders seem to be ambitious, that I would suggest arranging for Lord Griffiths to meet Boris Johnson to discuss ambition and London transport demands. I think it is rather a good thing that there is this ambition by city leaders and that it is being more seriously looked into.
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Q229 Lord Rowe-Beddoe: Secretary of State, if we may, let us stay with what has been referred to as HS3—that link. As you have heard we had the benefit of meeting five or six leaders of large northern cities, including the private sector. I must say that sitting there—and I can understand what has been said—I suddenly became very much aware that this not just desirable for them but the difference perhaps between night and day. I think Sir David Higgins in his second report, which was published in October, said that, “substantially improved services east-west are not only desirable, but possible. This is as important to the North as Crossrail”. So I am confused. We have the why, and it would be much easier to start perhaps from the top end, but then we are told by Mr Prout in evidence that of course we have all the planning now and we have not done much up there. It worries me, and I think it worries this Committee, that we are still London-centric. We have heard the warnings about the imbalance that this could create and not to do what you all—your Government, the previous Government, Lord Adonis—would like to see happen. We asked one of the leaders, the Mayor of Liverpool, if he had a choice between HS2 and HS3, and I have his quote here. It will be no surprise that he said, “I would go for HS3 all the time because it is seriously about connecting cities to drive economic growth in those cities to generally rebalance the economy”. How would you address those sorts of concerns?

Rt Hon Patrick McLoughlin MP: It is a very wide question. I do not think that Joe Anderson, although he would be talking for himself as far as that is concerned, would get the agreement of Richard Leese on what else is required. I do not think it is one or the other. I do think that the east-west links are part of the same issue and solution. Perhaps one of the things that we have not done incredibly well in this country over the years is invest the right kinds of amounts in our transport infrastructure that we need to invest. At the moment we are doing quite a lot in the north. We have the northern hub taking place, which will lead to a great deal of improved capacity in the short term. We have created a body called Transport for North. I have met it and I am going to meet it in early January, too. That is doing the initial work. The Government, along with Transport for North, will come out with their recommendations towards the end of March on the way forward for transport for the north. But I still come back to the point that it is not one or the other. They link into each other, and I do not think that we have been idle on the subject.

It is just worth thinking about the money that we are spending on HS2. It is not that it is being spent on HS2 and we are not doing anything else. Over the next five years in the region of £38 billion will be spent by Network Rail, and £12 billion of that is enhancement of the rail network. At the moment, there is a huge project going on at Reading station, for instance, not just rebuilding the station, although that has taken place, but providing new extra capacity so that some of the freight that is coming down from the Midlands is not going to go directly on to that railway line but will go over that railway line, thus freeing up capacity. So that is one of the things that I would say: this project is not in isolation as far as infrastructure is concerned. This is not the only project we are doing. This project starts basically when Crossrail finishes, and if you look at the money profile you will see the profile of expenditure rise once Crossrail takes over. Once Crossrail is completed in 2018, that is when the money will start to be spent on HS2.

I would also mention that you have the positive benefits of showing off and promoting engineering in this country, and perhaps a lot of other sides of the benefits that we have seen in the amount of work and business that will be set out for companies in this country. HS2 has already held three exhibitions and conferences for small and medium companies on how to feed into the business opportunities that are going to come from HS2. One of those
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was in London, Manchester and Birmingham, and they were well attended by a range of businesses from Carillion to even very, very small local suppliers. I think that is all part of the overall story, as is making sure that we as a country are in a position to provide not just the workforce but also the goods and services that will be needed on a project like this, as we have done, in fairness, for Crossrail.

**Lord Rowe-Beddoe:** Thank you, Secretary of State. Can I just ask Lord Deighton another question? You have talked about a regeneration board and my ears pricked up, as a former chairman of the Welsh Development Agency and a person who sadly rued the day when this Government decided to get rid of regional development agencies. How are you going to conceive that? Are you going to have private-sector people? Or is it just to be Whitehall?

**Lord Deighton:** No, it will be private-sector people. It will probably be built on the existing Network Rail regeneration business, LCR, and they will team up with HS2 centrally and then work with each of the cities together. We think that gives us the right balance between being locally led in the cities but having somebody in the centre who can help extract money from us at the Treasury and can also make sure that we are sharing best practice across all the different projects.

**Lord Rowe-Beddoe:** But who can provide advice to the cities if required.

**Lord Deighton:** Absolutely, so expertise, best practice and a connection back into the hub.

**Q230 Baroness Wheatcroft:** I can understand that rebuilding economies outside London depends in part on having good connectivity with the capital. There is no getting away from the importance of London, but I wonder whether the Secretary of State could say a bit about what has been learnt so far from HS1. Has that benefited economies outside London?

**Rt Hon Patrick McLoughlin MP:** If you go back to the Second Reading debate on HS1, a number of Kent MPs made a point about what HS1 has achieved for Kent and the areas in and around it. Perhaps one of the more interesting speeches was by Mr Mark Reckless who, of course, has said what a fantastic job HS1 had done for the Medway towns in providing that connection for Kent.

**Baroness Wheatcroft:** I am not sure I would put much stress on what Mr Reckless says. Do we have any figures?

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**David Prout:** We will publish an interim report on the impact of HS1. That report is largely built around benefit-cost ratios. One of things that is very difficult to do, either in projecting or indeed measuring the growth that is generated by transport infrastructure investment, is dealing with land-use change and what is displacement and what is genuinely new growth.

That is something that Professor Venables and Professor Overman, who came to talk to you, have worked with us on. We will also be publishing their report, which makes recommendations on how we should try to measure that better in future.

**Lord Smith of Clifton:** When is it likely to be published?
David Prout: I do not have a date. I know that the HS1 report is going through the assurance processes within the department at the moment.

Lord Smith of Clifton: Is there any estimated time of arrival?

David Prout: I do not have it.

Lord Smith of Clifton: It will be after we have reported?

David Prout: I do not know. I cannot tell you.

Baroness Wheatcroft: Obviously it would be interesting, and any figures that you could get to us in advance of that would be appreciated. One of the things that would be useful to know is the extent to which people are choosing to go on HS1 and how many people are opting for the cheaper tickets on the stopping train, and that feeds into my question here. What about pricing on HS2? Would you countenance undercutting by the other rail lines?

Rt Hon Patrick McLoughlin MP: Basically, no. We believe that we are providing extra capacity; it will not need to be undercut. There is competition on perhaps one of our cities, Birmingham, because you have three different services that feed into Birmingham. You have Virgin Trains, you have London Midland and you have Chiltern lines as well that feed into there, but Virgin has continued to see growth, as have the other two carriers. So we have seen a great increase in passenger numbers. That is probably one of the areas where you have the most competition, although there is open access to a more limited extent on the East Coast Main Line but not to the same degree as in that competition between three fairly big operators.

Q231 Lord Carrington of Fulham: I will come on to what I want to talk to you about, which is the cost of the whole project. But when we were talking about capacity on the West Coast Main Line, the evidence we have heard—and in fact I think some of the evidence we have heard from Mr Prout in the past—was that one of the major capacity constraints was the commuter lines into London, which are overcrowded at the moment, so their capacity is too short. We heard in the evidence before that the proposal for HS2 was to relieve that so that there would be more train paths coming in on the commuter routes into London on the existing West Coast Main Line tracks. Are there other ways, though, of relieving the commuter traffic into London?

Rt Hon Patrick McLoughlin MP: One of the things that I think is quite interesting is the impact that Crossrail will have on Old Oak Common. The fact is that Old Oak Common will become a major new terminus for transport in England and the United Kingdom in due course, because you will have not only the Crossrail trains running there but another interchange for other destinations. So Old Oak Common will become a very important transport opportunity in the future, as indeed could the development that could take place around Old Oak Common. The mayor is setting up a development corporation specifically for that area, which you will know perhaps better than I do.

Lord Carrington of Fulham: I have had some involvement, yes. The problem with Old Oak Common, though, is that it is going to have Crossrail coming into it, obviously, but its other transport links, particularly into the underground and bus systems, are not great at the moment. It will take a lot of investment to make that work, I would have thought, but I take your point. It leads on to my question, because those two aspects of HS2 are going to lead to massive knock-on expenditure, not just the expenditure that TfL is talking about for Crossrail 2 but quite a lot of smaller expenditure adding up to quite large sums. How
confident are you that the £50 billion or so that HS2 is going to cost is going to be realistic? The French experience with the TGV has been that they have not been able to keep the costs in line with their budgets. I know that we perhaps have a better track record on that with HS1, but how confident are you that these costs can be constrained?

Rt Hon Patrick McLoughlin MP: We do have a better track record, more up to date than HS1, with Crossrail. Crossrail has been a fantastic achievement; it has been delivered on budget and within the estimations for the next two years on time. That has shown that we have some tremendous advantages in the delivery on costs. That is one of the reasons why David Higgins was brought in as the chairman of the company to oversee that project, and likewise Simon Kirby. So it is a matter of making sure of the cost elements that have been set out—£21.4 billion for phase one, £21.2 billion for phase two and £7.5 billion for the rolling stock—which have also included quite a healthy contingency. The first position on phase one is £5.7 billion, on phase two it is £8.7 billion, and there is £1.7 billion rolling stock contingency.

Lord Carrington of Fulham: The experience of what is happening at Euston station is that the costs keep on being multiplied every time anybody looks at it again. You do not have to add in the Euston Arch to make it run over cost. How confident are you that those types of costs, the smaller costs, are not going to suddenly come in and bite you? Are they really indicated in the contingency?

Rt Hon Patrick McLoughlin MP: Of the three stations—Euston, King’s Cross and St Pancras—it used to be Euston that was seen as the modern station, the good station. Now it is seen as the slightly tired station that desperately needs the kind of investment that we have seen at St Pancras and King’s Cross. I have been using St Pancras over the last 20 years. It used to be a place that you would not want to spend more than five minutes in. Now it is a destination in its own right. If you arrive there early for a train you do not mind. It is a pleasant place and a great environment to be in. So I think that is what we have to properly work on at Euston.

I was over in New York to see the work that is being done in the Hudson Yards development at Penn station. They are basically developing above the station. That will capture value for what you could do with the rest of that area and possibly be of help to some of the costs that we are seeing with the station and a lot of interest in the way in which that should be developed.

David Prout: Can I just say, Chairman, that we are not over cost at Euston. We know exactly what the budget is for designing the HS2 station at Euston. The things we are working on at the moment are how we can reduce disruption to existing passengers into Euston—and we have taken a step back to make sure that we have got that absolutely right—and how we can design our new station to fit into a wider vision for Euston station. But as far as the HS2 station is concerned, we are not over budget. We are simply taking time to reflect on what we are proposing to make sure that what we are doing forms part of a bigger jigsaw puzzle for the whole of Euston station if a decision is taken in due course to rebuild the rest of the station.

Lord Carrington of Fulham: Adding in all these bits, do you have a total envelope of costs that you think this would deliver the project under? Is £50 billion the right number? Or is it higher than that by the time you have added in all the additionals that you are going to have to put in to make the project work?
Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP—Oral evidence (QQ 216-235)

**Rt Hon Patrick McLoughlin MP:** No, the £50 billion is the envelope cost for the project.

**David Prout:** The £50 billion includes everything that is necessary to make HS2 work. It includes, for example, platform extensions at stations off the HS2 network where HS2 trains will run: Lime Street, Waverley and Newcastle. There is money in the budget for those kinds of adjustments. Everything we need to do for HS2 is included in the £50 billion. One of the first things that we asked David Higgins to do when he took over as chairman of HS2 was to assure us that our costs were right. He did a lot of work assuring the costs and, in particular, benchmarked HS2 costs against HS1 costs. If you look at what he published in March, you will see that HS1 costs per mile in 2011 prices were £37.6 million. For HS2 we have an allowance at P50 of £43 million per mile and our P95 figure is £47.6 million per mile. If you take HS1 as a benchmark at £37.5 million per mile and our allowance at P95 is £47.5 million, we think our costs are robust.

**Lord Carrington of Fulham:** That would cover the complementary infrastructure projects that are required, or enough of them to make the whole thing work?

**David Prout:** All the infrastructure that is required to allow HS2 to run on the dedicated line and the train-service specifications for the classic lines as well.

**Lord Carrington of Fulham:** And to deliver the basic economic benefits to the north?

**David Prout:** All the benefits that were set out in the economic case, yes.

**Lord Deighton:** That should not stop us evaluating other projects that logically should take advantage of the fact that we will have HS2. That is where you have to draw the line.

If I may make one other comment, there are two aspects to the budget. One is that it is clearly good practice to deliver the project within the budget. Of course we may just have a budget that is much too big. So we also need to make sure—and Mr Prout referred to this—that our costs are as competitive as they can be. One thing that we have done at the Treasury is to say to David Higgins, “You need to go and have a look at how they are delivering these projects across Europe”, because we have done some work through Infrastructure UK, which is part of the Treasury, which shows that some of the big European projects per mile get delivered more cheaply, and we have broken that down. A lot of that is clearly a function of the building here taking place through highly congested, difficult terrain. If you go from Euston up to the Chilterns, that is a really complicated piece of engineering, so its cost per kilometre is going to be very, very high. But we do think that there are probably practices and techniques that are employed in Europe that we could probably transfer here to get some costs down, and we want to at least make sure we have understood that, explored it, and implemented if it is possible.

**Rt Hon Patrick McLoughlin MP:** There are also the lessons that we are learning from Crossrail. Some of the construction, things that have been developed by Crossrail particularly with Laing O’Rourke such as pre-building offsite and putting into site, have been very impressive indeed. Laing O’Rourke has a huge site in Nottingham, in an old colliery area, which is a very impressive production unit indeed.

**The Chairman:** Mr Prout, what is £50 billion in 2014 money?

**David Prout:** We quote it in 2011 money: Q2 2011.

**The Chairman:** But we are in 2014.
Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP—Oral evidence (QQ 216-235)

David Prout: We quote it in 2011 prices to maintain consistency with our quotes across a period of time.

The Chairman: Consistency, of course, is a virtue, but in real terms you have to spend the money in the year you spend it. My question is: what inflation rate is built into your planning for the purposes of this type of construction? As the Secretary of State pointed out, Crossrail 1 was done at a particularly advantageous time when there was precious little else happening. We now have a cornucopia of projects and the economy is moving forward, which is all good news, but that is likely, is it not, to lead to a degree of inflation for this type of project? Has that been calculated?

David Prout: We use the standard Treasury inflation guidance to calculate that in the benefit-cost ratio.

The Chairman: Thank you.

Q232 Lord Lawson of Blaby: You spoke warmly a moment ago about HS1. What speed does HS1 run at?

David Prout: It runs at 300 kilometres per hour maximum. I will confirm that in due course, but I am pretty sure that is its maximum: 360 for our HS2 trains.

Lord Lawson of Blaby: But HS2’s maximum is 400 is it not?

David Prout: We design to that standard, but—

Lord Lawson of Blaby: Exactly. HS1, although it is designed to run at 300, does not actually run at 300; and 400, which is designed for, is far faster than the TGV, far faster than anything else in Europe, far faster than HS1. Yet for this premium, for this fancy vanity project—being able to boast that we have the fastest railway anywhere in Europe—it is a substantial additional cost. It saves a piffling amount of time, whatever that time is worth, and it does very little more, if anything, to capacity, than if it were an HS1-speed railway. How can you possibly justify this additional cost, particularly, as Lord Deighton said, when you want to achieve your objectives at the lowest possible cost?

David Prout: The additional cost of designing to a 400 kilometres per hour capacity as opposed to conventional railway is roughly 9%.

Lord Lawson of Blaby: This is what Lord Adonis said. He said 10%, but that is the same thing. But we have been advised that that is untrue, because that assumes precisely the same alignment of the tracks. That is correct, is it not?

David Prout: You would not require the same alignment if you were designing to a lower speed.

Lord Lawson of Blaby: Exactly. That is my point. When you said 9% or 10% extra, that assumes that you had the same alignment—and you would not have the same alignment. In fact, it would be cheaper, so the difference would be greater than 9% or 10%.

David Prout: Why would you not have the same alignment?

Lord Lawson of Blaby: You just said that you would not. You yourself said that.

David Prout: I was saying that you would not have to have the same alignment.

Lord Lawson of Blaby: Exactly, so if you were sensible you would not; you would do it on a cheaper alignment. So I remain puzzled as to why you go for this ultra-high speed. I
David Prout: But what is the cheaper alignment that you are referring to?

Lord Lawson of Blaby: We are advised by people who know more about this than I do that you would not have to have the same alignment, and you would have a different alignment because it would be cheaper. You yourself said that you would not need to have the same alignment if it was at the HS1 speed. You said that a moment ago.

David Prout: You do not have to have the same alignment, because the radius of the curves is different.

Lord Lawson of Blaby: Exactly.

David Prout: But the alignment that we have chosen is to minimise the environmental impact of the railway. That above all is the thing that has dictated the route of the train. You would still want to have that objective in mind if you were building for a slower speed. So I do not accept the premise that you would necessarily have a different alignment. Where you save money on slower speeds is on things like tunnel size, because as a train goes through a tunnel if it going fast it generates a lot of heat and you have to have a bigger tunnel. But I do not accept the premise that you would necessarily have a different alignment.

Lord Lawson of Blaby: You yourself said that you would a few moments ago.

David Prout: I said that you could.

Q233 Lord Lawson of Blaby: Exactly, and to save money you would. I assume the Treasury is not so asleep on the job that they will allow you to have a more expensive alignment than you need.

On capacity, again the Secretary of State pointed out that there has been a particularly marked increase in recent years in freight capacity, and that is clearly important in design. But the capacity problem is the capacity at the peaks only and clearly freight does not need to travel at peak times. So why do you feel that the capacity problem is as acute as it is when freight could travel—if the railway’s pricing policy was sensible—at off-peak periods and everybody would be happy?

Rt Hon Patrick McLoughlin MP: I have been on the West Coast Main Line a number of times and heard the excuse that we are running late because of a freight train in front of us, so I do not buy what you are saying as an argument to back up the point that you are making. The simple fact is that the West Coast Main Line, as it operates today, is the busiest railway line anywhere in Europe and we have taken as much capacity as we can out of it. Obviously there is greater demand in the rush-hour period and in the peak-hour period, but the growth that we have seen is not just in the peak-hour period; it is across the whole service.

Lord Lawson of Blaby: But there is no capacity problem on the figures that we have been provided with apart from at the peaks.

David Prout: There are two different issues with regard to capacity. One is with regard to train paths, and that is the number of trains you can run on the track. The second is in
regard to overcrowding and the number of people on the trains. Overcrowding is worse at peak times, but there are not enough train paths at the moment to accommodate the amount of demand for freight transport. Freight is constantly trying to get on the lines, and we are unable to give them the space to get on the lines that they want.

**Lord Lawson of Blaby:** Let me come back to the huge taxpayer subsidy that has been referred to earlier today. To what extent do you think there is scope for reducing this taxpayer subsidy by the Government getting a cash return from the operator of HS2? What have you factored in for that?

**David Prout:** We have not decided what to do with HS2 once it is completed. With HS1, a 30-year franchise was sold for roughly a third of the price of constructing the railway. HS2 is different because it is absolutely the core part of the north-south railway system and it is designed to abstract a lot of business from the rest of the railway. We have shown that, overall, net for GB Rail HS2 will increase the amount of revenue. If you sell a franchise for example on HS2—and, as I say, no decisions have been taken by government at this stage—you get an upfront capital receipt but you do not have the benefit of the very substantial revenues that HS2 will bring in over a very long period of time. So it is by no means obvious with HS2 that the right thing to do is to sell a franchise in the same way as was done with HS1. Decisions on that have not yet been made and they will be made in due course by the Government.

**Lord Lawson of Blaby:** But this is rather important, is it not? What is the basis for this cash return that you will get in year in, year out?

**David Prout:** The basis is the modelling that we have done on demand and fares.

**Lord Lawson of Blaby:** But this is rather important, is it not? What is the basis for this cash return that you will get in year in, year out?

**David Prout:** The basis is the modelling that we have done on demand and fares.

**Lord Lawson of Blaby:** It is the cash return that the taxpayer, the Government, will benefit from?

**David Prout:** Yes. It will go into the overall pot of money that is used to run the UK rail system and there is a redistribution mechanism there. Some franchises run at premium—that is, they pay money in—and some franchises are paid a subsidy. HS2 will operate at a very substantial surplus, so a premium will be paid into the overall system.

**Lord Lawson of Blaby:** In your calculations you have made no estimate—no reliable estimate anyway—either of what you could get for selling the franchise or, if you gave the franchise away for nothing, which you are suggesting is a possibility, of what income you would get year in, year out—

**Rt Hon Patrick McLoughlin MP:** I do not think we would be giving the franchise away for nothing.

**Lord Lawson of Blaby:** So you will be selling?

**Rt Hon Patrick McLoughlin MP:** Not necessarily, but it may be the way in which the franchise is offered. As Mr Prout has said, those decisions have yet to be taken. It may well be that you could offer a franchise, or more of the kind of deal that we have with HS1, which is another long-term concession. But those will be decisions to be taken nearer the time.

**David Prout:** I am sorry, Lord Lawson. I used the word “franchise” for HS1. I meant concession, and that is what has caused the confusion. Apologies.
Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP—Oral evidence (QQ 216-235)

Lord Lawson of Blaby: Finally, taking all this into consideration, in your estimation what is the level of the ongoing taxpayer subsidy for HS2?

David Prout: Setting aside the cost-of-capital issue that we discussed earlier, our modelling says that there would be no ongoing taxpayer subsidy for HS2. In fact, quite the opposite: it would run at a very substantial surplus.

Lord Lawson of Blaby: Lord Deighton’s letter referred to £32 billion or £31 point something billion.

Lord Deighton: That includes the capital cost.

Lord Lawson of Blaby: That includes the capital cost?

Lord Deighton: Yes.

Lord Lawson of Blaby: Fully? Which should be included, of course. That is quite right.

Lord Deighton: For the full economic analysis, but the way we do it—the year in, year out cash flow—should be positive, as Mr Prout suggests.

Q234 The Chairman: Taking the numbers from Lord Deighton’s letter we have a £31.5 billion capital cost, which is going to generate £300 million a year, 1% return. Is that correct?

David Prout: I do not know if those two figures are strictly comparable. I think I would need to take some advice and write to you as to whether you can make that calculation.

The Chairman: It says here that it will generate a premium of around £300 million a year. So it would seem—

David Prout: Correct, for UK rail as a whole.

Rt Hon Patrick McLoughlin MP: That is for UK rail as a whole from 2036.

David Prout: In 2036, yes.

The Chairman: That level of return would make it extremely difficult to recover a substantial part of the capital cost that has been invested, so should we not look at the capital cost as sunk money?

David Prout: No one is suggesting that you should not. It is a choice for the Government whether or not to make this investment.

The Chairman: This, of course, then has to be paid off by the taxpayers over time, but the £300 million a year—

Lord Lawson of Blaby: That is the whole network. I think HS2, according to Lord Deighton’s thing, is between £50 million and £100 million.

David Prout: The operating surplus on HS2 annually will be in the billions. But when you then feed that into the overall GB rail-network-subsidy system you will find that you get less of a premium from the West Coast Main Line. So they sort of balance each other out.

The Chairman: That is the net number?

David Prout: Yes, the net.

The Chairman: I see.

David Prout: Yes, and net you get £300 million.
Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP—Oral evidence (QQ 216-235)

**Lord Deighton:** We are taking all the business away from the existing network.

**The Chairman:** This begs a question about the existing classic franchise and whether that survives.

**Lord Deighton:** The problem is in trying to work out a value for HS2 it is quite difficult to look at HS2’s value on its own, for example, without properly addressing the questions you asked earlier about the operating and pricing model, because effectively, to start with, the analysis here looks at it as an overall network, which I think at this stage is the right way to look at it. If we get to the point where we think it may be in our interest to separate it out and sell a concession, we will have to determine how to value it independently.

**The Chairman:** So those are all decisions that have to be taken?

**Lord Deighton:** Yes.

**Q235 The Chairman:** One final question, and this is still an issue that concerns the Committee: will you be publishing a list of those additional infrastructure investments—which for instance we heard about when we were in Manchester—which are necessary to achieve the vision, Lord Deighton, that you painted, which is of economic regeneration? Will we be able to see a list of those and the costs associated with them? Whether or not you include Crossrail 2 in that essentially is a matter that you will you have to take up with the Mayor of London.

**Rt Hon Patrick McLoughlin MP:** I do not think that any decision has yet been taken as far as Crossrail 2 is concerned, but there will be organisations that will include the cost of Crossrail 2 and sort of try to build up the figure. The truth of the matter is there will need to be investment in Euston if nothing happens. So do you say that that is a result of HS2, or do you say that when you are rebuilding HS2 you take the advantage of doing the upgrade that would need perhaps to have happened in due course? I think that figure will be very difficult.

The other thing is whether the northern hub is anything to do with HS2. Well, it will feed into the rail infrastructure and it might make people more likely to use the railway as a means of transportation. So it is basically impossible to do that figure. As I said in my earlier remarks to the Committee, over the next five years £38 billion will be expended by Network Rail, of which £12 billion is enhancement on the service. Will all that enhancement in future years be for the benefit of HS2? No. The answer is that it will not be, because there will be certain areas that will want better connectivity as a result of certain areas getting HS2. So I think that is an impossible figure for us to give you.

**The Chairman:** But the cost of the new stations that have to be built at Leeds and Birmingham is included, is it?

**Rt Hon Patrick McLoughlin MP:** That is included.

**The Chairman:** So the direct costs associated with HS2 are included, and let us say that optional extras, which would have transformational benefits to the economy, we would have to look at separately?

**Lord Deighton:** Yes. I think you are seeing hesitation on this side because we obviously want to avoid the conclusion that you have to add all these other costs on to get the benefits. I think Mr Prout has been very clear from the beginning that this is how the analysis has been done and that the existing justification of the business is based on what is in the
Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP—Oral evidence (QQ 216-235)

budget. When we talk about all these other things we are simply saying, “We have a strategy. HS2 is part of the strategy. There will be many other components to the strategy that will need funding too”, and it clearly makes sense when you spend money in the future to link it to the things you already have. So I think it is slightly dangerous to try to create an accumulated cost. I think that is the resistance you are seeing here.

The Chairman: On that note we will end. Thank you very much for your time and very helpful answers.
Mrs Mary Gair—Written evidence

There is no economic case for HS2. The projected cost of £50 billion is likely to be far exceeded if fair and just compensation is given to all those truly affected by this project. The passenger fares would require to be so high to recover the investment costs that access to HS2 would be precluded from all but the privileged few.

The Strategic Case for HS2 should have included fair compensation for ALL those affected by the project, including anyone affected by severe road congestion during the construction process and general noise and disturbance caused to a far wider area than that currently considered for compensation.

The economic benefits likely to come to the Midlands, the North of England and ultimately Scotland are exaggerated. There may be short term employment on the construction project but there is little hard evidence of any longer term benefits. There is already a perfectly good train system linking these areas and there has been little sign of a move away from the south for businesses.

London will remain the business hub for the UK and labour and expertise may indeed be facilitated to move from the North to London.

The costs of HS2 which will be met by borrowed money will only increase the country’s indebtedness for many years to come. The M6 toll road is an example of such projects which fail to make any money and in fact lose vast sums for many years.

HS2 should not be operated as a Franchise and should not be placed in competition with the West and East Coast Main Lines. This would have a very detrimental effect on these lines, which currently serve the travelling public well and what is equally important, they are affordable to the average passenger rather than the privileged few.

The only way that HS2 would be able to gain sufficient passengers to justify its existence is if the fares charged were comparable to existing fares. The project would then be entirely unviable financially.

August 2014
Summary

1. This submission responds to the second, third and fourth questions asked by the Committee:

2. • What are the likely benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships?

• Might some parts of the UK suffer economic disadvantage from HS2?

• Is London likely to be a main economic beneficiary of HS2?

3. The paper assesses the extent to which job creation associated with HS2 may help to bridge the North-South employment divide by examining recent evidence, especially information produced for the HS2 Growth Taskforce, and recent projections of regional employment trends.

4. It shows that the claims for the regional employment impact of HS2 made by government or by supporters of the project are subject to serious qualifications. Consequently it is very difficult to sustain the argument that the employment impact of HS2 would significantly reduce the North-South divide.

Introduction

5. The impact of HS2 on the North and Midlands is a key issue in the case for or against the project.

6. The government and supporters of HS2 have consistently claimed that it will have a transformative impact in narrowing the North-South divide.

7. Transport Secretary Philip Hammond claimed the high speed rail network will "change the social and economic geography of Britain; connecting our great population centres and international gateways". Hammond further suggests that linking England’s main cities via high speed rail, with further links to Scotland, could help break down the north-south divide. "Bringing those economies in closer reach of London, allowing them to benefit from London’s magnet effect in the world, is going to help solve some of the most intractable postwar social and economic problems Britain has faced."

8. Similar claims have been made by government and supporters of HS2 ever since. Recently the HS2 Growth Taskforce said “HS2 could be much more than a railway. It could be an exciting and transformational opportunity, particularly for our cities in the Midlands and North….HS2 can help rebalance the economy.”

154 The Guardian, 3 and 4 October 2010.
9. Such claims have however consistently been challenged by independent experts: ‘Claims about the “transformational” nature of transport investments should be generally discounted because they have no convincing evidence base to support them’. 
Professor Henry Overman, LSE, Evidence to the Transport Select Committee

‘Taking the evidence in the round it is very difficult to substantiate the argument that high speed rail is likely to have a positive impact on regional inequalities.’
Professor John Tomaney, University College London, Evidence to the Transport Select Committee

‘In most developed economies high-speed railways fail to bridge regional divides and sometimes exacerbate them. Better connections strengthen the advantages of a rich city at the network’s hub: firms in wealthy regions can reach a bigger area, harming the prospects of poorer places.’
The Economist

HS2 and job creation: Recent evidence

10. The debate about the job creation impact of HS2 falls into two parts:

- Job creation from regeneration schemes linked to the construction of HS2, concentrated around stations.

- Job creation arising from the wider impact of HS2 on the economy.

Jobs from regeneration

11. Current HS2 Ltd estimates of job creation, including that associated with regeneration at HS2 stations, are as follows:\(^{156}\):

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<tr>
<th>Table 1 HS2 Ltd job creation estimates</th>
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<td>East Midlands</td>
<td></td>
<td>1500 – 1600</td>
<td></td>
</tr>
<tr>
<td>Sheffield</td>
<td></td>
<td>4000 – 5400</td>
<td></td>
</tr>
<tr>
<td>Leeds</td>
<td></td>
<td>13,200 – 19,700</td>
<td></td>
</tr>
<tr>
<td>Regeneration Total</td>
<td>30,300</td>
<td>48,700 – 70,300</td>
<td>79,000 – 100,600</td>
</tr>
</tbody>
</table>

12. Of these the construction jobs are temporary, and the operational jobs are small in number. The regeneration-related employment estimates are more significant, and the

\(^{156}\) http://www.hs2.org.uk/what-hs2/economic-benefits-jobs
majority of these would be in the Midlands and North.

13. However, as the government admits, many of these will not actually be new jobs, but relocations from elsewhere. Moreover, they are not necessarily directly attributable to HS2: while their location is a direct consequence of the location of HS2 stations, they will depend heavily on other public and private regeneration investment.

14. This is reminiscent of the case of Lille in France, where there has been major regeneration investment around the HSR station. Lille is frequently cited by supporters of HS2 as showing the scale of job creation resulting from HSR, but in practice HSR has at best been only one element in a much bigger regeneration ‘package’. Moreover, despite this investment, unemployment rates in Lille relative to the average for mainland France have actually worsened significantly since the arrival of the TGV. Thus based on this key indicator, there has been no narrowing of economic disparities as a consequence of high speed rail.

15. The experience of HS1 is also relevant. A report by Colin Buchanan and Partners suggested that HS1 might ‘help to deliver’ 100,000 jobs. However there is little if any evidence on the ground that these large numbers of jobs are materialising.

16. Claims about the propulsive role of HS2 in creating employment through regeneration must therefore be treated with considerable caution, not taken as fact.

Wider employment benefits

17. In addition to possible job creation through HS2 station-related regeneration, it is argued that there will be ‘wider economic benefits’ in terms of growth and jobs.

18. There are two main recent sources of evidence for the wider economic benefits accruing from HS2.

19. The report by KPMG, HS2: Regional economic impacts, claims that HS2 could generate £15bn productivity gains for the GB economy in 2037 when the full Y network opens, with a further positive effect in following years. However the employment implications of this are not spelled out by KPMG (and it is of course quite possible that productivity gains would not translate into employment growth if productivity increases resulted from labour-saving investment).

157 http://hs2theregionalimpact.wordpress.com/2011/05/09/french-lessons-is-hs2-a-cost-effective-tool-for-regional-regeneration/
159 In fact, Buchanan suggests HS1 might ‘drive’ the delivery of 70,000 regeneration jobs over 60 years. http://www.colinbuchanan.com/uploads/cms/files/147e7dfe-2a53-4267-83d7-72bdde9206e.pdf
160 In Ashford, where ‘huge economic benefits’ were claimed, unemployment has fallen more slowly than in towns not served by the high speed line - http://blogs.telegraph.co.uk/news/andrewgilligan/100082403/high-speed-rail-more-doubt-over-the-economic-case/.
161 KPMG, HS2: Regional economic impacts, September 2013
20. Moreover, the methodology utilised by KPMG has been severely criticised by independent experts. Professor Henry Overman of the LSE, erstwhile adviser to HS2 Ltd, in a commentary titled ‘HS2 Regional Economic Impact: Garbage in…….’, says the report does things which are ‘technically wrong’ but are crucial for their findings. Key parts of their method ‘does not have a firm statistical foundation’, ‘is essentially unfounded’ and ‘produces estimates of effects that are meaningless’.162

21. The KPMG work also makes clear that the economic impact of HS2 would produce losers as well as winners, especially in places and regions distant from HS2 stations.163 These need to be set against the headline-catching ‘£15bn gains’.

22. Estimates of wider potential regional employment impacts have also been made by Atkins, in consultancy for the HS2 Growth Taskforce.164 Table 2 combines these with the station-related jobs shown in Table 1 to show the combined jobs claims for station-related regeneration and wider economic impact.

<table>
<thead>
<tr>
<th>Region/locality</th>
<th>Estimated total jobs</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Midlands</td>
<td>51,300</td>
<td>WM Region</td>
</tr>
<tr>
<td>East Midlands</td>
<td>13,350</td>
<td>EM Region</td>
</tr>
<tr>
<td>West Yorkshire (Leeds)</td>
<td>20,000</td>
<td>Leeds only</td>
</tr>
<tr>
<td>South Yorkshire (Sheffield)</td>
<td>4000 – 5,400</td>
<td>Station-related estimate only</td>
</tr>
<tr>
<td>Northwest (Manchester)</td>
<td>60,000 – 73,000</td>
<td>Greater Manchester</td>
</tr>
<tr>
<td>Total North and Midlands</td>
<td>148,650 – 163,050</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>82,140 – 120,570</td>
<td>Euston + Old Oak Common</td>
</tr>
</tbody>
</table>

23. If this data is taken at face value, these estimates suggest that HS2 would have some impact in reducing the north-south employment divide. The estimate for London is greater than that for any other region/city, confirming that London would be the biggest beneficiary of HS2, but it is between 66,500 and 43,000 lower than that for the whole of the Midlands and North.

24. This data cannot however be taken at face value as evidence of the impact of HS2 on the North-South divide, for a number of reasons:

- The estimates of job creation for the Growth Taskforce are not independent but come from organisations with vested interests, such as Centro in the West Midlands, for whom this is a possible opportunity to lever in major further packages

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162 http://spatial-economics.blogspot.co.uk/2013/09/hs2-regional-economic-impact-garbage-in.html
163 KPMG 2013 op cit, p54.
164 Atkins, Maximising the Growth and Regeneration Benefits of HS2: Final Report, March 2014. It should be noted that the data varies region by region in terms of its origin and geographical coverage. It is however the most comprehensive available.
of regional transport investment, and thus are of questionable credibility.\footnote{Appendix 1 provides a more detailed critique of Centro’s jobs claims.}

- The estimates are dependent on these very substantial additional regional transport investment packages. If these are seen as jobs created by HS2, this effectively massively increases the cost of HS2. On the other hand if these costs are not incorporated in the bill for HS2, neither can HS2 justifiably claim these ‘wider economic impact’ jobs, which are only tangentially dependent on it.

- Moreover, there is no new government money for the regeneration proposed and so money would have to be taken from existing funds, threatening other regeneration possibilities across the region. Effectively, a big slice of future regional transport investment and regeneration would be diverted to try to support HS2 rather than to meet local needs.

- In addition, the intention of the Growth Taskforce is to show how the supposed growth and jobs benefits of HS2 can be more widely spread, by means of city-region regeneration and transport strategies centred around HS2 stations. But this means that the primary beneficiaries would be the core cities in each region, creating new disparities between the big cities and other areas. Thus for example of 51,000 jobs in the West Midlands half would be in Birmingham and Solihull, with the rest of the region fighting over the scraps.

- Much more account needs to be taken of jobs lost due to HS2 as a result of its negative impact along the route. These are largely excluded from consideration by HS2 Ltd, but would be substantial. They include jobs destroyed in businesses directly impacted by HS2, and others such as jobs lost in train operating companies which lose business to HS2.

- The cost of each job created by HS2 would be eye-wateringly expensive. Taking the jobs in Table 1 (as these are the only ones for which costs are available), each job would, on the basis of government figures, cost somewhere between £420,000 and £350,000. The real figure would be much higher if temporary and relocated jobs were excluded. Applying the average cost per job in the wider economy to the sum which HS2 will cost would create 4 times as many jobs, while the cost per job for a standard local economic regeneration project is probably around £35,000. There are much better ways of spending the money allocated to HS2 which would bring more jobs and growth across the whole country.\footnote{See for example New Economics Foundation, High Speed 2: The best we can do? June 2013}

- Finally, these estimates of the job creation potential of HS2 are far below earlier estimates which were crucial in building the case for HS2 in the Midlands and North. Perhaps the most widely cited source of this type was undertaken for Greengauge 21 by KPMG in 2010 (Table 3)\footnote{High Speed Rail in Britain: Consequences for Employment and Economic Growth. Greengauge 21, 2010. The projections are from a base date of 2007. 2021 is the date when it was envisaged that the HSR network would become operational.}.
Table 3 Job gains and losses attributed to HSR by KPMG by region 2021 – 2040

<table>
<thead>
<tr>
<th>Region</th>
<th>000s</th>
<th>South</th>
<th>000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>-25</td>
<td>London</td>
<td>-59</td>
</tr>
<tr>
<td>West Midlands</td>
<td>68</td>
<td>Southeast</td>
<td>-71</td>
</tr>
<tr>
<td>Yorks and H</td>
<td>49</td>
<td>East</td>
<td>-40</td>
</tr>
<tr>
<td>Northwest</td>
<td>62</td>
<td>Southwest</td>
<td>-48</td>
</tr>
<tr>
<td>Northeast</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>264</td>
<td></td>
<td>-218</td>
</tr>
</tbody>
</table>

North-South divide reduced by 482,000, 24,000 jobs a year

It will be seen that the data shows gains by Northern and Midland regions (with the exception of the East Midlands) but also - in contrast to the contemporary official estimates - substantial losses in the Southern regions. Even more startlingly, Volterra and Arup undertook a study on the basis of which the Core Cities Group claimed in 2011 that HS2 could underpin 1m additional jobs in our major urban areas.168 Political and policy support for HS2 was thus built initially on claims that HSR would have a far more substantial impact in narrowing the North-South divide than current estimates.

**HS2 jobs claims in context**

25. Even if we were to ignore these many awkward questions about the official jobs claims for HS2, to what extent would they reduce the North-South employment gap? Asking this question highlights an important absence from the much of the debate about the impact of HS2 on North-South employment disparities: to wit, any benchmark of the scale of existing regional disparities against which to measure claimed impacts of HS2.

26. It is not possible to suggest a benchmark which is directly comparable to the data produced by HS2 Ltd and Atkins for the Growth Taskforce. A comparison can be made however which, despite its limitations, still offers a valuable contribution to policy debate.

27. Table 4 shows estimates by Cambridge Econometrics of employment change by region over the next decade. This forecasts employment growth in all regions, but much greater in the Southern regions than those of the Midlands and North. Accordingly, the North-South divide is projected to widen significantly, by nearly 380,000 jobs or about 35,000 a year.

168 [http://www.corecities.com/news-events/growing-evidence-job-creation-through-high-speed-2-and-better-local-transport-infrastruc](http://www.corecities.com/news-events/growing-evidence-job-creation-through-high-speed-2-and-better-local-transport-infrastruc). However on examination the Volterra/Core Cities figures turn out to be no more than a hypothetical and highly unlikely 'best case economic scenario' for the period up to 2020 – well before HS2 would be operating and so in no sense a result of it!
Table 4: Employment change by region 2014-2025\textsuperscript{169}

<table>
<thead>
<tr>
<th>Region</th>
<th>000s</th>
<th>Region</th>
<th>000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>126</td>
<td>London</td>
<td>458</td>
</tr>
<tr>
<td>West Midlands</td>
<td>166</td>
<td>Southeast</td>
<td>329</td>
</tr>
<tr>
<td>Yorks and H</td>
<td>131</td>
<td>East</td>
<td>241</td>
</tr>
<tr>
<td>Northwest</td>
<td>170</td>
<td>Southwest</td>
<td>184</td>
</tr>
<tr>
<td>Northeast</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>831</td>
<td></td>
<td>1212</td>
</tr>
</tbody>
</table>

**North-South redistribution 381,000: North – South divide widens by 35,000 jobs a year**

28. How does this compare with the current official claims? We cannot be precise, as the latter are for an unclearly specified future period, while the regional employment forecasts are for the next decade. All the same, a comparison provides very illuminating orders of magnitude. The official jobs claims show a narrowing of the North-South divide by 42-66,000 jobs. If we were to assume that these occurred over a decade, that would mean roughly 4,300 – 6,600 jobs a year – compared to the 35,000 a year by which the divide is currently widening. The impact of HS2 – even ignoring all the deficiencies of the official estimates noted above - would not come anywhere near stemming the current widening of the jobs divide, let alone start to close it. This fundamentally questions any statement that HS2 could bring ‘transformational change’ to the economic geography of the UK.

Conclusions

29. Assertions that employment growth attributable to HS2 will significantly reduce the North-South employment divide are unsustainable:

- Official forecasts of the regional employment implications of HS2 produced by government or by supporters of the project are subject to very serious omissions and qualifications.

- Even so, they are much more modest than previous estimates which were crucial in building the case for HS2 in the North and Midlands.

- Even when the official claims are taken at face value, any reduction in the jobs gap would fail by a large margin to stop the North-South divide widening, let alone produce ‘transformational change’.

- The jobs created by HS2 and possible associated investment would be primarily concentrated in the core city regions, especially around HS2 stations, creating new disparities within regions.

Professor Mike Geddes—Written evidence

- HS2 is a very wasteful means of job creation. The £43bn cost of the scheme could be used much more cost effectively to create many more jobs across the whole country.

September 2014
Appendix 1

CENTRO and West Midlands employment

In June 2010 CENTRO published a report commissioned from KPMG entitled: “High Speed Rail and supporting investments in the West Midlands - Consequences for employment and economic growth”.

This report, which headlined the creation of 22,000 new jobs in the West Midlands consequent on phase 1 of HS2 was used as one of the foundations for subsequent claims by the same authors for the generation of over 50,000 West Midlands jobs following completion of the Y network.

The report’s methodology contains many flaws, not least the omission of any attempt to quantify job/investment displacement effects, both within the West Midlands Region from less to more attractive locations, and from the West Midlands to London.

Putting these flaws on one side for a moment, and taking the report at face value, a close examination reveals that:

1. The job creation figure is based upon a very substantial and very expensive package of local transport improvements to improve connectivity to HS2. **Without this package, the report admits job creation would be halved.**

2. The job figure assumes no fare premium for travelling on HS2 as opposed to conventional rail services. **If a 30% fare uplift were to be applied (a not unlikely scenario) the report admits that the projected benefits would be reduced by a further 50%**.

3. The report states that **the benefits would be concentrated on those parts of Birmingham and Solihull closest to the proposed stations**. No estimate is made of investment displaced from elsewhere in the West Midlands conurbation.

Thus, although the figure of 22,000 jobs was widely publicised (and is currently still being quoted by HS2 Ltd on their website), it seems very likely that direct employment benefits to the West Midlands would only amount to around a mere 5000 jobs at most.
Cheryl Gillan MP—Written evidence

Introduction

Since the proposals for High Speed 2 (Phase 1) were announced in 2010, I have spent a great deal of time looking into the proposals in detail, and it has become increasingly clear that this line was ill-conceived, its development poorly managed, and fundamentally, as currently proposed, the wrong infrastructure project for our country’s needs. A significant flaw in the case for HS2 has always been the misrepresentation of its supposed benefits to our national economy.

1. Is there an economic case for HS2?

There is huge doubt over the viability of the economic case for HS2. Five business cases have been produced for Phase 1 of HS2, and yet, we still do not have a case that is solid and workable. When HS2 was first announced the benefit cost ratio (BCR) for Phase 1 was 2.4 and for the full Phase 1 and Phase 2 route (the “Y”) it was 4. The current BCR for Phase 1 has dropped to 1.4, meaning only £1.40 coming back for every £1 spent, and dropped to just 1.8 for the Y: hardly a lucrative prospect. To compare this BCR with other infrastructure projects, many road improvements projects have a BCR of 10 and the Optimised Alternative (the alternative to HS2 put forward by the 51M group of Councils opposed to HS2) has a BCR of 5.

The Department for Transport deem any scheme with a BCR of less than 1.5 as being “low value for money” and not to be proceeded. My colleague, Rt Hon Philip Hammond MP, when he was Secretary of State for Transport said when HS2 was first announced, that it would be necessary to “seriously review the viability” of HS2 if its BCR dropped below 1.5. On this basis alone it is time to “seriously review” the viability of HS2.

The assumptions which are used to back up the claims of a BCR of 1.4 often lack robust and consistent evidential basis and this is detailed further below.

In addition to the declining BCR, the budget for HS2 has increased dramatically since the project’s inception in 2010, and further rises are probable. The original budget was £20 billion; however, this has now more than doubled to £42 billion, (£50bn including rolling stock). Both the Heathrow spur (at a cost of £2bn) and the HS1 connection (£700m) are no longer going ahead, yet the budget has not reduced. The Institute of Economic Affairs even forecasts that the budget could rise to £80 billion. 171 Yet another consultation for compensation is currently taking place, and accurate costings for mitigation for those affected has not yet been fully accounted for in the budget. Plans for Euston have not been finalised, which, as they involve a total rethink and representation of the proposals, could also alter the budget significantly. Additionally, the budget is still based on 2011 prices, meaning that the £50 billion price tag is in fact three years out of date.

There has been a great deal of criticism of the business case from a large number of organisation across the spectrum including the National Audit Office, the House of Commons Public Accounts Committee, various think tanks, economists, transport experts

171 The High Speed Gravy Train: Special Interests, Transport Policy and Government Spending, Dr Richard Wellings, Institute of Economic Affairs, 19 August 2013.
and industry bodies (such as the Institute of Directors) and I hope these will be examined in
detail by the Committee. The KPMG report – on which the latest business case was based,
has been largely discredited and its methodology criticised. The fact that HS2 requires a
£31.5bn subsidy speaks for itself.

The risks behind HS2 have always been high on the agenda of this project, yet they continue
to be available only to an inner circle in Government. The project has been given an
‘amber/red’ rating by the Major Projects Authority (MPA), but the release of their reports
has been blocked by the Secretary of State for Transport. The MPA reports have not been
made available even to the select committee examining this project following Second
Reading of the Bill. This goes against the recommendation by the Information Commissioner
to release the reports, as well as suggesting that the reports are detrimental to the case in
favour of HS2. This veto reflects poorly on the transparency of this project, and worryingly
means that both my colleagues in the Chamber and those sitting on the HS2 Hybrid Bill
Select Committee will not be, and have not been, in full possession of HS2’s risks when
making important decisions.

Conclusion

With such a large amount of taxpayers’ money at stake, as well as the significant community
and environmental impacts, it is vital that this project is given the highest level of scrutiny
before going ahead. The opportunity cost of £50bn+ and the alternative projects which
could be achieved with this level of spend mean that it is vital that the business case for HS2
is robust and offers a good return for taxpayers. If this is not the case HS2 should not
proceed. Without all the information on the risks that have been assessed informed decision
making is impossible.

2. Should the DfT’s strategic case for HS2 published in October 2013 have
included any other factors in making an economic case for the project?

There are a number of factors which should have been included in making an economic case
for the project. As well as the factors which have been excluded, a number of the
assumptions made in the business case do not stand up to scrutiny. The assumptions have
changed considerably in the different versions of the business case and often with little
evidential justification. If these assumptions are wrong (and many have been questioned by
independent bodies) then the BCR falls way below its current level of 1.4, making the
project even less viable.

Value attributed to journey time savings

The HS2 business case has always relied heavily on the value attributed to journey time
savings – particularly for business travellers - which accounts for two thirds of the benefits
of the project.

Although the Department of Transport have now accepted (unlike in earlier business cases)
that business people do work on trains, the latest business case ignores the fact that the
time saved through shorter journey times is already productively used and assumes that
businesses would be willing to pay a premium for having a shorter journey (which they may
not if their employees can work on a journey). In recognising that business people do work
on trains (and therefore quicker journey times are not so important) the Government has publically shifted their rationale for building HS2 from high speed to capacity and yet at the same time over 79% of the claimed transport user benefits are still attributed to time savings.

The business case also assumes a substantial increase in business travellers. With the continuing developments in technology it is by no means certain that there will be a substantial increase in the numbers of business travellers in future years and in fact current figures show that business travel is falling.

**Demand Forecasting**

The business case for HS2 relies on there being an ongoing increase in demand for long distance rail travel at 2.2% per annum and over 25 years (ie that long distance rail growth will have increased by 79% by 2036). However, over the last two years long distance rail growth has plateaued. The strong growth in long distance rail demand following privatization in 1995 has stalled with no growth for over 2 years despite the rally in the economy. A recent article highlights this.

Forecasting so far into the future is very uncertain and previous rail projects have overestimated demand hugely (such as HS1 which runs at about one third of the predicted passenger levels). A study of more than 200 infrastructure projects found that there is a tendency to overestimate passenger forecasts by over 100% on rail projects. If there is not a 79% increase in passenger demand (which seems highly unlikely) then the BCR would inevitably be reduced.

**Savings from cuts to existing rail services**

The business case for HS2 has always included savings arising from cuts to current intercity services.

The 2013 case includes an increase in cuts from £5.5bn (in the previous business case in 2012) to £8.3bn. It is surprising that this figure has increased by almost 50% in one year. Again, without these large amount of cuts being included in the business case (which assumes that people would move from existing services to HS2 – where there is a large price increase), the BCR would be lower.

**Price competition**

The business case ignores the effect of price competition from other lines both in terms of how it affects revenues and demand. Available evidence shows that passengers are more likely to travel on cheaper lines than pay a premium to travel more quickly. If passengers choose to travel on cheaper lines then this could result in unused capacity on HS2 (as has happened with HS1).

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172 Modern Railways article “The Growth Delusion”, August 2014
173 Flyvbjerg B, Mette K. Skamris Holm, and Soren L. Buhl: How (In)accurate are Demand Forecasts in Public Works Projects?
The KPMG report and Wider Economic Impacts

The 2013 business case includes KPMG’s work on the Wider Economic Impacts of the project. The report was widely criticised by academic experts and its results have been contested. It is notable that the report was not peer reviewed by the Analytical Challenge Panel. A number of economics experts agree that the KPMG work lacks statistical rigour and even contains methodological errors which could cause the wider economic benefits to be overestimated by 6 to 8 times.\(^\text{174}\)

The other issue with including the wider economic impacts to support the business case is that the cost of regional economic and transport spending necessary to realise the wider benefits should also be included in the BCR but it is not. In addition, the economic disbenefits to regions where HS2 comes through have not been included in the business case and a lower landscape value has been used which should be rectified. IN addition there may be even wider disbenefits. Chiltern District Council have commissioned a piece of work which has shown that the local economy will suffer to the tune of £170m during the construction phase alone.

Additional costs not included in the business case

There are a number of costs which are excluded from the business case and which should also be factored in such as financing costs of capital (interest payments on HS2 debt could total £2.3bn per year), the costs of Crossrail 2 which is required to deal with the numbers of passengers arriving on HS2 into London Euston, property compensation (the full cost of property blight is estimated at £9.5bn) and the fact that HS2 is likely to make an operating loss (due to exaggerated passenger demand).

Alternatives

The business case for HS2 does not include any consideration of alternative investments which could achieve the same aim as HS2 nor does it consider how HS2 would fit into a wider UK transport policy. Consideration should be given to the returns from projects such as installing superfast (Korean levels) broadband across the UK or from projects focusing on the North (for example the £15bn “One North Transport Plan” or upgrades to existing services, particularly commuter services.

Capacity

The business case for HS2 continues to ignore the real position on capacity. It is now claimed that HS2 is vital to deal with a capacity crisis on WCML. However, the evidence shows that the WCML currently has considerable spare capacity (data released to the High Court as part of the 2012 Judicial Review challenge to HS2) showed an average evening peak load factor on intercity trains into Euston was only 52%. In the event that capacity does become an issue, there are other cheaper alternatives to increase capacity with less disruption to services than HS2 will cause.\(^\text{175}\)

\(^\text{174}\) Daniel Graham, Prof. of Statistical Modelling; Research Dir. of Railway & Transport Strategy Centre, Imperial; Henry Overman, Prof. of Economic Geography, LSE; John Tomaney, Prof. of Urban & Regional Planning, UCL.

\(^\text{175}\) 51M Optimised Alternative was costed at £2bn by Network Rail.
Conclusion -if the above costs are added in or if the flawed assumptions are corrected and factored into the HS2 business case, the BCR will fall to below its existing low level of 1.4 (HS2 Action Alliance have conducted research which suggests the true BCR is around 0.5). I would assume that the Treasury would be aware of these flaws and they should rework the business case to include these factors and make that information publicly available.

3. What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers? Will London be the main economic beneficiary of HS2?

There is little academic evidence that I have found to support the notion that a high-speed rail line will lead to the economic regeneration of the North of England, as suggested in the now discredited KPMG report, commissioned by HS2 Ltd and referred to above.

In fact the available evidence shows the contrary, in that where a dominant city is connected by high speed rail to a less dominant city, it is the dominant city (ie London) which benefits most because greater competition will then be accessible and skilled workers may start to commute to the larger city sucking skills away from those very places it is intended to regenerate. 176 The 2011 business case for HS2 stated that 75% of the new jobs created would be in London. Evidence also shows that the best way to regenerate an area and increase economic activity is to provide better regional transport connections in and around cities. Many of the towns and cities in the Midlands and the North have poor connections to each other and overcrowded commuter services. HS2 will do little or nothing to solve these problems for the majority of cities.

Taking HS1 as an example, in spite of many promises of the positive regeneration of East Kent in the 1990s, HS1 has failed so far to live up to expectations. Dr Wellings from the Institute of Economic Affairs argues that economic regeneration would be reflected in lower unemployment, but in the case of East Kent, from 2010-2013, the average employment rate was 5% points lower than during the pre-high speed period, compared with a 1.8% drop nationally.177 He goes on to assert that even an infrastructure project as large as high-speed rail is not influential enough to counteract other economic factors in order to fundamentally regenerate an area of the UK, such is proved in the case of HS1.178 Birmingham is as close to London now as the Northern cities would be with HS2 and yet it suffers from high levels of unemployment and deprivation. The case of Rotherham is also often cited in similar terms.

Looking at the evidence of high speed rail in France, it was hoped that the TGV would regenerate some of France’s other cities but yet relative unemployment has increased in Lille since the opening of the TGV. Also in Lyon unemployment in the Rhone department

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176 Professor John Tomanay’s evidence to the Transport Select Committee
http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/writev/rail/m14.htm
177 Failure To Transform: High-Speed Rail and The Regeneration Myth, Dr Richard Wellings, Institute of Economic Affairs, April 2014, p.6.
178 Failure To Transform”, p. 35.
increased from an average of 5.4% before the TGV was built to 9.7% in 2013. What job growth there was limited to those areas in close proximity to the line and its stations. It is also notable that in France, in spite of an established high speed rail network, 82% of CAC40 companies are based in Paris and none in the other cities served by the TGV.

In a February 2014 report, the Institute of Directors stated that 70% of their members believe that HS2 will have no impact on their productivity, and only 24% expect any sort of benefits.\(^{179}\) The author of the report explains that economic benefits are determined by one’s proximity to the line itself, which limits widespread economic regeneration.\(^{180}\) Owing to this probable trend, the report goes on to argue that not enough businesses will benefit to justify such extravagant Government investment, as the project has ‘such potential to turn into a white elephant’.\(^ {181}\)

The KPMG report assumes that the only constraint on commercial activity is transport infrastructure. KPMG assumed that each of the areas served by HS2 has a limitless supply of property, talent and other resources and on this basis argued that the economic benefits of having the new line would be £15bn a year. However, it appears that a great deal of complementary action is envisaged from local authorities and local enterprise partnerships to develop the areas around the HS2 stations. This is particularly the case around the stations which are outside city centres and require additional infrastructure to connect them to the existing transport networks — again the cost of this has not been factored into the economic case for HS2 and many of the areas could have been regenerated without the need for a high speed rail link. There will also be the cost of additional tunnelling in a number of areas to mitigate the damaging environmental effects of the rail line.

There are question marks over whether HS2 would ever reach Scotland as transport is devolved and it is unclear if Scotland would be able to afford a high speed rail line.

4. **How might the expected benefits of HS2 to the national economy be realised?**

It is not clear how the benefits (which will largely be in terms of jobs and regeneration around the stations) can be realised nationally.

London’s dominance is expected to increase and although properties in some areas around the stations may increase in value, those on the route with no station will lose. With the huge £31.5bn subsidy and exaggerated passenger demand figures the cost is likely to exceed any net benefits.

It is also likely that because of the shortage of skills in the UK for the necessary workforce to construct HS2 that there will need to be a significant importation of labour resulting in more foreign remittances.

5. **Might some parts of the UK suffer economic disadvantage from HS2?**

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\(^{179}\) *High Speed 2: on the wrong track*, Andrew Silvester, Senior Parliamentary Affairs Officer, Institute of Directors, February 2014, p. 8.

\(^{180}\) *High Speed 2: on the wrong track*, p.11.

\(^{181}\) *High Speed 2: on the wrong track*, p.19.
As previously mentioned, HS2 is likely to lead to greater centralisation, making the services, culture and other attractions of London more accessible to the detriment of other cities and the regions. There will also be economic disruption caused by the damage done by the line to areas through which HS2 passes but which have no station, such as Buckinghamshire.

I often refer to the fact that my constituency in Chesham and Amersham will have all the pain and no gain in relation to this project. As Phase 1 will be non-stop between London and Birmingham, Buckinghamshire will reap few economic rewards from the line itself. Instead, it is more likely that my constituency will suffer in terms of fewer tourists visiting the Chilterns Area of Outstanding Natural Beauty, potential damage to local amenities, a detrimental effect on my constituents’ wellbeing, and impacts on property prices.

Regarding Chiltern District as a whole, the effect on business could be substantial. There are approximately 5260 businesses in the district, which accounts for more than 32700 jobs. The line may not only deter these businesses from expanding during the construction period, as they will inevitably be affected by increased traffic, lengthy road diversions, noise, and land blight, but it also may affect the likelihood of new businesses choosing our district as a viable place to locate. It is even estimated that transport disruption alone could result in £12.6 million to the district’s businesses and £89.8 million in travel costs to its residents.

Moreover, the Chilterns AONB is the only nationally environmentally protected area on the proposed route of HS2, with approximately 5.6 miles of the line exposed. This area contains ancient woodlands, habitats, and large swathes of beautiful countryside; if this is irreversibly damaged by a project that does not even have a decent business case, both the Government’s environmental and economic credentials will be ruined.

6. **How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?**

I would assume that HS2 – if built - should operate as a franchise, and unless the Government is willing to fix the price on HS2 at the same level as the WCML and ECML (which would seem unlikely) that there will be price competition.

7. **Should travellers pay higher fares on HS2 than on other lines?**

Ticket prices for HS2 have not yet been announced, but in spite of HS2’s assumptions that HS2 will be priced the same as the classic network, fares on HS1 are 20% higher than on non-high speed routes, and premium fares for high speed rail lines is international convention.

8. **Does the prospect of HS3 affect the economic case for HS2?**

I broadly welcome the recent announcement of HS3 by the Chancellor, as I am a strong believer in the advancement of modern transport infrastructure. As HS3 focuses on

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Northern economic growth and connectivity, the Government is finally making plans to ameliorate an area that is in desperate need of revival. However, despite HS3 promising a ‘powerhouse’ of more efficient transport links between Northern cities, the Government is failing to form a cohesive plan of national transport redevelopment. By pushing ahead prematurely with HS2, the North will potentially have to wait decades for any sort of economic rebalancing which HS3 could bring, to be felt.

To achieve a better integrated North with greater economic prosperity, it follows that investment should be concentrated on starting any new rail lines in the North first. The Government’s £50 billion HS2 budget could be refocused and injected into creating stronger links between Northern cities, which would encourage a fundamental transformation of regional transport in these areas, and much more effectively boost local economies. By starting in the North, more time could then be devoted to formulating plans for Crossrail 2 in the South, a workable HS1 link, and a direct connection to our major airports, in order to fully maximise transport integration across the entire country. As it stands, the case for HS2 is significantly weakened by the clear benefits that HS3 could bring, both quicker and more successfully, to the North.

**Conclusion**

The junior Transport Minister, Robert Goodwill MP, said on 20 March 2014 in answer to a parliamentary written question to me that ‘the project already offers high value for money’. I believe that based on current evidence this is not the reality of the situation. The current economic case offers poor value for money, little evidence that HS2 will deliver the economic growth it promises, and a grave unawareness of where £50 billion could be better spent. We have a duty to the taxpayer to make sure that we are investing in the right projects – it is time to rethink HS2 and focus on a coherent UK-wide transport strategy encompassing air, rail and road with projects which provide better returns and benefit more people than HS2 will. The future is superfast broadband, driverless cars, integrated regional transport systems, hub airports – not HS2.

*September 2014*
Dr Moshe Givoni and Professor David Banister—Written evidence

Evidence to be found under Professor David Banister and Dr Moshe Givoni
The Chairman: Welcome, Professor Glaister. I am sorry for the slightly delayed start, but you have the stage to yourself. Lord Lawson will start off the questioning.

Q38 Lord Lawson of Blaby: Professor Glaister, you have been sitting here listening to the previous witnesses. Is there anything that they said to us with which you disagree or which you would like to qualify in any way or add to?

Professor Stephen Glaister: Thank you. I was not taking notes but, broadly speaking, I agree with what I took to be the feeling of the panel that the October strategy document is a satisfactory one and much better than its predecessors. It is very helpful. I have always felt that the standard cost-benefit analysis that HS2 have done over the years—I saw this as a member of the analytical challenge panel—was even-handed and well done within the rules of the game, which are clearly codified for this kind of thing.

In your first discussion, you quoted my remarks about the lack of an overall strategy here. I do not think that that was addressed and will perhaps say a few things about that. I do not think that the question of pricing has been properly discussed. There is a lot more to be done with that, and there has been a big failure from the very beginning to look at it properly. I am not at all convinced about the £15 billion of incremental benefit—perhaps we can come back to that later on.

On whether there has been a proper discussion in government about the big picture, my position is as follows. The way I read the numbers in the October 2013 report, the proposition is to spend £30 billion of Exchequer money on this project. The way I get to
that is that it costs £40 billion, roundly, to build, another £10 billion to provide the rolling stock and another £10 billion to operate the service. That gets you to £60 billion in total. But then, eventually, you get back £30 billion of revenue. So the hole that has to be filled by the Exchequer is the difference: another £30 billion, or £31.5 billion, I think, on the central estimates.

So here is a proposition to spend £30 billion of taxpayers’ money. For me, the strategic question is what problem we are trying to solve and whether you could spend that £30 billion in an alternative way to address the problem. That has never really been discussed adequately in my view. If you are worried about the state of the economy in the north, then you can ask how you could use £30 billion in an alternative way to deal with that particular problem; if you are worried about capacity on the west coast route, you can ask how you could use part of that £30 billion to approach the problem in a different way. I do not think that Mr Steer gave full credit to the analysis that 51m has done on how you could in fact provide quite a bit of capacity at much less cost, to at least delay the need for the decision to expand on the scale of high-speed rail.

When I gave that quote, we were waiting for the Government to publish their draft national policy statement. They eventually did publish it in spring this year. You might have expected then to see a discussion of this big picture as to what the national needs are in surface transport and how conventional rail, high-speed rail and road contribute to those needs. In fact, that policy statement says at the very beginning that the Government are taking HS2 as given—it is not up for grabs; end of story. Then there is some discussion about the needs of the national conventional railway and the needs of roads, but there is never a discussion about how the options of spending more on roads and less on railways, or more on railways and less on roads, have been evaluated.

**Lord Lawson of Blaby:** The comparison of alternative ways of spending money—in particular but not exclusively on alternative transport projects—should surely be an essential part of the analysis.

**Professor Stephen Glaister:** Yes, but the whole point of doing a decent cost-benefit analysis is that it allows you to look at whether it is good value for money across the piece in terms of ways of spending that money on other sectors. Nobody has really addressed the problem that a future Government will face over the next decade or so in terms of the national debt. We all know that it is going to be very difficult to find a billion here or a billion there. Listening to the debate at the party conferences, all the parties are struggling to find a billion a year to help the health service, education or whatever it is. If you look at the spending plans that were published this time last year by the Government and are reproduced in the executive summary of the HS2 strategy, you will see a line in there that is new for High Speed 2. It starts at not very much, but by 2018-19 it is £3.3 billion for that year, in 2019 it is £4 billion for that year, and in the following year it is £4.5 billion for that year. I am not saying that it is a bad thing, but I am saying that it is an expensive and painful thing to fund, relative to other things you could do with the money. That goes on for year after year, beyond this horizon.

Hence, I do not believe that there has been a decent discussion. That is why you have to show a really good rate of return—a really good benefit to cost ratio—for HS2. If it is not good enough, it is telling you that you could spend the money in better ways, according to a well defined set of principles for evaluating these things. I do not think, in the world we are sitting in now, that a rate of return of 2.3:1 is very good.
Q39 Lord Lawson of Blaby: So two things are the massive taxpayer subsidy required to finance this project and whether the money could be better used in some other way.

I wonder whether I can ask you about a third thing. The alleged benefit comes from the saving in business time. This seems, from what we have heard so far, to be largely based on the time saved on the train journey. The train journey will be shorter, but what matters is the door-to-door time; and, partly because of where the stations are being located, the door-to-door time will not be reduced to that extent—indeed, I am not sure it will always be reduced at all. What will happen is that the amount of useful time, which is the time on the trains when you can work, will be reduced, while the amount of useless time, which is everything except the train journey, will be increased. Has that been properly evaluated, in your opinion?

Professor Stephen Glaister: Within the limits of what is a difficult piece of evaluation, I think it probably has been, yes. You have raised at least two issues there. One is whether the unit values of in-vehicle time saving are correct in the appraisal, and the other is whether the modelling is correct about how long it will take people to get from their homes or place of work to the station. The second of those is so big and complicated that it is very difficult to model, but I think a good attempt was made at doing that. We can have a discussion about whether the proposed station locations are optimum, as you did at the end of the previous session, but as I understand it, that is history—the decision has been made and they are fixed, so there we are.

On the value of time in the vehicle, the first appraisal was done using standard values, which is the right thing to do because the Government wanted to compare this scheme against other ways of spending money, and you need consistency. Subsequently, as set out in the strategy document, the Government changed their mind about what the best values of time were—that is progress and the way things go—and the work has been redone with the new values of time. There is a discussion to be had about whether the values now being used reflect what people actually do on trains or not. Bearing in mind that these are not average or standard people—

The Chairman: I wonder if you could just hold that thought until we have voted, and we will come back to it. Thank you very much.

The Committee suspended for a Division in the House.

The Chairman: One or two of our members have had to leave, but we will start with Lord Carrington.

Q40 Lord Carrington of Fulham: You heard the previous evidence when we queried this £15 billion of benefits, which is going to come out of HS2. Does that £15 billion sound as though it is in the right ballpark, or does it sound rather as though, if you put a row of assumption in, you pop out a number, but it is only as good as the assumptions you put in at the beginning?

Professor Stephen Glaister: I will answer, but I defer to my colleague Professor Overman, who I think you are going to be hearing from. He is the real expert, and he was referred to in the evidence earlier today. Reference was made to evidence he gave to the Treasury Committee of the House of Commons about a year ago, which I heard. I was very much
Professor Stephen Glaister—Oral evidence (QQ 38-48)

convinced by his line of argument. For what it is worth, I think he is correct in his critique of the work that led to the £15 billion. It does not mean that the £15 billion is incorrect; it means that we do not know because of a statistical problem. The approach was fine, but there was a statistical problem which Lewis Atter referred to. The data were not good enough to give you an answer. We just do not know.

There has, I gather today, been further work on this since then, and I am not privy to it, so I will leave that for you to discuss later. What I would say about the £15 billion is that, if you believe it, an uplift of £15 billion a year from whatever the year was—I have done this calculation—£15 billion in the first year, and in the second year another £15 billion, if you bring that back to present value, that is an astronomical amount of money; it is between £200 billion and £300 billion. If somebody is offering you that if you put in your £30 billion, or perhaps you are thinking about £50 billion, and you get £250 billion back, you would bite their hand off for it, if you believe it. It is a very productive investment, if you believe that number. I think it is a long way higher than the more conventional methods of appraisal would suggest.

By the way, Lord May prompted me to clarify that my earlier answers were in terms of present values. The way we do these things is to bring them back to a common timescale. That is what I was doing there.

There were real technical problems with the original piece of work. Whether they have been sorted out, I really cannot judge.

Lord Carrington of Fulham: Can I just ask you about two other aspects of that? I find them quite interesting. We have had some difficulty getting out of anybody what they consider to be their margins of error or their uncertainty elements. I am used to looking at the Bank of England’s forecast. It now puts a fan of where it thinks the probability range is and where it will end up on things such as interest rates and so on. We do not get any of that for these types of analysis that I can find. Not only do we not get it; they say that you cannot do it, which I find surprising. They are also doing it at such a long distance in the future. We are talking 20 years before this railway starts to produce the £15 billion that they are talking about. You have so many uncertainties that to come up with a number which they say it will be without saying that it might be 5 or it might be 30—I have not done a lot of this sort of long-term project analysis although I have done a lot of short-term ones—strikes me as very odd.

Professor Stephen Glaister: I could not agree more. It is a problem that we have in any structural planning issue where we are dealing with; what the population growth is going to be and what the relative economic growth is going to be. To be fair, I think that the most recent document I have seen, which is the October document, very helpfully does quite a lot of sensitivity analysis. If you have looked at the full document, they have been really quite thorough in saying “Of course we do not know what the demand is going to be over this horizon”. Supposing it were 20% lower, or supposing the rate of growth or the value of time is going to be different, which we were discussing just before you went for your Division, how much difference would that make to the estimated benefit-cost ratio, the rate of return? It is not surprising that a quite small variation in long-term demand growth will make a big difference to the rate of return because you are putting in a vast amount of money now and only getting a return in a long time. That is a fundamental problem in all these things, which you cannot get away from, but those sensitivity analyses help you a great deal to form a view about how risky it is, on both the upside and the downside. Some things turn out not to be very important, although you might think they were, but other things,
such as the value of business time, is desperately important because at the end of the day it is all about saving business time. You can see in the sensitivity analysis that if the value of time for business users was reduced—I am sorry that I have forgotten the particular test they did—by 20% or something like that, it makes a big difference to the rate of return.

That is a framework for further discussion about whether we think the value of time is correctly done or whether more research is required.

**Lord Carrington of Fulham:** The other aspect—I shall finish on this quite quickly and I do not know whether there is an answer to it—is that when I have done project analysis in business, the discount rate is obviously critical. We were told that they were using a 3% discount rate, which strikes me at best as not a risk-adjusted discount rate, which is what I would expect them to use. Equally, if you are starting to use a higher discount rate, you inevitably shorten the project time. I was taught many years ago—things might have moved on—that if you are using a very low discount rate, using a horizon on a net present value of beyond 10 years you are starting to get into cloud-cuckoo-land and you really ought to be looking at no more than 10 years. If they are not using a high risk-adjusted discount rate on the £15 billion in 20 years’ time, I think the numbers must become very odd.

**Professor Stephen Glaister:** What they are doing is using the standard Treasury discount rate that is prescribed for this purpose at the moment. A long time ago, it used to be 10%, then it reduced to 7.5%, as I recall.

**Lord Lawson of Blaby:** It was 6% in my time

**Professor Stephen Glaister:** It is now 3% real, and I think it changes to 3.5% at some point. You are absolutely right: if you change that discount rate to 5%, it will wipe out HS2 because you are spending a lot of money now and getting nothing for a long time, so the discounting hits the benefits more than it hits the costs.

**Q41 Lord Carrington of Fulham:** If you do not put the risk into the discount rate, which I was always taught you should do, you end up having to put the risk into the number in 20 years’ time, because you have to have it in somewhere. They clearly have not put it into 20 years’ time and they have not put it in the discount rate, so where is the risk being adjusted for in the cash flow?

**Professor Stephen Glaister:** This is a long discussion for another day. One argument is classically that Governments have the ability to pool risk. They have a portfolio of projects, some of which will turn out well and some of which will turn out badly. Governments can defray the cost of risk in a way that a private firm cannot. That has been an argument for not putting a big risk adjustment into the discount rate. With a project that is as big and singular as this one, you might think that is a slightly specious argument.

You cannot get away from this problem. It applies on roads and power stations. It is big in nuclear power, of course. You cannot escape from it. There is an advantage in using a standard discount rate across the piece so that you can at least compare on a common basis, and that is what they have done. I do not want to defend it.

You have raised in my mind an important point that I would like to make about this. It raises very clearly the issue about whether you should delay the project. If you are uncertain about what is going to happen in the way you have discussed, it becomes important to ask whether we should wait a bit and see whether we can create a bit more capacity, as Sir John has been suggesting. As I said earlier, I think you could create a lot more
capacity than some people are given credit for. You could then wait a bit and see whether things change and you can make a better decision. What you must never do, however, is spend a lot of money up front and then delay completion, because that is absolutely fatal and we have done that lots of times in the past. We have done it with Crossrail. We spent vast amounts of money planning Crossrail and not doing it. If you are going to do it, you spend the money and get benefits flowing.

**Q42 The Chairman:** What do you judge the risk around the £50 billion capital cost to be? They are 2011 numbers anyway, so there is inflation to date. We have written evidence that inflation in this sector is rather higher than the annual rate of inflation, and the history of large projects—and there are not many as large as this—is of cost overruns. What is your assessment of the risk around that £50 billion?

**Professor Stephen Glaister:** I am not expert enough to be very helpful to you on this, but I believe that the £50 billion has a large optimism bias adjustment, which the Treasury insists on precisely to aim off for the phenomenon you have described. That is one of the ways the Treasury tries to deal with this particular risk. There is a real risk of prices of construction materials going up very rapidly in the near future because the economy is recovering. The Chinese economy is recovering and the price of concrete is shooting up. With Crossrail, we had had the advantage of, in the end, building it at a time when construction prices are rather low for reasons we all understand. That was a bit of good fortune, in a way. People have to make their own judgment about whether there has been adequate contingency for increases in unit prices in the construction costs of this thing. You also have to worry about what might be given away, if that is the right term, in the build process in terms of mitigation because the scheme that is now on the table has been changed quite a bit to reduce the impact on particular interests, which is a perfectly fair thing to do, but it greatly increased the cost. More tunnelling, which people are attempting to put in, increases the costs of delivery and reduces the benefits because you cannot run the trains so fast, as you heard Jim Steer say. There are lots of things that may happen between now and Royal Assent to the hybrid Bill that will change these numbers, typically, I suspect, adversely. That is something to watch out for.

**Q43 Lord Griffiths of Fforestfach:** To what extent do you think this project is a punt? That expression was used last week. We heard a lot about connectivity last week and in the earlier session this afternoon. Connectivity seems to be a necessary condition, but if you ask the question—and this is in no way to be derogatory of Manchester, Leeds or Birmingham—I can clearly see why people should come to London, because there is a lot of growth and there are firms with a great return on equity that are successful. You can see why people want to go to Cambridge or why people in the media business want to go to Cardiff, which is an international centre for independent production. Unless you have Manchester, Leeds and Birmingham really becoming clusters of something that is greater than just using connectivity—earlier today, Bridget Rosewell talked today about an appetite to take advantage—you just feel that in a way it is a political economy issue and rather imprecise. To what extent are we really just taking a punt?

**Professor Stephen Glaister:** Inevitably these things are going to be very risky. You are referring to what might happen to the industrial structure of these places over the years. Historically, there has been massive change. Edinburgh has developed a big business and financial services industry, as has Leeds, which is nothing to do with the transport infrastructure, given that they were reasonably well connected to start with. These places
all have basic high-speed rail connections down to London by international standards. There may be a capacity problem, and we may be able to make it a bit better, but fundamentally they are already well connected. Over the past 20 or 30 years, you have had massive changes in the industrial structure for other reasons. So your question, if I can rephrase it, is: how do we know that that kind of change is not going happen again, and how do we know whether high-speed rail will help?

There was some discussion in the previous session about whether it might just make access to London easier and therefore produce commuting to London. That is a real issue. I do not know, but over the decades there has been a massive increase in long-distance commuting into London. The existing conventional rail system has improved so much and the fares have been held down, so people now live in Peterborough and travel daily. They live much further away and travel daily. With High Speed 2 to Birmingham, it will take about the same time from Birmingham as it now takes from Barnet, so there is a possibility, although I do not know, that you will encourage a lot of longer-distance commuting into London, but this is a guess—a punt, as you put it.

Q44  Lord May of Oxford: The Department for Transport told the Committee in written evidence that HS2 is designed to be a long-term answer to the capacity problem that we face on the railways. Are you convinced that there really is a capacity problem and, if so, where does it exist? The enthusiasts refer to this problem, but there is a study by High Speed 2 Action Alliance that says that crowding is more on commuter trains than intercity trains.

Professor Stephen Glaister: I hope that your inquiry will press this issue very hard. I do not believe, but perhaps I have not seen the evidence, that the Government have established the nature of the capacity problem on the railway.

Lord May of Oxford: My experience is that travelling intercity you very rarely see people standing, but maybe that is atypical.

Professor Stephen Glaister: That is actually set out in the executive summary of the strategic case at figure 7, which shows the crowding patterns on the railway. It confirms what you have said. My experience is that, travelling out of London at least, trains often have more staff on them than passengers. The evidence you referred to, which I have seen, suggests that the real problem is with the London commuter network and that the line of route in from Birmingham is one of the least congested on the commuter network. If your issue is with crowding on the London commute, then you might, to go back to my original proposition, use some of your £30 billion to deal with that problem, not spend it in the way that is proposed here. There is no doubt that the train paths fill the track. Perhaps you could squeeze some more capacity, which is something else you should press. What would the franchise operators like to do or offer to do with a bit more signalling and so on? Fundamentally, there is a shortage of track capacity, but you are running a lot of empty trains up and down at certain times of day. There is capacity at many times of the day. It is a peak problem. That is why I said that I would like a decent discussion about pricing. You may have a few trains at 7 o’clock in the evening that are crowded, and that crowding is exacerbated by the pricing policy that is being used at the moment. If you are willing to use a different pricing policy to spread the load to the times when there are empty seats, you could, at least for a number of years, solve this problem without spending £30 billion on a brand new railway and you could buy off any interests that are badly affected with a small proportion of that money.
Lord May of Oxford: You are way ahead of me on ticket pricing. You answered that before I asked it.

Professor Stephen Glaister: Just to repeat, the case that there is serious capacity problem today on that railway has not been made. It may be true but, to my knowledge, it has not been thoroughly investigated.

Q45 Lord Shipley: There are capacity issues and demand issues. Could you say a bit more about demand forecasts? The economic case states that the average year-on-year growth in demand for journeys on long-distance rail operator services between 1994 and 2012 was 4.9%—almost 5%—but the assumed rate of growth for 2010 to 2036 is 2.2%. Do those figures look robust to you? We do not know what the population increase might be, although there are estimates from ONS, but do you think that the growth forecasts expressed in the economic case are strong?

Professor Stephen Glaister: Within bounds, my guess is as good as anybody else’s. It is a really difficult area of course, but one has to hang on to the fundamentals. There are two things that tend to drive most of these demands, population and employment, and the level of economic activity. Part of the answer to your question must be what view there is about the level of economic activity over the period we are talking about. I notice that long-distance travel in the last few years has been flat, although if you look at the Office of Rail Regulation figures it has just picked up in the last quarter, as I would expect it to, as the economy has picked up. We are noticing that on the road network—by the way, we have exactly the same problem in forecasting road traffic over this kind of horizon, something that we need for road planning, as we have for the railways. The forecast does not look unreasonable, but whether it is the best estimate, I could not say.

However, I refer to the answer that I gave earlier about sensitivity analysis. It is useful to change that assumption and see how much difference it makes to the overall rate of return. That is a very helpful approach. As you will know, the analysts were faced with the fundamental difficulty that if you allow growth to continue at compound rates for ever, you get to the situation where almost everybody is using the railways, so they capped it in 2036, I think. That capping date turns out to be quite important: if you cap it at 2040 rather than 2036, you get a rather different answer. I really cannot help you a great deal on this, except to say that it is a matter of judgment as to whether the central estimate is a good one and that you should look at the sensitivities as you change things. That is, helpfully, in the strategic document.

Lord Shipley: Many of the figures that demand analysis are based on assuming a journey to London. Have you seen any work that you think is robust about demand that might arise for journeys between the northern cities and the Midlands, for example, or between the Midlands and Scotland—in other words, not involving London?

Professor Stephen Glaister: I have not, but people have worked on that. The Northern Way has worked on that, and I think Henry Overman will be able to help you next week on that, because he has worked in that area. We know that there are significant congestion problems between the Yorkshire conurbation and the Lancashire conurbation. The M62 road over the Pennines is a nightmare, and there is a very strong case for improving the capacity certainly of the road link and maybe also—I do not know—the rail link as well. I suspect that if you were to improve those connectivities you would get a lot more usage of the links between those cities. We know there is a shortage at the moment.
Q46 Lord Smith of Clifton: Professor, if premium fares were charged on HS2, what effect do you think this would have on passenger demand and, consequently, on the economic case?

Professor Stephen Glaister: This is a fundamental and interesting question that has never been properly addressed. As I understand the history, when Lord Adonis commissioned HS2 to start to investigate the proposal, he dictated that fares should be the same on the new railway as they would be on the old railway. That was the starting point and it has been fundamentally that way ever since. No one has asked the question that you just asked: how could you change the fundamental economics by being radical with your pricing? I think the answer to that question can be split into at least two parts. One is what you could do with the level of charges, and the other is what you could do with their structure. I have already begun to address the latter, because you will have peaking problems and you will no doubt get the kind of things that airlines do with their pricing. To manage peak demand, if airlines are short of capacity they try to adjust their charges by time of day or whatever and will then think about leasing other aircraft if they need to. That is the kind of discussion that has never been had, and that we need to have.

On the level, we have a fundamental difficulty here. What is being proposed, as you heard earlier, is a massive increase in capacity along that line of route. You are also going to have a competing railway—the existing one. An aspiration is set out in the strategy to keep the level of connectivity on the existing railway between the towns and cities there. That means running much the same kind of train service on the old railway as you have now, so you will have a lot more capacity and, arguably, competition between the two. In that situation, the ability to raise fares on the new railway will be quite constrained by the competition; nor will it necessarily be the right thing to do. In the public interest, if you have lots of capacity, you want to have it used; the last thing you want to do is to price people off and have empty trains. That is a classic problem in first-year economics: if you have an empty facility, you do not want to raise the price. Raising the price may give you more revenue and help with the taxpayer cost, but it will damage the economic value of the facility. You really want the prices low. So you are faced with a dilemma: if you build this thing, which may be a good thing to do, you want to have it used; and if you want to have it used, you do not want to charge too much for it. That means that the call on the taxpayer might be even bigger than we are currently contemplating, as the revenues will not be the £30 billion that I mentioned earlier. I am not saying that it is an insuperable problem; I am saying that it has not been discussed properly and that it really ought to be. As I said earlier, you could do a lot with pricing on the existing system in order to at least delay the need to invest in the new one.

Q47 Baroness Blackstone: My question is related. Most of the benefits that are cited in the economic case are based on assumptions about what businesses will pay for faster journeys. Do you think these assumptions are robust or not?

Professor Stephen Glaister: I think the only way you can address that question is to look at the evidence. The principle is a good one and underlies all cost-benefit analysis: how much are people willing to pay for this benefit? That is the way you value it, not on how much I want it or how much the Government want it. The question is whether we have the right value here in terms of what business would be willing to pay for this time-saving and for the reduction in congestion and crowding, as was mentioned in the previous session. The only way to address that is to look at the research reports underlying it. As I said earlier, my understanding is that the Government have done further research and revised their view about this, and reduced the value of business time.
But there is an argument that, on this particular line of route, these are not your average businesspeople—they are particularly high-income, high-activity people who would be willing to pay a bit more than the national average for business travel. You will see a sensitivity analysis in this document which tries that out and says, “Here are the original values of time and here are the new official values of time for business, and here’s one that is somewhat higher and therefore between the two”. You can see that it makes a substantial difference. But the only way you can form a view about what is reasonable is to look at the evidence and see how people behave, and then look at whether that has been adequately researched. My own view would be that it has been reasonably well researched. There are other things we know much less about than this.

Q48 Lord Lawson of Blaby: I have one quick question. From your evidence, it is slightly odd that there is this massive sum of taxpayers’ money being spent on increasing substantially the north-south capacity, where there is already substantial capacity, even if it might be used more effectively. However, where there arguably really does need to be improvement is in east-west capacity and connectivity in the northern part of England, between the north-east and the north-west. That would probably do much more to help the north of England become more efficient, more effective, more competitive and more productive. It is a bit odd is it not?

Professor Stephen Glaister: We just have not had the debate. If you talk to people in Network Rail or the Office of Rail Regulation who have been through the process of agreeing the five-year settlement, you will find they have a big bag of schemes, with good rates of return, that they would like to implement. They are quite concerned that HS2 will gobble up all the capital available.

Lord Lawson of Blaby: It will.

Professor Stephen Glaister: That is the reality. As for freight, you need to serve the ports and bring stuff east-west, not north-south. It will not be very helpful with those kinds of movements. Those kinds of issues just have not been debated. That is why I go back to my opening remark: what is the best way of spending this money and have we got to it?

The Chairman: On that very point, the Division Bell cut you off part-way through the value-of-time question. A number of questions have been raised, both in writing and around the Committee discussion today. Could you indulge us by giving some thought to your answers to those questions? In particular, you raised a number of issues which you feel we should press. It would be most helpful if you could also include those in a note to us.

Professor Stephen Glaister: I will do my best. It might be helpful if the advisers want to talk to me about what would be helpful.

The Chairman: We could do the latter.

Baroness Blackstone: I just wanted to emphasise freight in particular, which you just mentioned. I am really puzzled why so little attention in the case for HS2 is given to freight. I do not quite understand why.

Professor Stephen Glaister: Do you want me to answer that now?

The Chairman: I am conscious that we have run out of time, unfortunately. If you could speak to our adviser, particularly on the questions that we have raised, and if you could give us a written response to questions that we have not been able to cover today—freight was indeed one of them—that would be very helpful.
Professor Stephen Glaister—Oral evidence (QQ 38-48)

*Professor Stephen Glaister:* I will do my best.

*The Chairman:* Thank you very much.
After the aural evidence session on 21st October 2014 the Committee invited me to comment on three questions that had not been discussed, as follows.

**Professor Tony Venables and Professor Dan Graham told the Committee last week that they thought there was a “symbiotic” relationship between transport infrastructure and economic growth. Do you agree?**

In principle there is a simultaneous relationship between two propositions: (a) economic growth requires better transport to serve it; and (b) investment in transport infrastructure stimulates economic growth.

The Eddington Transport Study (2006, Volume I) considered the evidence. Whilst there is evidence for both effects, in a developed economy (a) is likely to be more important.

It is clear that economic growth and population growth both increase the demands on the transport system for movement of people and goods. A poor quality unreliable, congested transport system will inhibit economic growth. Traditional methods of economic appraisal are, in part, attempting to measure the benefits to a growing economy of enhancing the capacity of the transport networks. Where they reveal high rates of return to the right investments that is signalling that the investment will relieve that inhibition. Low rates of return suggest that capacity or connectivity is adequate and the resources might be better deployed elsewhere.

In a developed, well-connected economy the evidence in support of (b) is much weaker. There are particular situations where accessibility to a piece of land is poor and transport investment has contributed towards development “taking off”: London Docklands being an example. But, in general, attempts using transport infrastructure investment to stimulate economic growth and regeneration where it would not have happened in any case are not successful: good transport is a necessary but not sufficient condition for economic development.

**If regional cities are to benefit from HS2, what complementary policies do you think are required?**

The benefits identified in the conventional appraisal of HS2—the appraisal that allows comparison with alternative ways of spending the public money involved—do not require any complimentary policies. Time savings and relief from crowding will accrue directly to users and their employers. Wider economic impacts such as agglomeration effects will
accrue to existing businesses through the better connectivity. These benefits are already factored in to the appraisal.

Arguably, regional cities could generate further benefits, not already included, by facilitating land use changes in the neighbourhoods of stations—such as office developments. Lord Deighton’s “HS2 Growth Task Force” has been setting out the arguments.

Also, the numbers of passengers involved in the forecasts are considerable. This will be a similar situation to access to a significant airport. So local authorities will improve the benefits from the new railway if they make increased provision for the passenger access to the stations. This will come at an additional cost to the public purse. If HS2 is going to arrive in any case such additional expenditures may have a good business case: if the considerable investment in HS2 is going to be made it makes sense to make best possible use of it.

**In what ways will freight traffic benefit from HS2?**

Rail freight will benefit to the extent that HS2 frees up more freight train paths on the existing railway and the rail freight industry is actually willing to pay for them.

North of Birmingham (Phase 1) or Manchester (Phase 2) HS2 trains will run onto the existing tracks. So there may be more passenger trains on these tracks and they will want to travel faster than now. Freight trains tend to run slower than passenger trains and they are particularly difficult to accommodate where there is a high density of high speed passenger trains. So there will be less (possibly much less) capacity for freight on the West Coast Mail Line north of these places.

Elsewhere the situation is less clear-cut. Network Rail have said that they want to preserve a similar level of passenger service and rail connectivity as now for passengers making journeys not directly served by HS2: so it is not obvious that many freight train paths will be released.

Significant demands from freight are east-west, for instance, joining the east coast ports to the Midlands. These movements are unlikely to be helped by HS2 which runs north-south. The present West Coast Main Line presently caters for one quarter of rail freight (http://www.hs2.org.uk/about-hs2/facts-figures/room-freight) so it does not cater for three quarters of it.

Part of the case approved in the mid 1990s for the rebuilding of the West Coast Mail Line was to provide more freight paths. Now that scheme is complete it would be worthwhile exploring with the rail freight interests the extent to which they would be
willing to pay for more train paths. (They will of course say they would like to have many more, if they are not required to pay a proper price for them.)

Freight train paths are not usually useful on their own because much rail freight has to be delivered to or from the railway: so extra paths will only be helpful if there are the corresponding extra facilities available for transhipment. Land use planning can obstruct this.

November 2014
Professor Dan Graham and Professor Tony Venables—Oral evidence (QQ 13-23)

TUESDAY 14 OCTOBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Griffiths of Fforestfach
Lord Lawson of Blaby
Lord McFall of Alcluith
Lord Rowe-Beddoe
Lord Shipley

Examination of Witnesses

Professor Dan Graham, Professor of Statistical Modelling and Research Director of the Railway and Transport Strategy Centre, Imperial College, and Professor Tony Venables, BP Professor of Economics, University of Oxford

Q13 The Chairman: Professor Venables and Professor Graham, welcome to this the first meeting but the second witness session of our inquiry into the economic case for HS2. We are being televised, so I would be grateful if you could speak loudly and clearly for the viewers and for the stenographer. Would either of you like to make an opening statement or shall we go straight into questions?

Professor Graham: Straight into questions.

The Chairman: Perhaps I could start. Professor Bannister has told the Committee that it is likely that economic growth leads to the need for investment in transport infrastructure and not the other way around. Do you agree?

Professor Graham: I do not agree entirely. The first thing to note here is this issue of growth. The way in which the academic literature tends to think of transport affecting the economy is mainly via productivity. The argument here is if we think of productivity in terms of the efficiency with which we produce our economic outputs, so we use inputs and we produce outputs, and those inputs would be people, labour, machines, materials and transport, transport from input to production. The way the academic literature conventionally has thought about it is if we lower the cost of transport, the time taken to travel between places that should lead to a productivity improvement, because you have improved one of the inputs that we use to produce our outputs. I am not sure about growth, but there is quite a lot of empirical evidence on the impact that transport has had
on productivity and it is a bit mixed, so I do not think the picture is definitely yes it does or not it does not. It is very much scheme-dependent. There is some evidence showing small or negligible effects; there is other evidence showing quite big effects. I think the relationship is more symbiotic than one-directional, so I do not entirely agree with Professor Bannister’s comment. I think that transport can be important for productivity and then, potentially, for growth.

Professor Venables: I had two comments when I saw that quote. One is that, yes, there are circumstances where transport can be a real driver of growth, something that sparks growth. Historically, when you think about canals or opening up new regions of the world, worldwide now, bringing developing countries into the world trading system, connectivity, transport can really be a spark for growth closer to home. If you look at the M4 Heathrow corridor, it is richer than it otherwise would have been because of the presence of Heathrow. So there are circumstances where transport can be a spark and a leader—some circumstances. More importantly and more generally, there is a symbiotic relationship, as Professor Graham said. There, the point is, of course, if the fundamental drivers of growth are the accumulation of skills, technology, capital input, if one element lags behind it constrains overall growth; it is important that things march forward together. Therefore, transport certainly can be a constraining factor. If you look at some of the rather old but well established estimates of the effects of public infrastructure on income, the sorts of numbers you can back out are something like this: suppose that technology and skills and all these others things increased 10%, so you would expect 10% growth, but public infrastructure stayed still, then you would get 9%. That is a very rough, back-of-the-envelope number, but coming out of estimates that people have made. Therefore, most importantly, it can be a brake. It needs to move along in line with those other generally more fundamental drivers of growth.

Q14 The Chairman: The Department for Transport has told us that they have appointed you, Professor Venables, to undertake a study of mechanisms through which transport investment affects economic performance. Can you tell us what that study found?

Professor Venables: I am not sure; it has not been published yet.

The Chairman: Can you give us a sneak preview?

Professor Venables: Yes. Certainly the answer to some of the questions that we are going to deal with later will de facto give you the sneak preview. I could give it to you now or maybe, as I say, if you ask that again at the end perhaps, I think you will get a pretty clear drift of the thinking that went into that report without my summarising a report that I believe has been cleared by the Department, but it is not yet published.

The Chairman: That is a good suggestion.

Q15 Baroness Blackstone: Do you think the cost-benefit analysis presented in the October 2013 economic case is persuasive?

Professor Graham: Yes, I do. There are two bits of evidence in the 2013 case. There is a standard cost-benefit analysis, which is done according to the usual theory of cost-benefit and calculated in a very standard way, and I do not think there are any major problems with that. It is quite nicely done. I like the fact that in the cost-benefit, rather than just reporting a single cost-benefit ratio, they do some sensitivity testing. They look at different demand forecasts, they look at different cost forecasts and they present the distribution. I thought
that was good. I also like the fact that they acknowledge that a scheme of this size, which involves a real step-change in travel markets, is difficult to predict and that it pushes cost-benefit to its limits. So I think the standard approach is quite good.

Where that report is weaker is the work that was done on gross value added or the output work. They tried to look at how connectivity relates to productivity. That is a good approach. It is an approach that is really promising that you can take further. However, the consultants who did the work did not have enough time to do it justice, I do not think, so that side of the case is weak. To be fair, though, in the report it does say that they are not relying too much on that evidence, but they did end up quoting a number of £15 billion per annum that I think is a tricky number. However, the basic cost-benefit is sound, as far as I can tell.

**Baroness Blackstone:** Do you think the number they quote is one that you could defend, if you had to?

**Professor Graham:** The £15 billion I would not attempt to defend, no.

**Baroness Blackstone:** You could not.

**Professor Graham:** No.

**Baroness Blackstone:** Can you say a bit more why you could not?

**Professor Graham:** Why would I not defend that number? The £15 billion number that is in this report is from the consultants who worked at looking at how connectivity affects productivity. There were several statistical problems with the analysis that they undertook—methodological difficulties that lead me to believe that that number is not reliable.

**Professor Venables:** I take the view about the basic cost-benefit analysis done by the Department rather than the additional consultants' report that the £15 billion came out of, so if we can park that to one side and just talk about the main cost-benefit. A cost-benefit appraisal of a big project like this needs to have three elements. The first is user benefits, which is obviously in the Department's cost-benefit. The second is wider impacts and, in particular, the productivity and agglomeration stuff. For both of those, the Department has world best practice and, agreeing with Professor Graham, they are done very well and very professionally. Obviously one can debate, there are uncertainties about all the numbers, but I regard that as basically a very sound cost-benefit analysis.

The third potential element, though, that is not in a cost-benefit of this type is taking into account what transport economists call “land use change”, which is a terrible term; it sounds like you stop planting beans and plant peas instead or something. I prefer to use “investment and employment effects”, so what is the private sector response in terms of a big scheme generating new private investment, potentially moving economic activity around the country? The big issue in HS2 is to do with rebalancing and northern cities, so you need to think through how it is going to change private investment. Is it going to move the location centre of gravity and change the economic geography of the country? That is much, much easier said than done. These things are incredibly hard to get hold of, incredibly hard to predict and it is not clear they necessarily bring benefits. Additional private investment may bring benefit, it may not; you can construct examples where the opposite case will be true. However, I do think that for a scheme this large more attention should be paid to these induced private investments, these location effects and all that and you probably should end up doing scenarios of, “Here is one possibility; there is another
possibility.” We really do not know, but let us at least take the arguments seriously and test them a little bit further than the user benefits and the wider benefits do. Therefore, I would quite like to see a third element, and my expectation would be that that third element would be a positive number on top of the first two, with a very low margin of confidence around that.

Baroness Blackstone: What is the basis for that prediction? Why do you say that?

Professor Venables: Due to the potential for that geographical rebalancing, which again perhaps we will come on to a little more, because private investment induced in city centres in relatively poor parts of the country might be particularly valuable, even if it is displaced from London. Nevertheless, if you think it is more valuable in one region than another, there is the net effect. There is a huge amount of uncertainty, but there is that third element that is very uncertain but rather important. It is the essence of the case to me.

Q16 Lord Shipley: Professor Venables, I would just like to pursue the wider economic benefits, because you have talked a bit about those. The economic case estimates those at £13.3 billion. Do I interpret you right as saying that you think that that is a robust number?

Professor Venables: By “wider economic benefits” we mean that second layer that I was just talking about. The methodologies to establish those numbers are pretty well established. There is a lot of statistical evidence on the parameters that are used to generate that number. Professor Graham has been a producer of some of that evidence, so he can speak to that. I think it is a good central estimate, with confidence intervals around it, naturally.

Lord Shipley: Professor Graham, do you want to respond to that, because I want to ask a follow-up question that you might answer at the same time? That is, whether additional investment would be needed, particularly in those places that do not have city centre stations and, if that investment has to be made, should it be included as a cost in the economic case, because there is an impression that it has not, so far, when it should have been. Is that right?

Professor Graham: On the first issue, I agree with Professor Venables; of course the methodology can be improved. Cost-benefit analysis produces a number that is not written in tablets of stone, it can be debated and there are different ways of doing things. However, the method that we have now for calculating benefits, including these so-called wider economic benefits—the nice thing is the assumptions are clear, people understand what it is about and there is good theory and good empirics to back it up. It is worth saying that when we talk about wider economic benefits here, there is quite a specific meaning of what they involve. It is not just anything; it is not just regeneration or other things. In the field of transport economics that is now defined and it is clear what it is and what it involves. In that sense, there is a level playing field across schemes and we understand it.

On this business of investment, to be honest, I am not an expert on this, so I do not want to answer too much about how much investment would be required. If I am not mistaken, a lot of the benefits from High Speed 2 come from releasing capacity around other cities and commuting into London and so on. I would imagine that is going to involve some investment to realise those benefits. The extent to which it has been taken into account I am not sure.

Professor Venables: If I could just come in on that one briefly. Here I am not completely sure, but I take it that the £13.3 billion of wider benefits there were generated by feeding in
a particular set of investments that had been counted. The question is there is no extra investment needed to get the £13.3 billion. In terms of the appraisal, what they did was feed in investment numbers and get that out, but then in practical terms I do believe that to get the maximum out of the scheme there will also be additional investments that, we hope, will yield further benefits as more is got out of the scheme, public investment and, more importantly, private investment again.

**Lord Shipley**: Has that level of extra investment been quantified by anybody?

**Professor Venables**: Not to the best of my knowledge.

**Q17 Lord McFall of Alcluith**: Professor Venables, you said earlier that the big thing here is about rebalancing the economic geography. The Department for Transport has said that the city regions in the Midlands and the north will derive greater benefit from HS2 than London. Does that, in the words of Professor Graham, have a specific meaning or is it just a general comment that has been made by the Department for Transport? If it has a specific meaning, could you tell me what it is?

**Professor Venables**: I believe it is the case that that claim came out of the KPMG work. They essentially proceeded in two steps. One was to get productivity effects, the wider economic benefits, but then map them into particular regions of the country. The argument can be made more broadly independent of that particular claim, but I think that particular claim is based on the KPMG work.

**Lord McFall of Alcluith**: I am still lost. Can somebody answer me then? Professor Graham, does it have a specific meaning? In other words, where is the meat here? What are we talking about?

**Professor Graham**: People have analysed the problem and, as Professor Venables said, they have tried to look at how connectivity affects productivity and they have then tried to say,“Okay, how might that be distributed across the UK?” To be fair to the people who conducted this work, this is an incredibly difficult issue to pin down. I do not think they really had the data that would let them pin it down, but they did an analysis that has produced interesting evidence. The problem is that there are some limitations of that analysis that mean that these conclusions about different parts of country are speculative. Let us just say that they are speculative.

**Lord McFall of Alcluith**: If they are speculative and they did not have the data, as you said, to let them pin it down, there is a huge gap, Professor Venables, between what you are saying is a big thing, the rebalancing of economic geography and what we are going to get at the end of the day with this project. It needs a whole picture approach and there is something missing here.

**Professor Venables**: Yes. This is, very, very difficult to do with any degree of precision. My position on this is that when we think, from economic fundamentals, in qualitative, not quantitative terms, about better connecting bits of the country, north and south, my economic principles lead me in the direction of saying that there will probably be a rebalancing effect in the right direction. That is my experience and thinking about economic principles. There is also a KPMG model that is grounded out of something. I can certainly explain to you what economic reasoning it is that leads me to that conclusion.

**Lord McFall of Alcluith**: Could I describe your rebalancing effect as being an informed act of faith?
**Professor Venables:** Yes, that is fine. There are the KPMG numbers, but what I was saying is, yes, it is a judgment based on work on spatial economics and economic geography.

**The Chairman:** HS2 has made this claim—and it is a very important claim in the public debate—that there will be the rebalancing of the economy. It seems to me it is based on a hunch.

**Professor Venables:** It is based on modelling work that we have described and it is based on a set of a priori arguments and, to some limited extent, experience from other countries, but there the evidence too is mixed.

**Lord Lawson of Blaby:** I think we can discount the KPMG study, because they were employed by HS2 who wanted this finding to be found, so we will park that. Looking historically, it is very odd, because over the past 100 years there has been an enormous improvement—it may not be good enough,—in transport infrastructure, both road and rail. Yet so far from there being any rebalancing, if anything it has gone the other way: London has become relatively more important. I am not saying that this is cause and effect, but it does seem to me that there is no hard evidence whatever that there will be any rebalancing. For a layman like myself, I would have thought that if you wanted to help the economy of the North by improved rail infrastructure you might think that improved connectivity within the North, something like HS3, which we are not talking about, might have more relevance than HS2.

**Professor Graham:** Can I just make two points here? The first thing is you would have to look at the distribution of investments in the past and where they had been made before you could really say much about rebalancing. We can look at the improvements and say that they have not done much, but where have those improvements been made, who has benefited most, has London maybe had more investment than elsewhere, and so on and so forth. However, there is an important point here, which is that the way in which High Speed 2 is being appraised is we are trying to look to the future and predict what is going to happen, so it is an ex-ante appraisal before the scheme is put into place. There is a need for more ex-post appraisal. That is, to look back at investments we have made in the past, not just in this country but borrowing evidence from other European countries and other countries more generally, and asking what impact did they really have.

What you are saying is absolutely right. We need to look back at the past. We need to do that to inform us about whether the cost-benefit numbers we have are of the right order of magnitude and that is going to be an important area that the Government and Civil Service need to look at in the future.

**Q18 Lord McFall of Alcluith:** How vigorously would you disagree with the London Borough of Hillingdon’s written evidence to us when they said that it is difficult to see how a scheme that attracts more people into London during the working day would help rebalance the economy?

**Professor Venables:** It might also attract more people into Manchester and Birmingham, so there could be increasing commuting in both those cities. I do not think anyone is saying—certainly I am not saying—that London is going to be hurt by this. Capacity in the London area will be improved and that is good for London.

**Lord McFall of Alcluith:** Back to your point then. If it is going to attract more people into London and it is going to attract more people into Manchester, it is the status quo.
therefore we miss the big point, which you are saying is the rebalancing of the economic geography.

**Professor Venables:** Can I give you the reasoning that leads me to that position? Any standard economic reasoning, basic textbook reasoning here would say if you have a poorer region—the developing world or whatever; the north of England—and a richer region, improving connectivity between the two will tend to be a force for convergence. The poorer region has lower wages and that will tend to attract jobs that were locked together in the larger region. As we see it in the world economy now and as we have seen it historically, being isolated is bad; being connected is a force for convergence. That is textbook economic reasoning and we have seen it writ large across the world in different contexts.

If I could go on with this line of reasoning, once you go to transport investments inside a country, things clearly get much more nuanced. The basic economic story here, as I see it, is unfortunately there is a U-shaped relationship. That is to say, improving connectivity to some point causes divergence and then, beyond that point, causes convergence. Can I try to explain that? Suppose you have London and Manchester—London is bigger—and really poor communications, then everyone has to have an office in both places. The only way you reach your customers is by having an office in both places. Improve transport costs a bit and you only need one office; where do you put it? It is still costly to reach your customers, so you surely put it in London—the bigger place. That is divergence. That is bringing transport costs down from a high level to a low level. That sucks stuff into London and, as it does so, it raises wages in London and makes London a really expensive place. Now take transport costs down even lower; then reaching your customers you can do from anywhere. So the only thing that determines where you locate is the relative costs of London and Manchester, and that suggests it is going to reverse. Now you can put your one office in whatever is the lower-cost place. Unfortunately, economics does give you that U shape, but if you take the power of that argument—costs in London now relative to costs in Manchester and further, better connectivity—it seems to me, as a hunch, as likely to pull in the direction of attracting inward investment of one sort or another, private investment, to those northern cities rather than to London.

**Lord Griffiths of Fforestfach:** Can I just continue there for a minute? The argument from the point of economics has a kind of vagueness about it, in the sense that it is saving travel time, it is increasing connectivity, it is rebalancing and then you put numbers on it and so on. However, if you look at, say, Cambridge and way it has developed, I am not sure how much it has to do with transport, but I never think of it as to do with transport. I think of it as to do with attracting a whole bunch of entrepreneurs, high technology, very skilled people. If I look at Cardiff and what it has achieved in independent television production, which is world-class, how did that happen? I do not think the train between Cardiff and London has been the cause of that. If I say to myself: what about Manchester? If we really wanted to develop Manchester, should we not be really putting money into the educational institutions in Manchester, the research institutions and so on? Would the times of trains be that significant?

I understand cost-benefit analysis, have done some 30 years ago, but it just seems to me it is slightly airy-fairy as opposed to something that is tangible and the idea of clusters and of economic development being built around clusters.

**Professor Venables:** I have a couple of points in reaction to that. Clearly, a railway line is not sufficient for anything. It is only part of a package. It is no magic wand that is going to
make stuff happen. I do not think anyone believes that. It is part of a package of stuff. When you look at the research literature on firms’ investment decisions and location decisions, access to a skilled labour force always comes as number one on the list and not that far down is transport stuff, access to markets and other places. Clearly, the railway line is not sufficient for anything; other stuff, like education, matters more.

The point about cluster formation is really important and really interesting. That is what drives a lot of growth, but these are now often very, very specialised clusters. To give my favourite example, 250,000 kilometres of zips get made in Qiaotou in China every year in enormously specialised clusters that, because they are so specialised, are clearly trading very, very heavily with the rest of the world. You have to be linked in. If all you are doing is zips, you have to get in with the other stuff from other places. In Cambridge, people need access to the science stuff, which tends to cluster very strongly, but they also need access to venture capital, to advertising, to law, to things that they buy from London, so I do not dismiss the railway line between Cambridge and London.

**Professor Graham:** The question is about whether high speed is the best way to achieve growth or productivity. There was a report in 2006 by Eddington, an independent inquiry into the effect that transport would have on the economy, and the report argued against things like high-speed rail. It said you do not need big transformational schemes to get good economic returns; you could do it by focusing investment on what they called “strategic priorities”—cities, ports, inter-urban routes—and trying to target pinch points in the network. It said to not do these big grand schemes and that you can get a lot of benefits in other ways, so, yes, it is perfectly legitimate to ask whether it is the best way of doing it. I do not think the answer is necessarily yes and maybe more work should be done on that sort of thing.

**Q19 Lord Griffiths of Fforestfach:** My second question is to do with when you are looking at the wider economic benefits. Professor Vickerman told us they were not automatic and the question is what can the UK learn from other countries? Here, frankly, I am rather confused by it, because, for example, it is said that between 1995 and 2011 rail usage increased by 60% in France, decreased by 7% in Italy, but both countries invested heavily in high-speed rail. The HS2 Action Alliance said, “It is very difficult to substantiate the argument that high-speed rail is likely to have a positive impact on regional inequalities”. Transport Watch said, “International comparisons confirm that such schemes benefits capital cities rather than regions”. What are we, as lay people, meant to conclude from what I would think to be conflicting judgments by professionals?

**Professor Venables:** I have not read all the evidence of all the case studies of high-speed rail around the world, but insofar as I have read them and read other people’s surveys on them the picture is very, very mixed. Lille did well, Lyon probably did well, and other places did badly, and so it goes on. It would be great if one could have a clear message from international experiences, but it is just very mixed. The lessons to be learned from it tend to be rather blindingly obvious ones: if you build railway lines where nobody lives and no one wants to use them, they are probably not going to be very successful. If you put stations in stupid places where nothing is going to happen, they are not going to be very successful. If you really set them up so that you have the planning regime, the education, and the skills around the neighbourhood such that they can attract private investment and have a strategy for doing this, then they can be rather positive. It is an awfully mixed picture and certainly I agree with Professor Vickerman’s statement that it is not automatic; it takes other stuff.
Professor Dan Graham and Professor Tony Venables—Oral evidence (QQ 13-23)

Q20 Lord Rowe-Beddoe: In the economic case—I do not know whether I should put that in quotations or not—do you consider that the estimates of the amount businesses are willing to pay for quicker travel are justified, because the benefits are being indicated at some 84% of the total benefit?

Professor Venables: There are a lot of experts out there on the value of time and I am not one of them, sorry.

Professor Graham: No, it is not really my area either.

Lord Rowe-Beddoe: Not your area. It is not my area at all, but my gut tells me that if I am building a case to do something on 84% of the benefit arising from “the value of time”, I think it is a bit worrisome. Anyway, let us move on. I have something else here; it is about time; it is something Lord Lawson dealt with in the previous session. Again, time: is it station to station or is it connectivity door to door, and has that been taken appropriately into account, in your opinion?

Professor Venables: Obviously, what matters is door to door, not station to station. I believe that the transport models do take that into account.

Lord Rowe-Beddoe: Yes, but it is largely dependent upon the anticipated speed that the train is going to run.

Professor Venables: Yes, that is clearly the middle bit.

Lord Rowe-Beddoe: Do you have anything to add?

Professor Graham: There has been an attempt to model this, but the basic question is: are they reliable? I do not know the models well enough to say.

Q21 Lord Carrington of Fulham: One of the big issues around this is how many people are going to use the trains, is it not? As you were saying, if you have a small but growing city and a very large and prosperous city and you connect the two together, you hope that the traffic flows are going to switch from the small city to the big city, switch under the U from the big city back to the small city, all of which is highly speculative, inevitably. However, the modelling that they have done is based on a consistent growth of passenger traffic along HS2 to justify the fact that this is going to take traffic from other transport providers. They are talking about fairly substantial increases over the next 20 years; I think the figure is something like 2.2% per annum compounded, which is a pretty substantial change. That does not really tally with the U curve that you were suggesting, in that it does not suggest that this is uniform over time and it does not put a 20-year time limit on it, because how big is the U? From what you are saying, it is pretty hard to give any estimate of that, as I understand it. Do you find that projections of passenger growth are very speculative or do you find them convincing or do you think that that is enough to justify building a new railway line, high speed or not, to take off projected traffic that may be speculative?

Professor Venables: Again, I can react in a number of ways. First, the U to which I was alluding was to illustrate a divergence-convergence story in per capita income driven by, in part, connectivity. It was not about the number of people on the train. It was about how things relocate.

Lord Carrington of Fulham: It has an implication, though, for the number of people on the train, surely. It cannot not.
Professor Dan Graham and Professor Tony Venables—Oral evidence (QQ 13-23)

Professor Venables: It does, yes; that is right. If the cities became more balanced, then I guess you would expect more passengers between them. If they were in a place of nothing, there would be no passengers and passenger numbers would be maximised if they were of equal size, other things being equal. Again, I am really not a transport modeller. I do not know the exact basis of the demand projections, but when I think about these things, we know that trade has grown faster than income for decades, that foreign direct investment has grown faster than trade, and that travel has grown faster than income. We know that the population of the UK will go up by 17 million people by 2050, and there is the recent evidence on increasing train travel. All of these arguments push in the direction of travel continuing to grow at least as fast or faster than income, which we hope will be more than 2.2% per annum. Now, maybe video conferencing will be perfected tomorrow and this will be a complete waste of money, but everything we know about that so far is that when I video-conference my international co-authors I travel less, but I have more international collaborations because of the possibility of video conferencing, so, in total, I travel more. That seems to be the message about the effect of technical progress on these things, so 2.2% per annum with a stop at 2036, I believe, does not seem to me to be grossly inflated at all.

Professor Graham: You could construct an argument to say it is too high, you could construct one to say it is too low, and with any cost-benefit there is always debate over demand forecasts. Again, what we could do is look back at the past and see how good our forecasts were in previous schemes. I was at a meeting in the OECD two weeks ago where the French have done this and they have looked at cost-benefits ex-post and ex-ante, so done before and after the scheme. What they found is that demand forecasts were always too high and cost forecasts were always too low, pretty much systematically. That is the case in France. I am not saying it is the case with this. I do not think 2.2% seems outrageous, but you can level these criticisms at any cost-benefit. It is not something specific to High Speed 2, I do not believe.

Lord Carrington of Fulham: I think what we are trying to get to is there are two aspects to this. One is that it has been suggested to us as part of the Hillingdon haul that the major effect of HS2 to Birmingham would be to make Birmingham so close to London that the increase in traffic becomes commuter traffic, not business traffic. In other words, because housing is cheaper in Birmingham, people will live in the West Midlands and commute to London and that is clearly a worry for us.

The other aspect of this that is concerning is that if the numbers are so speculative, this then becomes a political project, not an economic project. It then becomes a project where people are saying, “This is a grand projet. We are going to build a pyramid in the middle of the Louvre regardless of the cost,” and HS2 is just the British equivalent of that. If the numbers have such error factors around them, such standard deviations around them that the thing becomes economically meaningless to analyse it, we are taking a punt and it is a political punt. That is fine and perfectly legitimate, but is that a grossly unfair comment?

Professor Graham: I do not think it is grossly unfair. You are right in the sense that you get a cost-benefit ratio that does not have a standard error, so there is no way of knowing what its degree of significance is. That is clear and more work needs to be done on incorporating uncertainty into the benefit-cost ratio.

To be fair to this particular case, what they have done is they have produced a distribution of benefit-cost and they have tried to look at different assumptions on costs and demand, and I think they have done a better job than you would usually see in this kind of area.
**Professor Venables:** A lot of what I have been talking about is a punt, but remember that there is a core cost-benefit analysis in here that, as we started off saying at the beginning of the session, is done to best practice, a rather solid, standard cost-benefit that comes out with a benefit-cost ratio in excess of two. If that number was 0.8 and we were then coming up with all these other arguments, I would be extremely worried, but there is that more or less solid two-point-something underpinning it, which certainly influences the way I think about it.

**Q22 Lord Lawson of Blaby:** May I make one observation and ask one question? The observation is that, I think, Professor Venables, it was a false analogy that you made about globalisation in the developing world or the emerging world, as we now call it, into the world economy. That has had a profound effect and it is a benefit that is for the whole world, but particularly for the emerging countries, but that was because they were completely cut off, a totally different system. That has not been the case in the United Kingdom. We have had a single economic system and there has always been a lot of interchange, so I do not think the two cases are remotely comparable.

My question, however, is this: you said that improved transport brings benefits. I am sure that is right. I do not think any of us would contest that. The big question is: what is the benefit-cost ratio and the opportunity costs and what are the alternatives you could do? The question I would like to ask both of you is: if you were Secretary of State for Transport, what project would you suspect is the best bang for your buck? Would it be HS2 or would it be something else and, if so, what?

**Professor Venables:** We know from Eddington that there are very high returns to small projects—congestion. There are lots of small projects that need to be done, but I think I would stand back and say that there are serious regional imbalances in the UK. The population of the UK will go up by 17 million people, and I do not know where they are going to live. I would therefore say we need to do something rather serious about making some of the regions more attractive places to work, to do business and to live, and that is obviously a whole raft of measures. Education, skills and things are way up at the top, but I think fairly ambitious transport comes in that set.

**Professor Graham:** There is definitely a case to be made for investing in cities. Cities are highly productive places. They are where a lot of the innovation and the growth come from in the economy. We have big problems with congestion in cities, so there is a strong case to be made for looking at prioritising investment now, and that is kind of what Eddington said.

**Baroness Blackstone:** The problems of congestion in cities are not solved by railways that connect cities. They are solved by things like driverless cars and more people riding bikes and a whole range of other things.

**Professor Graham:** That is what I am saying. What I am saying is, rather than have this big scheme that is connecting cities at long distances, have investment inside cities to improve congestion and relieve the costs of congestion.

**Q23 The Chairman:** I wonder if we might just pick up your earlier suggestion and come back to the report that you have written for the Department for Transport. Is there anything that you have not mentioned in the course of this session that you would like to draw to our attention, particularly the conclusion? As you can see, we are at an early stage
in our journey here and we are struggling to find out what the mechanisms are through which transport affects economic performance. Another question that is related to that is you are spending £50 billion on one project. The Eddington report suggests that there are a number of other projects, which may add up to less than £50 billion, which might have a much greater impact on economic performance. I wonder if you could help us to work our way through those issues.

Professor Venables: To take the first of those, as I said earlier, in thinking about an appraisal you obviously think about the mechanisms through which you think the project is going to affect well-being, ultimately. The way the report is organised, there are, first, the user benefits, which we have talked about, using standard procedures pretty well. The second is productivity effects, so the core of the department’s wider benefit approach, connecting people, growing agglomerations, lots of robust evidence that that raises productivity. It is important—and this is coming from that report—to be very clear that these productivity effects can be realised in quite different ways. With Crossrail, it was about getting more workers into a place. We thought that central London was constrained, was not growing as it should as an agglomeration because of lack of commuting capacity. That was getting more people in. That is one agglomeration effect.

Another mechanism would be that you have Leeds and Manchester; let us just make the firms a little bit closer to each other in economic terms by improving communications. That is different from taking all the workers from Leeds and putting them in Manchester; it is just making the places interconnect, the businesses interconnect better between those places.

So, within the wider benefits within the productivity story there are different mechanisms going on that the department needs to disentangle a bit in some of what it does, but that is going into the detail of the report.

There are the user benefits, the wider benefits and then the broader, less precise land use change, economic geography, location effects. If you really do trigger a lot of private investment in a place, do we think that transport can do that and, if it does, do we think it is of social value? Both of those are difficult questions, but I think they are a mechanism through which transport affects the economy and they should be thought about seriously in cost-benefit analysis and it is not in the core DfT approach.

The Chairman: Fine. Thank you very much indeed. It has been a very interesting session. Thank you for coming.
Greater Birmingham Chambers of Commerce—Written evidence

1.1 The Greater Birmingham Chambers of Commerce constitute some of the UK’s oldest and largest Chambers. It has nearly 3,000 member companies that employ over 200,000 across the areas of Birmingham, Solihull, Lichfield, Tamworth, Burton, and Chase. It offers extensive services to industry and commerce, having served the interests of business for two centuries, promoting trade locally, nationally and internationally.

1.2 There are several key factors which help provide evidence to the economic case for HS2.

1.3 **Capacity:** Rail passenger growth has seen a rapid increase within the West Midlands over the previous five years. Figures released by ATOC in 2013 showed that rail passenger growth in the West Midlands is among the highest in the UK. Passenger commuting to Birmingham has more than doubled in the last five years. Without fundamentally addressing this capacity, rail congestion will spill over onto other modes of transport.

1.4 HS2 has the ability to help stimulate improved transport connectivity across the Midlands. HS2 features prominently in the “Midlands Connect” project (coordinated by Centro, Network Rail and the LEPs) which seeks to understand how transport can unlock economic growth between Midlands cities, in a similar vein to the Northern Hub project.

1.5 **Jobs and skills:** The Construction HQ, to be based in Birmingham city centre, will generate 1,500 jobs. Further jobs will be created by the maintenance depot and control centre for HS2 in Washwood Heath, an area with high unemployment following the closure of the LDV van works in 2009. The prospective placement of a HS2 Rail College in Birmingham has enormous potential to upskill a workforce which has seen historically structural unemployment.

1.6 **Regenerative effects:** the construction of the Curzon Street Station will be a catalyst for major redevelopment in the Eastside area of Birmingham. This has the potential to be on a similar scale as the Kings Cross/St Pancras redevelopment and will open up significant parts of the city, such as Digbeth, which are seeing rapid economic development.

1.7 The HS2 Curzon Street Masterplan put forward by Birmingham City Council predicts the creation of 14,000 jobs, 600,000sqm of new business space, and 2,000 new houses.

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1.8 The Interchange station in Solihull features heavily in the UK Central Masterplan (put forward by Solihull Metropolitan Borough Council and GBS LEP) and will significantly contribute to connectivity to existing assets in the region, such as the NEC, Birmingham Airport and Solihull Town Centre. UK Central anticipates the creation of around 20,000 jobs and 2,000 homes.

1.9 **Wider economic impacts:** Research commissioned by Centro\(^\text{187}\) estimated that an additional £2bn of Gross Value Added and 22,000 jobs could be produced by improved connectivity from the HS2 Y-network.

2.1 While areas affected by the line in South Staffordshire (such as Lichfield) will be disadvantaged, there may be stimulus to these areas through the construction of the line itself.

2.2 There is a clear demand from businesses in Greater Birmingham to re-consider the position on a **HS1-HS2 link**. The West Midlands has the highest growth rate in the UK for export value. Over 40% of the value of exports from the West Midlands is to European Union countries.

2.3 A direct high speed link to Europe will open up significant business opportunities and facilitate better connectivity between the Midlands and the North to the continent. It will also put the Midlands and the North on a more even footing with the South East for ease of doing business with Europe.

September 2014

\(^{187}\) See here for Centro HS2 Connectivity package

[https://www.centro.org.uk/media/208188/highspeedtwolocalconnectivitypackagefinal_1662.pdf](https://www.centro.org.uk/media/208188/highspeedtwolocalconnectivitypackagefinal_1662.pdf)
Q156 The Chairman: Mr Blackett and Mr Tunstall, welcome to this session of the Economic Affairs Committee’s inquiry into HS2. Thank you very much for joining us today. When you wish to speak, please press the button in front of you. A poll in April 2014 by YouGov found that only 29% of people from the Midlands and Wales region supported HS2; while 53% were opposed. We have seen from your evidence that you are very supportive. Why is the public not supportive; what are they missing?

Chris Tunstall: Thank you very much and thank you for having us. Part of the problem is the story that has been told to date, although more recently we have moved on to the real issues, which are capacity and the potential for regeneration. The initial story was about speed. Everybody saw this just as a way to get to London in under an hour, that there were to be only a few stations and would mean that you had to trek from existing stations to Birmingham or Birmingham interchange and make a connection there, and the potential for reduced services to London direct from places like Wolverhampton and Coventry.

I think it is more in the telling, more in the story. To be fair, I think that if you went back to the 1960s and 1970s, the heyday of motorway building, you would probably get exactly the same response.
Jerry Blackett: I just add that a strong majority of the businesses that we have surveyed in the Greater Birmingham Chambers of Commerce catchment area favour the creation of this investment in HS2. That probably tells you that we have had a chance to have a dialogue with those businesses to get below the original, “20 minutes for billions of pounds? What a waste of money” response to the argument, “We have a railway that is filling up”, and all the reasons, which you have probably already heard, why this investment is required. So we have made some progress, and I hope that the public will start to come along with us.

Q157 The Chairman: Which particular benefits appeal to the public that are replacing the speed argument?

Jerry Blackett: I think that what we have got to help the public understand is that this is about growth and jobs for their children and families and the ability of the Midlands, in our case, to compete globally. If we can get some of that dialogue going, I think that the ordinary person will start to feel that we are indeed in a white-hot race to win investment. We are competing with China and India; we are not competing with Manchester or Leeds, particularly. I think that we have not yet got some of that visionary material across.

Chris Tunstall: I’d also add that part of the problem in the past, particularly when we have tried to upgrade existing railways, such as the West Coast Main Line, is that not only has it caused major disruption and heartache for people, it has gone on for an interminable time. The last upgrade was predicted to last two years; it ended up taking nearly nine. We got an extra train service out of it, but that was at the cost of one of the stations closing. One key thing that we have to get across to the public is that this will enable us to improve local services significantly. Think of the train patterns that HS2 alone will allow us to do from east to west. At the moment, on the cross-Birmingham route we have three services an hour, which are overcrowded. With HS2, we can increase that to nine or 10 services an hour. We have been looking at a package for connectivity which significantly improves existing commuter lines. When people realise that it is about improving existing commuter lines, there will be a better understanding. At the moment, people are hearing, “We are building a high-speed railway which will get us to London faster”. In fact, the real benefits from the Midlands point of view are looking towards the north more than London.

Q158 Baroness Blackstone: Can I come back to your claim that the building of HS2 will have a beneficial effect for Birmingham and generate jobs? Will not some of those jobs just be displaced from other areas in the West Midlands that are not directly linked to HS2?

Jerry Blackett: We have tended to come at this as the economy pulling the need for transport infrastructure; we do not feel as if we are being pushed to lay more railway lines. There is a lot of growth going on around the Midlands at the moment. We are the top foreign direct investment location in this country outside London. We have a net balance of trade surplus with China. Our automotive story is very well known across the world. When we look forward 30 years to where we could take our economy and then back-fill it by asking, “What enablers do we need?”, we say, “We’ve got a railway line that will be full soon. We’d better sort that out. We’ve got an airport that has been expanded but could be more”. There is a real missed opportunity at the moment between the HS2 vision and the Davies vision. We are not recasting enough. I do not think that this is a question of displacing existing growth; this is about seizing the potential for additional growth across the Midlands in a way that, perhaps, we have not done until now.
Chris Tunstall: Over the period when we have seen one of the worst recessions we have had in living memory, we have seen rail growth double in the last seven years across the West Midlands. We are fast getting to the point where we will run out of capacity. When you run out of capacity is a moot point, because you can lengthen trains, as we talked about earlier. You can try to get a few new services on. You can alter the fares to try to get a spread across the day rather than just at peak hours, but we reckon that in 2024 or 2026, it will be full. That will definitely choke investment. Within the West Midlands, we commissioned work from KPMG on an economic study about HS2. That identified a potential for just over 20,000 jobs and about £2 billion GVA improvement per year from HS2 alone, but if we put the connectivity in to allow better use of the existing network and made the connections onto the high-speed line, we could double both of those figures.

We can argue all day whether the economic models are right or wrong, but would we take out the Jubilee line now? Would anybody take out the HS1 line? History has demonstrated that we have had economic growth on the back of major infrastructure investment.

Baroness Blackstone: But you are also saying that we have quite a lot of economic growth in the West Midlands and Birmingham anyway, without HS2. We have had evidence from a number of leading economists who are experts in the area of transport and regional growth. They say that what you are saying is an act of faith. It is very hard to predict. What is the basis for your act of faith that it is all going to lead to a lot more growth later, directly from HS2 investment, when you are getting growth anyway without it?

Jerry Blackett: To clarify, we have a 20 to 30-year strategic economic plan for the six LEP areas in the West Midlands and beyond. They forecast the potential for our economy to grow, but right in the guts of that are the enabling infrastructure assumptions, so the growth is built on an assumption that we have an integrated supporting structure for skills, transport and all the other bits. We are certain that if all those bits come together, we can deliver that growth, but please do not misunderstand me. We cannot do it without those enabling pieces, but we are certain that we can do it if we get the investment.

Q159 Lord Shipley: Mr Blackett, could you expand on an answer you gave a moment ago? I heard you say that Birmingham was competing with China but not with Manchester. Is it not the case that, if both Birmingham and Manchester are on an HS2 line, you will be competing with Manchester? On what basis did you say that there would not be competition with Manchester?

Jerry Blackett: I am trying to say that the real competition for the UK is from outside. Of course we want to be a flourishing city and be the best city in Europe, not just in the UK, for setting up businesses. I would say that the relationship with the northern cities—Manchester, Leeds and Sheffield—will be a win-win for both of us when you can get from Birmingham to Manchester in 40 minutes. I have come up today: it took nearly two hours and there was standing. At the moment, the business flows are not natural between us because of the transport links. There is a mindset against it. If you look at what is going on in Derby, with the Bombardier, Rolls Royce and Toyota industries, and then at what is going on around our part of the world, we have barely understood connectivity east-west and have barely even thought about it. When you start to connect up, and we have been thinking a lot about this, there is business that we will both do. We will see who does more but there is more to be had from the regions generally north. If we get it right, we will be stealing business from China, India and elsewhere, and the UK will grow overall.
Lord Shipley: Can I switch to potential competition, particularly for a labour force, with London? HS2 will bring down the journey time to London to 49 minutes, which is a great deal less than many people elsewhere spend commuting into London daily. It could be very attractive to people to live in Birmingham and work in London. To what extent have you factored in the possibility that Birmingham will lose workforce because some people decide to go to work in the capital?

Jerry Blackett: We are not frightened of a railway line that goes in two directions. We think that the growth opportunities outside London enable us to take some of the overheating out of London. We are going to be so close. Why has Deutsche Bank opened up 1,000 back-office jobs in Birmingham? That is because it is two-thirds of the cost of doing that in London and one-third can be saved. Why do we have such a large accountancy, banking and finance industry? It is because you can get a fantastically qualified lawyer at two-thirds of the cost. Physics talks about the laws of attraction: I think that there is attraction in what we are building up here to make investment in this way but we are equally relaxed about business people and individuals who want to work in London because it is so close. They will come back and spend their money back in our home region. I am very happy if people want to secure well paid jobs, or any jobs, in London. Let them come home and spend locally. We are very comfortable with the two-way traffic that we can envisage.

The Chairman: So it is a two-way, high-speed brain drain, is it?

Jerry Blackett: A brain drain? When you build transport, people will go in both directions. You have to have a reason to go in either direction. We are confident that we are building an economy that investment is following. As I said at the beginning, we are the top foreign direct investment location outside London in the country. We have set up more new businesses in the Midlands outside London than any other region: 16,000 in 2013. Something is going quite right. We have got the NEC, the airport, our business parks and our life sciences, and I could go on telling you why we think that we have a growth dividend for this investment. But we will not do it without the investment, which is the point that I was trying to clarify earlier.

Chris Tunstall: On an anecdotal level, rather than naming the firm, although it has been mentioned, I was talking to a colleague who previously worked for the said bank. Its rationale, if it is looking for new business and where to place the workload for that business, is first to look to Asia, then to Birmingham and then to London. That is where and how they look. That goes back to Jerry’s point that costs drive it. If you take that argument to its logical extension, at the moment 186,000 gross jobs come into Birmingham from surrounding districts. Birmingham exports about 80,000 jobs, so net about 90,000 jobs come into Birmingham. Are we that worried that we would say we cut all the links between Birmingham and its hinterland and not take those 90,000 jobs? That is exactly the same with London? Would we seriously consider closing the M42 if that was an issue, or closing the West Coast Main Line and the East Coast Main Line? It already happens, but it is this joining and pulling together. I could not categorically say, but I am not sure that that has been the experience on the continent in places such as Lille and Lyon and that they have seen the drain going the other way. While in the past 10 years the West Midlands metropolitan area in terms of gross GDP has gone down from £26,000 per person to £23,000, Lille quite clearly has seen it go up from £20,000 to £26,000 and in Lyon it has gone from £30,000 to £38,000. We have both experienced the same recession. What is different? The thing that stands out is that they have had investment in infrastructure.
Q161 Lord Griffiths of Fforestfach: I wonder whether you could help us with the following: in order for HS2 to have a real impact, a lot of other things—for example, local enterprise partnerships, complementary investment and so on—have to be done. What exactly do you think are the key elements that have to be done and, in particular, how they would be financed?

Chris Tunstall: The Greater Birmingham-Solihull LEP is obviously key. Both stations are in that LEP area. It has an HS2 growth strategy. As part of its strategic, economic plan, it has already identified the investment that is necessary in the short term, which was about £320 million of which it has already been awarded about £130 million. It is already tying in HS2 with its forward strategy over just the next few years, because this covers only the first year and is potentially indicative of the next four. That is in terms of investment. Skills are a big issue as well. It is alright to say that all these jobs will appear, but we do have jobs appearing with 1,500 construction jobs coming into Birmingham and the HS2 college jointly with Doncaster. We also have a depot at Washwood Heath, which has 600 or so highly skilled jobs. That is in an area of high deprivation. Unless we get people trained in that area and skilled up to take those jobs, there will be another 600 jobs on top of the 186,000 that we import at the moment. We have to get the skills right and that is another pillar of the GBS strategy, which is basically to enable us to be HS2 ready.

Jerry Blackett: May I add something about where we are going to get the money from because these are large sums? The Financial Times reported last week that the Qataris are very interested in investing around our new station. From the investors I talk to, I am certain that when you give a 30-year view of where a city region is headed, you give a sense of certainty and confidence and it is then no surprise that investment from around the world starts to become interested. That is the sort of agenda that they can cope with. I hope that we will find the investment internally as well, but we have a track record of being very friendly to overseas investment. Tata has come in to take on Jaguar Land Rover and Mondelez has taken on Cadbury, so we are very used to welcoming capital, and capital is foot loose and fancy free. In my experience, it is tangible now that Birmingham has got a sense of a long-term future, and investors are beginning to emerge. With the private sector element of the costs, we should be optimistic that the assumptions are achievable.

Lord Griffiths of Fforestfach: So you are particularly looking to external sources of investment and sovereign wealth funds which might want to invest on a long-term basis, and therefore having a rate of return that is slightly lower than what some private-sector investors would be looking at.

Jerry Blackett: You do the best deal you can based on the cards that you have to play. In some cases you have to accept that long-term returns carry a premium. I think that there is enough for everybody to benefit short term. The local office market is already severely short, so I think that we will see developers building as they do normally, and then the pension funds coming in. It was a pension fund that built the toll road around Birmingham. We feel quite excited about that menu of investment.

Q162 Lord Rowe-Beddoe: How important do you think east-west connections are in ensuring that HS2 is a success? We are talking, as we all know, of £50 billion, which I am sure is moving “northwards” as we sit here!
Jerry Blackett: Mr Tunstall will probably come in on that. For me, from a business point of view, I think that we have only scratched the surface on the east-west potential, because we have not been trained to think east-west. Because our communications have always been north-south, the frequency and connections for east-west economic building have not been there. In the last year, we have started a project called Midlands Connect, which is for the East Midlands and West Midlands businesses, local authorities and LEPs to coalesce around sizing the growth for the whole of the Midlands. We have started to have the sort of conversation that I was talking about earlier around Rolls-Royce. These are supply chain discussions that we have never had before, because east-west has just been too difficult to do, and we have always just said, “We’ll do that another day”. Now we are starting, and that is why we are only just scratching the surface of the east-west.

Chris Tunstall: As Mr Blackett said, we have a major initiative called Midlands Connect. We already have a number of corridors identified, both road and rail—it is not looking at rail or road in isolation. The DfT, Highways Agency and Network Rail are involved, including within their route studies, particularly Network Rail, the corridors that we have identified. I can give you some headlines, such as the fact that 60% of all the goods from the West Midlands end up in the East Midlands, although we talk about the exports from the West Midlands, and how it is the largest exporting region in manufactured goods in the country. So it is critical that we get that linkage; we are talking about 10 million people. One thing that we have not talked about is the fact that in the next 20 years we are expecting a 10% increase in population. So not only are we looking to grow businesses—as Sir Richard Leese said, we concentrate on passenger traffic, but it is very much about freight as well. The whole thing will start closing down on itself, and the idea of Midlands Connect is to get some of those connections upgraded.

Now, as for where we look for the cash, we make the business case for them and then we will look wherever for the cash. We talked earlier about the potential to raise funding from sovereign wealth, but we have been talking to the Government about the potential to extend enterprise zones, where it is on business rate uplift, or even the potential of supplementary business rates. But then we would have to talk carefully with Mr Blackett and businesses about that. It is key that we get those connections in. With 60% of our freight going to the east, it takes us an hour and 45 minutes to get from Birmingham to Nottingham. Do I need to say more? It is ridiculous. I know that we are talking about Leeds and Manchester and 42 minutes—but it takes an hour and 45 minutes to get from one of our core cities to an adjacent core city.

Q163 Lord Rowe-Beddoe: Thank you. The Chancellor launched a report recently and went on to say that the east-west connections were integral to making HS2 a success. We took evidence from the Mayor of Liverpool a week or two ago, Mr Joe Anderson. When he was asked if he had a choice between HS2 and HS3, he said that he would go for HS3, if that was the final choice. Would you care to comment?

Jerry Blackett: I do not think that, from where we sit, that bit of east-west would be a priority for me. Getting the north-south bit in is the priority. Now we are exploring how we exploit the east-west piece of the HS2 extension, and then the local connectivity to that. You need both, but I would not prioritise. From where I am sitting in the Midlands, you cannot do the east-west investment without the existing HS2 investment. That is really what is opening up the east-west for us, when it goes over to Nottingham. I am maybe missing the point of your question.
Lord Rowe-Beddoe: No, that is an interesting point. But the Mayor was quite clear that that was his choice.

Chris Tunstall: I think, with respect, that probably the question was wrong. The question for me would be, “Would you prefer HS2 coming to Liverpool or HS3 coming to Liverpool?” Liverpool’s stance is that they want that extra 20 kilometres or whatever it is to connect up. If he was looking at the benefit of getting his goods out from the port to the rest of the country, going south through the Midlands and further south down to London, I would say, although I have not got any figures to back it, that I would have thought that there was a far better economic case for his port than just the connection going east-west.

Lord Rowe-Beddoe: Actually, he was talking about Hull and Newcastle, as I recall. There is one other thing that I would like to move on to, which we have not talked about at all. In our earlier sessions, talking about station to station, we have had lots of comments to the effect that, “Well, what does that do for me, a businessman whose business is 10 or 20 minutes from the station?” A private individual submitted evidence who said that it took him 75 minutes to get to Euston by Virgin trains from his local station in Lichfield. Although he lives less than 20 miles from Curzon Street, the door-to-door journey to Euston will now take him 100 minutes. We have not really addressed that at all. Would you like to comment?

Chris Tunstall: That comes back to the point that we were making earlier, that this is not a question of putting in HS2 and then reducing services elsewhere. I mentioned Wolverhampton and Coventry; Lichfield is exactly the same. We would expect those services still to remain, so it is horses for courses. It is about how he would benefit and his particular needs for getting down to London. We would expect those services to remain. This is not about taking existing services off.

Jerry Blackett: We should remind ourselves that, eventually, the line is full. We need some new railway line. I do not think that anybody is now denying that we need to build some new capacity. Chris made the point earlier that when we build new capacity we release capacity from the classic network. Clearly, we have not got that message over to the person giving you evidence. That is an example of the work that has to be done.

Q164 The Chairman: To what extent will the interchange times between Birmingham New Street and the new station at Curzon Street reduce the saving of time in travelling between Birmingham and London? Secondly, what additional investment is needed to link the two stations? Is that included in the £50 billion or is it further funding that you will have to raise?

Chris Tunstall: We have a scheme called One Station that has gone through the LEP and is part of the £130-odd million approved as part of the first tranche of the local growth fund. That will be improving the connectivity; to be honest, it does not improve it significantly in terms of time but it certainly improves the environment. Anybody trying to get from the existing Moor Street to New Street knows that they have to go through what is known as the bus tunnel, or you walk up and over the Bullring. To my mind, this is very simple. What is the extra distance? It is physically just the walking distance between New Street station and Curzon Street, because you would still have to change platforms and so still incur time penalties when you change trains. That sort of time is about 10 minutes, on average. Obviously, if you have mobility impairment or something like that, it could be an issue. But we know, having looked at Walsall, that if you want to get from London up to Walsall and
Greater Birmingham Chambers of Commerce and West Midlands Integrated Transport Authority—Oral evidence (QQ 156-169)

have to change from Curzon Street to New Street, you would still save 25 minutes on the current journey. It would be normally be 35 but with the travel delay that you get by having to walk in between, you would still incur about 10 minutes delay.

By far our biggest concern, and it is a massive concern, is the approach between HS1 and HS2 and the link, because here we have a great opportunity. I have been in highways and then, more latterly, gone into transport. My home town is Bradford and I remember year upon year of Exchange Station and Forster Square Station wanting to be linked, and they were not. Our forefathers had not thought it through. They had not put the link in, and here we are, doing exactly the same thing. We have lambasted what was, effectively, a very good rail network that we are still using today but which has not been upgraded. We have not done that with our road network; we built motorways. Can we realistically imagine the volume of traffic and so on using the road network that existed prior to motorways? But we have done that with the railways. Our forefathers made very good railways for us but one flaw was that they did not make the connections. That lack of a link will give an hour’s penalty for anybody coming down from the Midlands or the north who wants to go through to the continent. It would still make short-haul flights to the continent more attractive than the more sustainable and environmentally friendly rail travel. That is a big concern for us.

I know that at the Department for Transport, the Minister has asked for further work to be done but our worry is that his further work will leave people walking down Euston Road. It may seem fine if you are coming down from the Midlands and the north for you walk down Euston Road with your bags and your kids! But of course if you are in London, you do not go to Euston but straight to St Pancras. Why would you possibly do that instead? But if you are coming from the north, you have no choice, unless you come down on the east coast.

The Chairman: Thank you. The second part of my question was: to what extent does additional investment need to be made and is that included in the £50 billion?

Chris Tunstall: No, it is not included in the £50 billion. We are looking for the additional investment out of our local growth funds or out of our own funding. We have enterprise zones within Birmingham at the moment and we are using the business rate uplift to fund capital investment over the next 20 years, so there might be funding from that.

The Chairman: What do you estimate the total additional cost to be?

Chris Tunstall: For that particular scheme, One Station, it would be £10 million.

Q165 Baroness Blackstone: You have put a lot of emphasis on capacity constraints. Some commentators would dispute this, apart from a very short peak period at the beginning and the end of the day. Can you put a bit more flesh on your claim that there is a serious capacity issue for Birmingham?

Chris Tunstall: We have to start from the premise that we are not talking about having High Speed 2 tomorrow. We are talking about an infrastructure project of the kind that, unfortunately, this country has a panache for taking as long as it possibly can to build. We are talking about it being 2025 or 2027 before it will come into use. If I can give you some figures; as I say, I do not want to start going over whether we are 90% full because individual trains might be 100% full—and if you go at midday, you might find that there are loads of seats and that it is just a matter of people deciding when they travel, although if you are in business that might be a bit harder. But if you were to look at the West Midlands on its own, you would see that we had 100% growth on our rail network in the last seven years,
from 2005 to 2012. There was 100% growth in the same period as the recession. In fact, within public transport buses bumbled along and went a bit lower while car traffic dropped but has now come back up to pre-recession levels, and we are still 100% more for rail.

**Jerry Blackett:** Which is about twice as much as the UK average.

**Chris Tunstall:** It is twice as much as the UK average, so I could debate all day about having trains where some are full and some are empty. But if you just look at the figures, if in the past seven years we have had 100% growth, what are the next seven years going to bring? If you go further back to 1995, we have had 220% growth from then up to 2012. So this is not something that has just occurred in the last five or six years; it has been growing over the last 20 years, during a recession. We are getting to a point where we need to do things. We are trying to improve the network; we are putting longer trains on. We are putting on more trains when we can but the network is very full. It is a very inefficient line with its slow stopping, its freight and its fast trains. We are taking some first-class carriages out from some of the Virgin services. We are trying but all this is only a stopgap measure. The real change will occur when we get High Speed 2 in, which I think will give us an extra 3,500 passenger places an hour.

**Q166 Baroness Blackstone:** How do you explain this very high level of growth over the past five years and, indeed, over the period before that? If you can understand the cause, you can perhaps make more reliable projections about what might happen in the future, whether it is going to flatten off or whether it is going to go on increasing at this rate. You cannot do that without some understanding of the causes.

**Chris Tunstall:** You are perfectly right. To be honest, I do not know the cause of it. I know, anecdotally, that people are fed up of travelling on overcrowded trains and are coming back to the car. There is a demand to travel—notwithstanding everything else, there is a demand to travel because people are travelling. I actually do not want them to travel in their cars; I want them to travel on public transport, to walk and to cycle. I want to do things that are more sustainable and environmentally friendly. I accept what you are saying, but over 17 years, we have been the highest-growing region, at 220%, even outgrowing London. If you look at London over the same period, it is 100%, yet we invested in Crossrail and are looking at Crossrail 2. If you look at investment over the past 25 years, anecdotally—I do not think that the DfT would put these figures on the table, but it has done a calculation—£40 billion has been invested in London and the south-east and £12 billion has been invested in the rest of the country. If infrastructure is not a big issue, if you do not need infrastructure for growth and wealth creation, why have we invested so much in an area that we know is performing exceptionally well? It just does not correlate if that is not the case. The argument is that there is a real need and demand for travel, and we need to supply that demand because we know that if it carries on at the current rate we will run out by 2024.

**Q167 Baroness Blackstone:** You mentioned taking out some first-class carriages to increase capacity. What about longer trains? Is that a partial solution at least?

**Chris Tunstall:** It is a partial solution. In fact, we are lengthening some commuter trains. There has been a recent announcement of new trains for the London Midland franchise and that will include some longer trains. Believe it or not, I come down from Durham to the Midlands on CrossCountry, and it never ceases to amaze me that it can have six-carriage...
sets running on the CrossCountry line off peak and then on peak, when everybody is standing, there are only three carriage sets. I have asked the question. I think some of it is to do with the franchising arrangement. It is loath to invest when it gets close to the end of its franchise. Which is an issue in terms of putting longer trains on. There is an issue about station platform lengths, but that is manageable. We have all been on trains where we have to move down the carriage. It is not ideal, but it is manageable; it is a stopgap, not a solution. It is a short-term solution.

**Baroness Blackstone:** You mentioned Liverpool as a port city and freight. Is there a constraint on freight moving north-south or east-west?

**Chris Tunstall:** Yes, certainly north-south. The lines are now effectively full. Most of the freight has to be moved at night, which is not a problem, apart from the fact that most of the maintenance needs to be done at night as well, particularly where you have only two lines. You have a real problem there. It has constrained freight to an extent, but what tends to happen is that freight then redistributes itself on to the road network, so we get freight clogging up the network. Mr Blackett mentioned the toll road and private investment in that. That was meant to take the strategic freight—through freight—through the West Midlands, starting and finishing outside the West Midlands. We find that there is still a ratio of five to one. There are about 10,000 freight vehicles on the M6 and only 2,000 on the M6 toll, and price is a prime determinant of that. The conflict between passengers and freight prohibits the movement of freight, particularly where you have lines with high-speed trains because they are not compatible.

**Baroness Blackstone:** So HS2 would be a plus for you in the longer term because it would release conventional lines for freight.

**Chris Tunstall:** It would release conventional lines for not only freight but passengers.

**Q168 Lord Shipley:** Mr Blackett, you said in your written evidence that the construction of a new HS2 station would be a catalyst for a major redevelopment of Birmingham. It has the potential to be on a similar scale as the Kings Cross-St Pancras redevelopment. With the scale of what you are planning, how have you costed in the disruption that construction of HS2 will cause in Birmingham?

**Jerry Blackett:** The disruption is a serious concern, and we are already addressing that through the structures that we have put in place. We have regeneration companies in place to plan the Birmingham station and the airport/NEC station. There are discussions with the Secretary of State at the moment. We have something in Birmingham called the Saltley viaduct that is a critical path for our buses to get into our city centre. The risk of our redevelopment is that that bus service will be severely disrupted, and that is a problem for us. I take comfort from the fact that we are addressing those things seriously now and as part of the hybrid Bill process are trying to get some certainty that the Bill will be as intelligent as it can be about managing the disruption. However, having been in business in Birmingham for some 12 years now, in my time we have built the Bullring, which was a pretty disruptive event, we had to widen the M6, we have put in active traffic management and we recently closed and re-established the tunnels, so we have a track record of managing big infrastructure. You might even say that the Olympics were an example to the rest of us that we can do big projects well. I think our appetite is that we see the bigger prize and we will manage our way through the inevitable short-term pain, but there is a lot
of work going on to deal with it, to my satisfaction, at least. It is not being at all dismissed as an irrelevance. It is a serious point.

Q169 The Chairman: Mr Tunstall, you mentioned trains being empty and trains being full. The airline industry seems to be pretty effective at using dynamic pricing to fill seats. Do you think there is a lesson that can be learnt by the rail franchisees which would improve the distribution of passengers across the whole of the day to fill up trains? Are they missing a trick?

Chris Tunstall: I think that we are getting there. At the moment, it is fair to say that we have not got as far as we should get. If you look at tickets now, if you are prepared to fix your train, as opposed to an open ticket, if it is a peak train, you will pay slightly more than you would pay for an off-peak train. If you book well in advance, just like on planes, you will get a reduced price, and the nearer you get to the day of travel, the more those prices increase. So I think that we are getting there. Having said that, I have been on a Durham Cross Country train mid-afternoon/early-afternoon, and that has been crowded as well. In fact, to be fair, I have yet to see a train that is not overly crowded. The problem with that service is that it is the only direct service to Birmingham; and it takes three hours!

The Chairman: Are you surprised that the modelling that has been done for HS2 assumes that the fares will be the same as on the classic railway?

Chris Tunstall: I think that that is right. There has been a lot of debate and speculation about whether this will be a rich person’s train and whether you will pay premium fares for it. The fares on the Virgin Trains West Coast Line have gone up significantly, and that is supply and demand. At the end of the day, you will reach a scenario that if you do not release some additional capacity somewhere, the price of tickets will go to such a point that you will force a lot of people off the railway because it will be just too expensive.

The Chairman: Mr Tunstall and Mr Blackett, thank you very much for joining us today. You have given very helpful answers.
Greater Manchester Combined Authority—Written evidence

Executive Summary

1. This submission is presented by Greater Manchester Combined Authority (GMCA). GMCA considers HS2 as a vital step in increasing the capacity of Britain’s rail network. HS2, and the capacity it frees up on the classic rail network, will deliver a transformational step-change in the connectivity of the north’s major city regions, in particular Greater Manchester, and in doing so, narrow the North-South productivity gap.

2. On this ‘real economy’ basis, GMCA believes there is a strong case for HS2; however the DfT’s conventional economic case for HS2 excludes these impacts.

3. Delivery of HS2, and the use of released capacity on the classic rail network, could drive productivity in Greater Manchester by making it possible for businesses to serve existing and new markets at a lower cost, and to better source and access workers of the right skills at the right cost. This allows businesses in Greater Manchester to become more efficient in what they do, to specialise, and increase their competitiveness in domestic and global markets.

4. The resulting productivity gains to businesses in Greater Manchester translate into additional GDP at the national level, and in turn increases the tax take to the Exchequer. This is overlooked by both the strategic and economic case for HS2.

5. GMCA believes the current case for HS2 also ignores a number of other important factors, which are closely linked to these real economy impacts, including:
   i. Capturing the role of the local public transport and highway networks in spreading the connectivity, and therefore productivity, benefits of HS2 further.
   ii. Considering local plans in the representation of the scale and distribution of the resident and business population in measuring connectivity.
   iii. The connectivity and productivity impacts of a fully worked up service plan for the use of released capacity on the classic rail network.
   iv. The positive feedback effects from business relocation to denser, more productive economic centres located on or close to the HS2 network.
   i. The role of international connectivity in providing HS2 to Manchester Airport, which will increase productivity by bringing businesses effectively closer to international markets, as well as support increases in that international connectivity, driving productivity further.
   ii. Increased international competitiveness, and thus increased international trade, from the productivity gains to UK businesses delivered by HS2.
   iii. The benefits of increased freight capacity which delivers direct cost savings to businesses and increases the potential productivity gains.

6. The economic growth potential for Greater Manchester and the net national productivity gains can only be turned into reality if the local conditions are right. This highlights the importance for strategic decision-making and long-term planning to
facilitate the local growth potential around the proposed HS2 stations at Manchester Piccadilly and Manchester Airport, and in turn secure and maximise the national productivity gains.

7. Recognising this once and forever opportunity, GMCA is developing an HS2 Growth Strategy which builds on the city region’s track record of developing innovative approaches to delivering transformational infrastructure investment that work both nationally and locally. Underpinning this Growth Strategy is the Piccadilly Strategic Regeneration Framework and masterplan and the masterplan for Manchester Airport, as well as a wider package of transport connectivity.

8. Delivering the Greater Manchester HS2 Growth Strategy, and thus realising the potential productivity gains locally and nationally, also requires central government to take a strategic, long-term approach to planning, funding and decision-making which is cross-departmental. We believe the establishment of a central delivery body, which works with local delivery bodies, could help to provide national coordination and, importantly, the long term view of the necessary conditions for facilitating the potential benefits of HS2.

9. However, it is important to recognise that HS2 alone will not eliminate the North-South productivity gap. Rather it is both:

i. a key building block in its own right as a result of the direct impact it will have on the productivity of key cities in the North; and

ii. a multiplier on all other investment and initiatives that target the competitiveness of the North as a result of the lower barriers to competition it provides, especially for the services sectors, by lowering transport costs between the North and the South.

10. The “One North” proposition is being developed to transform east-west connections across the north of the country, alongside the delivery of HS2, in recognition of the fact that HS2 provides a platform for multiplying the returns to all other investment in the north. The One North proposition seeks to maximise value by prioritising investment, alongside HS2, that delivers the best overall return to the taxpayer in terms of net national growth. This will be achieved by targeting investment in those interventions which deliver sustained and significant increases in productivity across the North, building on the productivity gains already delivered by HS2.

Introduction

1. The Greater Manchester Combined Authority (GMCA) recognise the potential economic growth benefits and significantly increased rail capacity that HS2 offers and consider it vital for the UK Government to take steps to ensure the full delivery of HS2. HS2 represents the only feasible option to overcome the future capacity constraints to growth by providing unique levels of increased capacity, reduced journey times, service reliability and support for long term agglomeration and long term job creation. Together these factors will deliver a transformational step-change in connectivity across the country and in particular the major cities of the north.
2. The underlying case for HS2 is that it will both drive UK growth and rebalance the economy. It is the step-change in connectivity of the cities outside of London that will deliver on these economic objectives; however this is overlooked by the conventional economic case for HS2.

3. The conventional economic case for HS2 is primarily focused on the welfare benefits to transport users, such as the value of time savings. It does not consider the impact of HS2 on the economy in terms of the additional jobs and productivity gains delivered through enhanced connectivity. Some of the potential productivity gains are captured in the DfT’s Wider Impacts (WIs) assessment of HS2. However, since WIs do not form part of the central economic case for the scheme, this does affect Government’s assessment of whether HS2 is good value for money.

The strategic and economic case for HS2

The link between connectivity and economic growth

4. HS2 could drive economic growth in the north, and specifically in Greater Manchester, by improving business to business access; labour market access; and customer leisure markets, as set out below:

i. improving businesses’ access to the valuable markets of London and the South East by reducing journey times from Manchester Piccadilly to London Euston from 2 hours and 8 minutes to 1 hour and 8 minutes, as well as improving the business-to-business markets between the country’s core city regions. This will enable businesses in Greater Manchester to serve these existing markets at a lower cost, and serve new markets further afield. The September 2013 KPMG report for HS2 Ltd\(^{188}\) shows that HS2 increases business-to-business connectivity (the number of businesses that can be traded with and the ease of doing so) for Greater Manchester as a whole by almost 19%. This assessment looked at a Phase 2 network that excluded an HS2 station at Manchester Airport, meaning the impacts of HS2 on Greater Manchester’s business-to-business connectivity, and thus in turn productivity, are significantly understated;

ii. improving businesses’ access to a wider and deeper pool of labour through improved services on the classic rail network that are made possible by the capacity HS2 frees up. This will enable business in Greater Manchester to better source and access workers of the right skills at the right cost, whilst also providing Greater Manchester residents with the ability to access a wider range of employment opportunities. We understand that work is continuing by HS2 Ltd to consider how to maximise the use of freed up capacity and the potential opportunities for improved labour market connectivity. The assumptions on the use of classic network capacity in both the current economic case (October 2013) and KPMG work for HS2 Ltd (September 2013) therefore understate the economic benefits of the scheme;

iii. improving businesses’ access to their customers, by expanding Greater Manchester’s footprint for leisure travel, not just to the locations directly on the

\(^{188}\) HS2 Regional Economic Impacts, September 2013
HS2 network but to places beyond. This provides customers with more choice and the ability to source products of higher quality and/or lower cost, which in turn will drive the competitiveness and productivity of Greater Manchester businesses;

iv. providing a new interchange station at Manchester Airport, the country’s largest airport outside of London, which will significantly widen the airport’s domestic footprint, with a direct service from the airport to London reducing the journey time to less than 1 hour and the journey time to Birmingham to just over 30 minutes. This not only spreads the benefits of the airport’s existing international connectivity further, it will also promote growth in that connectivity by allowing the airport to support a wider and denser national and international service network. To date the role of this increased international connectivity at Manchester Airport in promoting local and national economic growth has not been assessed; and

v. providing additional rail freight paths which directly enable businesses to get their goods to market less expensively than by road, which in turn would reduce congestion on the highway network and improve businesses access to markets by road.

4. Taken together these factors will significantly increase the productivity and competitiveness of Greater Manchester businesses, driving national GDP growth and net returns to the Exchequer.

5. In addition, with Piccadilly and Manchester Airport at the heart of the wider North West’s rail network, both HS2 stations have a major role in contributing to the connectivity and productivity of the economies across the country, making Greater Manchester a critical link in realising the economic growth potential from high speed rail in the UK.

Closing the North-South productivity gap to drive national economic growth

6. There is an increasing recognition that businesses need to be well connected to each other, to their labour markets and to their customers if they are to thrive. What applies to individual businesses also applies to the cities that host them, with differences in connectivity explaining a large part of the differences in productivity that are observed between cities in the UK.

7. If the UK is to reach its economic potential, we need all our cities to perform at the highest level, and as a nation we need to prioritise delivering investments where the potential for productivity gains is greatest.

8. This means first narrowing, then eliminating, the North-South divide in terms of productivity per worker. Given that a large proportion of this divide reflects differences in connectivity, closing the productivity gap will only be achieved through closing the connectivity gap. As outlined above, a central outcome delivered by HS2 is the step-change in connectivity it delivers for Greater Manchester and the country’s other northern cities.
9. The productivity gains offered by HS2 mean it is vitally important in reducing costs for businesses in the north and in turn lowering the barriers to competition in both domestic and international markets. This in turn provides a platform for multiplying the returns to all other investment which further reduces costs and the barriers to trade for businesses in the north. We therefore see HS2 as a fundamental building block in the regional and national agenda of closing the North-South productivity gap and rebalancing the UK economy.

**The ‘real economy’ benefits of HS2 for Greater Manchester**

10. Greater Manchester is already one of the most productive parts of the North West, with this productivity expected to further increase as a result of the significant local investment underway via the Greater Manchester Transport Fund and the Northern Hub programme. With the arrival of HS2 at Manchester Piccadilly and Manchester Airport, we believe Greater Manchester, and particularly the areas around these two stations, will become the most productive locations in the North of the country.

11. Previous work by Transport for Greater Manchester (TfGM) investigated the potential impact of HS2 on the Greater Manchester economy in terms of jobs (from business relocation) and productivity. The work shows that, by boosting productivity in Greater Manchester, it is able to compete more effectively for additional economic activity and jobs, which in turn will reduce regional disparities and promote a strategic change in the economic geography of Britain. This work took a narrow view of the service changes introduced by HS2 – in particular, it did not include the use of released capacity on the classic network – but still found that:

   i. providing HS2 services to Manchester Piccadilly as part of the proposed Phase 2 “Y” network could generate up to 13,000 additional jobs in Greater Manchester by the early 2040s; and
   
   ii. also providing an HS2 station at Manchester Airport could generate a further 9,000 additional jobs in Greater Manchester by the early 2040s.

12. Together this suggests HS2 has the potential to attract some 22,000 jobs to Greater Manchester, even before allowing for the impact of released capacity on the economy. However, providing HS2 to Greater Manchester is not simply about redistributing activity around the country. By bringing Greater Manchester businesses closer to their markets, particularly in terms of business-to-business connectivity, HS2 will allow them to specialise and become more efficient at what they do, leading to both local and national productivity gains. These productivity gains are greater still if business activity shifts to locations that are already economically dense and highly productive; Manchester’s regional centre is a clear example of such a location.

13. Work is underway by Greater Manchester to develop an analytical framework that quantifies the local and national productivity gains of providing HS2 at both Piccadilly and Manchester Airport, drawing on the principles employed by HS2 Ltd in its own assessment of the potential regional economic impacts of HS2. The KPMG work for

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189 HS2 Regional Economic Impacts, KPMG, September 2013
HS2 Ltd published in September 2013 found that delivering HS2 could increase the size of the Greater Manchester economy by up to £1.3bn. This assessment looked at a Phase 2 network that excluded an HS2 station at Manchester Airport, therefore understating the potential GDP impacts of HS2. The assessment also used assumptions from HS2 Ltd on the use of freed up classic network capacity which were relatively underdeveloped, particularly for the local Greater Manchester network. This would again suggest the potential GDP impacts of HS2 have been understated.

Other real economy factors which have been overlooked in the current case for HS2

14. As outlined above, the conventional economic case for HS2 does not consider the real economy impacts on connectivity, productivity and jobs which will translate into additional GDP and net returns to the Exchequer.

15. We also believe that the current case for HS2 ignores a number of other important factors, which are closely linked to the real economy impacts of the scheme. A more comprehensive assessment of the impact of HS2 on the economy should also include:

i. Capturing the role of the local public transport and highway networks in spreading the connectivity, and therefore productivity, benefits of HS2 further. In Greater Manchester there are some important connectivity improvements that are either under construction or committed which have not been fully considered in the assessment of HS2 to date. There are also planned schemes that will come forward by the time that HS2 is delivered. Examples of committed local schemes include:

   o Northern Hub, which will provide increased heavy-rail capacity across the north of England. Manchester will be a major beneficiary of these improvements through improved city centre access by local rail services; and create new direct cross-city links such as Rochdale – Piccadilly Station – Manchester Airport
   o Metrolink Second City Crossing, which will provide increased routes, capacity and resilience for Metrolink services in the city centre
   o Cross-City Bus, which will offer new opportunities to create cross-city bus links, improving bus access to an expanding city centre and linking with a new busway for services to Leigh via Salford
   o M56 to A6 link – a new highway link improving access to Manchester Airport to the east and bypassing the congested A6 through Stockport and Hazel Grove.

ii. An appropriate representation of both the scale and distribution of the resident and business population in the measurement of connectivity impacts: current DfT assumptions on the economic activity anticipated by the time HS2 is delivered do not appropriately reflect local plans and information held locally on the scale and distribution of existing activity. Within the Airport City Enterprise Zone, for example, some 20,000 additional employees are expected by the mid 2020s, out with the introduction of HS2. A denser cluster of businesses at Airport City will mean the business-to-business connectivity benefits (and thus productivity gains)
from HS2 to Manchester Airport are far greater than those which have been estimated to date;

iii. The connectivity and productivity impacts of a fully worked up service plan for the use of released capacity on the classic rail network: HS2 offers an opportunity to address some of the most critical constraint issues across a Manchester’s rail network, providing additional capacity for local rail services which will in turn increase the potential labour market connectivity benefits, and thus productivity gains, of HS2;

iv. The positive feedback effects from business relocation to denser, more productive economic centres located on or close to the HS2 network: as outlined above, with the arrival of HS2 at Manchester Piccadilly and Manchester Airport, these centres are expected to be the most productive locations in the North of the country. Concentrating businesses in these locations will further drive productivity and thus the national GDP growth and the net returns to the Exchequer;

v. The role of international connectivity: as outlined above, providing HS2 to Manchester Airport will significantly widen the catchment of the airport by widening local access to HS2, bringing domestic businesses effectively closer to international markets, as well as supporting an increase in the international connectivity offered at Manchester Airport, both of which are key sources of further net national productivity gains;

vi. Increased international competitiveness: all else being equal, the productivity gains to UK businesses that are delivered by HS2 will make those businesses relatively more competitive in the global market, which will lead to increased international trade and thus further net national GDP growth; and

vii. The benefits of increased freight capacity: as outlined above, freeing up additional freight paths on the rail network will deliver cost savings to businesses which will in turn further reduce the barriers to competition in both domestic and international markets, and increase potential productivity gains.

**Complementary local action: Greater Manchester’s HS2 Growth Strategy**

16. The forecast economic potential of HS2 for Greater Manchester can only be turned into reality if the local conditions are right. This highlights the importance for strategic decision-making and long-term planning to facilitate the local growth potential around the proposed HS2 stations at Manchester Piccadilly and Manchester Airport and in turn secure and maximise the national productivity gains.

17. Recognising this once and forever opportunity, Greater Manchester plans to build on its track record of developing innovative approaches to delivering transformational infrastructure investment that work both nationally and locally.

18. The Manchester Piccadilly Strategic Regeneration Framework (“SRF”) has been developed to directly address the need for this long-term view. The SRF area has the potential to host up to 45,000 additional jobs by the early 2040s, a net increase of more
than 30,000 jobs on today's figures, in what should be, with HS2 arriving to Piccadilly, the best connected and thus most productive location in the North of England.

19. Fundamental to the SRF will be the creation of a multimodal and fully integrated interchange at Piccadilly of suitable iconic design similar to that which has seen the regeneration of the area around St Pancras following the investment in HS1. This, along with wider investments in infrastructure and public realm in the development areas around the station, will create the right environment to support the scale of growth anticipated around Piccadilly and across the wider regional centre, and secure the national productivity gains that growth will provide.

20. Delivering the Piccadilly vision requires a coordinated and innovative approach to infrastructure design, planning, delivery and funding to realise the economic benefits offered by HS2. Turning the Piccadilly vision into reality will require significant up-front investment in advance of the benefits coming to fruition.

21. For the HS2 station at Manchester Airport, Greater Manchester and Manchester Airport Group are working together to develop the vision for a world-class international Airport Hub that will build on the already committed Airport City Enterprise Zone development and maximise both the local growth potential and national productivity gains offered by the arrival of HS2 at Manchester Airport.

22. Funding these investments requires Greater Manchester to be able to draw on the value created locally and receive a sufficient share of the value created nationally. Greater Manchester believe this can be achieved as long as the productivity gains of additional investment in Piccadilly and Manchester Airport (and thus the national tax proceeds that result) can be captured. Greater Manchester believe the model used to deliver the Northern Line extension, which centres on the Battersea/Nine Elms Enterprise Zone, provides a toolkit of principles for such a deal.

Complementary action from central government

23. Co-ordinated strategic decision making and long-term planning must be taken forward by central as well as local government if the potential economic growth offered by HS2 is to be realised. The HS2 Growth Task Force\(^\text{190}\) highlighted that a “business as usual” approach to regeneration around HS2 stations would not be sufficient to secure the full growth potential of HS2.

24. We agree with the Task Force’s recommendations to Government to support cities in delivering their HS2 Growth Strategies through the establishment of a central delivery body, which works with local delivery bodies, to provide national coordination and take a long term view of the necessary conditions for facilitating the potential benefits of HS2. A fundamental prerequisite to this will be cross-departmental planning, funding and decision-making.

\(^{190}\) High Speed 2: Get Ready, a report to the Government by the HS2 Growth Task Force, March 2014


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HS3 and the One North proposition

25. The prospect of HS3 (which we presume to mean the proposed east-west high-speed railway across the north of England) will have a strongly positive effect on the economic case for HS2. It would help achieve the ambition set out by Sir David Higgins for HS2 to be more integrated with other parts of the rail network and would extend the economic reach of HS2.

26. As outlined above, HS2 alone will not eliminate the North-South productivity gap. Rather it is both:

i. a key building block in its own right as a result of the direct impact it will have on the productivity of key cities in the North; and

ii. a multiplier on all other investment and initiatives that target the competitiveness of the North as a result of the lower barriers to competition it provides and greater access to markets, especially for producer and consumer service sectors, by lowering transport costs between the North and the South.

27. The July 2014 report commissioned by the cities of the north, entitled “One North: A Proposition for an Interconnected North”, sets out a proposition for transforming east-west connections across the north building on the proposals around delivery of HS2. One North recognises that HS2 provides a platform for multiplying the returns to all other investment in the north, with the long-term aim of closing the North-South productivity gap and rebalancing the UK economy.

28. The One North proposition seeks to maximise value by prioritising investment, alongside HS2, that delivers the best overall return to the taxpayer in terms of net national growth. This will be achieved by targeting investment in those interventions which deliver sustained and significant increases in productivity across the North, building on the productivity gains already delivered by HS2.

29. The scope for utilising HS2 infrastructure within the One North proposition needs to be an important consideration in deciding between potential alternative variants to the route of HS2 Phase 2.

How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

30. The operation of HS2 will pose unique challenges, and very different ones from those of services on the West and East Coast Main Lines. Therefore - assuming that the system of rail franchising is still in place when HS2 opens - it ought to form a separate franchise. Many HS2 services will of course run for part of their route on the East or West Coast Main Line, and those services would also need to form a part of the HS2 franchise. Even if the railways have been “re-integrated” by the time HS2 opens, it would be sensible for HS2 to form a separate business unit within a re-integrated rail industry.

31. The situation is not analogous to the situation on HS1, where the local South-Eastern franchise operates the domestic services that utilise HS1. In that case, the domestic HS1 services cater for a completely different market from the international services, and
most/all of the domestic services run partly on non-HS1 track. The domestic HS1 services are modest in scale. So in the case of HS1, it makes sense for domestic HS1 services to be part of the South-Eastern franchise, with international services operated separately.

**Should travellers expect to pay higher fares on HS2 than on other lines?**

32. At present on West Coast and East Coast Main Line services, travellers pay a wide range of fares according to time of day of travel, class of travel, and whether (and how long) booked in advance. The main aim of the fare structure is to raise as much revenue as possible to cover the largely fixed costs of operation and to contribute to fixed infrastructure costs. It is expected that a similar system will apply to HS2. The scope for increasing fares will to a certain extent be constrained by competition from other modes of transport, including car, bus, and air travel.

33. It is likely that demand on HS2 will be quite strongly peaked. It may well be more strongly peaked than at present on the West Coast Main Line if HS2 leads to a major increase in demand for regular travel-to-work trips for movements such as Manchester – London. However, HS2 will be designed to accommodate significantly increased volumes such as at peak times and this demand should not result in fares higher than those on West Coast Main Line services when it comes into operation. There will also be plenty of capacity available outside the peak to facilitate heavily discounted off-peak travel.

*September 2014*
Executive Summary

A. This response is made by Quentin Macdonald and Colin Elliff of High Speed UK, based in York. We are both career railway engineers, having respectively over 50 and 30 years’ experience in the industry. We are deeply concerned at the huge deficiencies of the HS2 proposals, from a number of viewpoints particularly capital and operating cost, connectivity gain (or lack of it), operational performance and environmental impact. These concerns have led us to develop HSUK which is a complete alternative to HS2.

B. We have answered the Select Committees questions by undertaking a rigorous comparison between High Speed UK on the one hand, and HS2 + HS3 on the other hand. These comparisons cover the following issues with the corresponding results appended:

a. Capital Cost – HS2 + HS3 £60B vs HSUK £40B
b. Connectivity – HSUK 10 times better than HS2 and 7 times better than HS2 + HS3
c. Journey time reductions – HSUK improves 488 journeys out of a basket of 528 journeys giving them an average journey time reduction of 40%. HS2 + HS3 improves just 68 of the same 528 journeys but makes 171 worse than today. The journey time savings are difficult to quantify in the absence of an HS2 timetable.
d. Network capacity – HSUK has double the capacity of HS2 on the core London ‘stem’.
e. Operational efficiency – HSUK connects to the existing network 55 times compared with 4 times for HS2. HS2’s main fleet is captive to HS2 new build.
f. CO₂ reductions through modal shift, primarily from road to rail – HSUK saves 600 Million tonnes of CO₂; HS2 saves none.
g. Environmental impact – HS2 damages the Chilterns badly as well as many other features of the countryside like ancient woodlands. HSUK avoids these problems entirely.

C. The superior performance of HSUK against all these criteria shows clearly that HS2 has failed to pass these ‘acid tests’ and should be rejected as the favoured solution to the call for investment in high speed rail.

D. We have asked the Select Committee to call for an enquiry to verify the HSUK claims. Then, if the HSUK claims are shown to be justified, to recommend a way to proceed to deliver to the UK the properly integrated High Speed rail system that it needs and deserves.

Introduction

I. This response is made by Quentin Macdonald and Colin Elliff of High Speed UK, based in York. We are both career railway engineers, having respectively over 50 and 30 years’ experience in the industry. We are deeply concerned at the huge deficiencies of the HS2 proposals, from a number of viewpoints particularly capital and operating cost, connectivity gain (or lack of it), operational performance and environmental
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impact. These concerns have led us to develop HSUK which is a complete alternative to HS2.

**The Design Principles of High Speed UK (USUK)**

2. Our proposals are contained on 350 sheets of mapping at 1:25,000 scale, covering almost 1,000km of new railway all the way from London to Glasgow. At 1:25,000 all roads, rivers, railways and buildings are correctly shown to scale. In the horizontal plane, straight sections, circular curves and transitions have been accurately designed so that the maximum speed at any given point is known as well as the land and property take. Vertical curvature has also been calculated throughout.

3. As a result it has been possible to develop a draft timetable which demonstrates that HSUK has a vastly superior performance in almost every conceivable respect when compared with HS2.

4. For HSUK we have chosen a maximum speed of 360 km/h (224 mph). HS2 has selected a design speed of 400 km/h (249 mph). The lower speed of HSUK helps to minimises wear and tear in daily operation and makes very little practical difference to journey times as will be shown later.

5. However the use of 360 km/h as the maximum design speed means that the minimum radius of curvature can be reduced from 7,100m (HS2) to 5,700m (HSUK). This makes it easier to fit HSUK sympathetically into the landscape than is possible for HS2.

6. Two sample sheets of the 350 sheets of mapping are shown at Annexe A. These show that the use of 5,700m radius curves allows HSUK to follow the M1 closely where significant noise pollution already exists.

7. Like HS2, HSUK proposes to use Euston as its London terminus. Unlike HS2, HSUK does not propose to construct lengthy tunnels out to Old Oak Common and far beyond to Ruislip. HS2 travels a total distance of 22.3km (13.9 miles) in tunnel from the Euston Portal to the West Ruislip Portal.

8. Instead HSUK tunnels directly and deeply under Primrose Hill and the Hampstead Ridge for 2.4km (1.5 miles) just 11% of the distance tunnelled by HS2. HSUK surfaces next to the Midland Main Line at West Hampstead station. From there it is straightforward to build alongside the Midland Main Line and then pick up the alignment of the M1 just 8.9km (5.5 miles) from Euston and construct the HSUK tracks alongside it.

9. The requirement for HS2 to serve Heathrow has been one of the driving forces for the creation of Old Oak Common station which has exerted a huge ‘gravitational pull’ upon the alignment of HS2, drawing it away from established intercity corridors and taking it instead into the more environmentally sensitive Chilterns and the rural areas of Buckinghamshire and Northamptonshire. In addition to the major local environmental impacts, the following adverse effects apply to HS2.
9.1. Major communities along the M1/M6 corridor e.g. Luton/Dunstable (pop. 239,000), Milton Keynes (pop. 230,000), Northampton (pop. 213,000), Coventry (pop. 317,000), and Leicester (pop. 330,000) have been bypassed by HS2, and have been left with worsened intercity connections.

9.2. There is then no practicable option but to configure the proposed national high speed ‘network’ as the ‘Y’ of HS2. This is a highly inefficient design, offering poor interregional connectivity and requiring excessive length of new construction when compared with the alternative very efficient ‘spine and spur’ of HSUK.

9.3. A controversial and heavily-tunnelled route through the Chilterns AONB costing many billions of pounds more is required by HS2 which will take longer to build than the more favourable M1 corridor route.

9.4. There is no practical possibility of establishing the necessary 4-track route from London to the Midlands via the Chilterns and as a consequence, the 2-track HS2 simply will not have enough train paths per hour to provide high speed services to all cities currently connected to the intercity network.

9.5. The 2-track HS2 also lacks the capacity to offer a significant number of direct regional services to Heathrow. Under current projections for HS2 services 191, most regional cities will not have direct services to Heathrow.

9.6. HS2 will be a high speed trunk route with minimal opportunity for connection to the existing network and will therefore be highly vulnerable to disruption.

10. All the adverse effects listed above are an inevitable consequence of the Government’s specification (set out in the core remit for the HS2 project) for an interchange station at Old Oak Common. With Old Oak Common treated as a non-negotiable requirement from the very start, this effectively compelled an exit route from London along the Central Line corridor via Ruislip. There is then no alternative but to pass through the Chiltern AONB on the onward route to the north. It also prevents fair and balanced consideration of alternative routes, most specifically the highly advantageous M1 corridor adopted by HSUK.

11. HSUK will be developed primarily as an intercity network, following the M1 corridor on its exit route from London. This is not only the least damaging route; it is also the most geographically favourable. It can serve directly major population centres such as Luton & Dunstable (pop. 239,000), Milton Keynes (pop. 230,000) and Northampton (pop. 213,000), and it offers the ‘line of best fit’ to the primary conurbations in the East and West Midlands, Yorkshire and the North West.

12. This is also an established historical fact, as is demonstrated not only by the route of the M1 (1959), but also by that of the London and Birmingham Railway (1838) (now the West Coast Main Line), the Grand Union Canal (1790) and Watling Street (Roman Britain).

13. HSUK has abandoned the ‘straitjacket’ and the cost of Old Oak Common and, instead, has provided:

191 Table 23, pp91-92, HS2 Regional Economic Impacts, DfT 2013 lists 2 direct regional services per hour from Heathrow. These are intended to operate from a new high speed terminus at Heathrow (for which no proposals have yet been put forward) and will serve Manchester Piccadilly, and Birmingham Interchange/East Midlands Interchange/Meadowhall/Leeds New Lane (thus failing to serve the regional hubs at Birmingham New Street, Nottingham Midland, Leeds City Station, and thereby failing to achieve wider access to the respective conurbations). For all other journeys, a change at Old Oak Common will be necessary.
13.1. An underground ‘London Interconnector’ linking King’s Cross/ St. Pancras, Euston, Tottenham Court Road (for Crossrail) and Waterloo;

13.2. Direct hourly regional rail services to Heathrow and Gatwick airports without going into London,

**The Overall HSUK Proposal**

14. A one page overview of the HSUK route design is included as Annex B. The equivalent diagram for HS2 is Annex C.

15. Full details of the HSUK proposals can be found on our website [www.highspeeduk.co.uk](http://www.highspeeduk.co.uk).

**Concern for the Environment**

16. This principle of following the M1 and other existing road and/or rail transport corridors has been followed as far as possible throughout the design all the way from London to Glasgow in order to minimise environmental damage.

17. Apart from the basic principle of keeping all the noise pollution together in one place, this design has another major advantage for the Chilterns compared with HS2. Luton and Dunstable lie in a gap in the Chiltern Area of Outstanding Natural Beauty with the M1 running between them. HSUK follows the west side of the M1 to a point near Farley Hill where it tunnels northwards for almost 5km (3 miles) under the built up area around Leagrave, re-emerging in open country next to the west side of the M1, just north of the Dunstable built-up area. HSUK is not built in the Chiltern AONB and therefore completely avoids any damage to it.

18. One of HSUK’s crucial advantages over HS2 & HS3 combined is its integral high speed trans-Pennine link which delivers four major benefits for the North:

18.1. HSUK connects Liverpool, Manchester, Leeds and Sheffield directly together, giving Yorkshire and the North-West a new east-west rail spine considerably increasing rail capacity and line speeds across the North. These benefits extend along the HSUK north-south spine to the East Midlands and to the North-East and Scotland.

18.2. The same tracks carry high speed services from Yorkshire and the North-West to London thereby reducing the overall amount of new construction needed.

18.3. The old Great Central route through Longdendale will become the new trans-Pennine spine with the old Woodhead tunnels enlarged to Channel Tunnel dimensions as part of HSUK.

18.4. This will allow, as a separate add-on project, the creation of a Swiss style M1 to M60 lorry shuttle with an accompanying lorry ban on several of the trans-Pennine Roads e.g. the A628 Woodhead Pass, the A57 Snake Pass and the A623 Peak Forest Road.
19. The 2008 Climate Change Act requires Government to set an annual carbon budget to ensure that the UK follows a path which will reduce its CO₂ emissions by 80% by 2050.

19.1. As will be shown later, HSUK has 10 times better connectivity than HS2. This far superior connectivity is forecast to create a very significant modal shift from cars and trucks to trains. In turn, that modal shift leads to a very significant forecast reduction in CO₂ emissions.

19.2. HSUK is forecasting a reduction of CO₂ emissions by 600 million tonnes over 40 years making a 6% contribution to the overall 80% emissions reduction target.

19.3. The ‘carbon neutral’ performance predicted for HS2 will make no contribution to CO₂ reduction and is completely contrary to the spirit (if not the letter) of current climate change legislation.

19.4. It is unthinkable that Government is proposing to spend upwards of £60 billion of taxpayers’ money on a transport scheme which contributes nothing to CO₂ reduction while an alternative scheme which does, is simply being ignored.

19.5. Whatever happened to joined-up-government?

20. MAGIC is a web site managed by Natural England in partnership with DEFRA, English Heritage, Environment Agency, Forestry Commission and Marine Management Organisation. The web site records every feature of the environment from battle sites and ancient monuments to SSSIs and ancient woodland, land and marine habitats as well as many, many other features of the countryside which must be of concern to responsible railway designers. HSUK has made full use of this web site to ensure that environmental damage has been kept to the absolute minimum.

The Select Committee’s Questions

21. Having given the Select Committee an initial introduction to HSUK, we decided to answer the Select Committee’s questions by giving an HS2 answer and then an HSUK answer so that the Select Committee can see just how much better HSUK actually is.

22. Our work in developing HSUK dates from as far back as 2006 and we have been following HS2 progress throughout that time. This has given us a unique perspective from which to make informed comment upon the Government’s HS2 proposals and we will be pleased to contribute further to the Select Committee’s Inquiry.

23. We have answered the Select Committee’s Questions in the order set and numbered them accordingly. We have also included concluding statements in respect of Policy for Rail Links to Heathrow (Additional Comment 1), Connections to High Speed 1 (HS1) (Additional Comment 2), and Public Policy (Additional Comment 3).

Question 1 – Is there an economic case for HS2?

24. It is crucial to distinguish between the principle of high speed rail development, and the actuality of the Government’s HS2 proposals. With HS2 presented to Parliament as the single ‘do something’ option, support for the principle of high speed rail development has seamlessly developed into support for the specifics of HS2. We
believe that the Government must do much more than simply demonstrate that there is an economic case for HS2. We believe that this paper will show that there is a far better economic case for HSUK than for HS2.

25. We are fully supportive of the Government’s aim, to improve the connectivity and capacity of the national transport system to deliver economic growth. We believe that the intervention of new, higher speed railways is by far the best strategy to achieve that goal. A better-connected and higher capacity rail system is vital not only to stimulate economic activity, but also to enable the step-change modal shift from road and air to rail that is essential to achieve reductions in transport CO₂ emissions in compliance with the 2008 Climate Change Act.

26. However, we are concerned that HS2 as proposed by the Government will not deliver the basic connectivity necessary to realise the predicted economic gains. The majority of HS2’s stations are remote from existing stations (often requiring a walking transfer) and there is minimal connection between HS2 and the existing main lines as currently, only 4 connections are proposed at the time of completing this submission (14-09-14).

27. HS2 is offered as a stand-alone railway effectively segregated from the existing national network. The distance between the rails, the track gauge, is the same for HS2 as for the rest of the UK network (1,435mm or 4'8½”); so that is not the problem. This segregation is the inevitable result of proposing to use trains built to continental loading gauge, UIC-C gauge, e.g. French TGVs, which are ‘fatter’ than trains built to the UK loading gauge e.g. Eurostars. To run onto the existing intercity network, HS2 will need some trains built to the UK loading gauge which they refer to as “Classic Compatible”. This means that the main fleet of High Speed trains built for HS2 will be captive on the HS2 new build lines.

28. HSUK on the other hand will create a new build high speed spine railway fully integrated with the current inter-city rail network. The integration is achieved through the provision of no less than 55 connections to the existing network. It is proposed that all the trains built for the HSUK services will be built to the UK loading gauge, a modern Eurostar design, allowing any train to go anywhere off the new high speed line that is electrified at 25kV.

29. The HSUK concept is that trains will run from all the existing city centre railway stations where there are existing local transport links with no need to reshape the local transport infrastructure. It will then depend on the required stopping pattern as to which route a train will take. For some journeys the whole journey will be on the new HSUK infrastructure. For other journeys HSUK will be used in part and for a few others the train will just use the existing infrastructure.

30. This approach gives the ideal railway to operate because as travel patterns and demand change over the years new services can be provided and old ones revised without any constraint because there are not enough trains of one size or another.
Cost Comparison

31. HSUK does everything that HS2 plus HS3 can possibly do so it is right to compare the cost of HSUK with HS2+HS3.

32. We have taken the price tag for HS2 from London to Newcastle and Glasgow including Green Book contingency allowances as £50 Billion. That figure may be low because we do not have any figures from HS2 on the cost of reaching Scotland and have had to make some assumptions. As explained earlier we have assumed that HS3 will cost £10 Billion giving a total of £60 Billion for HS2 +HS3.

33. We do not question the estimated cost of HS2 as their team will have all the skills for getting it right. We on the other hand do not have the people available to do an estimate for HSUK so we have had to approach this in a different way. We have taken a number of factors of HS2 like route length, length of tunnels, ease of build etc. and reduced that to unit costs which give the correct HS2 answer when applied to HS2 metrics. We can then apply these figures to HSUK metrics to give a reasoned comparison.

34. We find that whereas, HS2 + HS3 will cost £60 Billion to build the whole railway from London to Glasgow and Newcastle, HSUK will only cost £40 Billion to achieve a far better level of service to the same places.

35. There are 3 principal reasons for this:

   35.1. HSUK follows existing transport corridors and generally less severe topography on the eastern side of the country making construction easier and more accessible and therefore cheaper.
   35.2. The HSUK new build route is 280km shorter than HS2.
   35.3. HSUK requires 150km less tunnel than HS2.

Connectivity Compared

36. Connectivity is a word much thrown around in the discussions concerning HS2. To aid understanding we offer the HSUK view of the word.

37. HSUK suggests that the highest standard of connectivity is achieved when one only has a very short journey to the first railway station and one catches a single train to one’s destination station and then has only a short trip to one’s final destination. It cannot happen everywhere of course but with thoughtful infrastructure design and the creation of an imaginative timetable it is possible to make a very significant improvement to the quality and overall speed of the journeys which will be available in future. This is precisely what HSUK has done.

38. So, in the comparison of the connectivity of HS2 and HSUK we have taken the simple view that if a journey from A to B has been speeded up by the intervention of high speed rail, even if there is a change of trains involved, then connectivity has been improved. Connectivity has got worse if the journey is slower or less frequent. There is also a 3rd category of ‘No Change’
39. We looked at every possible journey between 33 places to start from and the same 33 places as destinations and found that there are 528 possible different journeys discounting the return journey in every case.

40. The places selected were: Aberdeen, Birmingham, Bradford, Chester, Coventry, Darlington, Derby, Doncaster, Edinburgh, Glasgow, Heathrow Huddersfield, Hull, Leeds, Leicester, Liverpool, London, Luton, Manchester, Milton Keynes, Newcastle, Northampton, Nottingham, Oxford, Perth, Peterborough, Preston, Sheffield, Stoke, Walsall, Warrington, Wolverhampton and York. This was felt to be representative of the principal services on offer from either HS2 or HSUK.

41. Each journey was then ranked as Improved or Not Improved or Made Worse. The results are startling. We have kept HS2 and HS3 separate and then added them together to make a comparison with HSUK.

| Basket of 528 Inter-City Journeys |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|
|                               | Services Improved | Not Improved    | Made Worse      | Total           |
| HS2                            | 49               | 306             | 173             | 528             |
| HS3                            | +19              | -17             | -2              | 528             |
| HS2 + HS3                      | 68               | 289             | 171             | 528             |
| HSUK                           | 488              | 40              | 0               | 528             |

Connectivity

HSUK vs HS2 = 488/49 = 10 times better
HSUK vs HS2 + HS3 = 488/68 = 7 times better

42. It is the result of that study that gives us the confidence to say that HSUK’s connectivity is 10 times better than HS2 and 7 times better than HS2+HS3. The crucial point is that HSUK does everything that HS2+HS3 does and does it better and for £20billion less.

43. We ask, but get no answers, why should any Government want to invest upwards of £60 billion in HS2 which makes no difference to 289 of the 528 journeys, makes 171 journeys worse and improves a paltry 68 journeys. It makes no economic sense whatsoever, when for £20 billion less one can have a scheme which makes no difference to 40 journeys, makes none worse and improves 488 journeys out of 528.

44. The average journey time reduction for those 488 journeys is 40% when compared with today’s timetable. It is also worth saying that some of the HSUK journeys which are not speeded up are journeys such as Peterborough to Doncaster which already has direct services on the East Coast Mainline averaging 98mph point to point.

45. This lack of HS2 connectivity places huge limitations on the performance of HS2 as a national transport system. It can provide direct benefit to relatively few intercity journeys, and most of the population will remain reliant on the existing rail network.
where intercity services are proposed to be reduced\textsuperscript{192}. Without the necessary integration, HS2 cannot deliver the forecast economic benefits. HS2’s lack of connectivity is also the root cause of its failure to achieve significant reductions in transport CO\textsubscript{2} emissions\textsuperscript{193}.

46. Government proposes to spend in excess of £60 billion to build HS2 and HS3. We believe that three overlapping groups of people, the public at large, the taxpayers and those directly affected by the construction and subsequent operation of the railway would reasonably expect that the new high speed railway as proposed by the government is the best concept and the best design producing the best results that can be achieved for the money spent.

47. Our analysis shows that HS2 is a very poor design which no government should be supporting because it is possible to spend \textbf{£20} billion \textbf{less} and \textbf{achieve so much more} with \textbf{far less environmental damage}. The HSUK design shows how this can be done.

48. The case for full integration between high speed and existing networks is fully proved by HSUK’s vastly superior performance. Across its full national scope, HSUK directly serves all existing regional hub stations (e.g. Birmingham New Street, Manchester Piccadilly and Leeds City), is connected to the existing network at 55 locations, and through these links extends to all secondary cities served by the existing network (most of which will be bypassed by HS2).

\textit{Journey Time Comparisons}

49. There have been various criticisms levelled at HSUK one of which is that with a top speed of only 360km/h then journeys are bound to be slower.

50. There has also been uninformed criticism that HSUK cannot possibly match HS2’s headline timings on journeys like London to Birmingham, Manchester or Glasgow because of its ‘Spine and Spur’ configuration.

51. HSUK decided to put this to the test, knowing that we have developed a timetable and HS2 has not, which meant a lot of work for HSUK. The lack of an HS2 timetable was confirmed to us last October by Professor Andrew McNaughton who is Technical Director of HS2 Ltd. at a conference at Huddersfield University. As a result, we have had to assess the HS2 times for them and they are welcome to look at our results and, if we have got it wrong, explain to us why.

52. So with that caveat about the HS2 timings we set about comparing journey times between the same places for both designs.

53. We decided to calculate the journey times from London, Birmingham, Manchester and Leeds to 11 places, namely London, Birmingham, Nottingham, Sheffield, Manchester,

\textsuperscript{192} Table 23, pp91-92, \textit{HS2 Regional Economic Impacts}, DfT 2013

\textsuperscript{193} Table 2.5, p53, \textit{High Speed Rail}, DfT Command Paper, 2010
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Liverpool, Leeds, Newcastle, Edinburgh, Glasgow and Heathrow. We felt that this was a broad enough sweep of places to make a fair comparison.

54. After discounting return journeys and duplicates to avoid double counting that gives 33 possible journeys. The results are given in the table below and clearly show that HSUK significantly outperforms HS2.

<table>
<thead>
<tr>
<th></th>
<th>LONDON</th>
<th>BIRMINGHAM</th>
<th>MANCHESTER</th>
<th>LEEDS</th>
<th>HEATHROW</th>
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<tbody>
<tr>
<td></td>
<td>HS2</td>
<td>HSUK</td>
<td>HS2</td>
<td>HSUK</td>
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<tr>
<td>London</td>
<td>---</td>
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<td>59</td>
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<tr>
<td>Birmingham</td>
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<tr>
<td>Sheffield</td>
<td>62</td>
<td>56</td>
<td>6</td>
<td>45</td>
<td>42</td>
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<tr>
<td>Manchester</td>
<td>69</td>
<td>74</td>
<td>-5</td>
<td>51</td>
<td>55</td>
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<tr>
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<td>94</td>
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<td>---</td>
<td>---</td>
<td>97</td>
<td>90</td>
<td>108</td>
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</tbody>
</table>

All figures are journey times in minutes

<table>
<thead>
<tr>
<th>113</th>
<th>Time of journey made on existing network in the absence of improvement by HS2</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Number of minutes HSUK is quicker than HS2</td>
</tr>
<tr>
<td>-5</td>
<td>Number of minutes HS2 is quicker than HSUK</td>
</tr>
<tr>
<td></td>
<td>Journey excluded from numbers to avoid double counting</td>
</tr>
</tbody>
</table>

There are 33 different journeys shown in the above table

For 1 journey the HS2 and HSUK times are the same

For 6 journeys HS2 is quicker than HSUK by an average of 6.5 minutes

For 26 journeys HSUK is quicker than HS2 by an average of 31 minutes

55. Of particular note in the table above is that 11 of the 33 journeys are simply not improved in any way by the HS2 intervention and the HSUK improvement can therefore only be measured by comparing the HSUK time with the existing timetable.

56. The other notable effect is the difference to Nottingham where HSUK serves the existing Nottingham station but the remote Toton station (aka East Midlands Interchange) takes its toll on the achievable journey time.

Conclusion to Question 1

57. In short there would seem to be a strong economic case for not building HS2 but doing something more enlightened like HSUK which has been designed from the outset to improve significantly the rail services across the UK.
Question 2 – Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio (BCR) persuasive?

58. HS2 has claimed a BCR of just over 2.0; in the range of 2.1 to 2.3 we believe. There has been much adverse comment about this low value though we will not comment further on whether that figure is high enough to justify the proposed expenditure. HSUK on the other hand offers something like 10 times better connectivity which we believe will give rise to significantly better patronage than on HS2. As a result the value of £Benefit is expected to rise significantly because there will be many more quicker and far more convenient services on offer. On the cost side, the value of £Cost is expected to be some £20 billion lower. Taken together these two changes might be expected to improve the value of the BCR by a factor of 1.5 to 2.5 putting the HSUK BCR into the range of say 3.5 to 5.5. This would be likely to turn High Speed Rail from being a marginal investment in HS2, as many see it at present time, into a transformational project, HSUK, which is truly bankable. We leave it to the economists who specialise in these matters to do the detailed analysis including the Net Present Value calculations which will be needed to come up with a reliable figure for HSUK’s BCR.

59. We are concerned that the analysis undertaken by the DfT and HS2 Ltd makes no structured assessment of how the intervention of high speed rail might optimise connectivity and therefore the economic and environmental benefit. It appears to have been assumed that building a new high speed line will act like a magnet and that new local transport infrastructure will appear automatically like magic to improve connectivity and that new local business will likewise pop up like mushrooms. The cost of this is not of course included in the HS2 costings as far as we know and therefore seems unlikely to have been included in the BCR calculations. We cannot see that any account has been taken of the adverse effects either of providing disconnected secondary cities e.g. Milton Keynes (pop. 230,000), Coventry (pop. 317,000), Stoke (pop. 249,000), Leicester (pop. 330,000), Derby (pop. 249,000), and Wakefield District (pop. 326,000). That is 1.7 million people who will not benefit from HS2 because of the lack of an imaginative design. As such, we believe that HS2 will achieve little overall connectivity benefit and hence the projected benefit cost ratio seems suspect.

60. HS2 also appears to have no concept of what constitutes an ideal intercity network in which connectivity is optimised. When designing HSUK, we have developed our national network with the guiding principle that all primary cities plus the national hub airport at Heathrow should be directly interlinked with intercity quality trains operating at hourly or better frequencies and accessing the existing regional hub stations where all the local connecting trains, busses and taxis are already located.

61. HSUK meets this standard for 15 key UK centres – London, Heathrow, Milton Keynes, Birmingham, Leicester, Nottingham, Derby, Sheffield, Manchester, Liverpool, Leeds, Darlington (for Teesside [pop.377,000]), Newcastle (for Tyneside [pop. 775,000]), Edinburgh and Glasgow. For all other principal UK centres that are currently connected to the intercity network, HSUK also offers major benefits in
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terms of improved journey times and greater availability of direct journeys, with no requirement to change trains.

**Question 3 – What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?**

62. The isolation of HS2 from the existing rail network means that, as described above, it cannot deliver the improvements in connectivity essential to deliver economic growth to any region in the UK. There appears to have been an assumption that others e.g. local passenger transport authorities and Network Rail, will implement the necessary developments to local transport networks (both road and rail) to integrate local communities with HS2. We do not believe that the costs for these works are included in the HS2 costs which means that there is a hidden element of the costing which should be clearly revealed. One example of this effect will suffice.

63. HS2 has planned an ‘East Midlands Interchange’ in the salubrious surroundings of the freight yard at Toton with Toton diesel locomotive maintenance depot nearby. This is intended to supersede Leicester, Nottingham and Derby as the region’s primary intercity hub station. It will need to be a new build station located on a freight-only line currently having no passenger services of any kind to interconnect with. All the local transport links will have to be provided from scratch. Meanwhile, just 6 miles away, a multi-million pound modernisation of Nottingham station has recently been completed providing full integration, with the ever expanding Nottingham Express Transit (NET); their excellent new tram system. This has been done by building a bridge over the top of the railway station to integrate the two new tram lines to the south of the city with the existing lines to the north and also connecting directly with the existing rail services, both long distance and local from Nottingham station. HSUK has not let that kind of excellent opportunity slip and the HSUK network and timetable has been designed to ensure that Nottingham station is directly served by HSUK.

64. From our perspective, experienced in railway engineering and railway operations, we would comment that it is rarely possible to retrofit integration onto a fundamentally segregated line like HS2. Integration can only be achieved if it is planned into the system from the start. In the case of the East Midlands, High Speed UK’s alternative strategy of full integration will make the centrally-located stations at Leicester, Nottingham and Derby into key transport hubs in an enhanced national rail network. Journey times and availability of direct services will be hugely improved, offering far greater benefits for the region than HS2 possibly can at their disconnected ‘East Midlands Interchange’. Similar examples can be provided for other UK regional centres.

**Question 4 – Might some parts of the UK suffer economic disadvantage from HS2?**

65. There is a clear priority, dictated by the existing distribution of population, for developing high speed rail in a northward direction from London, rather than westward. As such, major cities such as Bristol and Cardiff might appear to be
disadvantaged. Their rail connections to London are being addressed by means of the Great Western Main Line Electrification already in progress. However, these cities and their services to surrounding regions particularly further north will suffer far greater direct disadvantage through HS2’s proposed terminal ‘solution’ in Birmingham.

66. Here, it is proposed to operate high speed interregional services from the new Curzon Street terminus station to Northern and Scottish cities, while trains from Cardiff and Bristol will continue to arrive at the existing New Street station. Passengers wishing to make a through journey using high speed services will be forced to make a walking transfer between the two stations. This is hugely regressive, and threatens the basic integrity of the national rail network for which New Street is effectively the hub.

67. By contrast, under the integrated High Speed UK proposals, Birmingham New Street will remain the intercity/high speed hub for the West Midlands, with high speed cross country services extending from the high speed trunk route in the East Midlands via Derby and Birmingham New Street to Cardiff, Bristol, and other south-western centres.

68. As already noted, HS2 has been designed to bypass many major regional centres including Coventry, Stoke, Leicester and Derby. With these cities also likely to see reductions in intercity services on the existing main lines\(^ {194}\), it seems clear that they will be positively disadvantaged by the advent of HS2. Any benefits achieved by HS2 would appear to be highly localised around the new high speed stations, and there is a likelihood of ‘zero sum gain’ by which the economic gains around the new stations are matched by losses in the disconnected surrounding cities.

69. Although it would be possible for more connections to be provided between HS2 and the existing network enabling these bypassed cities to be served, HS2 only has 2 tracks between Birmingham and London. This 2-track stem of HS2 simply cannot provide sufficient train paths per hour to carry services to all regional cities currently served by the intercity network. This will lead inevitably to a 2-tier 2-speed Britain in which HS2 will serve only the ‘primary’ cities, while most ‘secondary’ cities will remain reliant on the existing network on which intercity services are projected to be reduced.

70. This problem is completely avoided by HSUK’s full integration with the existing network, and because its design has 4 tracks all the way from Euston at least to Leicester and, subject to further traffic studies, probably to Killamarsh Junctions just south of Sheffield. This gives HSUK double the number of train paths per hour on the southern stem of the route and is what allows intercity services to be enhanced by using HSUK as necessary to improve services to all cities currently served by the national intercity network.

71. It is a matter of huge concern that the economic and transport analysis underpinning the HS2 proposals appears to have neglected these fundamental issues of lost connectivity simply accepting that HS2 will favour a few cities by serving them and ignoring many more by bypassing them.

\(^ {194}\) Table 23, pp91-92, *HS2 Regional Economic Impacts*, DfT 2013
Question 5 – Is London likely to be a main economic beneficiary of HS2?

72. The HS2 ‘Y’ is designed to focus directly upon London. The HS2 map in Annex C gives the simple impression that HS2 has just been designed to be a high speed conduit to London and nothing else. To a lesser extent Birmingham will have services to other places. But how about making a journey from Manchester to Newcastle? Not on HS2 you won’t though HS3 may help to address that. It therefore seems inevitable that any economic gains will be concentrated in London. Hence HS2 seems more likely to reinforce the North-South Divide, rather than to redress it. It is also of great concern, that the Government has recently decided to omit any link to HS1 from the HS2 Bill. That will serve to continue the current isolation of regional economies from Continental markets except by air. This issue is addressed later in the paper.

73. These deficiencies have arisen from an apparent belief that faster links to London are all that is required to stimulate the regional economies. This is quite wrong, although the belated ‘HS3’ initiative may mean that Government has seen a little of the light. The reality is that rail links within the regions and between the regions are in greatest need of improvement, along with better connections to international aviation particularly to Heathrow and Gatwick as well as future direct rail links to the Continent via HS1. HSUK has been designed to meet all of these requirements.

Question 6 – How might the expected benefits of HS2 to the national economy be realised?

74. The economic benefits of HS2 will only be realised if it is entirely reconfigured to achieve the integration with the existing network that is necessary to improve national connectivity in a balanced and symmetrical manner across the country. Despite several hundreds of millions having already been spent on HS2 it will be simpler and cheaper to ditch HS2 in favour of the HSUK design. This shows that 10 times better connectivity can be achieved by HSUK than HS2 by using the correct design philosophy. HS2 cannot benefit the national economy because it does not have the connectivity required.

Question 7 – How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

75. Much of HS2’s suboptimal performance gives rise to a suspicion that it has been configured as an isolated and disconnected ‘system’ to conform with an assumed franchise model that it would be let as a single franchise and run in isolation. The problem is that this kind of design is not the high speed enhancement needed by the existing network. The ‘franchising’ tail really should not be allowed to wag the ‘enhanced network’ dog and yet that is what appears to be happening.

76. It is vital that one or more franchising models are developed for high speed rail that harmonise fully with optimum functioning of the national rail network. One straightforward option could be to appoint no train service operator but allow
existing franchise holders, using high speed trains, to bid to enhance their existing services. This model would suit HSUK very well.

**Question 8 – Should travellers expect to pay higher fares on HS2 than on other lines?**

77. We see no reason why travellers should not pay an appropriate premium for improved train services. But we see it as more important that high speed rail is developed in such a way that travellers are presented with a genuine choice – either to pay a higher fare for a higher-speed journey, or a lower fare for a slower journey along the existing lines. But under HS2, that choice will rarely exist.

78. For instance, as already noted, cities such as Coventry (pop. 317,000) and Stoke (pop. 249,000) will be bypassed by HS2, and will be left reliant on slower and less frequent intercity services on the existing network. Unless travellers make a circuitous journey to the nearest high speed station (Coventry residents to Birmingham Interchange or Stoke residents to Crewe Hub), they will be unable to access HS2 and in making these diversions, they will lose most if not all of the projected time savings. This is not a good prospect for cities of their size and economic importance.

79. Under the fully integrated HSUK design both Coventry and Stoke will have direct access to high speed services giving another 566,000 people ready access to an improved national network.

**Question 9 – Does the prospect of HS3 affect the economic case for HS2?**

80. We understand the recently announced HS3 to be a projected high speed link between Manchester and Leeds, extending westwards towards Liverpool and north and eastwards towards Newcastle and Hull. It was said to be exploiting the existing infrastructure though which particular line was not specified. At the present time the details are few and the costs appear to be a guess though we have seen the figure of £10 billion put on it and have used that figure in the absence of anything better. When the HS2 project was launched in 2009/10 any prospect of a trans-Pennine link was rejected in favour of developing the existing trans-Pennine routes as part of the Northern Hub initiative. However, as people living east of the Pennines were only too well aware, the much trumpeted Northern Hub would do absolutely nothing for them so this change of heart by Government is to be welcomed.

81. As a consequence of initially rejecting a trans-Pennine link, HS2 has been developed as a highly London-centric ‘Y’, with no account taken of the need for commensurate connectivity giving improvements across the Pennines. Clearly nobody in Whitehall has ever tried a weekday evening rush hour train from Huddersfield to Leeds which rivals any crush loading London has to offer. We at HSUK know both well. In particular, terminus stations are proposed at both Leeds and Manchester which are wholly incompatible with any future high speed trans-Pennine line. Such a link must logically be a through route from Liverpool to Newcastle/Hull, without reversal at either Manchester or Leeds. That is simply not possible with the HS2 proposals.

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It must be stressed that there is no inherent merit in the ‘Y’ of HS2. This constitutes a highly inefficient solution, in that it requires long arms to extend northwards to either side of the Pennines with separate spurs to access each major city, yet offers very little in the way of interregional connectivity (most importantly, no trans-Pennine link to connect the primary northern communities of Liverpool, Manchester, Leeds and Sheffield). By contrast, High Speed UK, using the very efficient ‘spine and spur’ design, achieves much greater connectivity for a significantly shorter route length and therefore cost.

In all cases, the fully integrated and holistically planned High Speed UK vastly outperforms HS2 + HS3. This demonstrates clearly that HS2 should have been planned from the start as an integrated national network. Failure to do so has rendered the current HS2 proposals unfit for purpose and, in terms of the Inquiry of the Select Committee, ineffective as a means of generating national economic growth. The Government’s ‘HS3’ initiative is welcome as an acknowledgement of the importance of trans-Pennine links, but it cannot remedy the fundamental deficiencies of HS2.

It should be emphasised that almost at the inception of HS2 in 2009, the Government’s advisors at HS2 Ltd were advised of the alternative HSUK concept (then entitled High Speed North). This message has been consistently repeated, in the form of consultation responses and other engagement. Yet the Government has persistently refused to engage with the HSUK alternative, and continues to ignore it as it presses ahead with the hugely sub-optimal HS2.

Additional Comment 1 – Interaction between HS2 and Aviation Policy

One of HS2’s primary aims has always been to improve rail links to Heathrow. This has been a response to widely-shared concerns at the adverse economic impact of the very poor rail links to Heathrow from most regional cities generally involving a Tube journey upon arrival at most London Terminal stations.

We share these concerns, and we believe that high speed rail must be developed in such a way as to provide radically improved links from the UK regions to international aviation. But we are concerned that the requirement to achieve a ‘high speed’ connection to Heathrow has had a hugely adverse effect upon HS2’s performance as an intercity railway, capable of improving national connectivity and providing much needed extra capacity.

HS2 Links to Heathrow

The HS2 strategy for serving Heathrow appears to have two parts. Firstly there is a proposal to operate 2 direct regional services per hour from a new High Speed terminus at Heathrow for which no details have been published. They will serve Manchester Piccadilly, Birmingham Interchange, East Midlands Interchange, Sheffield Meadowhall and Leeds New Lane thereby failing to serve vast swathes of the country. If that is not convenient then prospective passengers have the alternative option of catching a train on HS2 which stops at Old Oak Common and changing onto a Heathrow train there.
88. The damaging and costly effect of taking the line to Old Oak Common has been noted earlier and once again there is a ‘tail and dog’ effect in action. The tail of ‘Old Oak Common to Heathrow connections’ has been allowed to distort the dog of ‘proper HS2 connectivity’.

89. In all of the outputs of the HS2 project, there appears to have been no recognition of the clear fact that, however desirable the outcome of improved regional connections to Heathrow might be, they have had the undesirable effect of seriously compromising HS2’s efficiency as a national intercity network which must remain its core purpose. With HS2 unable to optimise national intercity connectivity, it cannot constitute an effective intervention capable of generating economic growth, or driving necessary major reductions in CO₂ emissions.

HSUK Links to Heathrow

90. HSUK has adopted a radically different strategy to resolve the separate aims of a) improving UK intercity connectivity and b) improving regional access to the UK’s hub airport Heathrow as well as to Gatwick.

91. Rail access to Heathrow will be improved through the development of the existing Heathrow Express system which currently starts at Paddington (though soon to have trains from Crossrail) and, after calling at Heathrow Central for Terminals 1, 2 & 3, terminates either at Terminal 4 or at Terminal 5.

92. At the moment Heathrow Express only has an easterly connection into central London. HSUK has a separate strategy for improving overall access to Heathrow called ‘Compass Point’ which would extend the Heathrow Express services to the north, south, and west. For the immediate purpose of HSUK it is only the northern extension which is included in the HSUK costs. The northern arm is partly new build railway running parallel to the Hayes by-pass but mostly upgrading existing lines to get access to HSUK at Cricklewood and in particular a new station on ThamesLink referred to here as Brent Cross.

93. The proposed Compass Point system would function primarily as a regional system, intersecting with all main lines radiating from London, at Woking (SWML), Reading (GWML), Ruislip (Chiltern), Watford Junction (WCML), Brent Cross (MML) and Stevenage (ECML). This will allow passengers from Heathrow to connect to main line intercity services, and will effectively place most regional centres a single change of trains from the national aviation hub at Heathrow.

94. Compass Point will also intersect with High Speed UK at Brent Cross. This will allow high speed services from the UK regions to follow the circumferential route of the Northern Orbital Arm (mostly along existing lines) to directly access the Central Terminal Area and Terminal 5 at Heathrow. The fundamental routeing efficiency of High Speed UK – whereby several cities are located on a single line of route – allows all primary regional centres to be served with just 4 separate trains. This has two

196 The concept of the Compass Point network was originally advanced in the paper Rails Around London – In Search of the Railway M25 by Colin Elliff, published by the Institution of Civil Engineers May 2001.
highly beneficial effects; firstly, the trains will be well filled, and secondly, relatively few ‘paths’ on the high speed line will be consumed by airport services.

95. High Speed UK thus offers an unprecedented opportunity, for the regional hinterlands of the UK to be efficiently connected to the national hub airport by hourly direct trains. This is effectively optimised ‘hub and spoke’ aviation – but with the spokes comprising frequent and comprehensive train services, rather than feeder flights operating at irregular frequency and offering patchy national coverage.

Heathrow + Gatwick = Heathwick

96. There is no reason why rail services from the regions should terminate at Heathrow. Gatwick is located only 45km from Heathrow, less than 15 minutes away by high speed train. Providing a dedicated High Speed rail route between Heathrow and Gatwick will permit the two airports to function as a virtual single airport with ‘airside’ to ‘airside’ shuttle trains operating to transfer transit passengers, transit luggage and cargo between the two airports.

97. All this is included in the HSUK plans, though not the costings, with detailed alignments developed at 1:25,000 scale for the direct link between Heathrow and Gatwick. The 45km of new high speed railway on a heavily-tunnelled route through the sensitive commuter belt might conservatively be estimated at £4.5 billion construction cost (@£100M/km) but that is cheap compared with the double-digit billion costs associated with new airports in the Thames Estuary, or an expanded Heathrow.

98. Above all, detailed plans already exist for a second operational runway at Gatwick giving Heathrow and Gatwick combined 4 operational runways. This would constitute the 4 runway London hub airport for which the aviation industry is pressing and which is also provided with high quality rail services to the rest of the UK that will deliver widespread economic benefit.

99. HSUK has made a formal submission of this proposed high speed rail link between Heathrow and Gatwick to the Airports Commission chaired by Sir Howard Davis. We also supplied the Commission with the details of the whole of the HSUK proposal and the Compass Point network for improved rail access to Heathrow and Gatwick from the regional cities.

Additional Comment 2 – Link to High Speed 1

100. Including a link between HS2 and HS1 was always a core requirement for HS2. After Sir David Higgins arrived at HS2 one of the first casualties was the proposed redevelopment of the North London Line to perform this link. The reason given was that it was too expensive and did not offer value for money.

101. However it was also clear that it would do significant damage to the Camden Market area of north London. So HS2 is not now intended to link with HS1.
HSUK approaches Euston down the Midland Main Line (MML) which terminates in St. Pancras Station. HSUK will have access to the MML tracks and could send a train into St. Pancras if required.

It only requires a few minor modifications to the track layout at Kentish Town and in St. Pancras itself to give HSUK access to the 6 international platforms numbers 5 to 10. From those platforms HS1 can be accessed directly.

Since the UK does not look likely to join the Schengen Area any time soon, performing a ‘bounce back’ to access HS1 will hardly be an inconvenience since border controls will have to be carried out at St. Pancras anyway.

The cost of these works is estimated to be of the order of £500,000 (for the avoidance of doubt that really is just half a million pounds).

It is recognised that additional money may need to be spent at St. Pancras to facilitate the Border Control at St. Pancras for UK regional trains proceeding to and from HS1 and using the Channel Tunnel.

Additional Comment 3 - Public Policy

Amongst the many technical deficiencies of the Government's HS2 proposals, it is clear that these proposals also run contrary to several aspects of public policy including:

- Total disregard for compliance with the 2008 Climate Change Act as HS2 is unable to offer any reduction in CO₂ emissions;
- Public policy expects there to be budgetary restraint in public projects. HS2 has failed to design a system with the most 'bang for the buck'. Comparative estimates indicate that HSUK will be about £20 billion cheaper to construct and will be able to do so much more;
- Public policy favours regional development which is balanced across the regions. The HS2 design favours London at the expense of the regions;
- Public policy expects local communities and rural environments to be protected in the face of large infrastructure schemes. HS2 has unnecessarily chosen a very damaging route through the Chilterns and will damage many other parts of the rural environment;
- Public policy and Local Plans always favour town centre development or redevelopment over further out-of-town development. In a number of cases, e.g. Toton, HS2 simply ignores this requirement;
- Public policy always seeks to get new transport developments properly integrated with existing transport systems to best effect. Because HS2 has been designed as a stand-alone system, it fails this test on a grand scale.

Conclusions

We have undertaken rigorous comparison between High Speed UK on the one hand, and HS2 + HS3 on the other hand. These comparisons cover the following issues with the corresponding results appended:
108.1. Cost – HS2 £60B vs HSUK £40B
108.2. Connectivity – HSUK 10 times better than HS2 and 7 times better than HS2 + HS3
108.3. Journey time reductions – HSUK improves 488 journeys out of a basket of 528 journeys giving them an average journey time reduction of 40%. HS2 + HS3 improves just 68 of the same 528 journeys but makes 171 worse than today. The journey time savings are difficult to quantify in the absence of an HS2 timetable.
108.4. Network capacity – HSUK has double the capacity of HS2 on the core London ‘stem’.
108.5. Operational efficiency – HSUK connects to the existing network 55 times compared with 4 times for HS2. HS2’s main fleet is captive to HS2 new build.
108.6. CO$_2$ reductions through modal shift, primarily from road to rail – HSUK saves 600 Million tonnes of CO$_2$; HS2 saves none.
108.7. Environmental impact – HS2 damages the Chilterns badly as well as many other features of the countryside like ancient woodlands. HSUK avoids these problems entirely.

109. The superior performance of HSUK against all these criteria shows clearly that HS2 has failed to pass these ‘acid tests’ and should be rejected as the favoured solution to the call for investment in high speed rail.

110. We consider it essential that the Government conducts a far-reaching and independent Inquiry whose terms of reference would include but not be limited to:

110.1. Establishing whether the claims made by HSUK in this paper about the deficiencies of HS2 and the superiority of HSUK are justified;
110.2. Establishing the reasons why the HS2 proposals have progressed so far towards legislative powers without adequate technical or procedural scrutiny;
110.3. Establishing how other apparently superior proposals have been dismissed, without justification;
110.4. Then, if the HSUK claims are shown to be justified, recommending a way to proceed to deliver to the UK the properly integrated High Speed rail system that it needs and deserves.

111. It is hoped that the Select Committee will recognise that HSUK has a considerable quantity of supporting documentation which it was not appropriate to include in this submission, for example a further 348 sheets of mapping at 1:25,000. HSUK will be pleased to supply any further information that the Select Committee may wish to see. We will also be ready, as required, to meet the Select Committee to answer questions to clarify both the HSUK proposal and its methodology.

*September 2014*
ANNEX A

HIGH SPEED UK:

25k

33 KISLINGBURY

RAD = 5700m

TRANSITION

STRAIGHT

HIGH SPEED UK:

25k

34 UPPER HEYFORD

RAD = 5700m

TRANSITION

STRAIGHT
High Speed UK

High Speed UK—Written evidence

ANNEX B

Heathrow-Gatwick high speed link for multi-site aviation hub – Transit time under 15 mins.
Annex C

Slide taken from a presentation to the ICE West Midlands on 7th April 2011 by Andrew McNaughton, Technical Director of HS2 Ltd.
Mike Hill—Written evidence

0. Summary.

0.1. High Speed Rail (HSR) systems encourage the migration of service sector jobs from smaller to larger cities, and economically polarise regions, rather than creating new economic activity. This is illustrated with the proposed HS2 station at Toton (HS2 Toton). The HS2 business case exaggerates the benefits of journey time savings and released capacity. HS2 will not address congestion. Capacity can be greatly increased in simpler ways.

- The Economic Impact of High Speed Rail.
  
o) Studies of the world's HSR systems show that:

  c) HSR tends not to create new economic activity. Instead, through reducing transport costs, it encourages the clustering of existing economic activities, driven by agglomeration efficiencies. Nationally, service sector companies migrate from the smaller, economically weaker cities on the HSR route to the larger, economically stronger, capital cities. (Medium-sized cities are particularly negatively affected.) (Manufacturing is unaffected.) Regionally, businesses away from the HSR route may migrate to a neighbouring city with an HSR station, polarising the region.

  d) HSR only marginally affects population and housing growth.


- The Economic Impact of HS2 Toton.

  o) Reducing transport costs promotes clustering, e.g. the closure of regional offices. Nottingham does not contain significant industry clusters and will thus lose service sector jobs to established clusters elsewhere, e.g. biomedical technology jobs from its teaching hospital & university to the Francis Crick Institute near the Euston end of HS2. Employment in Nottinghamshire is already concentrated in Nottingham, limiting the scope for job migration within the region.

    o) (As a lure to prestigious companies, the presence of an HSR station is not a significant criterion for a company selecting a location. To promote local economic development, invest in local transport infrastructure & education and directly subsidise industries moving into the area. Nearby Long Eaton has excellent inter-city transport connections (the motorway, the airport, a 90-minute hourly train service to St. Pancras & Eurostar), yet it is not an economic powerhouse.)
HS2 Ltd estimates that an HS2 station at Toton will have only a marginal effect on employment & housing, using methodology applicable to the inner-city rather than to a parkway station. KPMG estimates that HS2 will cost the East Midlands jobs. Volterra were unable to suggest any means of using HS2 Toton to create economic activity.

(HS2 Toton has not attracted any development interest. The green belt site adjacent to the proposed station already has good transport connections and developers have attempted to build there for many years. The site has been unlocked by the local council's inability to maintain a five-year housing supply. The site does not need regeneration and is not in an area of high deprivation.)

(Catering for HSR commuters wastes housing for local workers. And the viability of HSR commuting needs questioning. A season ticket to London currently costs about £10k, plus 20-30% HSR premium. Wages in London are similar to those in the East Midlands for the same job.)


2.1. A Note on Estimation Methodologies.

2.1.1. HS2 Ltd's estimation methodology may greatly exaggerate both the job gains attributed to HS2 Toton and the importance of locating a development zone immediately adjacent to the station. The methodology focuses only on the changing land use in the immediate vicinity (1km) of a new station. It assumes a concentrated passage of pedestrians through an already urbanised area, which will not occur at an isolated interchange like Toton. HS2 Ltd itself claims that the methodology is not applicable to greenfield sites. HS2 Ltd also acknowledges the probability of regional polarisation, the effects of which are ignored by restricting the analysis to the station's immediate vicinity. (Jobs migrating to a station’s vicinity are cited only as gains.) Competition, for jobs and workers, from other cities on the HSR route is also ignored. (Job migration along the HSR route is ignored.)

2.1.2. KPMG's analysis has been criticised by the experts as being without statistical foundation and of greatly exaggerating the benefits. It shows a job migration from the South to the North, in direct contradiction to the empirical evidence.

2.1.3. Volterra's report completely ignores the empirical evidence. (It also fails to cite references for its claims about the benefits of HSR. If examined, these claims may be attributed to KPMG's analysis, economic growth independent of HSR, regional polarization or direct subsidy.)

HS2 Business Case.

- The HS2 business case exaggerates the benefits of journey time savings:
  - a) The basic unit of time for significant journeys remains the "day out of the office", with employees often travelling unpaid in their own time and staying overnight. HSR does harm the business accommodation industry, reducing the need for overnight stays.
  - b) Inter-city commuters work unpaid on trains, using the office workday for face-to-face communication.
  - c) Cost savings for the private sector need not translate into economic growth. With the economy's current lack of demand, larger companies are hoarding cash rather than investing.

- The HS2 business case exaggerates the benefits of "released capacity" (the cancellation of inter-city services, slowing of fast trains and cancellation of stops):
  - a) The vast majority of rail users are local commuters (travelling on inter-city trains), rather than inter-city passengers. They will suffer worse rail services, possibly to the detriment of the local economy. Northern & Midlands councils are unwilling to release any capacity.
  - b) Few rail services seem able to take advantage of the freed paths. (Information on post-HS2 service schedules is scarce.)
  - c) Cost savings are lost if cancellations are replaced by heavily subsidised rail freight and local passenger services.

- Opportunity costs need considering, e.g. Nottinghamshire councils are trying to improve Nottingham-Newark-Lincoln rail services for the benefit of local commuters, yet are currently unable to get funding. The Eddington Review 2006 concluded that existing road & rail links should be improved, instead of building an HSR.

Capacity & Congestion.

- HS2 will not address congestion or add any useful capacity. London suffers congestion from all directions. The congestion is local, rather than inter-city. The single-line, non-stopping capacity of HS2 is too specific. (Also, HSR is low capacity due to stopping distances.)

- Capacity (e.g. between London & Birmingham) can be increased by numerous alternative schemes, which are more effective, cheaper and quicker to implement than HS2. These alternatives have not been properly evaluated. For example, the two greatest capacity restraints appear to be the unwillingness of the various rail franchises...
to work together efficiently and their reluctance to purchase additional rolling stock. (Information on capacity & congestion is scarce, but suggests that the problem is exaggerated.)

*September 2014*
Summary

- The Government welcomes this enquiry into the Economic Case for HS2. HS2 is designed to be a long-term answer to the capacity problem we face on our railways and a transformational way to improve the connections into and between our major cities.

- Rail travel has doubled over the past 20 years from 740 million to 1.5 billion journeys per year\(^\text{197}\) and the population of Britain will increase by almost 10 million over the next 25 years\(^\text{198}\). The Government is already investing £73 billion in capital investment from 2015 to 2020 - including tripling the national roads budget\(^\text{199}\). However, without HS2 by 2026 there would be:
  - At least 150 people for every 100 commuter seats into Euston and Birmingham New Street in the peak hour; and,
  - More than 100 passengers for every 100 seats on intercity West Coast Mainline services\(^\text{200}\).

- Compared with today's capacity, HS2 ultimately triples the seats from 11,300 to 34,900 departing London Euston during the peak hour\(^\text{201}\). HS2 also releases capacity on the existing network to introduce new services. Network Rail estimates that over 100 cities and towns could benefit from new or improved services as a result of capacity released on the existing rail network\(^\text{202}\).

- HS2 will connect 8 out of 10 of the major cities in the UK, leading to significant improvements in rail journey times between these cities, in particular between the Midlands and the North of England. The Birmingham, East Midlands, Sheffield and Leeds stations will each be connected by journeys of less than 20 minutes\(^\text{203}\).

- HS2 will deliver huge economic benefits, while HS2 is being built it will create 24,600 full-time equivalent (FTE) construction jobs\(^\text{204}\), while HS2 Ltd predicts that additional commercial development brought forward as a result of HS2 in areas immediately

\(^{200}\) DfT (2013), ‘The Strategic Case for HS2’, [https://www.gov.uk/government/publications/hs2-strategic-case](https://www.gov.uk/government/publications/hs2-strategic-case), Figure 7, page 17
\(^{201}\) DfT (2013), ‘The Strategic Case for HS2’, [https://www.gov.uk/government/publications/hs2-strategic-case](https://www.gov.uk/government/publications/hs2-strategic-case), Figure 9, page 22
surrounding HS2 stations could support up to 100,000 jobs.\textsuperscript{205}

- Using the Government’s standard approach to appraisal Hs2 represents ‘high’ value for money which could increase to ‘very high’ if demand grows beyond 2036.\textsuperscript{206} We estimate that the overall net transport benefits (including wider economic impacts) are over £70bn, the majority of which can be attributed to trips which originate outside London.\textsuperscript{207}

**Inquiry items**

**ITEM 1: Is there an economic case for HS2?**

1.1 Evidence suggests that investment in infrastructure can have a stronger positive effect on growth than other forms of investment and this applies to transport infrastructure.\textsuperscript{208} The CBI has stated that “Quality infrastructure is vital for boosting exports, unlocking business investment across the UK, and supporting our leading firms – an essential element of a meaningful industrial strategy.”\textsuperscript{209}

1.2 While the Government has a major programme of investment in hand across the national transport network, with total funding of £73bn over the period from 2015 to 2021 we expect it to remain under significant pressure. This is particularly true of the critical north-south corridors which link our major cities. The West Coast Mainline (WCML) is a good example of the compromises under which our major transport networks have to operate. Despite a major £9bn upgrade lasting 10 years it has reached its planned capacity, experiencing trip growth of 36% between 2006 and 2009.\textsuperscript{212}

1.3 Congestion on the WCML has a noticeably detrimental effect on the reliability of intercity and commuter services that use it, with performance targets regularly not met


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and below the national average\textsuperscript{213}. In addition to rail capacity issues, there is increasingly severe crowding on individual trains. Rail has seen strong and consistent growth in the last two decades\textsuperscript{214} and our Economic Case forecasts long distance passenger demand will continue to increase at a rate equivalent to 2.2\% per annum\textsuperscript{215}. Rail freight is also expected to continue to grow with a forecast doubling in freight tonnes km by 2043\textsuperscript{216}.

1.4 HS2 is designed to be a long-term solution to these capacity problems, improving the connections into and between our major cities. It is a transformational scheme which:

- Compared with today’s capacity, ultimately triples the seats departing London Euston during the peak hour\textsuperscript{217};
- Releases capacity on the existing network to introduce new services. Network Rail estimates that over 100 cities and towns could benefit from new or improved services as a result of capacity released on the existing rail network\textsuperscript{218};
- Directly connects eight out of our ten largest cities\textsuperscript{219}; and
- Delivers significantly better connectivity than the best alternative with passengers being able to travel from Central London to Birmingham in 49 minutes rather than 1 hour 24 minutes today and from London to Manchester in 1 hour 8 minutes rather than the 2 hours 8 minutes it takes today\textsuperscript{220}.

1.5 Transport is not an end in itself but an enabler which can unlock potential and help the economy to grow. By investing in transport infrastructure we can reduce costs to business and improve productivity\textsuperscript{221}.

1.6 HS2 will have a direct impact on local jobs particularly in engineering and construction, our most up to date estimates indicate that while HS2 is being built it will create 24,600 full-time equivalent (FTE) construction jobs, excluding jobs in the supply chain\textsuperscript{222}. Beyond the construction of the railway, the associated development and regeneration triggered

\begin{itemize}
  \item Office of Rail Regulation, \url{http://dataportal.orr.gov.uk/}, [Accessed 4 Sept 2014]
  \item Office of Rail Regulation, \url{http://dataportal.orr.gov.uk/}, [Accessed 4 Sept 2014]
  \item Network Rail, (2013), \textit{Long Term Planning Process: Freight Market Study,}, \url{http://www.networkrail.co.uk/improvements/planning-policies-and-plans/long-term-planning-process/market-studies/freight/}, page 3
  \item DIT (2013), \textit{The Strategic Case for HS2}, \url{https://www.gov.uk/government/publications/hs2-strategic-case}, page 21
  \item Network Rail (2013), HS2 benefits to extend across rail network – Network Rail study, \url{http://www.networkrailmediacentre.co.uk/News-Releases/HS2-benefits-to-extend-across-rail-network-Network-Rail-study-1dfe.aspx}
  \item DIT (2013), \textit{The Strategic Case for HS2}, \url{https://www.gov.uk/government/publications/hs2-strategic-case} page 82
\end{itemize}
by HS2 can have important local impacts, just as HS1 did. Already HS1 has attracted over £10bn private sector investment around station sites.

1.7 An integral part of the evidence supporting the case for HS2 is the cost-benefit analysis as presented in the Economic Case for HS2; but this cannot tell the whole story. A scheme on the scale of HS2 with significant changes in journey opportunities and travel times presents challenges for these tools and methods. But even with these limitations HS2 delivers high value for money and is estimated to generate more than £2 for every £1 invested. The full HS2 network generates benefits to transport users of approximately £60bn and Wider Economic Impacts totaling over £13bn compared to net scheme costs of £31.5bn.

1.8 There is good reason to believe that the returns from investment in HS2 could be higher than this. The analysis uses conservative assumptions to estimate scheme benefits, for example we cap growth in passenger demand 3 years after opening. If demand continued to rise to 2049, just 16 years after the opening of the railway, the resulting 'long term benefit cost ratio' was found to be 4.5, which represents very high value for money.

ITEM 2: Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?

1.9 The Strategic Case for HS2 considered all the factors important in making an Economic Case for the HS2. Specifically it focused on:

- The benefits to transport users of HS2, which includes: journey time savings, crowding relief, improved service reliability and improvements to the frequency of services. These benefits totaled approximately £60bn.
- The Wider Economic Impacts resulting from the reductions in travel costs between businesses resulting in greater business to business interaction and the greater access to labour markets facilitated by HS2 which increases labour market supply which amounted to over £13bn;
- The environmental impacts of HS2 particularly in terms of quantified estimates of the carbon, noise, landscape and air quality impacts;
- Presenting robust estimates of the costs of HS2 and quantifying the associated risks and uncertainty within those estimates;
- Establishing how the benefits of HS2 are spread throughout the country by assessing how improvements in connectivity would increase the competitiveness of areas; and,
- Considering the direct economic opportunities to individuals created by the construction of HS2 as well as the regeneration impacts beyond the direct expenditure.

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225 This takes account of the capital and operating costs of the scheme as well as the revenues generated from the additional rail demand resulting from HS2.
1.10 To assess the impacts of HS2, the Department and HS2 Ltd have used the best tools and evidence base available. Understanding and assessing the full set of economic, social and environmental benefits of investment options is a complex challenge. This is particularly the case for HS2 which is transformational and pushes at the boundaries of standard approaches to assessing the benefits of a scheme. While our approach is world class, and gives us a sound basis for informing decisions it is essential that we continuously develop it, to keep pace with evolving challenges and opportunities.

1.11 For example, capturing the potential benefits from the regeneration opportunities generated by HS2 is at the cutting edge of economic appraisal. This is also true of attempts at capturing the impacts from land use change which we recognise may not be fully reflected in the existing calculation of user benefits and Wider Economic Impacts.

1.12 With advice from an independent panel of experts, Hs2 Ltd commissioned KPMG to consider the potential impacts of HS2 on the economy at a city and city region level. This work examined how improvements in connectivity would increase competitiveness of areas outside of London and change the future pattern of growth. The analysis shows that while all regions benefit, the city regions in the Midlands and the North do particularly well.

1.13 The DfT has appointed a team of experts – including Professor Tony Venables, Professor Henry Overman and Dr James Laird – to undertake a comprehensive study of the mechanisms through which transport investment affects economic performance, and the extent to which these are reflected in our current appraisal methodology. This is in recognition of the fact that considering the role of transport in economic growth is crucial to decision making and delivering the right solutions.

1.14 The Department is currently considering the team’s study report and is aiming to publish this, and plans for the next phase of work, later in 2014.

ITEM 3. What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?

1.15 HS2 improves connectivity across the Midlands, North and Scotland generating new journey opportunities and helping to relieve capacity constraints. This will act to boost economic growth, investment and skills in those regions, an impact which will be further enhanced if local areas align local planning and investment with the HS2 opportunity.

1.16 HS2 is designed to be a radical way to improve the connections into and between our major cities across the country and solve our capacity problems. Compared with

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227 KPMG (2013), ‘HS2: The Regional Economic Impact’,  
today’s capacity, HS2 ultimately triples the seats departing London Euston to cities across the country during the peak hour. To those cities not directly on the route it releases capacity on the existing network to introduce new services. Network Rail estimates that over 100 cities and towns could benefit from new or improved services as a result of capacity released on the existing rail network.

1.17 HS2 will connect 8 out of 10 of the major cities in the UK, leading to significant improvements in rail journey times between these cities, in particular between the Midlands and the North of England. The Birmingham, East Midlands, Sheffield and Leeds stations will each be connected by journeys of less than 20 minutes.

1.18 The closer people and businesses are, the easier it is for them to connect and trade, and the greater the scope for efficiency gains and increased productivity. HS2 Ltd predicts that additional commercial development brought forward as a result of HS2 in areas immediately surrounding HS2 stations could support up to 100,000 jobs. The Core Cities Group – representing eight of the largest city economies outside London – puts that figure at 400,000.

1.19 This boost will be further enhanced if local areas align local planning and investment with the HS2 opportunity. This is why we are supporting local areas in their development of HS2 Growth Strategies, as recommended by the HS2 Growth Taskforce. The strategies will help local areas unlock the full regeneration and investment potential that comes with HS2.

1.20 Places in Phase One of the scheme are already making progress in developing their HS2 growth strategies. For example, the Greater Birmingham and Solihull Local Enterprise Partnership (GBS LEP) has already begun developing HS2 Growth Strategies for Birmingham Curzon Street and the interchange station at Solihull.

1.21 The “Curzon Street Masterplan” (2014 – Produced by Birmingham City Council) provides the framework and principles to guide development, regeneration and

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connectivity. It covers 141 hectares of the City Centre. The Masterplan seeks to ensure the station is fully integrated into the fabric of the City Centre and opens up accessibility between the City Centre Core, Eastside and Digbeth. It projects:

- A net increase of 14,000 jobs created by 2056;
- 700,000 metres squared of development space will be brought forward;
- £1.3bn of extra GVA per year; and
- Around 2,000 new homes.

1.22 “The UK Central: a prospectus for a ‘Garden City’ approach” (2014 – produced by Solihull Metropolitan Borough Council) states that the development zone around the station spans to over 140 ha. This site together with the adjacent NEC, International Airport, Birmingham, Business Park and Jaguar Land Rover will collectively known as the “Hub@UKC”. On top of the existing jobs the new zone to the East of the M42 will provide the capacity for up to 20,000 jobs and at least 2,000 homes.

1.23 “The Euston Area Plan” (2014 - jointly prepared by Camden Council, the Greater London Authority and Transport for London) provides a framework for change in the Euston area. Based on a comprehensive redevelopment of Euston, it projects the potential to deliver:

- Between 180,000 sqm and approximately 280,000 sqm of new employment and economic floor space can be developed;
- In addition there could be in the region of 20,000 sqm of retail floor space around the station.

1.24 “Old Oak: A vision for the future” (2013 - produced by The Mayor, Transport for London, Hammersmith & Fulham, Brent and Ealing Councils) presents plans for regenerating the Old Oak area. The plan projects:

- The opportunity to regenerate 155 ha of derelict and under used land
- Potentially delivering up to 90,000 jobs
- Potentially delivering up to 19,000 new homes
- More recently, the Mayor of London has launched a consultation to establish a Mayoral Development corporation around Old Oak Common to implement these plans and bring forward development.

1.25 Phase two station places have also began work to determine the wider benefits of HS2. For example, The “HS2 Piccadilly Regeneration Framework” (2013 - produced

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by Manchester City Council and Transport for Greater Manchester) looks at the regeneration potential around Manchester Piccadilly. It projects:

- A potential increase of 4,500 new homes and 625,000 sqm of commercial office space
- An increase of 100,000 sqm of retail space and 1,000 new hotel rooms for the Piccadilly and Mayfield areas

1.26 The Growth Task Force recognised the need to make sure we equip the UK workforce with the right skills both to build HS2 and to support the UK’s future competitiveness. The Government is committed to developing the high-level technical skills needed for high speed rail as part of a wider network of skills provision for sectors that are critical to economic growth. For example we have launched a new vision for ‘national colleges’ to provide cutting-edge skills training for different sectors across the country, and the new High Speed Rail College will be one of the first to be developed.

ITEM 4: Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?

1.27 HS2 will provide a very significant expansion of the rail network’s ability to carry passengers and freight, resulting in improvements to rail services throughout the country. HS2 will bring benefits to places throughout the UK including those with stations on the new railway such as Leeds, Manchester, Birmingham and London; to stations on the classic network like Liverpool, Darlington and Newcastle which will receive high speed services; and to other places on the existing mainlines like Milton Keynes, Rugby and Peterborough which will have better services from released capacity on the existing main lines.

1.28 Using the Government’s standard approach to appraisal, we estimate that the overall net transport benefits are over £70bn, the majority of which can be attributed to trips which originate outside London. Furthermore, with advice from an independent panel of experts, HS2 Ltd commissioned KPMG to consider the potential impacts of HS2 on the economy at a city and city region level. The analysis shows that while all regions benefit, the city regions in the Midlands and the North do particularly well. A review of High Speed Rail investment overseas such as in France, Spain and Germany

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conducted by HS2 Ltd\textsuperscript{244} indicates how HSR has contributed to better connectivity, leading to regeneration and development which has transformed local economies.

1.29 Station investment will also act as a catalyst for regeneration, estimated to support up to 100,000 jobs around the stations\textsuperscript{245}. Ultimately, HS2 increases productive capacity and will lead to growth in the wider economy. External estimates suggest this could lead to an additional 400,000 jobs\textsuperscript{246}. The Centro report into the possible results of High Speed Rail on the West Midlands showed that there was potential to create over 50,000 additional jobs in the region, this represents a regional rise in employment of 1.7 per cent.\textsuperscript{247}

1.30 In addition, as the biggest infrastructure project in Europe, HS2 will have a significant direct impact on local jobs, particularly in engineering and construction, creating 24,600 construction jobs and 3,100 permanent operation and maintenance jobs across the Y-Network.\textsuperscript{248} We want as much of HS2 as possible to be built by the UK workforce, the skills required for HS2 are also the types of skills we will need to drive further economic growth.

1.31 We already have a skills gap in railway engineering and advanced construction, the Perkins Review\textsuperscript{249} recently identified a need to substantially increase the supply of engineers in the UK. We are creating a new HS2 skills college to complement existing work to meet the skills gaps and help to deliver a UK workforce equipped for the future. The full scope and scale of the College is still being developed with HS2 Ltd, but the College will as a minimum be delivering training in high end engineering and construction.

1.32 To ensure that the predicted positive impacts of HS2 on the entirety of the UK are maximised, we are working across Government to respond to the recommendations made by Lord Deighton’s HS2 Growth Taskforce\textsuperscript{250}.

\textsuperscript{244} HS2 Ltd (2014), ‘High Speed Rail: International case studies review’,
\url{http://assets.hs2.org.uk/sites/default/files/inserts/International%20case%20studies%20review.pdf}

\textsuperscript{245} Temple ERM, (2013), Sustainability Statement,
\url{http://assets.hs2.org.uk/sites/default/files/consultation_library/pdf/PC205%20Vol%201%20Sustainability%20Statement%20180713.pdf}, page 121

\textsuperscript{246} Volterra and Arup (2011), ‘Final report to the Core Cities Group: Understanding the transport infrastructure requirements to deliver growth in England’s Core Cities’,

\textsuperscript{247} Centro (2013), ‘How the HS2 Y Network will transform the West Midlands’,
\url{https://www.centro.org.uk/media/17256/HS2_Y_Network-new.pdf}, page 6

\textsuperscript{248} HS2 Ltd (2013), HS2 Environmental Statement volume 3: Route Wide Effects,

\textsuperscript{249} BIS (2013), ‘Professor John Perkins’ Review of Engineering Skills,

\textsuperscript{250} HM Government (2014), Getting set for HS2: Responding to the HS2 Growth Taskforce,
ITEM 5: How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?

1.33 Phase 1 of HS2 is not expected to open until 2026, the precise operational structure of HS2 has therefore not yet been determined and will be subject to detailed consideration.

1.34 No commercial structures have been ruled out at this stage. The government’s working assumption is that passenger services on HS2 could be franchised in a similar way to other national rail services. Between now and the opening of HS2 this government and its successors will consider a range of operational and commercial structures to ensure the best service for passengers and the best value for taxpayers.

1.35 Future governments will also want to promote the most effective use of network capacity as they consider the design of future franchise service specifications and fares regulation. Crucially, once Hs2 opens, there is an opportunity to target capacity previously used for longer distance intercity journeys to meet demand from other markets, including commuters, regional travel and freight. The best solution will meet the needs of passengers and promote economic growth by carrying people to where they want to go. In practice, the right balance of fares levels and service patterns for different markets is likely to be reviewed and revised in light of experience as passenger and freight demand responds to the step change in capacity.

ITEM 6: Should travellers pay higher fares on HS2 than other lines?

1.36 The Government have made clear our determination to see the cost of running our railways come down so that we can deliver a better deal for both taxpayers and fare payers.

1.37 It is not possible to know at this stage what the future competitive environment will be, but we are confident that the investment case for HS2 is robust to a range of scenarios. Our assumptions on the viability of HS2 and the expected fares income do not factor in or depend on a premium for high speed services. All our appraisal has been based on high speed rail fares being in line with existing services. Depending on the regulatory regime adopted by future Governments there may be a mixed response with some fares higher than we have assumed in the standard case, and some fares lower.

ITEM 7: Does the prospect of HS3 affect the economic case for HS2?

1.38 Developing East West connections is about improving connectivity in the North which in turn means improved journey times. This could widen and strengthen the North’s labour markets and improve business efficiency which in turn could mean a more productive Northern economy.

1.39 Sir David Higgins, the Chairman of HS2 Ltd, has been asked to present outline options for improving rail journey times and connectivity in the North of England to help stimulate economic growth and regeneration. His report should include consideration of the route, timescales and costs. He will look at all route options, and will be
HMG Department for Transport—Written evidence

working with Network Rail over the coming months on a holistic review of rail in the North.

September 2014
TUESDAY 28 OCTOBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Smith of Clifton

Examination of Witnesses

Alison Munro, Managing Director - Development, HS2 Limited, and David Prout, Director General of the HS2 Group, Department for Transport

Q63 The Chairman: Ms Munro and Mr Prout, thank you very much for joining us. In the previous session, you heard Professor Overman say that this project would sit in the bottom 10% of transport projects that were looked at and evaluated by the Department for Transport. I think Professor Mackie marked it down in the bottom 1%. Do you agree with that assessment?

David Prout: Thank you, Lord Chairman. I do not know if that is correct or not, but I can certainly let you know. What I would say is that transport projects are very different. The vast majority of transport projects that we evaluate are quite small. They are completed reasonably quickly and they are followed by a 15-year evaluation period when you assess the impact of that transport project on demand.

The HS2 project is very different from that in one key respect, the benefit-cost ratio, in that it only allows demand to continue to increase until three years after the HS2 phase 2 is opened. A roundabout will be built in a couple of years and then you look at increasing demand over a 15-year period. With HS2, we measure it from the date of the calculation. The impact of that is that demand is effectively capped in 2036 for HS2, even though phase 2 is only completed in 2033. As we show in the strategic case, that has a downward pressure on the benefit-cost ratio.

Q64 The Chairman: Can we come back to the question that Lord Lawson asked in the last session, which is the total overall cost of this project? The Financial Times reported last week that Sir David Higgins was “struggling to keep it within the spending envelope that he
The question is: is the £50 billion budget both realistic and achievable? Of course, £50 billion is in 2011 figures. It would be interesting to know what it is in 2014 figures.

The other question that has come up in previous sessions is the extent to which this could be done at a lower cost if we were not going for world-record speeds and were going for more modest speeds of 175 miles. I would be grateful for your views on that.

**David Prout:** I think you need to look at the cost of the project in two parts, phase 1 and phase 2, because our estimates on phase 1 are much more mature. We have done much more work on that, but we also have made the majority of decisions on phase 1. As far as phase 1 is concerned, we are clear that we will come in on budget of £21.4 billion. In June or July last year, at the time of the spending review, we put up the cost estimate for HS2 and we had a lot of flak in the press for that. We put it up by £10 billion. The previous cost had been at what is called a P50 level of certainty, a 50% chance of coming in on budget. The £10 billion increase was a P95, a 95% likelihood of coming in on budget, so the budget that we have is a P95 budget coming in at £21.4 billion for phase 1.

We have not made decisions on phase 2 yet, but what we are absolutely clear about, and what the Chancellor made clear to David Higgins, the Secretary of State, and me when we saw him a week or two ago, is that the budget is the budget.

**The Chairman:** So that I understand, phase 2 has been calculated to not quite such a granular degree, and therefore there is an element of estimation in it, but nevertheless the Chancellor has said, “Well, that may be the case but you have to stick to this £50 billion”?

**David Prout:** Correct, yes.

**Alison Munro:** I was just going to pick up your question about whether we could save costs by delivering the railway at a lower speed. We did actually look, in the early days, at what you would save by delivering a conventional railway rather than a high-speed railway. What we found is a lot of the cost you still have to bear. You still have to provide the stations and the track and so on. What we found from that was that it saved about 10% of cost, and that was slowing it down to a conventional speed, but you lost much more in terms of benefits. I think you lost about 30% of benefits for a 10% saving in the cost. Looking at it incrementally, the extra cost of high-speed was outweighed by the extra benefits that you get from high-speed.

**The Chairman:** It would solve the capacity problems, which we will come on to later, but you would get less value for money from time saved, which is a controversial discussion. Thank you.

**Alison Munro:** Less value in terms of benefits.

**David Prout:** Could I add one thing at this point? In the previous evidence session, it was said that we had not looked at alternatives and, as Ms Munro has just said, that is one of the alternatives that we have looked at. But over the years the Department, working with partners, has done a huge amount of work on alternatives. There are four major reports on alternatives: Atkins in 2010, Atkins again in 2011, Atkins and Network Rail in 2012, and most recently again in 2013. These are really substantial, thick reports on alternatives, dealing with road and rail alternatives. Most recently, only yesterday, David Higgins set out in his report that we had looked again at alternatives, particularly on the eastern leg of phase 2, and we really pulled up the roots on that and had a good hard look at it. David
Higgins concluded again that the right strategic alternative is a high-speed route east and west of Birmingham.

The Chairman: Did these alternatives have the same rigorous analysis of cost benefit and value for money attached to them?

David Prout: They have BCRs attached to them, assessments of the amount of capacity that you would generate, assessments of the kind of disruption that would be generated by the construction of these alternatives. You do not get the same level of cost estimation as you do on a much more mature scheme like HS2, where we know much more about it, but we deal with that by optimism bias and so on.

Q65 Baroness Blackstone: Could you tell us why the cost-benefit ratio was not presented without the wider economic benefits included? In making the strategic case, you always included the wider economic benefits. Can you tell us why that is?

David Prout: In the strategic case, we were presenting the case for HS2 as a whole; the transport user benefits and the wider economic impacts. In the economic case, which was published alongside that, the BCR without wider economic impacts was included. It is not a difficult calculation to get from the table produced in the strategic case from the BCR with WEIs to without WEIs. All the inputs are set out and it is a simple long division to go from one to the other.

Baroness Blackstone: Do you accept what Professor Overman was saying? I do not know whether you were here throughout the session—

David Prout: Yes, I was.

Baroness Blackstone: —that if the wider economic case is not included you get a very different kind of outcome? It becomes only moderately good value for money and it does not compare terribly well with all sorts of other things, according to him.

David Prout: The BCR is the BCR and it is set out in the documentation. When you calculate just transport user benefits, you naturally get a lower BCR than if you do transport user benefits plus wider economic impacts. That is correct.

Alison Munro: But the inclusion of wider economic impacts is consistent with the way that the Department generally looks at the value for money of schemes. If you were comparing with other schemes you would want to include the wider economic impacts, and the value for money assessment.

Baroness Blackstone: Given what you were saying earlier about the work that has been done on these other projects, I am not quite clear why that has not all been published and set out in direct comparison with HS2, because I do not think it has been.

David Prout: It has been, yes.

Baroness Blackstone: It has?

David Prout: At each decision point we have set out the latest alternatives. We did it in the strategic case. There is a whole chapter on alternatives in the strategic case that we published in October.

Baroness Blackstone: Is that in the October 2013 document?

David Prout: In this one, yes. The full report was published alongside it, at the same time.
Q66 Lord Smith of Clifton: The Department for Transport has told the Committee in written evidence that, “HS2 is designed to be a long-term answer to the capacity problem we face on our railways”. Can you explain where that capacity problem is?

David Prout: Yes. HS2 is quite a complicated project in terms of explaining what the problems are and that it is trying to tackle and how it will meet those problems. I think it is important to try to set this in a bit of context in wider transport policy as well as the HS2 project itself. I have read all the transcripts that have been published so far of the previous evidence sessions and there has been a lot of talk, for example, about short, medium and long-term investments in the transport infrastructure in this country.

Short term, the DfT has done a lot of work to increase the capacity of services on the West Coast Main Line into Euston Station. We have increased the length of Pendolinos on the busiest routes from nine carriages to 11 carriages. We are about to convert a first-class carriage to standard-class on the nine-carriage Pendolinos in order to increase capacity. Between 1997 and 2010, we went from seven trains an hour on the West Coast Main Line to 11 trains an hour—11 train paths an hour. These are the short-term measures that we have been taking in order to increase capacity on the West Coast Main Line.

Lord Smith of Clifton: Is the capacity pinching so badly and where does it pinch badly?

David Prout: There are basically two major issues in terms of capacity that HS2 is dealing with. One is long-distance capacity, and that is a question of not just seats on trains but of train paths. Train paths are like landing slots at Heathrow and there are not enough train paths on the west coast main line to accommodate all the demands. For example, at the moment Virgin would like to put in routes from Blackpool and Shrewsbury direct to London and there is not space for those train paths. There is a train-path problem as well as a number of seats problem on the long-distance services.

The other problem is commuter capacity, and there the overcrowding on commuter trains is much worse than it is on long-distance trains. What HS2 does is create 18 additional train paths per hour north to south, and that takes long-distance trains off the existing tracks on to our new track and frees up capacity on the existing tracks for more commuter services. It deals with these two issues, long distance and commuter, and in both respects creates additional capacity.

In addition to that, going back to one of your earlier questions on freight, the West Coast Main Line is a mixed-use railway: long-distance intercity trains, short and long-distance commuter trains and freight trains, all muddled up together. That is one of the reasons that reliability on the West Coast Main Line is so poor, because if you get delays on one of those it knocks on right through the system. Taking the intercity trains off the West Coast Main Line will create more space for freight as well.

Lord Smith of Clifton: What about capacity for commuters coming in from the south to the capital? It will not do much for them, will it?

David Prout: It does not serve the south of London.

Lord Smith of Clifton: No, quite. In terms of priority, is that not one of the major priorities for overcrowding and lack of capacity?
David Prout: There are many priorities, and HS2, over this five-year spending review period, takes £16 billion of the £73 billion going into transport infrastructure investment.

The Chairman: I wrote last week to the Secretary of State and asked for some detailed information about capacity. When will that be forthcoming?

David Prout: We are preparing that information at the moment, and we will talk to the Secretary of State about it.

Q67 Lord Monks: Can I shift the questioning away from capacity towards demand and the demand forecasts that we are operating? There has been substantial growth in rail transport, although it has been rather flat in the last couple of years or so. How confident are you about the demand forecasts in the future, the 2.2% running up to 2036?

David Prout: We are as confident as we can be, and you have heard other people giving evidence where they said that our demand assumptions are reasonable. You compare them to the historic trend over the last 20 years and they are reasonable. They are possibly an under-estimate, but 2.2% a year is the figure that we have gone for as the most reliable that we can devise. As I said also, do not forget that as far as demand is concerned we cap it in 2036. We do not increase after that. The population will go on increasing at 5 million every 10 years, but we cap demand in 2036.

Lord Monks: How robust do you think the assumed link between rail demand and GDP growth is in the model that HS2 has used to produce demand forecasts for the future?

David Prout: We think it is robust. The link is not a completely linear parallel link. If you look at rail demand over the last 100 years, we are back now to the number of passenger journeys you had in 1920. The pattern has been down and then back up again, and over that time economic growth has gone up and up, pretty steadily with a few blips. I do not think there has ever been a pound-for-journey link and, more recently, rail demand has been going up more rapidly than GDP.

Alison Munro: Perhaps I could add a bit of context on that. Quite a lot of the growth that we have projected into the future is driven by population growth. As Mr Prout said, if you look at the number of trips that people make in the future, on our forecasts that increases from 2.1 at the moment to about 2.9, so we are not talking of a massive change in the way that individual people behave. It is a combination of factors. When you look at that, compared with what has happened in the past, our forecasts are quite conservative.

Q68 Lord May of Oxford: I want to ask you some questions about the prospect of premium pricing. In your strategic case for HS2, it says the estimates of the revenue that HS2 will generate are based on “conservative assumptions, using the same fare structure as the existing railway”. Being a bit more explicit about that, in written evidence to the Committee, the Department for Transport has said, “Our assumptions on the viability of HS2 and the expected fares income do not factor in or depend on a premium for high-speed services”.

To the contrary, Volterra Partners told the Committee in written evidence that the assumption that HS2 will charge the same fares for non-high-speed rail services is hugely misleading. Professor Glaister said last week that the issue of fares has never been properly addressed, and he thought that premium fares indeed could reduce demand and place even greater burdens on the taxpayer. Could you tell us a little bit more about your reaction to all that?
**David Prout:** The assumption that we have made in our modelling is that it will be the same average fare structure as there is today.

**Lord May of Oxford:** What would be your reply to Volterra and Professor Glaister?

**David Prout:** I did not really understand the comment from Volterra, I am afraid. I simply did not understand what they were saying, because what they said was not true.

**Alison Munro:** I think Professor Glaister also made the point that if you are providing a lot of capacity, which High Speed 2 will do, in that scenario you probably would not price up. You want people to use that capacity and that is the philosophy that underlies our assumption that you would not charge premium fares; you want to get people to use High Speed 2. That releases the capacity on the existing railway, which then provides the opportunity for more commuter services and so on. There is a policy reason for having this assumption.

**Lord May of Oxford:** I am very tempted to set a precedent in the Select Committee by saying, “Would you like to have a bet on it?” Perhaps we should move on.

**The Chairman:** Perhaps there is a little bit of form already, which is that we have received evidence that suggests that the premium pricing on the HS1 link has in fact deterred passengers from going on the High Speed 1 from Ashford to London, and that the numbers on that line are below the forecasts that were in place at the time that it was built. Could you shed any light on that?

**David Prout:** The franchise for the domestic service on HS1 is part of a wider franchise for that part of the south-east. As part of the franchise, the franchisee is allowed to charge premium fares. That is a policy decision that was made by the Government when that franchise was put in place and it is then a commercial decision on the part of the franchisee to maximise their revenue within the terms of their franchise. That is how it works.

**Lord Smith of Clifton:** In Japan, the high-speed trains charge more than the surface ones and they do it remarkably well.

**David Prout:** All I am saying is that all of our modelling is based on the same fare structure as we have today and, given that fare structure, you end up with the BCR that you have, and you can demonstrate that the railway, when you do the commercial modelling, will run at a very sizable surplus.

**Baroness Blackstone:** I am puzzled as to why you would not at least model a premium price fare structure. After all, if you are providing a better service, most commercial operators in whatever the field, whatever the sector, would charge more for a better service, so why not consider this at least?

**David Prout:** The franchise conditions have not been determined yet.
Q69 Lord McFall of Alcluith: A number of respondents have raised concerns about the time-saving benefits from faster trains and that that would be lost if they were not near them. Indeed, one respondent, a private individual Dr Nigel Shepperson, submitted evidence saying that currently it takes him 75 minutes to get to Euston via Virgin Trains from his local station at Lichfield Trent Valley. Although he lives less than 20 miles from Curzon Street – the proposed site of the HS2 station in Birmingham – the door-to-door journey to Euston via HS2 would take him an extra 25 minutes, namely 100 minutes. Is that situation unique or could it be happening in a number of other places?

David Prout: It could happen. He would presumably continue to use a Lichfield service rather than go to Curzon Street.

Alison Munro: Overall, what our modelling is showing is that the vast majority of people get substantial journey time savings from High Speed 2 because that is what is generating the benefits.

Lord McFall of Alcluith: Could you put a figure on that when you say “the vast majority”? Have you modelled it?

Alison Munro: The modelling models how all the rail users will choose whether to switch to High Speed 2 or to continue to use the existing railway. It is the journey time savings that they will enjoy by switching to High Speed 2 that drives the benefits that then go into the benefit-cost ratio. The fact that High Speed 2 is generating a lot of benefits is demonstrating that for many people High Speed 2 is delivering a considerable benefit.

Lord McFall of Alcluith: When Professor Mackie gave evidence, he said that he was not convinced that the access cost from home to these station locations has been fully factored into the model. Is he wrong?

Alison Munro: We have included access costs in the model. We have a specific model within our model, the station access model, which models people’s journey times from their homes or from their offices to the station, so we do try to do that. That model is based on evidence. It is the best we can do in the modelling sense, so that is definitely included.

Lord McFall of Alcluith: So he is wrong in what he says?

Alison Munro: I would hate to say he is wrong. I do not know exactly what he has said, but we definitely model access to our stations and that is included.

Lord McFall of Alcluith: I will repeat what he says, “I am not convinced that the access cost from home to these station locations has been fully factored into the model”.

Alison Munro: We certainly attempt to, as far as you can do in modelling, and modelling is not a precise way of calculating every individual journey. It models, on average, how people behave and it is built on existing data, so we try to model it as best we can. In fact, if you look at the composition of the benefits, we do generate positive benefits in terms of people’s access to the station, so overall High Speed 2 improves accessibility to stations. For example, Old Oak Common introduces a better station location for many people in the west of London. We improve accessibility, for example with Euston station where we include a link to Euston Square in our costs provision for improving the underground provision.

So within our current costs we do provide for good access to our stations, because we have always recognised that if this railway is going to be used and deliver benefits people have to
have good access to the stations. That has been a driving factor as we have developed the design of the railway.

**Q70  Lord McFall of Alcluith:** Sir David Higgins mentioned on Monday proposals for HS3 and his support for it. How much work has been done on that, and what is the ballpark figure for the cost for HS3?

**David Prout:** We have done a fair amount of work with Network Rail on HS3. The question that was asked of us was whether it was feasible to reduce journey times between Manchester and Leeds as a core part of a new east-west corridor. We have identified numerous interventions. The number I have in my head is 120 different interventions you could make on the route that could reduce journey times.

**Lord McFall of Alcluith:** I have seen a figure used that it would cut the journey time from 48 minutes to 26 minutes. Is that the type of figure you are thinking of?

**David Prout:** I cannot remember what miles per hour that assumes for the line, but at the 26-minute end of the scale it is more expensive than it is at the 35-minute end of the scale because you have to do more interventions. What we have not done yet is identify which are the most cost-effective interventions to make, and then go from that to a proposal as to how you would put together the series of interventions that would be the most cost effective to reduce journey time.

**Lord McFall of Alcluith:** So we could describe your proposals as at a very rudimentary stage at the moment in terms of analysis?

**David Prout:** I would say they are at a preliminary stage, yes.

**Lord McFall of Alcluith:** What is the global figure that you are talking about for this?

**David Prout:** It depends which interventions you choose, and we have not done that.

**Lord McFall of Alcluith:** What is the range? A figure of £7 billion has been mentioned.

**David Prout:** Yes. I do not know where that figure came from.

**Lord McFall of Alcluith:** So what is the range?

**David Prout:** We do not have a range because we do not have a proposal that has the right combination of the most cost-effective interventions yet.

**Lord McFall of Alcluith:** The £7 billion figure was released along with the report.

**David Prout:** No, I do not think it was.

**Alison Munro:** I think the £7 billion figure has been quoted. It was not our figure and I think it was simply if you took the per mile cost of High Speed 2 and applied it to High Speed 3.

**Lord McFall of Alcluith:** So you have not done a lot of modelling and you have not done any costing in terms of the global figure: is it fair enough to assess that?

**David Prout:** No, I do not think so. What we have done is we have worked out the numerous different interventions you could make to reduce the journey time between the two cities. What we have not done is identify which are the most cost-effective interventions and we have not put together a package that we would want to present to the Government for approval.

**Lord McFall of Alcluith:** So people should not really be rubbing their hands in glee at the moment. We need an awful lot of information to come out. Okay, fine.
Q71 Lord Rowe-Beddoe: A significant part of the benefit-cost ratio that we have been given is attributable to the regeneration benefits that are associated, or have been suggested to be associated, with this project. What complementary policies do you believe are required to ensure that those regeneration benefits will happen?

David Prout: In point of fact, the benefit-cost ratio is largely made up of transport user benefits rather than regeneration benefits. Those are the benefits that will be experienced by individual travellers and businesses as a result of the increased connectivity and capacity that we will create.

Lord Rowe-Beddoe: Excuse me: is that the 1.7 or the 2.3?

David Prout: That would be the 1.7 for the whole—

Lord Rowe-Beddoe: I am talking about the 2.3.

David Prout: That element is what is technically described as the wider economic impacts or wider economic benefits, but those do not include regeneration. Those include—it is set out in the economic case—agglomeration, increased competition and accessibility of the labour market. The regeneration, for example around Curzon Street or Old Oak Common, is not included in the benefit-cost ratio, but your question still stands: what do you need to do to make the most of those opportunities? That is an issue that was tackled by Lord Deighton in the Growth Taskforce report. He talked about it in four dimensions: what you needed to do in the station places to drive regeneration; what you needed to do to get the network ready in order to have the maximum possible accessibility of the HS2 stations to surrounding areas; what you needed to do in terms of skills to get people ready to benefit from the opportunities presented by HS2; and what you needed to do to make the most of the huge procurement effort that has to be done from HS2, so how you get British business ready to do the best they possibly can from the huge spend through one project.

Lord Rowe-Beddoe: How do you think we are going to do that?

David Prout: If you look at the regeneration issue, I think you have to look at it in several dimensions. In the first instance there is the land that HS2 will own on the stations and around the stations. We have to design our stations and our road access in a way that will drive regeneration in those places. Secondly, there is the area immediately surrounding our stations. It is very important for the local planning authorities to put in place plans for the regeneration of those areas, for them to use their compulsory purchase powers where necessary to do land assembly, and for the Government to contribute from the usual regeneration pots to make the most of those opportunities. Then there are the wider areas where HS2 will have an impact. That is where things like the skills agenda, the procurement agenda and so on come into play.

Q72 Lord Rowe-Beddoe: We have received written evidence, and in fact other witnesses have referred to it, of the danger that London will benefit at the expense of regional centres. Would you care to comment?

David Prout: Yes. I think what everybody who has appeared in front of the Committee has agreed is that transport infrastructure investment can lead to economic growth. I think that is common ground. The question then is whether HS2 can rebalance the economy or contribute towards that. There are several dimensions to this which I thought about in preparation. The first thing is that the economic benefits you get from transport infrastructure investment are largely around business efficiency, investment, agglomeration
and so on. London is already extremely well connected. The north of England, where we are taking the railway, is not so well connected: therefore, if you create a railway line between the two, the proportional benefit will fall on the north rather than London. London is already very well connected. It will make a less important difference than to the north where they are not so very well connected, so they will get a big benefit from it. Logically that would suggest that in terms of the balance of economic growth, the north would benefit more than the south.

The second thing is the particular circumstances that pertain in this country at this moment and for the foreseeable future around the very high costs of locating in London—be that housing, office or labour costs. If you make the north more accessible, it will tend to make it more attractive because it is a cheaper place to locate. I think that is some of the argument—I did not follow all of it—around the U-curve that people were describing in your earlier sessions, where if you have two really badly connected places, you have two head offices. That is not where we are at the moment. If you have two places that are reasonably well connected you have the offices in the bigger place, naturally. If you have two places that are really well connected you locate in the cheaper place. That is what I understood the academics to be saying who presented to you earlier last week. Under those circumstances, given the relative costs of London and the north and the benefits of improved connectivity between the north and the south, again you would think that that would tend towards rebalancing the economy.

Thirdly, there has been a lot of talk about the KPMG study. We have just heard Professor Overman at length, and a lot of the talk has focused on the quantum of benefit, £15 billion, £8 billion—but, again, what I think is common ground is that the analysis they have shown around the relative benefits of different parts of the country is sound, and that is why there has been such outrage by the so-called red dots on the KPMG map: the places that will not benefit from HS2 because they are in Cornwall or East Anglia or wherever.

In addition to that, one has to listen carefully to what the leaders of the north are saying. They are not saying, “Please do not send HS2 here because we will disbenefit from it”. Quite the opposite, they are saying, “Please send it here because we will benefit from it”, and I think that we should listen to that. Our modelling shows that 70% of the jobs supported by HS2 will be outside London. Is that enough?

**Lord Rowe-Beddoe:** That is a very telling response. I think you perhaps ought to address your answer to the Yorkshire Chambers of Commerce, who appear to be not quite on the same page as you, and also the London Borough of Hillingdon who have a deep concern.

**David Prout:** They have a particular reason for saying that.

**Lord Rowe-Beddoe:** But anyway, thank you for that. That is very helpful.

**The Chairman:** It is unsurprising that some of the cities in the north are not saying, “We do not want it”, because it is looking a gift horse in the mouth, is it not? They are getting it and it is paid for by the whole country.

**David Prout:** Yes, but if it was going to suck the life out of their economies they would not be welcoming it.

**The Chairman:** That is true.

**Q73 Lord Carrington of Fulham:** To carry on a little bit from that, if I understand what you are saying, which is very interesting, it is that there is a positive benefit, everybody
is agreed that there is a positive benefit, and all they are arguing about is the quantum of the positive benefit: how big it is. That then raises the next issue. If the positive benefit is at the small end of expectations, whatever that may be—I suspect that there is an error factor in all of these calculations, purely because of the length of time that is involved and the difficulty of projecting future income streams and so on—are there other projects that could have been done in the transport field, not necessarily on the railways but perhaps on the road, which could have produced a similar benefit at the lower end, and have you modelled that at all?

David Prout: That is a question that is addressed at the heart of all the alternative studies that we have done. There clearly are alternatives that can increase capacity, and some of them are being implemented at the moment, as I alluded to earlier in terms of extending the Pendolino trains, but in terms of quantum of capacity increase, none of the alternatives that do not involve building a new railway delivers the same quantum of benefit. That is common sense because we are building a new railway. All the others are about adapting, mending, tweaking and adding to the existing railway. You cannot get away from the fact that a new railway creates new capacity.

The second thing is around connectivity. There has been a lot of criticism of the case for HS2 in terms of its presentation in the early days as being about speed. It was always presented as speed and capacity right from the 2009 documents, if you go back to them, but speed is important. Getting to Manchester quickly is important. It is two hours eight minutes at the moment. It will be one hour eight minutes. That is transformational. It will make it much easier, quicker, more convenient and less tiring to go to and from Manchester. You cannot get that without building a new, high-speed railway.

In terms of reliability, HS1, the Channel Tunnel rail link, has over 99% reliability. The West Coast Main Line is 85%, having had £9 billion spent on it. It is still at 85% and that is because it is old and rickety, it twists and turns and it has mixed use. For reliability, you can only get that kind of huge step change by building a new railway. In terms of frequency as well, you can only get the step change by creating a new railway because only then can you create the extra train paths that allow you to have more frequent trains.

Q74 Lord Carrington of Fulham: One final question that is really exploring what we were talking about before: the connectivity between the northern cities. That seems to drive a lot of the economic benefit of HS2. In other words it is the phase 2, it is the Y at the top that forms a lot of the economic benefit coming down the whole project, which is right at the tail end of the investment project, as I understand it. Would it have been better to have started it the other way around: not with HS3 necessarily, although that could then be tied into it perhaps, but to have built the connection between Birmingham, Manchester and Leeds first, got all that up and running and going, and then considered building the connection through to London? That seems to be putting to one side the problems with the commuter traffic into London, which can be addressed in other ways, perhaps—but putting the HS2 London-Birmingham link into the second phase rather than the first phase?

David Prout: The BCR of 1.7 is for phase 1. The 2.3 is for phase 1 and phase 2. It is not just for phase 2 in isolation. There are two major issues. The first is simply a practical one, which of course could be overcome by delay, which is that we are much further advanced in terms of the regulatory and legislative provisions for phase 1 than we are for phase 2. More important than that are the capacity constraints between Birmingham and London that are causing the problems on the West Coast Main Line. You basically have to tackle those first,
otherwise by freeing up the routes to the north all you do is free them up and put them into a traffic jam. You have to free up the bottom end first. That is why we have to build a new Euston station, at huge expense. It is no good building a new railway line into London unless you have the platforms to park the trains at. You have to do it. You have to do it south to north, because that is where the traffic jam is.

**Lord Shipley:** Can I just pursue that? I was told three years ago that there was a third reason why London-Birmingham had to come first, which was that the fares income was needed to help generate revenue. In that context, and before you comment on that, I have been puzzled about what you referred to as the rough workings on fares, because I would have thought that what the fare levels were going to be would be central to decision-making. What is your expectation in terms of public subsidy on HS2? What proportion of the total do you think, from your rough workings, the fares will represent?

**David Prout:** If you look at the commercial case, we did not give our detailed workings but we gave the headlines in terms of public subsidy for the operating railway, and what those headlines show is that HS2 will operate at a very substantial operating surplus. Part of that will be abstraction from the existing railway network, because we are taking business off the West Coast Main Line, the East Coast Main Line, the Midland Main Line, on to HS2, but the balance, as set out in the commercial case, shows that HS2 will net for UK Rail plc an increase in revenue.

**Lord Shipley:** Is that based on there not being a premium price?

**David Prout:** Correct, yes. What we have done is said, “Can we operate this railway effectively, efficiently and with a good BCR using the existing fare structure?”—and we can. That is the thinking that we have put into it.

**Q75 Lord Shipley:** All right. Can I pursue the rest of the rail network briefly? I am a user, I live in Newcastle and I use the east coast line weekly. In your view, will the fact that there is going to be major capital investment in HS2 reduce the likelihood of the upgrading of the intercity connectivity that occurs, for example, down the east coast? There are others into the south-west and into south Wales. Will they suffer as a consequence of investment going into HS2?

**David Prout:** There are two answers to that. As I said earlier, if you look at the overall capital investment programme for the next five-year period, £16 billion goes into HS2 and more than that goes into the classic rail network. Some £73 billion overall goes into transport infrastructure investment, so if those plans are implemented and if those plans are continued there will be adequate funding for investment in the rest of the rail network. One of the things we are very conscious of in developing our plans is pre-commitment of future control periods for Network Rail—and we basically avoid that wherever we possibly can.

In terms of the services to Newcastle, the intercity express programme is now commissioned and is starting to be provided. That will go ahead, barring unforeseen circumstances that I cannot imagine. It is all contractualised now. There are some particular issues north of where HS2 new track stops, just south of York. Coming from Newcastle you will come down the classic network to Church Fenton in a classic compatible train, bump up on to our lovely new railway and come down at 225 miles per hour. But between York and Newcastle there is a well known two-track section of track. It is very expensive and disruptive to upgrade that, but at some point in the next 20 years, before HS2 is
finished, I would have thought there is a good chance that something will be done about that.

Lord Shipley: I would certainly support you in that endeavour, but I think there is a wider question about those parts of the UK that are not part of the HS2 network and how they are going to ensure that the investment is put in to enable them to have rapid connectivity.

My last question is to ask you about the HS2 Growth Taskforce. What work are the Government doing to implement the recommendations that it made?

David Prout: The task force made 19 recommendations. We accepted 18 of them. All of those are being worked on at the moment. Probably the most visible thing to the public would be the announcement of the new HS2 skills academy that will be built in Birmingham and Doncaster. Equally, last week HS2 held its second round of suppliers’ conferences where it announced that there would be at least 2,000 apprentices as part of HS2, which was one of the recommendations of the Growth Taskforce. All the cities up and down the line are working on their growth strategies in order to put in place the right planning regime around our stations. We have pump-primed that for the non-London parts of station places for phase 1, with some resource funding from DfT so that they can do that better.

We are working on the establishment of what we are calling Regenco at the moment so that we have a central government capability to help local areas regenerate around the stations. We are working hard across the piece on that and Sir Jeremy Heywood, the Cabinet Secretary, has chaired a series of meetings across government to make sure that departments pull together on this issue.

Lord Shipley: Okay, so a lot of people are doing a lot of work. Is the DfT adequately resourced to deal with all of this and all of the other major transport projects it is handling?

David Prout: There is a really important issue around the amount of work that DfT is doing. We are adequately resourced at the moment but there are more projects coming. Fiscal constraint is a problem for all government departments and I would strongly advocate large and highly skilled teams dealing with these major projects, because they are very complicated. The burden of responsibility on our shoulders to ensure that the money is spent well is huge. Since I took over as DG for HS2, we have increased the size of the team from 30 to over 100, and I think that is about the right size for this stage of the project for dealing with HS2.

Lord Lawson of Blaby: I have a very quick question, because we are coming to the end. You stated that HS2 would have a substantial operating surplus, but is that not slightly misleading? There will also be a very substantial burden on the taxpayer and on the public finances, will there not?

David Prout: The cost of capital is not taken into account in that calculation. That is common practice, as you know.

Lord Lawson of Blaby: Yes, except it is a very capital intensive project, is it not?

David Prout: Well, you get a lot for your money.

Lord Lawson of Blaby: True. So you do not count the capital cost. You stated there will be great benefits from your lovely railway—I think that was your phrase—that would not be secured by improving the existing network. That may well be the case, but it may also be the case that the benefit-cost ratio of improving the existing network is greater than the
benefit-cost ratio of HS2. What studies have you done of the alternatives and have you published them?

**David Prout**: Yes. There were four major studies, as I said at the beginning of the evidence that I gave, in 2010, 2011, 2012 and 2013; weighty, extensive studies of the alternatives with the BCRs set out. It is indeed the case that some of the small interventions do generate a very good BCR, and some of those are being implemented. I gave the example earlier of increasing the length of Pendolino trains. That is a very cost-effective way of increasing capacity but it only takes you so far.

**Q76 Lord Lawson of Blaby**: Finally, one of you stated much earlier on—I am not quite sure which of you it was, forgive me—that there is an increase in passenger journeys from 2.1 to 2.9. What precisely does that relate to?

**Alison Munro**: That is the number of trips per household per year: so that gives you an indication of how much more travelling we are expecting people to do on long-distance journeys.

**Lord Lawson of Blaby**: I thought it was that. What puzzled me was that you say that is a very conservative estimate and yet it is an increase of 40%. That does not sound like a conservative estimate to me at all.

**Alison Munro**: We are assuming that once it gets to that higher figure of 2.9, which is in 2036, it never increases beyond that—so forever more that is the amount of increase in travel. At the moment there are quite significant differences in the amount of trip-making between richer people and poorer people. The sort of increase in the number of trips people would make per year is really not large, I would suggest.

**Lord Lawson of Blaby**: A 40% increase not large? It seems to me very large.

**Alison Munro**: But in absolute terms we are talking about from two trips a year to less than three trips a year. It is not difficult to imagine that increase in trip-making.

**Lord Lawson of Blaby**: Difficult to imagine such an increase, you say?

**Alison Munro**: I do not think it is at all difficult to imagine people increasing their trips from two a year—we are starting from a low level—to under three a year per household. That seems to me quite a modest level of travel.

**Lord Lawson of Blaby**: Since some people will not travel any more it means that there are other people who are going to have to travel a lot more. So it does not seem that it is such a cautious estimate, but I will leave that with you.

**Q77 The Chairman**: You mentioned the very considerable investment that is going to be required to make Euston ready for HS2. Some witnesses have suggested, or some written evidence has suggested, that HS2 should stop at Old Oak Common. Is that an option that you considered—and, if so, what were the drawbacks of doing that?

**David Prout**: I think it is the door-to-door issue and the connectivity issue that you have been discussing in the Committee over the last couple of weeks. A central London station is an essential part of driving demand on HS2. The capital investment required would not justify terminating a station out at Old Oak Common. Interestingly, the new open access providers of high-speed services in Italy have not been allowed into Termini station in
central Rome but are forced to drop their passengers at a station in the outskirts. I think that is a real problem for them.

**Alison Munro:** In our modelling of High Speed 2, we estimate that about one-third of people would choose to use Old Oak Common, so for two-thirds of people a central London location is preferable. If you stopped the trains at Old Oak Common, that would be a disbenefit to two-thirds of people. Some of them would then choose to continue on the existing railway, so you would not get the benefits of High Speed 2.

**The Chairman:** Mr Prout, Ms Munro, thank you very much indeed: a most interesting session.
HMG Department for Transport—Supplementary written evidence

HMG Department for Transport—Supplementary written evidence

This note is intended to respond to the evidence submitted by HS2 Action Alliance (HS2AA) and covers the key issues raised by HS2AA.

Benefits

Journey Time Savings
Summary of HS2AA points

There is no proper basis for the current values used for time savings. Time savings account for 79% (£46bn) of the benefits claimed for HS2. (para 6)

DfT has been forced to admit that time spent on trains is productive. Mobile technology has greatly increased the utility of on-board time. Rather than remove this benefit…DfT simply relabelled the unit value a ‘willingness to pay’ figure. This is despite there being no pertinent survey evidence to support the switch or the values adopted. (para 8-9)

A more robust approach would be to accept that time saved is 100% productive, and that time savings no longer have a productive value. (para 11)

The other time savings (for walking, waiting, station access, interchanges) that make up £15bn of the £46bn benefits are also over-valued. (para 12)

Leisure and commuter travellers: The evidence used pre-dates the arrival of mobile technology so the values cannot reflect the improved utility of on-board time (para 13)

DfT response

1. Businesses benefit from reduced travel times in a number of ways, including improved access to suppliers or customers. Therefore, it follows that businesses should be willing to pay for quicker journeys and it is this willingness-to-pay which forms the basis of values of working travel time savings.

2. To reflect this the Department commissioned a review of UK and international evidence on the business values of time which demonstrated that the values used in the appraisal of HS2 correspond closely with the average values from the available revealed preference evidence on the willingness to pay for travel time savings.

3. This study commissioned by the Department examined whether values of time have fallen over time in response to increased opportunities to use travel time productively. They found no evidence of there being a trend reduction in values over time. Furthermore, a recent values of time study in the Netherlands suggested that

251 Institute for Transport Studies, University of Leeds (ITS Leeds) (2013), Valuation of Travel Time Savings for Business Travellers
the proportion of business travel time spent working on a train has not increased since 1997.\textsuperscript{252} This is despite the significant technological change since that date.

4. This study however, raised questions about the suitability of using an ‘average’ value of time in appraising high-speed rail schemes. In their report the authors conclude that the evidence across a range of studies supports a higher business valuation in the context of high speed rail, the report states: ‘across the central values for each study, the value of time was on average around 50\% larger than the gross wage rate, and across the six UK studies it was 40\% larger’.\textsuperscript{253}

5. The higher observed values may be the result of a number of factors, including:

\begin{itemize}
  \item the long-distances served by high-speed rail services;
  \item the higher productivity of business travellers that make use of the services;
  \item the larger time savings offered by high speed rail schemes; and,
  \item other effects such as the ability to avoid overnight stays, and the additional productivity achieved by being able to spend more time with the client.
\end{itemize}

6. On the balance of the evidence presented in the ITS Leeds study, we think that there is good cause to believe that high speed rail schemes should be assessed with values of time that are higher than the standard WebTAG values currently adopted in the HS2 appraisal. When a higher value of time is adopted which reflects the ITS Leeds study the BCR for the Y-Network including Wider Economic Impacts rises above 3.0.\textsuperscript{254}

7. The approach adopted to valuing walking, waiting, station access and interchange is consistent with that described in the Department’s appraisal guidance (WebTAG) and used across all transport appraisals including those for other rail schemes.

8. The Department has commissioned a review of the comparability of the estimates of leisure and commuter traveller values of time used in the appraisal of HS2\textsuperscript{255} relative to other studies conducted more recently. This shows that the values we use are consistent with evidence from these more recent studies.

\begin{footnotesize}
\begin{enumerate}
  \item Significance, VU University, John Bates Services (2012), \textit{Values of time and reliability in passenger and freight transport in The Netherlands}, page 113
  \item HS2 Ltd (2013), \textit{The Economic Case for HS2}, \url{http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf}, page 89
\end{enumerate}
\end{footnotesize}
Current % of business travel

Summary of HS2AA points

The estimated current proportion of long distance rail business travel is not credible. The latest business case increased the proportion of business users by a third – from 28% to about 38%. (para 14)

The latest approach remaps ticket type data to journey purpose (using assumed conversion factors), rather than using the extensive readily available survey evidence. This is despite: (para 15)

- The fit of the new estimates to the survey evidence is very poor
- The survey evidence is consistent with the previous estimates of business travel
- The survey is large scale, frequent and the basis for commercial rewards, making it highly reliable.

Passenger Focus conduct the National Passenger Survey……shows that Virgin Trains (the operator of the fast trains on the WCML) have about 30% of passengers travelling on business and all long distance services about 26%. (para 16)

DfT response

9. The National Passenger Survey data used by HS2 Action Alliance is not directly comparable to the data used in the economic case as it has a different definition of long distance trips. The HS2 Economic Case assumes long distance as being trips above 100 miles whereas the HS2AA have used data from the National Passenger Survey which considers all trips made on Train Operating Companies which provide long distance services, regardless of trip length. The journey purpose splits is adjusted using weighting supplied by the Train Operating Companies however, it is not clear what evidence these weights are based on.

10. Analysis of the National Travel Survey between 2002 and 2010 suggests that of those making long distance (journeys > 100 miles) weekday rail trips between London and the East Midlands, Yorkshire and Humberside, 41% are business travellers while for journeys between London and the West Midlands, North and West this proportion is 42%256.

11. Prior to the October 2013 HS2 Economic Case the journey purpose of trips was determined by using ticket sales data to examine the type of ticket sold (full price, open etc.) and making assumptions about the relationship between the ticket type and the journey’s purpose. This approach had the following limitations:

- The relationship between ticket type and journey purpose was based on national averages and did not vary according to distance or region; and,
- Analysis of the National Passenger Survey data, shows that more business trips are now being undertaken using reduced or advanced purchase tickets and this was not reflected in the data and assumptions used.

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256 Department for Transport (2012), National Travel Survey
12. To reflect these limitations HS2 Ltd revised their approach to calculating journey purposes. Journey purpose splits are now directly sourced from the National Rail Travel Survey on a geographically specific basis recognising that the number of commuting/business/leisure travellers varies significantly by route and distance. This reflects both the nature of the destination – with large cities and conurbations attracting a significantly higher proportion of business trips – and the degree of competition with other modes for business travellers.

Crowding
Summary of HS2AA points

Crowding benefits (worth £7.5bn) are ascribed to HS2 on the basis that crowding will be less on HS2 than the “do minimum” alternative (which is based on currently committed developments only). (para 20)

The crowding benefits are entirely an artefact derived from the use of an unrealistic ‘do minimum’ comparator, rather than a realistic and credible alternative. (para 22)

DfT response
13. Modelling the impacts of HS2 requires the scheme to be compared to the alternative of not building HS2. If HS2 is not built there will still be growth in long-distance rail travel\(^\text{257}\) and there will be some investment that is already planned for the current rail network.

14. The HS2 do-minimum reflects all committed investment on the current rail network known at the time the modelling was conducted. Similarly our forecast of do minimum demand takes account of the latest evidence available at the time the modelling was done.

15. This is the standard approach for assessing all transport schemes as specified in the Department’s Transport Appraisal Guidance, WebTAG.

16. While it is recognised that further investment in the rail network will continue beyond committed schemes and indeed, beyond the construction of HS2 itself it would not be appropriate to hypothesise about not least because it is likely that many future schemes will complement rather than replicate the benefits generated by HS2.

17. Further details of do-minimum assumptions can be found in Annex A. These committed improvements deliver a 10% increase in peak hour capacity from Euston.\(^\text{258}\)


Costs
Summary of HS2AA points

The case for HS2 fails to include some major items (para 25):

- The cost of capital – funding for HS2 is currently treated as ‘free’ money
- The cost of connecting HS2 to existing infrastructure
- Incorrect cost escalation – a mismatch in the treatment of costs and benefits
- Social dis-benefits e.g. uncompensated property blight – their omission is illogical

DfT response

18. Departmental budgets are set by the Treasury, which considers the debt and financing cost implications of different budget levels. Therefore, for public investments, appraisal aims to demonstrate the benefits per pound spent from the available budget.

19. Incorporating a 2.5% real cost of capital in the construction cost estimate, could in fact improve the Benefit Cost Ratio (BCR). If HS2 is financed by debt, the cost would be spread over a longer time period, which could – depending on the exact terms of the loan and the interest rate – push down the Present Value Costs (PVC) and improve the BCR.

20. For example, if we assume an interest rate of 2.5% with an interest only loan covering the period of construction supported by a 30 year mortgage once operation of the full network has begun, the BCR increases from 2.3 to 2.6.

21. Supplementary schemes to HS2 should be considered on their own merit with separate business cases. These schemes will generate their own benefits which have not been captured in the Economic Case for HS2. The benefits which have been calculated in the Economic Case for HS2 are not dependent upon the realisation of those supplementary schemes. The HS2 scheme is consistent with the 2013 Hybrid Bill and consultation.

22. The government aims to ensure that owner-occupiers whose properties (and property values) are most directly and specifically affected by the proposals for HS2 are eligible for compensation; and that those eligible for compensation receive fair and reasonable settlements reflecting the location and circumstances of their property.

23. While there is no real cost increases assumed beyond 2036, the same is also true of rail fares. Furthermore, no allowance is made for efficiency savings and productivity improvements which one would expect to occur over the lifetime of HS2.
**Benefit Cost Ratio**

**Summary of HS2AA points**

There are also concerns with the BCR itself, particularly given the uncertainties (para 37):

- The “standard case” results are unsound – inappropriate use of value for money test; its ‘do minimum’ assumption, the period of evaluation and assessment of demand/use of the cap
- Inadequate sensitivity testing of the results

**DfT response**

24. The value for money test has been applied appropriately in the Economic Case for HS2, the BCR is presented both with and without Wider Economic Impacts as recommended in the Department’s Transport Appraisal Guidance (WebTAG).

25. Modelling the impacts of HS2 requires the scheme to be compared to the alternative of not building HS2. If HS2 is not built there will still be growth in long-distance rail travel and there will be some investment that is already planned for the current rail network.

26. The HS2 do-minimum reflects all committed investment on the current rail network known at the time the modelling was conducted. Similarly our forecast of do minimum demand takes account of the latest evidence available at the time the modelling was done. This is the standard approach for assessing all transport schemes as specified in the Department’s Transport Appraisal Guidance, WebTAG.

27. While it is recognised that further investment in the rail network will continue beyond committed schemes and indeed, beyond the construction of HS2 itself it would not be appropriate to hypothesise about not least because it is likely that many future schemes will complement rather than replicate the benefits generated by HS2.

28. Further details of do-minimum assumptions can be found in Annex A. These committed improvements deliver a 10% increase in peak hour capacity from Euston.259

29. A key principle of the Departments appraisal guidance WebTAG260 is that a defined appraisal period should be adopted which captures the planned period of scheme development and implementation and typically ends 60 years after the scheme opens. It is this principle which is adopted in the appraisal of HS2 and is consistent with other transport appraisals conducted by the Department.

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30. The HS2 Economic Case has been tested against variation in a wide range of variables including:
   o Demand growth and the demand cap;
   o Values of Time;
   o Construction Costs; and
   o Fare growth;

   This analysis shows that the Economic Case for HS2 is robust to a wide range of scenarios. In more than 75% of the scenarios tested the Y-Network represents high value for money.\footnote{HS2 Ltd (2013), The Economic Case for HS2, http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf, page 10}

**Economic Growth and Transport**

*Summary of HS2AA points*

There is no longer a relationship between economic growth and domestic transport – crucial to the HS2 case – in either the UK and other developed economies (para 48)

David Metz has demonstrated that the link between economic growth and domestic transport is broken…. while there was a clear relationship until about 1997, since then economic growth is not mirrored by a corresponding increase in domestic travel (para 50)

**DfT response**

31. There is no evidence of saturation in rail demand – people are making more trips by rail than ever before. The distance travelled per person per year on surface rail has increased by over 30% since 2002\footnote{Department for Transport (2014), National Travel Survey, NTS04010}.

32. There is evidence of a strong positive correlation between transport demand and economic growth. Failing to invest in transport infrastructure may constrain economic growth, pushing the capacity of a network to the limit and thereby constraining (or even reducing) the productivity of an economy through negative effects such as congestion and overcrowding.\footnote{Eddington, R. (2006). The Eddington Transport Study Main Report: Transport’s role in sustaining the UK’s productivity and competitiveness. Volume 1: Understanding the relationship: how transport can contribute to economic success. http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/162259/187604/206711/volume1.pdf (Accessed 19 February 2014)}

33. Evidence from the Organisation for Economic Co-Operation and Development (OECD) suggests that investment in infrastructure is important for growth and that building better transport links can have a stronger positive effect on GDP than other forms of investment\footnote{Égert, B., T. Kozluk and D. Sutherland (2009), “Infrastructure and Growth: Empirical Evidence”, OECD Economics Department Working Papers, No. 685 OECD.}. The CBI has stated that “Quality infrastructure is vital for...
boosting exports, unlocking business investment across the UK, and supporting our leading firms – an essential element of a meaningful industrial strategy.\textsuperscript{265}

34. In the IMF’s October 2014 World Economic Outlook, analysis finds a strong case for increasing public infrastructure investment in countries where conditions are right. The study found raising public investment by 1 percentage point of GDP would increase the level of output by about 0.4 percent in the same year and by 1.5pc after four years.\textsuperscript{266}

35. Transport is not an end in itself but an enabler which can unlock potential and help the economy to grow.\textsuperscript{267} By investing in transport infrastructure we can help connect people to employers and enable businesses to access a greater supply of workers. Transport also enables improved connectivity between businesses, their clients, partners and competitors.

36. Recent UK evidence indicates the role transport has in widening the pool of available workers for businesses.\textsuperscript{268} Network Rail concluded that GDP per worker tends to rise along with ‘effective density’ as a result of higher concentration of businesses in urban areas.\textsuperscript{269}

37. A recent study by Centre for Cities on “Transport Priorities for Stronger Cities” suggests linking larger more productive cities with faster and more frequent transport. This can enable greater business to business connectivity and give business access to a wider pool of labour both of which can drive economic growth.\textsuperscript{270}

**Demand**

**Summary of HS2AA points**

HS2 are at pains to argue that their demand estimates are conservative. This is transparently incorrect, when their estimates are set in the context of recent trends in domestic travel. (para 53)

\textsuperscript{265} CBI (2013), ‘Faltering speed of delivery on infrastructure could undermine efforts to secure the recovery’, 

\textsuperscript{266} Abdul Abiad, Davide Furceri, and Petia Topalova (2014) World Economic Outlook, 


\textsuperscript{268} Melo P and Graham D (2014), Testing for labour pooling as a source of agglomeration economies: Evidence for labour markets in England and Wales, Regional Science, Vol. 93 No. 1

\textsuperscript{269} Network Rail. (2013) Long Term Planning Process: Long Distance Market Study,  
http://www.networkrail.co.uk/improvements/planning-policies-and-plans/long-term-planning-process-market-studies/long-distance/

\textsuperscript{270} Centre for Cities (2014), “Fast Track to Growth, Transport Priorities for Stronger Cities”  
http://www.centreforcities.org/research/2014/10/20/fast-track-to-growth/
A study of more than 200 infrastructure projects showed that there is a tendency to overestimate passenger forecasts by more than 100% on rail projects. HS2 does not look to be an exception. The demand modelling exaggerates demand for HS2 because (para 54):

- The projected background growth is unlikely to happen;
- The uplift in demand assumed from introducing HS2 is too large; and,
- No allowance is made for new technology that will remove rail’s current competitive advantage (from mobiles etc making on-board time useful), which may reduce rail demand.

Background long distance rail travel growth, i.e. without HS2, is unlikely to happen because (para 55):

- Domestic travel (all modes) has been a saturated market for a long time
- Long distance rail demand has now flat-lined
- The demand model used to predict large future rail growth is defective, and produces an estimate of growth 5 times greater than population growth.

Business travel generally is declining: Domestic business travel is also not growing in absolute terms (in kilometres per annum). It is not growing measured with either GDP or population. Since 1996 GDP has grown by 40%, population by 10% (and 5% since 2005) but business travel has fallen by 10% (and 16% since 2005). So a link to GDP growth no longer exists (para 58).

Defective rail demand model: The rail modelling for HS2 that predicts future rail growth (at 2.2%/a for next 25 years or 79% increase by 2036) is based on a version of the Passenger Demand Forecasting Handbook. It is defective and results in too optimistic a forecast (para 61).

DfT response

38. The figure below demonstrates that long distance rail travel has grown faster than all other modes of transport.
39. Rail travel has doubled over the past 20 years from 740 million to 1.5 billion journeys per year\(^{271}\) and the population of Britain will increase by almost 10 million over the next 25 years\(^{272}\). In the decade from 2002 to 2012 the annual growth in long distance rail travel was 5.2\(^{273}\). The figure below demonstrates this long-term trend growth in rail demand for services across the network including long distance journeys.

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40. There is no evidence of saturation in rail demand. The distance travelled per person per year on rail has increased by over 30% since 2002\(^{274}\).

41. There are two reasons to believe that the assumption we make about long term demand growth in the standard appraisal may be conservative. First, our appraisal assumes demand growth equivalent to just 2.2% a year. Second, it assumes that after 2036 – only three years after opening – there will be no further growth in the number of people using HS2 for the next 57 years\(^{275}\). This does not even allow for population growth to generate additional demand.

42. It is true that the average number of trips and miles per person made for business purposes has decreased over time. However, this is not true of rail. Whilst people travelled less on business by rail during the worst years of the recession (2007-2010), since 2010 the number of miles travelled on rail for business per person per year has increased by almost 60%\(^{276}\).

43. The overall cross modal decline in business travel is largely due to a fall in the number of business trips made by those driving a car (down from 26 in 2002 to 22 in

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\(^{274}\) Department for Transport (2014), National Travel Survey, NTS04010


\(^{276}\) Department for Transport (2014), National Travel Survey, NTS04010
2012). It has been argued that this is likely to be largely caused by the declining use of company cars following the removal of free fuel allowances in the early 2000s.

44. It has been argued that telecommunications and travel have risen together through many historical technological advancements and there is no compelling reason to assume that current and future events will dramatically alter that relationship.

45. Our general approach to forecasting demand growth is based on standard industry practice as described in the Passenger Demand Forecasting Handbook.

46. There is no systematic upward bias in the methodology used to forecast rail demand. The Department in its 2007 ‘Delivering a sustainable railway: White Paper’ prepared a set of demand forecasts which predicted demand 6% lower than actual data in 2012/13. Had we predicted the economic downturn and accounted for it in our projections in 2007, the gap between predicted and actual demand would have been even larger.

47. Even with a more conservative approach which lowers demand cap by 20%, HS2 still has a strong economic case. The value for money of the scheme is lower but the expected BCR would be almost 1.5. In reality, demand saturation is unlikely to happen overnight like a demand cap but more likely to slow gradually over a number of years.

Capacity

Summary of HS2AA points

It is argued by the Government, for example by Patrick McLoughlin and Baroness Kramer, that additional long distance capacity is urgently needed on the WCML, and this underpins the need for HS2. But the WCML currently has considerable spare capacity. (para 65)

…. the railway carriages are half empty. Data released to the High Court (as part of 2012 HS2 Judicial Review challenge) showed that the average evening peak load factor (the ratio of passengers to seats) for InterCity services from Euston was only 52% (or 229 passengers/train). (para 66)

277 Department for Transport (2014), National Travel Survey, NTS0409
279 Mokhtarian (2003), Telecommunications and Travel: The Case for Complementarity, Journal of Industrial Ecology, Volume 6 Number 2
This loading data is before 35 out of the 56 Pendolino trains used on the route were lengthened from 9 to 11 cars, completed by 2013 giving an additional 150 standard class seats in each train. This reduces the 52% evening peak loading to about 43%. (para 67)

It is the commuter trains and not intercity services (that HS2 is designed for), that have the chronic overcrowding on WCML. (para 68)

There is proven potential to increase capacity on the existing WCML route without HS2. (para 70)

The 51m ‘optimised alternative’ was costed by Network Rail at £2bn and Atkins for DfT gave it a net benefit ratio of 5.17 (compared to HS2 at under 2 at that time). Disruption to create the extra capacity is minimal and similar to ongoing current works.

DfT response

48. Extra capacity provided in recent years has filled up more quickly than expected. Since being upgraded, the West Coast Main Line has seen trip growth of 36% between 2006 and 2009. The congestion on the WCML also has a noticeably detrimental effect on the reliability of intercity and commuter services that use it, with performance targets regularly not met and below the national average.

49. Latest data (originating from 2013) shows:
   - On average 4,800 people are standing on arrival into London Euston in the AM peak with 4,200 standing in the PM peak.
   - For trains arriving at Euston during the morning peak, 21% were over capacity and in total 50% had passengers standing.
   - Outside London, Birmingham had the highest number of passengers with 39,000 arriving into the city centre in the AM peak. On average there was 3,500 people standing on arrival into Birmingham.
   - Sheffield experienced the largest increase in crowding in the morning peak compared to 2012.

50. Analysis shows without HS2 by 2026 there would be:
   - At least 150 people for every 100 commuter seats into Euston and Birmingham New Street in the peak hour; and,

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284 DfT (2013), ‘The Strategic Case for HS2’, https://www.gov.uk/government/publications/hs2-strategic-case, Figure 7, page 17
More than 100 passengers for every 100 seats on intercity West Coast Mainline services.

The railway is effectively the same size as 15 years ago, but there are now around 4,100 more train services a day; an increase of c.25%. The West Coast Mainline is operating at a level of intensity that is making it extremely difficult to achieve target levels of performance reliability.

The Public Performance Measure (PPM) is the rail industry’s main measure of punctuality and reliability, measuring the percentage of services arriving at their final destination on time. PPM in Great Britain has stayed fairly constant at around 90% since 2007/08, but has fallen in the last two years. Long distance operators such as those operating on the West Coast and East Coast Mainlines had the lowest PPM in 2013/14 at 87%.

Analysis by Atkins shows that upgrades to the existing railway will not achieve our objectives. The optimized 51M option would only increase the number of seats out of Euston by 36%. At 2.5% per annum passenger growth, the extra capacity would be used up in the 2020s, with no further options to upgrade the WCML:

- It would fail to offer a robust solution to the problem of poor service performance.
- It may not support job creation to the extent of HS2 and not match the regeneration opportunities available;

Source: ORR, Public Performance Measure by sector, Table 3.43

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285 HS2 Ltd analysis of data supplied by the ORR (1998/99, trains planned) and from the ORR Data Portal
HMG Department for Transport—Supplementary written evidence

- delivers much smaller journey time benefits; and
- would likely result in significant disruption to passengers during the construction phase.

Environmental Implications

Summary of HS2AA points

HS2 is opposed as needlessly environmentally damaging by a range of environmental pressure groups including the Green Party. (para 75)

DfT response

54. HS2 is a project that is vital for this country’s future economic growth but we all recognise that constructing a project of this scale is clearly not possible without some environmental impacts. By planning this project sensibly we have sought to reduce adverse environmental effects as far as possible. For instance, of the 143 miles of the Phase 1 railway, over 79 miles is in cutting or tunnel.

55. Environmental mitigation is something that has been considered from the very beginning of the project meaning that reducing environmental effects is hard-wired into the railway it is not something that has been bolted on at the end. The Government’s aim is to seek no net loss in biodiversity. This is incredibly ambitious for a project as big as this.

56. We have taken a responsible approach to the environment but ultimately, following the principles of sustainable development, a balance needs to be struck between the economic, social and environmental effects of a project.

57. Even the environmental effects are themselves a balance, as measures to avoid or mitigate one environmental effect might cause another. For example, to mitigate flood risk you might want to raise the railway above the ground but to mitigate visual effects you might want to lower the railway into the ground.

58. The Environmental Statement published on 25 November 2013\textsuperscript{288} provided a balanced, professional assessment of the anticipated effects of the proposed scheme. This Environmental Statement represents the largest environmental impact assessment ever undertaken in the UK, and builds on the previous work in the Appraisal of Sustainability. In total, this represents over 3 years work so far by some of the best environmental specialists in the country.

59. In operation savings from mode shift, freight uptake of released capacity and tree planting exceed direct emissions from Phase One of HS2 – representing a saving of around 3 million tonnes of CO2 equivalent gases over 60 years from 2026 that

\textsuperscript{288} HS2 Ltd (2013), HS2 Phase One: Environmental Statement, 
would otherwise accrue if HS2 didn’t exist and journeys had to be taken through other modes\(^{289}\).

### Opportunity Cost of HS2

**Summary of HS2AA points**

*It is surprising that a Strategic case for HS2 should not adequately review alternative investments (Para 84)*

**DfT response**

60. We have considered a wide range of alternative options to a high speed railway including:
   - the use of alternative modes,
   - a conventional speed line, and
   - upgrades to the existing rail network.

61. The appraisal of these alternatives has been the subject of several reports published since 2010, most recently in the Strategic Case for HS2 published in October 2013. The analysis demonstrates that whilst the alternative schemes may offer medium to very high value for money overall, they do not deliver the same scale of benefits as HS2. The benefits of the Phase One alternative would be 30% of those delivered by HS2 Phase One. The benefits of the Phase One and Two alternative would be less than half of those delivered by the full Y-Network.\(^{290}\) They also fail to deliver the same level of capacity or journey time savings and would cause significant disruption on the existing rail network.

### Costs under control

**Summary of HS2AA points**

*It is plain that the Government are concerned to conceal an on-going lack of control of the HS2 project. Since the MPA first raised the alert status to amber-red, HS2’s costs have already risen significantly – from £32bn to £43bn for the infrastructure (in 2011 prices). (para 95)*

**DfT response**

62. HS2 will be constructed within the funding envelope set out within the 2013 Spending Review. Sir David Higgins’ independent review of costs, published in March this year, confirmed that the cost estimate for Phase One is appropriate.

63. We have established a robust framework of delegations and approvals for Phase 1 in which to manage the funding thresholds held by HS2 Ltd, the Department and the HM Treasury ensuring there is a tight control and monitoring of cost as the Phase I project progress through Parliament and beyond.

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\(^{289}\) HS2 Environmental Statement, Volume 3: Route-wide effects, p. 35

\(^{290}\) DfT (2013), The Strategic Case for HS2, page 133.

64. The project has also established a joint HM Treasury, IUK, DfT and HS2 Ltd Cost and Risk Group to ensure there is a shared and continued drive down on costs.

**Subsidy Justification**

**Summary of HS2AA points**

_It might be expected that the Strategic Case explain why HS2 should merit a £30bn+ subsidy._

(Para 96)

**DfT response**

65. Our analysis shows that HS2 leads to substantial benefits to society as demonstrated by the economic case. The ‘standard’ point benefit-cost ratio (BCR) for the full HS2 network is ‘high’ value for money at 2.3, including wider economic impacts.

66. The full HS2 network generates benefits to transport users of approximately £60bn and Wider Economic Impacts totalling over £13bn compared to net scheme costs of £31.5bn.

**Likely Economic Benefits of HS2 to the Midlands, to the North of England and to Scotland**

**Summary of HS2AA points**

_The claimed benefits, of more jobs and wider benefits, are not justified because (para 112):_

- The weight of academic evidence finds little/no supporting empirical evidence to say the regions will benefit, and inequalities reduce. London is likely to benefit most
- While localities in the North and West Midlands close to new stations may benefit, it can be at the expense of their hinterland ie not a net regional benefit
- Reports for Government, such as that by KPMG have been shown to be based on false assumptions and are not robust statistically
- Even regeneration-related benefits at stations are not guaranteed. IEA research into the impacts of HS1 on East Kent do not reveal regeneration benefits
- To gain even these limited benefits requires complementary investments beyond that in the HS2 cost envelope.

**DfT response**

67. HS2 will provide a very significant expansion of the rail network’s ability to carry passengers and freight, resulting in improvements to rail services throughout the country.

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291 HS2 Ltd (2013), The Economic Case for HS2, [http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf](http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf)

292 This takes account of the capital and operating costs of the scheme as well as the revenues generated from the additional rail demand resulting from HS2.
68. HS2 will bring benefits to places throughout the UK including those with stations on the new railway such as Leeds, Manchester, Birmingham and London; to stations on the classic network like Liverpool, Darlington and Newcastle which will receive high speed services; and to other places on the existing mainlines like Milton Keynes, Rugby and Peterborough which will have better services from released capacity on the existing main lines.

69. Using the Government’s standard approach to appraisal, we estimate that the overall net transport benefits are over £70bn, the majority of which can be attributed to trips which originate outside London.

70. The KPMG analysis is our first attempt towards filling an evidence gap, since standard transport appraisal may not capture all of the potential effects of large-scale transformational schemes such as HS2. KPMG have developed a practical and transparent methodology to quantify the economic impact of investment in HS2.

71. The methodology has built on analytical approaches that have been used in similar contexts. This has been based on a review of the existing literature, KPMG’s own experience, and consultation with HS2 Ltd’s independent advisory panel. There are technical issues with methodology, but this is a difficult analysis to do. There is no ‘off the shelf’ methodology that is widely used. We believe this work represents a valuable first step in improving the evidence base in this area.

72. A review of High Speed Rail investment overseas such as in France, Spain and Germany conducted by HS2 Ltd indicates how HSR has contributed to better connectivity, leading to regeneration and development which has transformed local economies.

73. Station investment will also act as a catalyst for regeneration, estimated to support up to 100,000 jobs around the stations. Ultimately, HS2 increases productive capacity and will lead to growth in the wider economy.

74. The Centro report into the possible results of High Speed Rail on the West Midlands showed that there was potential to create over 50,000 additional jobs in the region, this represents a regional rise in employment of 1.7 per cent.

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75. A report by Steer Davies Gleave (SDG)\textsuperscript{297} argues that government policy can provide conditions needed to influence broad distribution of growth though it cannot precisely control location and level of economic activity. Their evidence suggests specific economic impact of transport investment depend heavily upon the wider economic, social and policy context. They conclude that the UK needs infrastructure to have spare capacity in order to exploit new opportunities as they emerge. This flexibility ensures that our transport networks are resilient to a range of potential economic scenarios in the future such as the “Northern Powerhouse”.

\textsuperscript{297} SDG (2014) Transport Constraints and Opportunities in the North of England, page 19
Annex A
The ‘Do Minimum’ timetable assumptions are based on committed schemes as follows:

- **Chiltern railway:**
  - includes Evergreen 3, which allows for new London Marylebone-Oxford services via Bicester Town to be introduced, as well as a small amount of train lengthening on some peak services between Aylesbury and High Wycombe.

- **Cross Country:**
  - includes electrification, with an all-electric fleet, but with locomotive hauled service on non-electrified routes or sections of routes.
  - The timetable assumes no significant changes in journey times except where services are diverted via East-West Rail (e.g. Bournemouth to Manchester Piccadilly)

- **East Coast Main Line:**
  - Uses the Phase 2 timetable assumed in the DfT’s Intercity Express Programme (IEP) business case modelling.

- **Great Western includes:**
  - the introduction of an hourly service operating between Birmingham New Street and London Paddington to back fill for the diversion of Cross Country services via East West rail
  - increased service frequency from Bristol Temple Meads, Cheltenham, Hereford to London Paddington respectively.
  - removal of services to/from London Paddington starting/finishing at Didcot Parkway
  - a reduction in services operating between Oxford and London Paddington with new services introduced between Oxford and London Marylebone as part of Chiltern Line service pattern
  - replacement of local services operated by Great Western between Reading and London Paddington by service operated by extending Heathrow Express services to Reading

- **London Midland includes:**
  - timetable which allows for 110mph running on the fast lines, and therefore some improvements to journey times.
  - the additional path created by the future year West Coast timetable, with a consequent increase in service frequency between London Euston and Northampton
  - some train lengthening assumed in the future year timetable
• East Midland:
  o assumes that electrification takes place, with appropriate shortening of the handful of services that currently originate (or terminate) on non-electrified routes (Leeds, Lincoln and York).
  o assumes all services into London St Pancras operate using electric stock with a mixture of formations, which results in an increase in capacity. Furthermore, the longer distance services stop less frequently, with related journey time benefits.
  o assumes substantial journey time improvements along the Midland Mainline, with reductions in journey time of 10 to 20 minutes

• West Coast Main Line
  o timetable was prepared by DfT which utilises the remaining spare capacity on the southern half of the West Coast Main Line.
  o In each off-peak, contra-peak and most shoulder peak hours there are two additional arrivals and departures at London Euston. One of these paths is allocated to London Midland and another to Inter City West Coast (ICWC)
  o An all-electric fleet is assumed, with electric trains being loco-hauled (with new diesel locomotives capable of rapid coupling/uncoupling manoeuvres) on non-electrified routes.
  o Most routes are assumed to use a mix of nine-car and eleven-car units, with the Birmingham to Scotland route using new-build six-car units

• TransPennine:
  o The indicative Northern Hub timetable was prepared by DfT for modelling purposes only

• East-West Rail
  • Assumes the East-West Rail western section (between Oxford and Bletchley) and is based on the DfT view of the likely service patterns as late 2012.

• Other services:
  o Crossrail services are based upon the late 2012 view of likely service patterns supplied by the DfT operating between Maidenhead, Shenfield and Abbey Wood.
  o A Western access to London Heathrow has been included within PFM4.3. The Heathrow Express service pattern is assumed to utilise this.

October 2014
HMG Department for Transport, Rt Hon Patrick McLoughlin MP and Lord Deighton—Oral evidence (QQ 216-235)

HMG Department for Transport, Rt Hon Patrick McLoughlin MP and Lord Deighton—Oral evidence (QQ 216-235)

Transcript to be found under Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP
Kelvin Hopkins MP—Written evidence

**INTRODUCTION**

Kelvin Hopkins has a long-standing and serious interest in railways. He was responsible for transport policy at the TUC in the 1970s and is now Vice-Chair of the Rail APPG. Since 1995 he has had a particular interest and involvement in rail freight matters.

For the last decade he has been a member of a team seeking to advance GB Freight Route, a plan to build a dedicated freight priority railway line from the Channel Tunnel to Glasgow. GB Freight Route will be built to a large gauge specifically to accommodate the transport of lorry trailers on trains. It will be constructed on old track bed and under-utilised rail routes for all but 14 miles of its entire length. Transmodal terminals will be constructed in each of the major economic regions of Great Britain.

The scheme has the support of the supermarkets, major freight hauliers, Eurotunnel and others. The GB Freight Route team comprises BR trained railway engineers, a major freight haulier as well as Mr Hopkins.

Kelvin Hopkins has also written and spoken much about rail passenger investment and specifically about alternatives to HS2 which he believes is unnecessary and economically unjustifiable. His submission to the Committee’s Inquiry into HS2 focusses on these alternatives and incorporates a paper he has written (Sensible Alternatives to HS2) prepared in consultation with his colleagues in the GB Freight Route team.

**SENSIBLE ALTERNATIVES TO HS2**

1. The plan for a high speed rail line has been widely criticised on cost and indeed on grounds that it is unnecessary. There are sensible coherent and practical alternative investments in railway infrastructure which would be much more useful and could be undertaken at a fraction of the likely cost of HS2. This paper describes those alternatives which are summarised as follows:

   i. **Electrification of the Birmingham Snow Hill Line to London** (via Solihull, Leamington Spa and Banbury) and linked to Crossrail for direct business centre to business centre rail services between our two largest cities.

   ii. **Upgrade of East Coast Mainline** to provide more capacity between London and Edinburgh and other major cities in the north.

   iii. **Further upgrading of West Coast Mainline**.

   iv. **Some upgrading of Midland Mainline**.

   v. **Construction of GB Freight Route**, a dedicated large gauge freight line between the Channel Tunnel and Glasgow capable of transporting full sized lorry trailers on trains.
LONDON AND BIRMINGHAM

2. First, there is the question of London to Birmingham passenger capacity, the supposed primary problem which HS2 it is alleged would solve. The sensible alternative, proposed in my October 31st House of Commons speech, is to upgrade and electrify the Birmingham Snow Hill to London line, which passes through Solihull, Leamington Spa, Banbury and other towns on which a handful of trains run each day to and from Marylebone.

3. This line also runs directly to Paddington, a much more useful London terminus which links directly with Crossrail and thus to the City and Canary Wharf. An increased frequency of trains on this route would solve any supposed capacity problem between our largest cities, running at 125 mph.

4. There is also a more compelling and exciting possibility for this route. If it were electrified, a simple link to Crossrail at Old Oak Common would provide direct passenger services between the centre of Birmingham and the City of London and indeed to Canary Wharf. HS2 arriving at Euston would still mean business travellers having to take the underground to the City with an additional change to Canary Wharf. If one were a business traveller, which route would be preferred? The time saved by HS2 travelling to Euston would quickly be lost in onward travel by underground and DLR journeys.

5. But there is even more, another possibility. The electrified Snow Hill to London line could also branch off at Greenford to join Crossrail going west and thus provide a direct service from Birmingham city centre to Heathrow. With the electrification of that line and these two links to Crossrail together costing no more than half a billion pounds, any London/Birmingham capacity constraint would be solved at a minute fraction of the cost of HS2. The vastly expensive and destructive HS2 link to Euston involving much tunnelling and the demolition of many homes and businesses around Euston would also be avoided.

6. There are other problems with HS2 at the business level. The planned stations at Birmingham are not in the city centre (one at Curzon Street, the other a parkway station near Birmingham Airport) and would require onward journeys by local transport for business travellers. Snow Hill is in the heart of the business district and the new tram link will also provide a direct link to New Street and thus the NEC and Birmingham Airport so all possibilities are covered without the expense and environmental impact of HS2. HS2 is simply not worth the money, would have a massive environmental impact and is wholly unnecessary. It could not even do well the job it is intended for.

LONDON AND THE NORTH

7. It is necessary however to look beyond Birmingham and consider what needs to be done to accommodate better passenger services to the North. First, there is the easy one to solve, which is the East Coast Mainline.
(a) EAST COAST MAINLINE

8. It has been alleged that ECML is now running at full capacity, an assertion which can be disputed even without more modernisation of the line. Again, in my Commons speech I reminded fellow Members that a trial run by BR in 1990 had seen a service train from Kings Cross reach Edinburgh in 3½ hours, 3 minutes faster than the time initially proposed for HS2. This was achieved by slightly adjusting the timings of other traffic and even included a two minute stop at Newcastle.

9. Some fellow MPs protested that the line could not be cleared for a special train on a regular basis, which of course is quite right. I then proposed a number of modifications to the route which would permit regular fast passenger services achieving the 3½ hour time to Edinburgh with indeed the two minute stop at Newcastle.

10. First, the doubling of the two track viaduct at Welwyn and tunnels to the North is an obvious priority. The flyover at Hitchin to the Cambridge line has already been built which has solved another potential problem. Further north, the line between Huntingdon and Peterborough needs to be four-tracked, and there is space to do this without difficulty. A flyover at Peterborough for the Lincoln line would be the next necessary modification and a further flyover at Newark for the Nottingham to Lincoln line would complete the major works required. It has also been suggested that a number of level crossings on the line need to be bridged for safety reasons, perhaps 20 or so.

11. With all this in place, 140 mph working can be achieved on most of the route, with the exception of slow sections through York and Newcastle, and the 3½ hour time to Edinburgh would become a daily routine. Faster and more frequent direct services to the major cities, notably Leeds and Hull would also be straightforward, again obviating the need for HS2 in the case of Leeds. There could also be a restoration of direct services from King’s Cross to Lincoln and Grimsby/Cleethorpes with much reduced journey times.

(b) WEST COAST MAINLINE TO THE NORTH

12. The next route to be further upgraded is of course the West Coast Mainline to the north of Birmingham. With pressure taken off the London to Birmingham section by the Snow Hill/Banbury route proposed, this would of itself free up train paths for additional train services to the North. But more modification of the line is necessary too.

13. A flyover on to the Northampton loop from the southern end is necessary (easy access at the north end of the loop is already in place) which would be beneficial to services south of Birmingham.

14. Many northern rail services can and do bypass Birmingham on the Trent Valley corridor from Rugby passing through Nuneaton and Stafford, but this route needs to have its four tracking completed. Speeds are restricted by the tight ‘Queensville curve’ at Stafford and a tunnel to straighten the line would be necessary to sustain fast speeds at that point. Beyond that, a flyover at Colwich to the Stoke on Trent
line is being planned. Little more needs to be done to facilitate more fast passenger working between London and to the North West. Much of the route is capable of 130 mph operation.

15. It is the case that north of Birmingham, the West Coast Mainline is even now capable of running much more frequent trains, and with the completed modernisation would have ample capacity for the long-term. Electric trains from WCML could also join the proposed upgrade route via Leamington Spa so that passenger service points further north – Manchester, Liverpool, Glasgow etc as well as Birmingham Airport the NEC and New Street of course could also link direct into Crossrail, the City and Heathrow.

(c) MIDLAND MAINLINE

16. Some modernisation and upgrading of the Midland Mainline is also necessary. Electrification is coming, and most welcome that will be, but some further upgrading would make possible increased train speeds and shorter journey times. At Market Harborough there is a tight curve which should be straightened by reverting to a previous track alignment, not a difficult problem. Modifying track layouts at Leicester and Derby is also necessary, but beyond that not much more needs to be done to achieve faster train services to Leicester, Derby, Nottingham and Sheffield.

GB FREIGHT ROUTE

17. GB Freight Route is a proposal for a new freight priority line from the Channel Tunnel to Glasgow linking all the major conurbations to each other and to the Continent. This line could take all the north-south freight traffic off existing West Coast, East Coast and Midland Mainlines, freeing them up for more fast passenger services.

- Lorry Trailers on Trains

18. But this is only a minor part of the benefits to be achieved from GB Freight Route. Crucially, the line would be built to a much larger loading gauge, permitting the transport of the largest lorry trailers on trains. Double stacked full size containers would also be accommodated.

19. 80% of freight both within Britain and cross-channel goes by lorry, with all the emissions, road damage and consequent congestion that involves. Much of that traffic could and should go by rail but to achieve a substantial modal shift of freight from road to rail it is vital to provide for the carriage of lorry trailers on trains, not possible on the existing rail network. GB Freight Route is the solution.

20. The concept has already been demonstrated by running trains carrying lorry trailers between the Continent (Antwerp and beyond) through the Channel Tunnel and to a terminal at Barking. Beyond Barking, the network’s existing loading gauge cannot accommodate lorries on trains and re-gauging the existing network – which is in any case dominated by and needed for passenger services – would be prohibitively expensive.
- The Route
21. The separate GB Freight Route line would be built on old track-bed (including a section of the old Great Central Line to the south of Leicester) as well as under-utilised existing lines suitably upgraded. There would be only 14 miles of new track route, nine miles of which would be in tunnels. Only 5 miles would be new construction in the countryside linking the disused Great Central Line to the existing network. There would be minimal planning requirements or environmental impact.

- Cost
22. The carefully calculated cost of GB Freight Route would be just under £6 billion for the entire scheme. The route has been carefully and precisely designated by experienced British Rail trained engineers and would cause no environmental difficulties and no degradation of the countryside. Most significantly, it would be financially viable, with income more than covering construction and operating costs.

- Terminals
23. Terminals would be located near motorways for ease of access and close to the major conurbations. Travelling northwards from Barking there would be further terminals to the northwest of London, in the south Midlands, east Midlands, west Midlands, north Midlands, south Yorkshire, south Lancashire, Cumbria, the North East and Glasgow, and with a final terminal in the South West.

- Support
24. Support for the GB Freight Route scheme is significant, with all of the major supermarkets in favour and promising thousands of units of freight each week. Major hauliers have also expressed support. Eurotunnel is actively supporting GB Freight Route.

- Modal Shift
25. GB Freight Route would take up to five million lorry journeys off Britain’s roads each year and virtually all north-south rail freight would be transferred from the West Coast, Midland and East Coast Mainlines freeing up those lines for more passenger services.

- International Links
26. GB Freight Route would also link directly to the growing rail freight network being built on the Continent. In a very few years it would for example be possible for hauliers to drive their trailers to a terminal in Glasgow and have them delivered to Rome or to the Ruhr, to Sweden or to Spain and in future even to China, for final local delivery by road. Trains even now travel every week from Poland to China so the opportunities for international rail freight are already opening up and must be grasped. Without GB Freight Route Britain faces being forced deeper into a peripheral economic role off the coast of the great land mass of Europe/Asia.

- Economic Benefits
27. GB Freight Route would link the north British economy directly to Europe and Asia and breathe new life into the British regions. It would make an immense
contribution to Britain’s transport system and is surely a scheme whose time has come.

28. Britain needs this new rail freight line whether or not HS2 is built. GB Freight Route presents no planning difficulties and could be fully operative within a very few years and well before the difficult and expensive HS2.

29. GB Freight Route and HS2 do not conflict with each other with only four miles of track following the same route. Four-tracking at that point would be simple.

- Conclusion

30. This paper proposes a number of serious investments to improve and indeed transform Britain’s vital railways. Some components of what is described are already in train or at least on drawing boards, but most are not yet planned. They should be, and indeed there will be other schemes in different parts of Britain which should also be considered. Taken together, what is proposed here would cost a fraction of even the current estimated costs of HS2 and bring substantially greater economic benefits.

Note: I am indebted to colleagues from the railway engineering and logistics industries for advice and information in preparing this submission.

September 2014
Rex Hora—Written evidence

Rex Hora—Written evidence

1. Economics of speed
The speed of HS2 should be limited to 225 kph (140 mph). This would allow more trains to be run for the same energy cost. For many passengers, frequent trains would be more useful than very fast trains.

1.1 Limiting the speed to 225 kph would reduce construction cost by permitting sharper curves.

1.2 Limiting the speed to 225 kph would greatly reduce energy cost because energy consumption is proportional to the square of the speed.

2. Economics of route choice
The construction cost of the London to Birmingham section could be greatly reduced by re-using the route of the closed Great Central Main Line from Aylesbury to Rugby instead of creating a new route. From Rugby to Birmingham, the capacity of the existing West Coast Main Line could be increased by adding two extra tracks.

July 2014
HS2 Action Alliance—Written evidence

HS2 Action Alliance is a not-for-profit limited company formed with the objective of improving Government decision making on High Speed 2 (HS2). We are supported by over 100 affiliated groups and over 15,000 registered supporters. HS2AA adopt an evidenced-based approach to challenging the business case, the environmental case and compensation arrangements.

Summary

i) There is no robust economic case for HS2:

- There is no commercial case for HS2, even on the Government’s own evaluation.
- The benefits are greatly inflated, particularly:
  - the value of the time savings are exaggerated, as there is no relevant evidence that businesses would pay the full cost of their employees time to reduce the time that they are actually working. Government ignore the fact that time onboard is more useful than it was
  - the proportion of current long-distance rail business travellers are a third higher than in all previous business cases, despite reliable evidence that previous estimates were correct
  - relief of crowding is a product of using an unrealistic comparison basis for HS2, and could not exist in reality
  - benefits are assessed as being constant over a time period during so long they may have largely ceased to exist, as they are not robust to likely technological change.
- The costs exclude major items ie cost of capital, cost of new infrastructure needed to connect HS2, uncompensated blight, and it underestimates others - rebuilding Euston, operating costs.

ii) The benefit cost ratio, properly assessed, is less than 0.5 (“poor” value for money), meaning the subsidy is more than twice the size of HS2’s economic and social benefits.

Neither the standard case, nor the sensitivities tested cover realistic outcomes, let alone explore the downside risk.

iii) HS2 is unnecessary:

- The relationship between domestic transport and economic growth no longer exists, and building new transport infrastructure cannot be relied upon to deliver economic benefits
- Travel demand is unlikely to materialise on the scale predicted by Government because:
  - domestic travel in general (by all modes) is saturated
  - the particular reasons that have driven long-distance rail growth will not be sustained
  - long-distance rail demand has already flat-lined
If the predicted demand occurred it could be met more cheaply by improving existing railways.

Creating capacity that is not required, as HS2 would, is a waste of resources.

The WCML railway has considerable spare capacity – more so than other comparable routes.

The level of demand required for HS2 is unlikely to arise, but because HS2 is an ‘all or nothing’ project, the expected losses are very much larger than the Government predict.

iv) There is no reasonable basis to assume that HS2 will redress regional disparities, or cause regeneration in the regions:

- Academic opinion is that such connections benefit the capital city
- Jobs created near stations are likely to be simply redistribution from the hinterland
- The Government’s KPMG study has fundamental flaws that make its results ‘meaningless’
- High speed rail itself has very small agglomeration benefits

v) The October 2013 business case contains a number of departures from previous business cases. Some are predictable and reasonable, e.g. using later version of the forecasting model; others are unexpected and lack justification (e.g. level of business use). But without these ‘unexpected’ changes, the benefit cost ratio would be well below 1 – even before correcting other defects, such as optimistic forecasts in growth or omitted costs (of financing, Euston, HS2 connections etc).

vi) Similarly the Strategic Case that HS2 would cause regeneration of the Midlands and North is made by employing a methodology that had already been discredited.

Q1 Is there an economic case for HS2?

1 The Government accept that there is no commercial case for HS2, and that it requires a subsidy which, on their own optimistic figures, is £16.7bn for Phase 1 and £31.5bn for the full Y.

2 It is assumed HS2 makes an operating profit, but this is highly dependent on optimistic demand (and revenue) forecasts and realising savings (£8.3bn) from the classic network.

3 The Government seek to make an economic case for HS2 using social cost benefit analysis, where economic and welfare benefits which would not form part of a commercial case are taken into account. Their latest Strategic Case (Oct 2013) identifies benefits £57.7bn for the full Y, costs of £40.5bn and a benefit cost ratio (BCR) of 1.8 which increases when wider economic impacts (WEI) are included to 2.3. Phase 1 has a BCR of 1.4 (1.7 with WEI).

4 Unfortunately the cost/benefit analysis fails to be as claimed an “objective, rigorous and accurate assessment of the costs and benefits of proceeding with HS2”. It overvalues the benefits (particularly of reduced journey times) assumes unrealistic growth and business use, excludes major costs such as interest and additional infrastructure needed to
achieve local connectivity and hence the time savings claimed. A more realistic BCR is well below 0.5, making HS2 very “poor” value for money.

5 We focus on our concerns on the benefits, costs and the BCR under Q1, and demand under Q2.

Benefits

Journey time savings

6 There is no proper basis for the current unit values used for time savings. This is crucial as time savings account for 79% (£46bn) of the benefits claimed for HS2 and are greatly dependant on savings claimed for business. They concern not just the on-board time (worth £31bn) but time spent waiting, at interchanges etc.

7 Business travellers. Previously the values of time used contained two major flaws: that salaries were unrealistically high (at £70k/a) and the wrong assumption that people wasted their time on trains ie did not work. The salary level has been corrected (with values one third lower), but the second flaw has been disguised.

8 DfT has been forced to admit that time spent on trains is productive, indeed their own studies evidenced it. One of the reasons that Government themselves promoted train travel is the usefulness of time on trains! Mobile technology has greatly increased the utility of on-board time, and there are sound reasons for assuming that time will be fully useful by 2026 when HS2 starts.

9 However, rather than remove this benefit, as businesses would get no more productivity from their staff by getting there 30 minutes quicker, DfT simply relabelled the unit value a ‘willingness to pay’ figure. This is despite there being no pertinent survey evidence to support the switch or the values adopted. Such relabeling is irrational – it assumes that businesses would pay the same rate to reduce already productive time as unproductive time. It is inconceivable that businesses are indifferent to whether their staff are working or not!

10 This approach is also inconsistent with the trend to less office based work, with an increasing proportion of ‘briefcase’ employees working from home. Why would there be a material difference between home and on a train that is worth the entire cost of the time on the train to the employer?

11 While adopting a “willingness to pay” approach is acceptable, it requires evidence to support using the values that are still calculated as if people did not work on trains. Instead they refer to overseas studies that predated the increased utility of on-board time, and generally employ the DfT’s previous approach of the cost of time to businesses. A more robust approach would be to accept that time saved is 100% productive, and that time savings no longer have a productive value. We assume, conservatively, that it is 75% productive. This wipes £20bn off the benefits (for the Y).

299 The value adopted was £31.96/hr (in 2010 money) – still 5 time higher than leisure/commuter values (at £6.04/hr) – and still calculated as before ie the cost of the time to business (at average business traveller salary) using updated salary figures
The other time savings (for walking, waiting, station access, interchanges) that make up £15bn of the £46bn benefits are also over-valued. Previously such matters were not considered by DfT to be the concern of the business but of the individual (for which the lower commuter rate was appropriate). DfT now use the new business unit cost, despite no evidence that businesses actually do value these matters greatly more than the employees actually affected. We believe this change is unjustified.

Leisure and commuter travellers: Time savings for this group have always been assessed on the ‘willingness to pay’ basis (ie as a welfare rather than productivity gain) which is what they are prepared to pay as indicated by surveys of what people say or reveal in their behaviour. But the evidence used pre-dates the arrival of mobile technology so the values (£6.04/hr and £6.81 for leisure & commuting respectively) cannot reflect the improved utility of on-board time. The more useful the time, the less passengers will value a reduction to that time. There is no evidence to quantify by how much the values are now too high: HS2AA have assumed by one quarter.

Current % of business travel

The estimated proportion of long distance rail business travel is not credible. The latest business case increased the proportion of business users by a third – from 28% to about 38%. This alone accounted for a massive a 52% rise (£14.6bn) in claimed business benefits since the previous economic case. The new increased level is inconsistent with the evidence.

The latest approach remaps ticket type data to journey purpose (using assumed conversion factors), rather than using the extensive readily available survey evidence.

This is despite:
- The fit of the new estimates to the survey evidence is very poor
- The survey evidence is consistent with the previous estimates of business travel
- The survey is large scale, frequent and the basis for commercial rewards, making it highly reliable.

Passenger Focus conduct the National Passenger Survey (NPS), which is a 6-monthly large scale survey that gives statistically meaningful results for individual train operators’ customer satisfaction scores. Amongst other factors it gives the reason for travel, and shows that Virgin Trains (the operator of the fast trains on the WCML) have about 30% of passengers travelling on business, and all long distance services about 26%. The increase in 2010 coincides with completion of major WCML improvements. This result conforms to the pre-October 2013 HS2 business case assumption (of 28%). There is simply no question that this survey is not statistically reliable.

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300 Table 7 page 20. The Economic Case for HS2: Summary of Key Changes since August 2012; October 2013, giving a net increase in transport user benefits of £11.5bn and £4.5bn of additional fares income
The NPS survey also gives route examples eg London to Manchester has 31% business users (Mon. to Sun). This contrasts with 63% from the remapped exercise that covers Mon. to Fri. only.

It is consequently hard to justify any increase in the current level of business use. It is also not supported by the general trends in business travel, (see Q2 below). We assume it stays at 28%.

We note that the one third increase in business users entirely compensates for the one third reduction in their salary rate that DfT were forced to make when we and others exposed it. Clearly without the increase in business users, the BCR would be much lower.

**Crowding**

Crowding benefits (worth £7.5bn) are ascribed to HS2 on the basis that crowding will be less on HS2 than the “do minimum” alternative (which is based on currently committed developments only). The business case assumes that these crowding benefits continue to apply through to 2092. The ‘do minimum’ is unrealistic as it assumes that demand grows entirely unconstrained by the absence of capacity to carry it. In reality improvements occur constantly.

As an example, the Stafford area works received approval from the Secretary of State earlier this year. The works will deliver more capacity (for long distance, local and freight trains) and journey time reductions. Re-signalling across the existing network will occur (several times) before 2093, permitting greater top speeds, shorter journey times and increasing capacity.

The crowding benefits are entirely an artefact derived from the use of an unrealistic ‘do minimum’ comparator, rather than a realistic and credible alternative.

The crowding benefits from Phase 1 alone are £3.9bn\(^{301}\), which is more than the cost of alternative ways of providing the capacity that would address the overcrowding\(^{302}\).

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\(^{301}\) Spreadsheet ‘Benefits and Revenue Phase 1 Standard Case.xls’, tab ‘Total Benefits’, cell B72

\(^{302}\) Network Rail costed the 51m proposal at £2bn (for infrastructure changes)
Reliability

24 The economic case assumes that HS2 will deliver improved reliability (worth £5.5bn). This is despite the fact there will be 18 high speed trains an hour each way (that no one else in the world delivers, even France only has 12), and HS2 is not a ‘closed’ high speed rail system i.e. it must interact with the classic network as many services are partly on the classic network. It is hard to see how such improvements are deliverable.

Costs

25 The case for HS2 fails to include some major items:

- The cost of capital – funding for HS2 is currently treated as ‘free’ money
- The cost of connecting HS2 to existing infrastructure – these are serious omissions
- Incorrect cost escalation – a mismatch in the treatment of costs and benefits
- Social dis-benefits e.g. uncompensated property blight – their omission is illogical

26 Cost of capital omitted: DfT ignores its own guidance\(^{303}\), assessing HS2 without any inclusion of the cost of capital. This is a massive item, a real 2.5% charge on £50bn (neither infrastructure nor trains are ‘free’) is £1.25bn each year, and cannot be dismissed by claiming that HS2 would be funded directly out of taxation, or of selling the completed railway into the private sector. This has an NPV (2011) of £17.5bn, in itself adds more than 50% to the subsidy required (the net cost to government) and reducing the BCR to 1.2 for the full Y (or 1.5 with WEI) without any other correction.

27 Even if paid for out of tax, the money still has an opportunity cost from the borrowing that is required or repayment of debt that is prevented. If sold to the private sector, it is inescapable that the owner will require payments to give a return on the investment – creating a clear cost that must be met from operating revenues and subsidy.

Connecting HS2

28 Euston dispersal: In a recent parliamentary debate on HS2, Frank Dobson reports that HS2 Ltd now accept that Crossrail 2 (a £20bn cost) is needed to resolve an acute passenger dispersal problem. While some passengers will leave HS2 at Old Oak Common many continue into Euston. DfT/HS2 Ltd estimate that the number of passengers using the Underground in the three hour morning peak will more than double by 2041 (from 24,682 to 56,420), and the Victoria Line is already at peak capacity today. Crossrail 2 is a large omitted cost from the 2013 Strategic Case for HS2.

29 Euston rebuild: Frank Dobson reports in the same 9 September debate on HS2 that the cost of the Euston rebuild is now estimated by HS2 Ltd at £7bn rather than the £2bn in the Economic Case.

30 Out of town stations: HS2 is planned to have out of city centre stations at Old Oak Common, Birmingham airport, Toton, Sheffield (Meadow Hall). To provide effective public transport additional investments are needed at all these locations except Old

\(^{303}\) TAG Unit A5.3 Rail Appraisal, January 2014, section 4.1.2 Financing assumptions

\(^{304}\) 9 September 2014, Parliamentary Debate on HS2, Frank Dobson, Hansard Col 811
HS2 Action Alliance—Written evidence

Oak Common (where although TfL plan no Crossrail station, the cost is within the HS2 Case). Without these other investments, costed at £2bn by Taxpayers Alliance, HS2 will lack sufficient connectivity to offer their claimed journey savings.

31 **Strategic imperatives**: HS2 for the purpose of its costing has been de-scoped. The costs of the connections to Heathrow and to HS1 are no longer included in the costing. Both these links worsen the benefit cost ratio of HS2 but were previously described as strategic imperatives. Connecting to Heathrow was even part of the original HS2 remit.

**Incorrect cost escalation:**

32 The costs of factors such as labour (eg train divers salaries) are escalated only to 2036, while the benefits including that based on assumed real earnings (eg value of time savings) continue to escalate for the entire evaluation period (through to 2092). So not only do benefits continue unabated to 2092 (itself questionable), but they are increased in value for the entire period while costs stop growing far sooner.

33 This is clearly inconsistent and underestimates the costs compared to the benefits. Escalating the costs in the same manner as the benefits adds an additional £6.6bn to the operating costs and hence the subsidy required for the full Y:

- £2.3bn extra in wages/salaries
- £2.8bn extra in maintenance costs (based on 1%/a increase)
- £1.4bn extra in electricity costs (assuming price increases in real terms at 1%/a)

34 Diesel costs, which are used to compute a saving from reduced classic services, are assumed by HS2 Ltd to escalate throughout the evaluation period!

**Social dis-benefits forgotten:**

35 The social benefits of HS2 (eg transport user benefits) are included in the assessment but the social dis-benefits of the loss in property values near to the route are not included – with the exception of those few properties that HS2 Ltd expects to acquire under its compensation arrangements (eg under Safeguarding, the Voluntary Purchase and Need to Sell schemes). HS2 Ltd assess the cost of land purchase and their compensation schemes at £2.5bn for the Y. But this omits the cost of blight that remains uncompensated and must be borne personally by both individuals and businesses.

36 HS2AA estimate excluded uncompensated loss (on blight out to 1km) at just under £10bn (the Y).

**Benefit cost ratio (BCR)**

37 There are also concerns with the BCR itself, particularly given the uncertainties:

- The “standard case” results are unsound – inappropriate use of value for money test; its ‘do minimum’ assumption, the period of evaluation and assessment of demand/use of the cap

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305 Taxpayers Alliance Report “HS2 will not solve capacity issues” 26 September 2013.
HS2 Action Alliance—Written evidence

- Inadequate sensitivity testing of the results

38 **Value for money test:** The value for money test that is indicated by the BCR is exaggerated, as the categorisations of ‘poor’, ‘high’ etc values should apply to the BCR without Wider Economic Impacts (WEI). Government instead use the figures including WEI – presumably it is only these that are large enough to count as “high” ie exceed the threshold of 2 (£2 benefit for £1 spent).

39 **The “do-minimum” assumption:** the case compares HS2 against the current position improved only by committed rail enhancements ie a “do minimum” package out to 2092 (the benefits period). This is a serious flaw as it is wholly unrealistic:

- It freezes enhancements at the level currently committed (in 2013) despite the fact that they will and do keep happening
- It assumes like-for-like renewals, implying the perpetual renewal of obsolete technology. In reality renewals is always an opportunity for improvement eg ERTMS signalling which is applied to HS2 will be implemented across the intercity network long before 2093 (most likely before the second phase of HS2 is complete) will increase capacity and reduce journey times
- It means that the assumed demand growth is far too high for the capacity that is provided under the “do minimum” ie the “do minimum” is artificially constrained and the demand is projected without reference to supply limitations hence the spurious crowding benefit attributed to HS2. In reality capacity constantly evolves, eg to accommodate demographic change from a growing London, through Crossrail, Thameslink, longer platforms etc

40 Best practice in cost benefit analysis requires assessment of options against the best alternative, not the status quo (ie the ‘do minimum’ is) which would not be credible or feasible to 2092.

41 **Curtailing benefits much sooner:** benefits are evaluated out to 2093 (60 years from Phase 2 first being operational). This is an unacceptably long period, particularly because of the inherent future uncertainties eg due to technical change, discussed under Q2. It is beyond even the period for which the Office of Budgetary Responsibility produce figures for economic growth! A shorter period eg to 2050 should have been used. This gives a BCR of ‘poor’ value (at 0.49)\(^{306}\) as we wrote to labour about.

42 **Sensitivities tested:** Not only is the ‘standard case’ unjustifiably favourable to HS2, but the sensitivities focus on the up-side potential. Given the uncertainties, the costs and history of inadequate previous assessments eg for HS1\(^{307}\) this is unsatisfactory:

- **Lower rail growth:** DfT appears to test lower rates of growth but in reality they do so by just extending the year when the demand cap is achieved. In combination with assessing benefits over such a long period the reduction is cosmetic. They do test

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\(^{306}\) 7 August 2014 letter from HS2AA to Miatta Fahnbulleh (advisor on transport in Ed Milliband’s office)

\(^{307}\) demand only met two thirds of its downside assessment - C&AG’s Reports (HC 302 session 2000/1 fig 6; HC 77 session 2005/8 Fig 8); HC Public Accounts Report (Completion & sale of HS1 June 2012) 4 Session 12/13
the scenario in which growth is capped at 2027\textsuperscript{308}, in which the BCR with WEI is reduced to just below 1.5 for the full Y (from 2.3). But demand is still increased 40% - which is nearly three times the population growth to 2036. Instead they should have assumed it grows in line with observed general domestic transport growth, with rail travel growing at only the rate of population increase (which itself may be optimistic as developments in other modes, eg road, may win back market share). This gives a BCR of ‘poor’ value for money, ie below 1 (see Table 1).

- **Journey time savings**: these dominate the benefits and are highly questionable. The DfT should have considered the BCR if the on-board time savings to business have no value, as this time is productive. Instead they consider values of time that are actually even higher\textsuperscript{309}.

- **Lower business demand**: the business traveller percentage should have been assessed using the Passenger Focus derived survey evidence – not those from the ticket type re-mapped in a new way. The survey results were not even used in sensitivities. The ticket type basis resulted in an increase in benefits by 1/3\textsuperscript{rd} for Phase 1 and 25% for the fully Y\textsuperscript{310}. It is extraordinary that the position without this change is not given in the range of BCR results, particularly given its very questionable basis.

- **Classic rail savings not achieved**: the costs of not making the £8.3bn savings in classic services should have been tested. This might be because of delays to completing the re-modelling of Euston (making mass transfer to HS2 from WCML unlikely or materially delayed), or, price competition causing demand for the classic services to continue. Such an outcome would also prevent creating the re-use of freed up capacity.

**A more realistic BCR**

43 A realistic assessment of HS2 would have the ‘standard case’ with a benefit cost ratio below 0.5, which is very poor value for money (requiring a subsidy at least twice the benefits). Table 1 shows the appropriate changes from the Government’s ‘standard case’ and the resultant benefit cost ratio, using more realistic assumptions.
The table does not take all the factors we have discussed above into account. This is partly because the combined effects are difficult to assess. However, it is indicative of the scale of the concerns HS2AA have for the economic case:

- **On the benefits** we show individually the impact of three large items – business value of time, business use and crowding. We did not include reliability or capping the benefits at 2050.
- **On the costs** we cover including the capital charges and the cost escalation correction. The table omits many items: HS2 connections; uncompensated property blight, Crossrail 2; Euston rebuild; un-achievability of classic service saving; and environmental impacts).
- **For demand** we assume population growth (15% over the period\(^\text{311}\)) - discussed under Q 2.

In summary, there is no economic case for HS2 and it is hard to make sense of key elements in the remodelling of benefits for the October 2013 Strategic Case, unless the purpose was to ensure a favourable result. The evidence on the best available data shows that HS2 is in fact very poor value for money.

\(^{311}\) "PFMv4.3: Assumptions Report", October 2013, Table 2.1, page 2 gives 14.5% to 2036.
Q2 Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?

46 The Government in the Strategic Case argue that there are strong economic and demand based reasons for having HS2. This is based on a number of false assertions:

- That there is a continuing relationship between economic growth and growth in travel
- That the trend in transport growth is faster than that used for HS2’s demand forecasts
- That stopping the assumed growth in 2036 is cautious and that the economics of HS2 will be better as growth will continue
- That high speed rail gives rise to regeneration (including in East Kent for HS1)
- That the environmental impacts are modest, and positive for carbon
- That there are no satisfactory alternatives to HS2
- That the costs are under effective control

47 So there are a range of factors that the Strategic Case should have taken account of, and did not.

Economic growth and transport

48 There is no longer a relationship between economic growth and domestic transport – crucial to the HS2 case – in either the UK and other developed economies 312.

49 More than 30 eminent transport professors (including advisors to HS2 Ltd) wrote an open letter to the Secretary for Transport in the Financial Times 313 pointing out that the evidence base for the link between improved transport infrastructure and economic growth and more jobs can no longer be relied upon. They emphasised in their letter that as Eddington had said in 2006, the UK is already well connected.

50 David Metz 314 has demonstrated that the link between economic growth and domestic transport is broken. The graph below shows that while there was a clear relationship until about 1997, since then economic growth is not mirrored by a corresponding increase in domestic travel (the top line that shows distance travelled). Incomes are rising but we are not travelling more. This remains true with the subsequent recovery in the economy since 2010.

312 ‘The Prospects for Inter-Urban Travel Demand’, Yves Crozet, OECD/ITF, Dec 2009
313 Letter to Sec. of State for Transport, 21 January 2013 – ‘Transport Strategy – where should we be heading?’
314 ‘Saturation of demand for daily travel’, D Metz, May 2010
If a cross-sectional analysis of travel is made, there remains a clear relationship between income and travel, with the affluent travelling more than those with lower incomes, eg MPs travel more than factory workers. This reflects the different roles within society having different characteristic travel demands. But because the overall demand for domestic travel is saturated, total travel per person has not grown as the UK has got richer. Metz suggests it is not income that constrains us each travelling more but the time individuals wish to spend making visits.

DfT offer a graph of rail demand and GDP as evidence of a relationship between rail growth and GDP. There is such a relationship as central London employment is a key driver for commuting rail demand in London, which is an important component of total rail demand. But as discussed below, business travel is reducing per capita, and hence is not a driver of economic growth.

Demand
HS2 are at pains to argue that their demand estimates are conservative. This is transparently incorrect, when their estimates are set in the context of recent trends in domestic travel.

A study of more than 200 infrastructure projects showed that there is a tendency to overestimate passenger forecasts by more than 100% on rail projects. HS2 does not look to be an exception. The demand modelling exaggerates demand for HS2 because:

- The projected background growth is unlikely to happen
- The uplift in demand assumed from introducing HS2 is too large
- No allowance is made for new technology that will remove rail’s current competitive advantage (from mobiles etc making on-board time useful), which may reduce rail demand

Growth in travel
Background long distance rail travel growth, ie without HS2, is unlikely to happen because:

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315 ‘The Strategic Case for HS2’, page 42
316 ‘How (In)accurate Are Demand Forecasts in Public Works Projects?’ Flyvbjerg B, Mette K. Skamris Holm, and Søren L. Buhl. 2005
HS2 Action Alliance—Written evidence

- Domestic travel (all modes) has been a saturated market for a long time
- Long distance rail demand has now flat-lined
- The demand model used to predict large future rail growth is defective, and produces an estimate of growth 5 times greater than population growth.

56  *Market saturation*: The overall domestic travel market is saturated. UK domestic travel per person has not been growing for nearly 20 years (this is not just a UK phenomenon, but what happens in affluent societies). Total long distance trips (over 100m) per person has been at about 7 per year.

57  *Any further growth in long distance rail will therefore be at the expense of other modes*. But due to changes in technology, it is more likely that long distance rail will lose market share – particularly to automated cars.

58  *Business travel generally is declining*: Domestic business travel is also not growing in absolute terms (in kilometres per annum). It is not growing measured with either GDP or population. Since 1996 GDP has grown by 40%, population by 10% (and 5% since 2005) but business travel has fallen by 10% (and 16% since 2005). So a link to GDP growth no longer exists.
59  Long distance rail demand has flat-lined: evidence shows long distance rail travel has plateaued. The strong growth in long distance rail demand following privatisation in 1995 has stalled, with no growth for 2.75 years for passenger km and 2.25 years for passenger journeys, despite the economy rallying. Modern Railways highlighted this in August 2014 article “The growth delusion”.

60  Rail growth has not always occurred. Rail travel was stagnant from the Second World War until the mid 1990s when particular factors applied eg a large rail subsidy increase.

61  Defective rail demand model: The rail modelling for HS2 that predicts future rail growth (at 2.2%/a for next 25 years or 79% increase by 2036) is based on a version of the Passenger Demand Forecasting Handbook. It is defective and results in too optimistic a forecast because

- The utility of travelling time is ignored. It takes no account of the recent improvement in the utility of on-board train travelling time in explaining the growth of long distance rail. This will have caused the overall cost (including journey time) of rail travel to fall. There was a major review of the rail forecasting model by Oxera/Arup (in 2009) which failed even to consider this as a variable to explain the increase in rail’s market share.\(^{317}\)

\(^{317}\) Discussion by Bruce Weston with Oxera (Andrew Meaney) in 2011
No allowance for technical change: It has a blinkered view of technological advances and inter-modal competition. Changes in the utility of travelling time would explain the countercyclical growth in rail long distance travel. Over the relevant timescale rail’s advantage in utility of travelling time is likely to erode rather than increase. Future technology (Google or self-driving cars, mobile technology on aircraft, etc), will eat into rail’s current competitive advantage in providing an environment suited to work or leisure activities compared to other transport modes. Ignoring this over an 80-year period seems certain to result in over-estimation of rail travel and over-optimistic conclusions about HS2.

GDP and rail growth assumptions are also not robust: It assumes that increases in real income result in somewhat larger increases in long distance rail travel. But this relationship is incorrect. Long distance rail has grown during the recession, but stagnated when the economy came out of recession and subsequently.

It is a short term forecasting model: It is unsuited to long term forecasting, because it has fixed elasticities. Sir Roy Eddington recommended such models be used for 10 year forecasts – not 25yrs. 25yrs prior to the current (2011) base year was 1986 (as the previous long term graph shows) – long before mobiles and broadband. The model is fitted to the circumstances of the past rather than the determinants of future transport requirements.

Price competition between routes is ignored. Different routes are assumed to compete on the basis of journey time and crowding only and not price. This is unrealistic. It will cause a misallocation of demand to HS2 from other rail routes. Plainly passengers also take price into account in making choices (eg Chiltern line to Birmingham is one third cheaper than Virgin but takes longer). It has also been assumed, quite improbably, that HS2 would not be a premium priced railway – when all other high speed services in the UK and overseas are. This exaggerates forecast demand for HS2, as Public Accounts Committee forcefully pointed out.

As a consequence demand might be expected to grow at most at the rate of population – ie at 15%, compared to the five times greater figure assumed by DfT in the economic case (79% increase to 2036). HS2AA assume a 15% (14.5%) increase in their revised quantification (this equates to a 0.5%/a increase in long distance rail growth).

The uplift in rail travellers when HS2 becomes available is also unlikely to be as large as forecast. This is because the reductions in journey time are now less valuable than modelled. HS2 Ltd currently assumes 26% of its passengers are new travellers, this will be an over estimate, as it is based on the reduced journey time being massively valuable to potential travellers (and un-eroded by the inevitable improvements from technical advance and numerous minor improvements).

The Government’s case ignores the real position on existing and available capacity.
It is argued by the Government, for example by Patrick McLoughlin and Baroness Kramer, that additional long distance capacity is urgently needed on the WCML, and this underpins the need for HS2. But the WCML currently has considerable spare capacity.

First, the railway carriages are half empty. Data released to the High Court (as part of 2012 HS2 Judicial Review challenge) showed that the average evening peak load factor (the ratio of passengers to seats) for InterCity services from Euston was only 52% (or 229 passengers/train).

Second, this loading data is before 35 out of the 56 Pendolino trains used on the route were lengthened from 9 to 11 cars, completed by 2013 giving an additional 150 standard class seats in each train. This reduces the 52% evening peak loading to about 43%.

Third, it is the commuter trains and not intercity services (that HS2 is designed for), that have the chronic overcrowding on WCML, as any commuter knows, confirmed by standing passenger data, and the analysis reported in the Strategic Case. Euston itself is the second least crowded London station (after HS1 into St Pancreas!).

Fourth, there is proven potential to increase capacity on the existing WCML route without HS2:

- Reducing the number of first class carriages from 4 to 3 per train and running longer trains (increasing to 12 car everywhere but Liverpool). Together this creates 693 seats a train – three times the average evening peak loading (229) – more than the growth DfT forecast.

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318 Baroness Kramer said in the House of Lords on 5th June 2014: “Busy arteries such as the West Coast main line will be overwhelmed in the next decade if we do not build new capacity between our cities in the form of new rail, which is why we need the new north-south rail High Speed 2.”

319 Network Rail London and South East Route Utilisation Strategy July 2011. Morning peak load 41% (St Pancras), 60% (Euston), all others between 65% (Kings Cross) and 99% (Paddington).
Relieving three pinch points on the WCML would allow more trains to run (extra commuter trains to Milton Keynes and Northampton and 15 extra intercity services in each direction as well as increasing freight capacity by grade separation).

This solution was developed and promoted by 51m (a cross party alliance of local authorities opposed to HS2). The 51m ‘optimised alternative’ was costed by Network Rail at £2bn and Atkins for DfT gave it a net benefit ratio of 5.17 (compared to HS2 at under 2 at that time). Disruption to create the extra capacity is minimal and similar to ongoing current works. At the very least the HS2 cost benefit analysis should have used the 51m as part of the best alternative instead of using the “do minimum” as the base comparator. The 51m solution is risk free, incremental and can accommodate more than forecast long distance demand.

Interestingly although the Government insist that the WCML is full, Network Rail are now accepting the use of more train paths. Network Rail have agreed with Alliance Rail that there is capacity to operate an additional 12 InterCity trains a day on the WCML (six in each direction between Euston and Blackpool and six between Euston and Leeds via Manchester Victoria and Huddersfield) Network Rail have also agreed the timetable for September 2014 to include extra fast commuting in peak that were previously thought to have required the Ledburn Junction grade separation.

Fifth, the Strategic Case compares the capacity against that which would be available with HS2. This is misleading: there is no virtue in creating unused capacity (it is a waste of resources). DfT and Network Rail have conceded that the 51m approach creates more than sufficient capacity to meet their forecast demand.

Given there is no difficulty in meeting the demand that the Government forecast with modest improvement to the existing network, and that renewals will as a matter of course increase capacity and reduce journey times, betting £50bn on building a new railway that depends on high demand even to deliver poor value for money is perverse.

Environmental implications

HS2 is opposed as needlessly environmentally damaging by a range of environmental pressure groups including the Green Party – some of which support high speed rail in principle (eg CPRE).

Landscape impacts: The environmental implications of HS2 are not reduced to monetary values in the assessment, although a woefully inadequate attempt is made to assess the landscape impacts. These are valued at a £1bn dis-benefit but on a methodologically unsound basis that underestimates its impact eg it places the lowest value for some of the land in the only Area of Outstanding Natural Beauty it cuts through, and truncates the period of assessment without allowance for restoration.

Landscape impacts and the loss of ancient woodland are major considerations, because as proposed HS2 does not follow existing major transport corridors, it permanently spoils the character of areas that are relatively tranquil.

320 http://www.alliancerail.co.uk/2014/06/12062014-blackpool-to-london-and-huddersfield-to-london-direct-rail-services-move-a-step-closer/
78 Health impacts: HS2 also damages people’s health and wellbeing in the areas through which HS2 will pass. This was not covered by the Strategic Case and the Health Impact Statement was not even consulted on.

79 Comparison with HS1: HS2 would be far more damaging that HS1, which is frequently used as exemplifying the expected effects. Noise increases greatly with increasing speed (it massively increases in volume and becomes more episodic (with shorter onset and attenuation making it more noticeable and disruptive), and harder to screen (as with speed it is increasingly aerodynamic noise and generated by the body or above the train (by the pantograph) rather than by the wheel rail interface). HS2 does not follow existing transport corridors, while HS1 extensively follows the M2, and needs to be straighter because of its 400km/h design speed.

80 Slower speeds: HS2 has devastating environmental implications largely because to achieve the very high speeds it cannot be routed to follow existing transport corridors. Neither the Strategic Case in 2013 nor the first economic assessment in 2010 examined alternative routes based on slower speeds eg at 300k/h (the maximum HS1 speed).

81 The Government say that dropping the speed to 300k/h adds 4.5minutes to the journey time for Phase 1. Given the journey time savings are substantially over valued (and this leads to a distortion in decision making, as remarked by Public Accounts Committee), the economic case for HS2 should now be tested against a range of less environmentally damaging alternatives.

82 Carbon emissions: HS2 claim that HS2 reduces carbon emissions over its life – 120 years. This is because the HS2 carbon assessment is based on a number of inappropriate assumptions:

- That HS2 will cause a transfer of freight from road to rail, but no case is made for this and there is no evidence that HS2 would relieve any capacity constraint on carrying freight by rail
- The carbon impact of additional electricity consumption from HS2 is assumed to be the average carbon impact of electricity generation, not the marginal emissions of additional peak consumption which would actually occur. This means that the generation to supply HS2 would add to carbon emissions until the generation system is almost entirely de-carbonised
- The boundaries of the ‘system’ for assessing carbon emissions are drawn to exclude:
  - The energy requirements of some of its construction, and materials for construction
  - The potential re-use of any freed-up airport runway space for long haul flights.
- Assumes operational carbon savings for a period of 120 years from starting operation is absurd. These benefits depend on an absence of change until well into the next century.

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321 Draft Environmental Statement, Volume 1 (Introduction), para 7.4.4 page 94, HS2 Ltd 2013
322 'The completion and sale of HS1'; 4th report of session 2012-13, June 2012
Using reasonable assumptions HS2 substantially adds to carbon emissions. Speed isn’t green.

**Opportunity cost of HS2**

It is surprising that a Strategic Case for HS2 should not adequately review alternative investments, or how it fits as part of a coherent UK transport policy.

DfT admitted to the Public Accounts Committee (in 2012, in the context of lessons to be learnt from HS1) they had not considered any range of alternative costs and benefits to HS2, eg on local services or broadband.

The Strategic Case in 2013 now says that alternatives like broadband have been examined. But the stance taken is (that they will happen too) is not an evaluation of them as alternatives. The current plans for broadband involve very limited expenditure (under £2bn). Investment in rural broadband seems a more credible way of creating employment opportunities in the regions (by giving them access to global markets) than giving a few cities faster access to London.

Curiously the alternative of using price to constrain demand, up to the point where there is a commercial case for additional capacity, is not considered. Travel is energy intensive, and is in decline for business purposes. Travel by car, which is the dominant mode of travel for most of the population, is constrained by taxation that exceeds the direct cost of its provision. It is also constrained by the failure to address pinch points that have greatly better BCRs than rail investments. The environmental justification for this is disappearing with electric cars which, because they store electricity, will be de-carbonised far earlier than electric trains.

The discussion of rail alternatives to HS2 in the Strategic Case is also misleading:

- The alternatives generated by the Government are not realistic. They produce far too much capacity for the demand that even the Government forecast. For example there is simply no need to electrify the connection between Doncaster and Sheffield for Phase 2. Creating capacity in excess of demand is wasting resources that could be put to better use, and its inclusion in the alternatives serves no purpose but to worsen their economic case.
- While it accepts the 51m alternative is realistic for Phase 1 (and far cheaper) it says it produces less capacity than HS2. It should instead have compared it with the forecast demand. Network Rail in their review of the 51m alternative did not dispute it could meet all the required demand!
- An advantage (besides costing very little) of the 51m solution and other improvements to the existing railway is that they are incremental and so could be implemented to the degree that emergent demand is required. In contrast HS2 is essentially an all or nothing scheme highly dependent on the high levels of long distance rail demand that are unlikely to arise. This advantage is completely ignored.

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323 This point is made repeatedly by Prof Stephen Glaister (RAC Foundation)
Clearly there are alternate plans that could be focused on the north eg the £15bn “One North Transport Plan”. These should have been covered in any comprehensive evaluation.

**Costs under control**

The Strategic Case argues that costs are under effective governance.

The Major Projects Authority (MPA) has made independent reviews of the project, its governance and the prospects of it being successfully delivered. They have classified HS2 as ‘amber red’ meaning that its success was assessed as ‘in doubt’.

The November 2011 MPA report raised the project’s alert status from ‘amber’ to ‘amber-red’. This status has been maintained in subsequent assessments including that in September 2013. The assessors said they had low ‘delivery confidence’ in HS2, according to sources familiar with the report, and identified four core weaknesses in it:

- The timetable is risky, with too little time allowed for the passage of the hybrid bill
- The management and governance arrangements are inadequate, with a confusion in roles between DfT and HS2 Ltd
- The management methods were inadequate, without the use of even a ‘critical path’ method
- The skills, capability and resources deployed were insufficient.

The Government vetoed the release of the report, but this decision is subject to judicial review.

While the original report that was suppressed is now quite old, HS2 has had the same rating by the Major Projects Authority repeatedly since, and, as Andrew Gilligan reports these issues are echoed in DfT’s recent internal audit report.

It is plain that the Government are concerned to conceal an on-going lack of control of the HS2 project. Since the MPA first raised the alert status to amber-red, HS2’s costs have already risen significantly – from £32bn to £43bn for the infrastructure (in 2011 prices).

**Subsidy justification**

It might be expected that the Strategic Case explain why HS2 should merit a £30bn+ subsidy.

Long distance rail is used by a tiny and minority (0.18% of all trips are long distance rail) as the next graph shows and rail users are relatively affluent (47% are in the 20% income households). It is also clear that on the evidence, HS2 will not generate material economic activity, rather it will be a drain on the economy. This makes it a strange priority for subsidy.

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Andrew Gilligan, the Telegraph, 14 December 2013
While a local bus services subsidy is justified by beneficial effects on the labour market (bringing economically inactive people into employment), a similar case cannot be made for long distance rail. Interestingly, 60% of MPs are said to be long distance rail users, which may give them a skewed appreciation of the importance of long distance railways.

Range of benefit cost ratio (BCR) outcomes are not persuasive

Under Q1 we expressed concerns about the BCR. The Strategic Case even created longer term growth scenarios eg out to 2049. These cannot be credible outcomes on which to base any decision. They rely upon a relationship between economic growth and travel that is spurious.

The case for HS2 uses an unrealistic benefits timescale – another 78 years to 2092, and 120 years for the carbon assessment. Over this period, the changes in technology, social patterns and human behaviour are unforeseeable. It is unsound to set the benefits so derived against entirely foreseeable costs. Looking backwards 78 years illustrates this: in 1936:

- There was almost no air travel
- Few people had private cars
- No digital devices existed including any form of computer
- Few homes had even a telephone
- The world’s first regular public broadcast of television was started by the BBC that year
- The NHS had yet to be created
- The 2nd World War had yet to be fought
- Nuclear weapons had yet to be invented
- China was in no sense an economic power
Q3 What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

102 HS2 is being sold on a completely false prospectus. An HS2 Ltd spokesman recently claimed:

“Analysis by KPMG has shown that HS2 could boost the economy by up to £15bn per year when operational. HS2 will rebalance the economy, skill a generation and support new homes and jobs”.

103 Not a single element in this claim is supportable. What is more disturbing is that the Government must know this.

Likely economic benefits
104 The claimed benefits, of more jobs and wider benefits, are not justified because:

- The weight of academic evidence finds little/no supporting empirical evidence to say the regions will benefit, and inequalities reduce. London is likely to benefit most
- While localities in the North and West Midlands close to new stations may benefit, it can be at the expense of their hinterland ie not a net regional benefit
- Reports for Government, such as that by KPMG have been shown to be based on false assumptions and are not robust statistically
- Even regeneration-related benefits at stations are not guaranteed. IEA research into the impacts of HS1 on East Kent do not reveal regeneration benefits
- To gain even these limited benefits requires complementary investments beyond that in the HS2 cost envelope.

105 Simple competition theory sees distance as a barrier to competition, with improvements in transport reducing this barrier. London completes with regional cities for the provision of a range of professional services, and while London is the most efficient location at service provision, distance affords regional cities some protection from London’s greater efficiency. So without other factors, reducing the cost (time or money) of transport ought to benefit London at the cost of regional cities.

106 The empirical evidence suggests that this ‘theoretical’ effect actually occurs with high speed rail. Prof Tomaney’s report on the evidence confirms this:

‘The report examines evidence of the experience of five countries where HSR has been introduced to assess its impact on their economic geography. Taking this evidence in the round it is very difficult to substantiate the argument that high speed rail is likely to have a positive impact on regional inequalities. Cities which are the location of HSR stations may gain some benefits, but distribution of net benefits needs careful analysis. Some of the benefits accruing to regional cities may be at the

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325 Quoted in article titled Superfast broadband will see a bigger return on investment than HS2, says economist’, Thursday, September 11th 2014 by Hannah Langston
HS2 Action Alliance—Written evidence

expense of neighbouring places, while in countries with dominant capital cities net benefits tend to accrue to these.’ Transport Select Committee written evidence HSR14, 2011

107 Work done by Prof Tomaney\textsuperscript{326} shows that experience from actual high speed railways fails to show the effect claimed by Government, and that there is a tendency to increase centralisation.

108 David Higgins in his HS2+ report highlighted the concentration of top companies in London and the opportunity to decentralise. He failed to note that in France (with its more extensive high speed rail network) 82\% of CAC 40 companies are based in Paris. None in cities served by the TGV.

109 Agglomeration benefits: The work done by Graham and Milo\textsuperscript{327} shows that, on the empirical evidence, in practice the agglomeration effects of high speed rail are very small. This work was commissioned for, and published with, the 2010 case for HS2 by HS2 Ltd. However, its conclusion was misquoted in the 2010 White Paper to give the impression that such agglomeration benefits might be material. The work had concluded that they would be worth £10million at most.

110 Back-office services: It has been argued that HS2 would make the location of ‘back-office’ activities in the service centre to the Midlands and North more attractive, as this would allow the utilisation of less expensive labour than in London, but with ready senior managerial access from London. However, it is unclear what scope there is for this, beyond current practice. ‘Back-office’ provision is relatively lowly skilled, and UK locations compete against low cost providers (eg India), with the internet and telecoms increasingly providing business integration (rather than personal travel).

111 There is no good evidence that HS2 will have any beneficial effects to the areas it connects, except possibly London (but further concentration of economic activity in London has costs). There is likely to be a concentration of development near stations, but at a cost to places in their hinterland.

KPMG

112 The KPMG analysis, commissioned by Government and published in 2013, shows something different. But there are serious problems with it technically and with its assumptions:

- The method of statistical assignment of effects is defective (leading to major overestimation)
- The assumption that transport linkages are the only constraint on business location is transparently false (skill, in particular, is an issue for Midland and Northern cities)
- There is a complete failure to recognise the absence of a concentration of appropriate skills in regions, and the consequential gravitational pull of London for those with the required skills and aptitude for professional services.


\textsuperscript{327} ‘Advice on the Assessment of Wider Economic Impacts: a report for HS2’, Daniel J. Graham and Patricia Melo, 25 February 2010
The use of a future date for money values is also misleading as it inflates them compared to the other numbers standardly used for HS2 – which are on a current or 2011 basis.

The problems with KPMG’s approach were well appreciated before Government commissioned the study. Mackie and Laird Con conducted a detailed critique on behalf of the Northern Way in 2010. KPMG’s approach is essentially unchanged. KPMG’s study for Government was savaged in expert evidence from Profs Graham and Overman at the Treasury Committee meeting (5 Nov. 2013). Prof Overman suggested that KPMG had overestimated the benefits by a factor of between six and eight.

Expert opinion is that the benefits estimated by KPMG are not additional to those captured in a conventional transport appraisal with WEI. The key additional information that the conventional analysis does not capture is the regional distribution of benefits. Unfortunately, the failure to take into account skills and land availability mean that the KPMG analysis is unhelpful for even this.

Dr Richard Wellings (IEA) has published an analysis of the effects of HS1 on East Kent, which demonstrates that the claimed benefits to East Kent have not materialised – rather the reverse – with below average economic growth accompanying the new services. He also cites Birmingham and Doncaster as locations with good transport connectivity (including by rail) but poor economic performance, which provides a real world demonstration that KPMG’s assumption about transport connectivity being the key constraint on regional economic development is false.

Because high speed rail has a tendency to centralisation, the issue with other initiatives to encourage investment and attract skilled workers to regions is therefore not one of complementary action. Other measures may be successful, but one might expect a new high speed rail connection to make the task harder rather than easier.

However, as discussed above, complementary investments are required for HS2 to be useful in transport terms alone. The lack of connectivity for out of city-centre stations necessitate additional investment, which is not inside HS2’s economic case. Even Euston requires investment to address passenger dispersal problem (Crossrail 2) which is not within HS2’s business case – although the time savings which depend upon them are included. An alternative that might address the Euston dispersal issue is extending Crossrail to replace some commuting services into Euston (as is now being considered), but this will have costs which are not in the HS2 assessment.

Review of Methodologies to Assess Transport’s Impacts on the size of the Economy, James Laird and Peter Mackie, September 2010

Profs Overman and Graham in oral evidence to Treasury Committee, 5 Nov. 2013, Q138 – Q140

‘Failure to Transform: High-Speed Rail and the Regeneration Myth’, Dr Richard Wellings, 28 Apr 2014

Similar claims were made for HS1 as have been made for HS2 in regard to economic regeneration. For example the study ‘Economic Impact of High Speed 1’ by Colin Buchanan and Volterra, commissioned by London & Continental Railways, January 2009, estimated the regeneration benefits of HS1 to be £10bn in addition to WEI.
HS2 is an unusually poor infrastructure expenditure for generating UK jobs, eg compared to road building. The UK has no indigenous high speed rail industry, and so will import the technology (and most probably the high valued added components) from foreign manufactures.

Q4 Might some parts of the UK suffer economic disadvantage from HS2?

As discussed above, HS2 is likely to contribute to a trend of centralisation of cultural and services activities in London, at the cost of Birmingham, Manchester, and Leeds. The reason for this is that the time cost for visiting London is reduced, thus improving access to London’s facilities from cities on the route. This puts regional facilities in closer competition to London. As London has a much greater provision than regional cities, this may adversely affect the viability of regional activities.

In contrast to the results from KPMG’s analysis of the effect on HS2 on regional economic activity, which they see as favouring those connected by HS2 with detriment to those cities which are not, eg Wales and South West, the increased competition with London from HS2 is likely to have the reverse effect. The economies of cities connected to London might lose service sector activity to London, while the economies of cities unconnected are unaffected. The assumption that drives KPMG’s wrong conclusions is that it is only transport connectivity that prevents businesses locating in regional cities – rather than (in particular) a shortage of the necessary skills.

Q5 Is London likely to be a main economic beneficiary of HS2?

Even KPMG identify London as the largest beneficiary. It is plausible that London would be the only beneficiary, and itself not be greatly benefitted. The basis for this is discussed at Q3 above.

Q6 How might the expected benefits of HS2 to the national economy be realised?

The claimed benefits are said to be in terms of jobs and regeneration around stations eg Old Oak Common and regions served by the services. However a net benefit should not be expected. This is because it will require a subsidy that needs to be financed, yet delivers economic and social benefits that are worth less than the subsidy.

Other factors for expecting a net negative effect are:

- The subsidy is likely to be much larger than the Government claim. An on-going subsidy for services is likely to be necessary:
  - If the infrastructure is sold off once complete there will be capital charges without fares income or economic growth to pay for it
  - Long distance rail ridership and that of HS2 in particular is likely to be much less than forecast, so that fares income would not cover operating costs
- There would be a tendency to strengthen London’s economic and social dominance, exacerbating London’s transport requirements, requiring Crossrail 2 etc.
weakening the economies in the regions and underutilising the less congested infrastructure there

- The UK lacks an indigenous high speed rail design or manufacturing capability, meaning that the high value added activities will be imported
- Property values will increase in the vicinity of the new stations, but properties along the line of route will lose value, due to the adverse local environmental impacts of very high speed trains and the lack of any counterbalancing improvement in connectivity. The positive economic effects are captured in the WEI, but the costs, eg from environmental damage are not.

**Q7 How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?**

124 It is not obvious why HS2 should be operated on a different model from the body of the UK railway, unless the Government has different policy objectives.

125 The core issue is the degree of Government control over the management of the infrastructure and the provision of train services. In broad terms the options are competition with a degree of regulation, or state management. The choice will depend on the extent of price fixing and control of service specification intended to be applied. Price fixing to prevent alternative rail routes competing on price, as is implied by the assumption that high speed rail and classic rail be priced the same, goes beyond the current level of control, because Virgin Trains, London Midland and Chiltern Railways currently compete on price with their London-Birmingham services.

126 Allowing competition is inconsistent with the current HS2 business case, as:

- Competition and overcapacity will drive price competition and in turn larger subsidies (as prices will relate to avoidable costs not total costs)
- Price competition allows slower services to offer a discount from the price level of fast routes to win business. This is what London Midland and Chiltern Railways do with their London-Birmingham services today – and win business from Virgin Rail as a result. HS2 would not have as large a market share with price competition, and cuts to classic services would be difficult to justify when the trains concerned achieve reasonable occupancy levels, so the assumed savings on the classic railway would not be deliverable in practice.

**Q8 Should travellers expect to pay higher fares on HS2 than on other lines?**

127 Faster routes and high speed routes have to date commanded a price premium. This is the experience internationally, and also on the high speed Kent commuter services that run on HS1. The Government’s assumption that HS2 would be priced the same as the classic network is unlikely to be the case when HS2 operates (as the Public Accounts Committee emphasised unless the Government regulate fares to make it so.

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332 April 2012, Public Accounts Committee, Sale of High speed 1
HS2 Action Alliance—Written evidence

128 HS2 will create surplus long distance rail capacity, with a number of undesirable consequences. With competition the surplus capacity will force down fares, increasing the subsidy to long distance travel, ensures low occupancy of HS2 and inability to cut classic services as planned (and hence preventing planned savings from being realised).

129 It is irrational to increase the subsidy for long distance rail travel, as it is used by the relatively affluent and in encouraging travel it wastes energy.

Q9 Does the prospect of HS3 affect the economic case for HS2?

130 HS2 might be expected to reduce any regional benefits from HS3.

131 Any regeneration benefits to the north of HS3 would be lost if HS2 is built first. This was Ultraspeed’s conclusion, and one reason why people have proposed building HS2 from north to south – rather than the commercially less costly south to north.

132 Ultraspeed was a proposed Maglev (a very high-speed sort of railway) network, for which supporting analysis by CURDS\textsuperscript{333} showed benefits to the North (primarily for Manchester) from connecting the North up first. However the study showed that this regional benefit was lost to London, if the North-South connection were built first. This confirms the conclusion that a connection with London sucks economic activity South.

133 The CURDS work for Ultraspeed preceded the analysis by Graham and Milo, which suggests that the regeneration benefits would in any event be modest.

September 2014

\textsuperscript{333} CURDS (Newcastle University) /Railway Consultancy, reported in ‘UK Ultraspeed evidence to the Eddington Review’, October 2006.
TUESDAY 4 NOVEMBER 2014

Members present

Lord Hollick (The Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Smith of Clifton

Examination of Witnesses

Joe Rukin, Campaign Manager, Stop HS2, and Bruce Weston, Director, HS2 Action Alliance

Q78 The Chairman: Gentlemen, welcome to the Economic Affairs Committee, and thank you for joining us today. This is the seventh session of our inquiry into the economic case for HS2. We have a fair amount of ground to cover, and I would be grateful to you if you could keep your remarks as concise as possible; if you agree with the other witness, then a nod will suffice. Would either of you like to make an opening statement?

Joe Rukin: I am fine with going straight to questions.

The Chairman: Let me ask the first question. Can you explain to the Committee how both of your groups were founded, who you represent, and what, if anything, differentiates you?

Joe Rukin: We were both founded in 2010, and we represent action groups up and down the line. There are over 100 action groups, and we also work with parish councils, residents’ associations, and other levels of council as well. The HS2 Action Alliance was formed first, and basically it concentrates more on the academic side of the argument, whereas Stop HS2 is a grass-roots campaigning organisation. Back in 2010 the roles were clearly defined, but there has been obviously a little bit of blurring since then as time has gone on and we have both done more of the same stuff.

Bruce Weston: Yes. HS2AA, as Mr Rukin said, was founded in 2010. We have about 120 affiliated groups and 15,000 individual members. Our approach is quite coloured by who our directors are, so we tend to be pretty evidence-based in how we approach things, and
we focus very much on the economic and environmental cases, compensation, and making legal challenges.

**The Chairman:** Can I just ask you whether, in principle, you support infrastructure investment in transport to improve connectivity and to help boost the economy?

**Joe Rukin:** Absolutely. We have been advocating since the start that HS2 is the wrong investment, and that there are better investments that would deliver more benefits to more people more quickly and cost less money. This is not the Luddite argument, despite what previous Secretaries of State for Transport have said. We fully support the idea that you need to invest in the country’s infrastructure, but HS2 is the wrong investment at the wrong time, and has unproven benefits, a poor business case, and is massively environmentally damaging. There are so many reasons pointing to other transport investments that cost less money.

**Bruce Weston:** The only thing I would add is that I work as a consultant in the railway sector, and professionally I am concerned with improving infrastructure.

**Q79 Baroness Blackstone:** In the written evidence that you submitted to us, you said that you were pretty unhappy about the value placed on time savings in the Strategic Case. Could you tell us about that, and what you would like the Department for Transport to do instead of what it has done so far?

**Bruce Weston:** Yes. Our real problem with the Government’s approach on value of time is that it does not really pass the test of common sense. Very early on, we made two criticisms of how they were handling value of time. The first was that if you were really going to have a very large increase in the number of business travellers, it was not believable that they would all come from the same very elite earnings sector that they had from their 2000 sample of rail travellers.

Our second point was that mobile technology has been revolutionising the usefulness of the time you spend on trains, and this seemed to us to have the inevitable consequence that you cannot attribute the same value to reducing time that is useful to time that is not useful. Basically, we made these two points, and we have been pressing for them to be addressed.

Now, the first was actually addressed in the October 2013 business case, where they re-based their earnings data on the 2010 survey—so 10 years later—and lo and behold, that actually reduced the unit value of time by a third. The second point—that people working on trains, and for that matter leisure people, are finding the time they spend on trains much more enjoyable and useful—has not been addressed. There is no reduction in the value of time to reflect the fact that the time is more useful, and so a saving of that time, logically, must be worth less to individuals and businesses. That is a very important point, because quite a lot that has been said about this indicates the contrary, and blurs this third reduction—because they have re-based the point of their calculations—to it actually being something to do with the more useful value of time. It is not.

Now, our view of how you put this right is that essentially the Government have moved from saying, “We are looking at the value of the time to businesses”, to, “We are looking at what they are willing to pay for it”. It is a clever move in some senses, but unfortunately they do not have any evidence that says that businesses are actually prepared to pay the same to reduce productive time as unproductive time, which is what their approach implies. I would be very surprised if you could conduct surveys that did show that, because it would be pretty irrational to hold that view. But I would say that in the absence of actually having
any direct evidence that this position is right, they ought to be taking the line that they radically reduce the value of onboard business time savings and leisure time savings, if they ever get evidence that shows this. It is not a trivial change to the business case, because so many of the benefits are actually dependent on this single parameter, which is the value of the time it saves, and it is predominantly value on board the trains that is affected by this issue. It is really quite crucial, and personally I have always been a bit shocked that they are prepared to contemplate a £50 billion investment while not actually having anything very solid to back the major benefit that this is supposed to deliver.

**Baroness Blackstone:** I am sure you are right; it is common sense that not all time on trains is wasted. But the problem is that common sense will not tell you how to assess at least some of that time spent on trains, and the willingness-to-pay route is one that is normally used in cost-benefit analysis. If you do not like that either, what is the alternative? How can the Department for Transport do this?

**Bruce Weston:** I do not have any difficulty with using a willingness-to-pay basis, but you need some actual evidence to base it on. It seems wrong just to say, “Look, we used to do the sums on the basis of the value of the time that was being wasted being cut. We are not doing that any more, because we accept that time is being spent usefully, so we are doing it on a willingness-to-pay basis”. They cannot point at any surveys that show that businesses are actually prepared to pay the same single unit cost that they would have paid for wasted time for a reduction in the time that people spend on trains. It is not that I am against the willingness-to-pay basis; I just say that you cannot adopt it if you do not have any proper evidence to base it on.

**Joe Rukin:** One of the problems is that the department and HS2 Ltd are exceptionally selective in the figures and the methodology that they use, and they do not like comparing like with like. That is a theme that goes through the case for HS2 like Blackpool through a stick of rock. They have moved to this willingness-to-pay model, which was devised by the Institute for Transport Studies at Leeds, without actually paying any attention to what that report specifically said. For example—quoting directly from the Leeds report—the willingness-to-pay approach “does not—to the best to our knowledge—form the basis of official national guidance in any country”, and, “Whichever approach the Department adopts, the values derived need to be fit for purpose, appropriately robust, applicable to the appraisal cases for which they are used and capable of being updated over time”.

The problem, for example, on the value of time, is that willingness to pay has simply been a rebranding of value of time. It still relies on value of time, and I think that HS2 Ltd was nudged by the Public Accounts Committee, which was very critical of this. When HS2 Ltd came back to the Public Accounts Committee for the second time, it was quite critical that it had still not done anything. Just comparing like with like, HS2 Ltd assumes that the value of time of people increases by 2% for the next 80-odd years, until 2092. However, they do not have that same assumption in their costs. What you are seeing is an inflation of the benefits of HS2 but completely ignoring the same effects on the cost, and that sort of approach is standard throughout the case for HS2. Again, with willingness to pay, the ridiculous thing is that they are saying that people will be willing to pay for quicker journeys but base it on the idea that the costs of tickets will be exactly the same as the current ones. Currently, they are saying that it takes one hour and 25 minutes to get from Birmingham to London on the Virgin train on the West Coast Main Line, and when HS2 comes along, it is going to be 49 minutes. If they are both going to be the same price, of course you are going
to choose the quicker one, unless you actually want to spend longer on the train for whatever reason.

The other thing is that, if you look at the Institute for Transport Studies’ model, the Department for Transport has actually hit out at HS2 Action Alliance for using a different definition of what consists of a long-distance journey. HS2 Action Alliance has used the actual figures from the train operating companies on what a long-distance journey consists of. HS2 Ltd has decided to use any journey over 100 miles, but the Institute for Transport Studies, in its willingness-to-pay model, says that a long-distance journey is any journey taking over two and a half hours. It is completely incredulous that it uses that model, because it does not take two and a half hours to get to Manchester, Birmingham, or somewhere between Nottingham and Leeds. It keeps trying to compare apples with oranges throughout the piece, and this completely undermines its case.

The other thing I should add on willingness to pay, because it is one of the points that we keep coming up with, is that the entire basis is the idea that business users will want to use trains more and more in the future. Three years ago Arup, which at that point had been given every outside contract related to HS2, told all its employees, “Do not travel for meetings. Use video-conferencing instead”. It is a problem that they do not understand that the imperative of business will change. It will be a generational change, but the imperative for business will be to not travel, because it will represent a cost saving and potentially more efficient time in the future. It will simply become industry standard.

Bruce Weston: If I could just add a point to Mr Rukin’s, in fact the Department for Transport is not contesting that travel for business purposes is not growing.

Q80 Lord Monks: I was going to come on to that and quiz you about passenger demand and the way that that bit of the argument has been going. You have made the point that passenger demand has not been going up, and in reply the Department made the point that demand for rail has been going up. Now, some of this is addressed in your supplementary evidence that we have had in the last day or two, but how do you see that? I have worked with employers and companies before which, when they have hit a bad patch, have banned all business travel. That has lasted about six months, and then it has gone back to normal. Business travel by rail, despite what Arup has done, has gone up, according to the Department. You have some comments on that, and I wonder if you could share those with the Committee.

Bruce Weston: Absolutely. I would like to kick off by saying that I do not have a crystal ball that tells me what the future of transport demand is going to be. What I would say is that there is plenty of evidence that the experts frequently get it wrong, and in particular they get it wrong in the context of large projects. The Department for Transport itself does not have a spotless record on this with HS1.

The problem is that if you have a good short-term forecasting model and you push it, it keeps telling you that the trains that you have now go on for ever. It really requires that you put that picture into context, and the essential context, the way we look at it, is that the amount of domestic travel that people do per person over the last nearly 20 years has not changed. If you look at the number of long-distance journeys they make, it has been persistently at around seven. There is no change; it is not increasing. You have an overall context of domestic travel per person not going up as we have become more affluent. We have become a lot more affluent over that period. There have been ups and downs, but
generally people have become a lot more affluent, but people, per person, actually are not travelling more. That is essential context.

Looking at rail by itself, rail has undeniably increased a great deal from about 1995. If you go further back than that—if you go back to the Second World War, and go from there—the total demand is pretty well flat, and it lost market share throughout that period. You might say that in the modern era, from 1995, it has had a lot of growth, but the obvious question, looking at this in the context of no growth overall, is whether there is something special about rail, and if there is, whether it is going to keep going in the way it has. Can we safely predict that it is just going to go on as it has recently for ever? Now, we say that, actually, there are quite a few reasons to think that that sort of approach is a bit incautious. It might be right, but there is a pretty good chance that it is going to be wrong.

There are four reasons. First, there are special factors about the increasing value of onboard time, the increased subsidy that we had when we privatised the railway, and the fact that we have had some new ideas on pricing—something like airline pricing. Secondly, the model that you actually use to produce all this growth is essentially a short-term forecasting model. It is very heavily used for predicting revenues for rail franchises and that sort of thing. It has been constantly modified to keep it on track for that sort of purpose, but it is essentially a short-term model. Back in 2006, the review of the transport needs of the country commented on the forecasting model, which is a couple of generations back but is essentially the same forecasting model, and said that because of the way it worked it would not produce reliable forecasts over about 10 years. Now, we are looking at forecasting before we reach a point of saturation—the cap that they use—of 23 years, so we are really pushing what you can do with that sort of model pretty hard. It assumes not only things like the growth of population but a relationship with economic growth—it goes up with real incomes. It does not have anything about the usefulness of time, which is actually quite important, because while it is pushing rail up now, if you have something like Google cars it is not going to push it up any more. In fact, it could reverse. If people found that they could work and do what they wanted as the car whisked them along to wherever they wanted to go, the trends that we have been looking at are going to see a reversal. I cannot say whether Google cars or their like are going to come in. It is pretty likely, but what is very likely indeed is that what has been happening over the last few years will not keep on happening for ever.

The Chairman: Mr Rukin do you have anything to add?

Joe Rukin: Yes. Again, going through the piece, HS2 Ltd does not seem to compare like with like. When the Department for Transport is saying how much rail growth is increasing, it is looking at national rail growth and conveniently not paying attention to long-distance travel. Whichever of the three definitions of long-distance travel you use, you see that growth in long-distance travel has completely bottomed out over the last four years. It has been on a consistent decline. It is now under 1%. The easiest way of looking at and thinking about whether HS2 Ltd’s demand forecasts are reasonable is that they seem to think that HS2 will be full the moment it is built, which seems completely absurd to me. The reality is that while rail use is increasing, 70% of rail journeys in this country are London and the south-east. That is the reality: the majority of the passengers on the rail network are short-distance commuters, not long-distance point-to-point business users. The reality, again, is that the growth in rail travel has been predominantly based on the growth in discounted tickets, advance tickets, and being able to get somewhere, at least in long-distance terms, cheaper than you would otherwise be able to do. Of course HS2 Ltd
and the Department have consistently ignored other ways to increase capacity, including the ones that are planned, such as bringing in ETRMS, which is automatic signalling, so you will be able to increase the number of trains and potentially the speed of the trains on the existing tracks.

**Q81 Lord May of Oxford:** The Department for Transport, as you surely know, attempted to address the issues that you have raised, and specifically aspects that you feel should have been given more attention: the cost of capital, the cost of connecting to existing infrastructure, and the costs beyond 2036. As I read the Department for Transport’s reply, I feel they have been pretty sensible in what they have said, but I would welcome it if you would care to expand on that a little. When I say “expand”, I do not mean to be impolite, but you are not getting a very high grade for being as concise as the Chairman asked initially.

**Bruce Weston:** I will try to do better. Perhaps I can try to change your mind on the position at Euston. Basically at Euston we are in a position where the means of getting away from Euston mainline station and into the mainline station are pretty busy already, and I think pretty well everybody accepts that if you had the extra volume of passengers that HS2 would bring, it would not work. You are in a situation where reinforcing the infrastructure at Euston so that you have something like Crossrail 2 is not an optional extra. You will not get the journey time savings that HS2 claim if you have not relieved the dispersal from Euston. Saying, “That is another business. It has its own benefits”, is simply is not true. You will not get the core benefits if you do not address the problem, and it is not a problem you can solve for nothing. There is a large cost in there that ought to be in their calculations, and it is not.

**Joe Rukin:** Probably one of the best examples of this is the East Midlands station at Toton, assuming it is going to be at Toton—there is the rumour going around that it is going to get moved to Beeston, but obviously the business case and figures that we have at the moment are based at Toton. HS2 Ltd is telling you that it will take 51 minutes to get from London to Toton, and then it will take a further 17 minutes, so 68 minutes in total, to get to the centre of Nottingham. At the moment, there is no way of doing that at all. It will take you 40 minutes on a bus; it will take you 30 minutes driving. Even if they extend the tram network, the chances of doing it in 17 minutes are minimal. However, the business case relies on the idea that you can get to the centre of Nottingham in 68 minutes, and the infrastructure is not in place to do that. They say it will take 22 minutes to get to Derby. When we have asked them, “How are you going to do that?”, they say, “You can just get a cab”, which again seems bizarre.

It is these things that need to be included in the cost to make this thing work that have been excluded, because HS2 Ltd is very good at saying, “This is the time it currently takes you to get to Birmingham. This is the time it will take you to get to Birmingham with HS2”, but it is not getting you to New Street, it is getting you to Curzon Street, which is a 10 or 15-minute walk to New Street. It is shown across the world that the advantages in getting a high-speed train are completely lost if you cannot easily continue your onward journey. As things stand, out of the 10 proposed stations, only two of them are at current station sites, Euston and Manchester Piccadilly. All the rest of them will be new builds—obviously Old Oak Common is a bit different, because there will be a station for Crossrail, but only as a result of HS2. Crossrail was not building a station at Old Oak Common. This is the thing: you will have to lose the time that you have saved to continue your onward journey, and HS2—
**Lord May of Oxford:** Could I interrupt you? Just putting it another way, my favourite country to visit is Japan. The transport systems there make us look medieval. Are you really entirely satisfied? You give me the impression that you are looking for reasons not to like this. What is your feeling about the future of rail transport in Britain? You are happy with it as it is? I know I have gone off-piste.

**Bruce Weston:** The answer to that is that virtually nobody is happy with it as it is, but a really nice example of the sort of thing that people are considering that they might get some benefit out of is HS3. The naming is actually quite important here, because I think it is about detoxifying the High Speed brand, because when you look at it, it is high-speed; it goes 125 miles per hour, which is defined in the European standard as high-speed. We have plenty of that. It is not the ultra-fast speeds you get with HS2, which, we contend, is not suited for a small, densely populated country. The great thing about High Speed 3 is that it would not have a tendency to draw economic benefit down to London, which is clearly the risk with HS2. More interestingly yet, they do not call West Coast Main Line or Virgin services High Speed 0, or the East Coast Main Line High Speed Minus 1, but they are, by this definition, high-speed railways.

A very important point to understand about our railway system is that we have a very developed network; we have fast, frequent services to the major destinations of our country. In fact, if you look back to Eddington, one of the reasons why they thought that high-speed rail would not be a priority for the UK is because it already had faster connections to our major cities from the capital than the places that were going for high-speed rail.

**Joe Rukin:** I suppose that the easiest way to demonstrate the problem with HS2 is simply quoting the title of David Higgins’ report last week, “From HS2 towards a national rail strategy”. That is the problem with HS2: there should have been a national rail strategy first, and maybe HS2 would have come out of that process, but it did not. That is the problem throughout this: that HS2 has been chosen as a project in isolation—I will come on to HS3 later, I suspect—without actually looking at what the country needs. For example, one of the arguments that we keep getting thrown at us is that the West Coast Main Line will be full to bursting in not very long. I suppose I am touching on the next question, but the reality is that there are ways around that. For example, until the West Coast Main Line was electrified in the 1960s, you used to have trains coming down from Birmingham down the Chiltern Line into Paddington. With Crossrail releasing capacity at Paddington, or even being able to divert trains to the new North London line into Old Oak Common, that may be a strategic alternative, which has been completely ignored. That is the problem, though: all the strategic alternatives to HS2 have been ignored, simply because, as Eddington warned, it is a policy that has allowed political momentum to build up behind it, making it unpopular or difficult to cancel. That is where we are really; this decision has been made in isolation.

Going back to the original question of the missing costs, it is not just the additional infrastructure—the HS3 proposal is a tacit admission that this is needed to make the thing work—but you have to look at other issues. One of the best ones, I suppose, is the disruption during construction, because the alternatives were dismissed by a Network Rail report saying that you would have all this disruption on the existing rail network—say, 14 years of weekend closures. That completely ignores the fact that on the Great Western Main Line the electrification is being done at night, avoiding that disruption, and forgets that you could do that with other places.
HS2 Ltd completely ignores the disruption that HS2 will cause, even on the railways, because you have 15 years of potential reconstruction of Euston; you would have to move every track and every platform. Obviously the official timescale is 10 years, but the discussions that seem to be coming out of Camden at the moment are pointing towards 15 years. That is going to cause massive disruption for everywhere that has trains coming into Euston. You also have to look at where it crosses the West Coast Main Line at Lichfield, Balsall Common, and other places on the network; as soon as Crossrail is built you will be messing it up by building a station right in the middle of it, which is not exactly going to help; the same with the east-west line.

All these things have been ignored, as has the disruption that this is going to mean to the roads, which is more important potentially to the economy. For example, near the Birmingham Interchange station, which is a good mile away from the current Birmingham International station, you have to cross two dual carriageways, one of which is four lanes at that point—two motorways—and build a station in the space of two miles. There is a phrase for that: years of traffic chaos. HS2 want to move the M1 in two places, and this needs monetising in the business case, and it simply has not been at all. “It is part of our optimism bias”, is the answer that you will get out of HS2 Ltd.

Finally, of course, we are supposed to be facing fuel shortages. We have no idea where the electricity is going to come for this. When we ask that question, we get told, “We are the Department for Transport. It is not our problem”.

**Q82 Lord Smith of Clifton:** Gentlemen, when David Prout appeared before us last week, he described the number of seats available on long-distance services out of Euston as “a problem”. Do you disagree that it is a problem?

**Joe Rukin:** Obviously, there is a need for capacity throughout the network, but one of the great examples I could give you is that last year supposedly the most overcrowded train in the country was the 4.46 out of Euston to Crewe. The reason why it was the most crowded train in the country was that it was four carriages long. Now it is eight carriages long, and all of a sudden it is not the most crowded train in the country. This is the problem with the trains coming out of Euston that are over capacity. It is not Virgin Trains, the long-distance trains, in the main; it is the London Midland trains, the short-distance commuting trains going to Hemel Hempstead, Watford Junction, Tring, Milton Keynes, et cetera. You will find that those are the problems, and in a lot of cases you can simply extend those trains.

The other thing that has come out recently is that HS2 Ltd has finally realised how much disruption its plans to redevelop Euston would cause, and obviously there is the problem between one being on AC and one being on DC. It is talking about the potential of running the aforementioned London Midland trains, or at least to those destinations such as Tring and Hemel, along Crossrail and out at Old Oak Common via the new North London line, on to the West Coast Main Line. That is potentially something that will alleviate that problem to some extent, but as I mentioned before you have previously had trains coming into Birmingham that were going down the Chiltern line into Paddington—obviously they go into Marylebone at the moment—but you have the potential to run those into Old Oak Common as well.

These are strategic ways of trying to address the problem, which has not been looked at. The reality is that the West Coast Main Line at Euston is, out of all the London termini, the second least busy station. The least busy is St Pancras, where HS1 arrives. Although you are
potentially addressing the problem, you are not addressing where the problem really lies, and where capital spending should be prioritised.

Bruce Weston: If I can try to answer the question more directly, the Government have persistently said that the long-distance trains out of Euston are full, and there is a capacity problem. That simply is not true: we knew it was not true, but we had tremendous difficulty getting the facts out of the Government. They would not release the passenger counts information, and we ended up commissioning our own study and counting the number of people on the trains. It proved to be quite good, because eventually the Government had to release the information to us, the court told them to, and it confirmed that trains leaving Euston in the evening peak are just over half full. Now, if you are trying to make a case for HS2, that is a very inconvenient fact. I can see why you would not want everybody to know that the trains are half empty. However, the simple fact is that the evidence shows that the long-distance trains, even in peak, are a little over half full.

Q83 Lord McFall of Alcluith: How would you address the issue of increasing capacity? A few proposals have been put forward, from 51m to GB Railfright, which would link the Channel Tunnel to Glasgow, to the New Economics Foundation, which suggests a £33 billion investment for the East Coast and West Coast Main Lines.

Bruce Weston: In the longer term, if the model for predicting rail capacity growth is right, you will end up having more demand on the West Coast Main Line than the current arrangements can cater for. They might be a little over half empty now, but eventually that would fill up. The 51m solution is, to my mind, a sensible way to go about it, because you do not have to take a view now on what demand is going to be in 2036. You have a whole set of small responses that you can make in regard to demand increasing, like lengthening the trains or removing one or two of the pinch-points so that you can get a couple more services in.

It is an incremental approach, which is capable, in full form, of handling all the long-distance demand that the HS2 demand projections have. It does not handle all the demand that HS2 would, because HS2 claims this 26% uplift in demand, because the journey is faster. HS2 is saying that not only will people swap over to HS2, because it costs the same and it is faster, but that for every three passengers that you get transferring across you will get an extra one, because it goes a bit faster. The 51m proposal does not handle the one extra, because you will not have the one extra, but it handles the three. I think it is quite a good solution, particularly because you do not have to take a punt on what things are going to be in the distant future, which in reality nobody knows.

Joe Rukin: I do not think I have anything to add to what Mr Weston and I have already said.

Lord Shipley: Could I just ask what allowance you made for population growth in your modelling on capacity?

Bruce Weston: We simply took the demand forecasts that DfT and HS2 have made. We did not make our own forecasts. We just demonstrated that all that demand could be accommodated, but certainly within their modelling they have increases in population growth and increases in productivity, and per capita income. They have a whole host of factors that are built in there, and certainly population growth is one of them. Of course, population growth gives you about a fifth of the increase that you get from the supposedly conservative 2.2% per annum compound growth. The population is very easily accommodated.
Q84 Lord Shipley: Can I just go back to an issue that we were discussing a while ago on fare structure and premium fares? I had always assumed that HS2 would charge premium fares. However, the modelling is done on the expectation that they are the same. Should the operator be permitted or able to charge premium fares, first of all?

Joe Rukin: I think that is absolutely certain, because you cannot have a situation whereby you are running two trains, one is much faster than the other and they are both the same price. Look at Birmingham to London at the moment. You have three options: the London Midland, which is a very slow train; the Chiltern line, which is the medium train; and Virgin, which is a fast train. The price bands reflect those speeds; it is that simple.

It is very obvious that all that has happened is that HS2 Ltd and the Department for Transport have said, “We are going to look at the same prices, because that is the only way that we can make the business model work”, because they are effectively assuming that almost everyone is going to transfer from the West Coast Main Line to HS2. All you have to do is look at Kent, and it is quite simple: you can do the same journey on the Javelin as you can do on Southeastern, and one costs more than the other. It is pretty straightforward, and that is what the case would be if HS2 were to open.

Lord Shipley: Are you concerned about the extent to which HS2 is reliant on public subsidy, whether premium fares are charged or not charged?

Joe Rukin: It is not just a question of whether premium fares will be charged or not; it is a question of whether or not the passenger forecasting is robust. We would say it is not. As a result I would say there is absolutely no question that HS2 would require a very large public subsidy. Across the world, wherever you look at high-speed rail networks you find that they never manage to attract the grossly inflated passenger numbers that were used to justify their construction. The best example I could give you is HS1 in Kent, which was genuinely a brand new rail link, because you could not get a train under the sea before. Just this year they celebrated arriving at 10 million passengers a year, but they should be at 25 million.

Lord Shipley: What level of subsidy do you think is likely to occur?

Joe Rukin: A massive one, unfortunately.

Lord Shipley: Can you quantify that?

Joe Rukin: I find it very difficult to speculate, because obviously it would depend on where the fares ended up in the future, which we cannot really tell.

Lord Shipley: But you think it would be massive. You have used that word, “massive”.

Joe Rukin: Absolutely, because HS2 Ltd is relying basically on a doubling in passenger numbers by 2033, and it comes to its benefit-cost ratio by multiplying three or four very large numbers by each other to end up with a massive number at the end. If one of those large numbers is a bit smaller, it puts a massive hole in the business case.

Bruce Weston: I think there is an implication in the question that if you had premium pricing somehow or other you would not have to face the same subsidy. The problem with that view is that if you had premium pricing, a lot of people would choose not to move off classic services. It means that you would not be able to cut the classic services in the same sort of way, so you would not be able to have the £8 billion-odd saving from doing that. You would find yourself with loads of capacity, which you would be running, and you would probably have a large ongoing running cost subsidy. Not only do you have to stash up to
build the thing in the first place out of public money, but you then have a year-on-year drain on finance, because it is not paying for itself.

Q85 Lord Carrington of Fulham: If we assume that the purpose of all this, however you achieve it—whether it is HS2, improvements to the existing rail network, or, indeed, other possible solutions—the purpose of it is to connect Birmingham initially, but then Manchester, Leeds and so on, and presumably eventually Glasgow and what have you, better connection to London and to the south-east. The Government are saying that this would have major economic benefits in rebalancing the economy. In other words, it would boost the economy in Birmingham initially, but eventually as the HS2 reaches Manchester it would boost the whole of the north-west, and eventually the north-east as well. Do you buy that argument?

Bruce Weston: I do not buy it at all. The interesting thing is that although this argument has been running for quite a while now, it started from the position of there being no evidence for it at all. The difficulty is that a better connection to London most naturally reinforces the dominance of London. If you look at it narrowly, there are four reasons. A place may be identified as the best opportunity for regeneration. HS2 may well support more economic divergence, because it may make it possible to operate with just an office in London and not one up north. It is very hard to see how any of this overcomes the fact that we are very London-centric and the main transport routes range from London, so improving one of the spokes in this does not put the far end of the spoke from London in the same situation as London, because the rest of the links to the country are not there. It is not removing London’s historically established advantage.

On a narrow level, regarding the extra passengers that HS2 is supposed to carry, a lot of them are going to be leisure passengers, and on the DfT’s own numbers most of them will be making trips to London and spending money in London that they would have spent further north.

Finally, if you solve the passenger dispersal problem from Euston that this is going to create, for example by building Crossrail 2, that is another benefit for London.

Joe Rukin: Quite honestly, if you wanted to wave a magic wand and rebalance the economy, the very last thing you would want to do is make it easier for people to come to London. Again, when you look at the international comparisons, you find that more economic activity gets sucked to the capital, and with London being so primate in our economy, the effects are likely to be much worse in this country than they have been in other countries. One of the best examples you could have is David Higgins, in another tacit admission that HS2 is about solving London’s commuter problem, saying last weekend in the Sunday Times that without HS2 you would need a massive house-building programme in the south-east. If that is not saying that it is about commuting I do not know what is, and this is what you have to expect; you have to expect commuter towns to be built south of Crewe, somewhere between Nottingham and Derby, between Coventry and Birmingham. You already have the first plans for a garden city as a result of the station near Birmingham Airport submitted by Solihull Borough Council at the moment. If that does not demonstrate that it is about getting more people into London, I really do not know what does.

Lord Carrington of Fulham: I am struggling with the concept of what you are saying. The logical conclusion from what you are saying is that we should not spend any money on improving communications between Birmingham and London, because all that does is
benefit London to the detriment of Birmingham. You should not improve transport facilities north-south in the UK at all? In fact, you might even argue, carrying on possibly to absurdity, that you should make them worse, because that would boost the economy in Manchester more.

Joe Rukin: What areas like Birmingham really need is the money spent in those areas themselves. North-south links are pretty good as they are, to be perfectly honest. What is bad is east-west and inter-urban transport systems. Look at Leeds, for example. Leeds is the largest city in western Europe without a light rail solution. If you could promise that to Leeds, would they still support HS2 so much? The reality is that it does not matter where you look, you will drag more economic activity to London if you make it faster to go to London. I know the Committee has mentioned the Doncaster paradox previously, in that if a fast connection to London meant economic activity, Doncaster would be one of the richest places in the country. It is the same with David Higgins saying that making Crewe a rail hub will make it prosperous. Being a rail hub is the only reason that Crewe is there in the first place, and they are talking about more jobs being created in Crewe than their current population. When you look at these figures in depth, they seem patently absurd.

Q86 Lord Rowe-Beddoe: Referring to the east-west connection, which obviously has been coming up all the time, in the last few days Sir David Higgins is reported as saying that it is not only desirable but possible, et cetera. Could it be a stand-alone project, in your opinion?

Joe Rukin: The problem with HS3, as it is proposed at the moment, is that as with HS2 a decision seems to have been made in isolation, and the Government seem to have gone for the highest-cost option without really assessing the alternatives. We have said since the start that if you want to rebalance the economy, and create, as it is now dubbed, the northern powerhouse, you spend the money there, as I said in the example with Leeds. Again, there needs to be a strategy first—an analysis of what is needed. Arup reported just this year that you could effectively create a new trans-Pennine link by reintroducing 11 miles of lost track between Skipton and Colne. That is not the perfect commuter route between Manchester and Leeds, but it could move freight on to that line, and that could be done for £110 million, compared to the £7 billion that you are talking about with HS2. You could probably chuck in the Woodhead line from Sheffield to Manchester and still be paying about £500 million.

There is Beverley to York and numerous other places where you could reintroduce old track—in Skipton to Colne you could actually do four tracks for £110 million—but these things do not seem to have been looked at. The very odd thing I find with this HS3 argument is where it leads—the current plan for trans-Pennine electrification—because it seems that these plans do not necessarily work in isolation, because the HS3 plan, as it has been called, is clearly, in the main, about updating existing tracks. As Mr Weston indicated, if you are travelling at 125 miles an hour and you are calling it high speed, that means it is an upgraded track. It does not mean it is a new build. Maybe you have a section of tunnel that will be new build, but it has to be upgraded track, because you cannot call it high speed if it is new unless it is going 155 miles an hour.

Where it leaves the current trans-Pennine electrification we do not know, and that is worrying in some parts, because again earlier this year Network Rail said at the Transport Select Committee in the Commons that they could guarantee doing Manchester to Liverpool, but they could not guarantee doing beyond Manchester, because there was never
any real budget for the trans-Pennine electrification. That is the real question: where is this money coming from? There were a lot of other things that came out of the HS3 conversations. The Prime Minister said he was starting a conversation last week when the Chancellor said he was starting the same conversation back in June, so very little seems to have happened since then.

The thing with that is that we are really not sure what the absolute purpose is. If we are talking about spending £7 billion just to reduce journey times between Manchester and Leeds, you have the potential that you are actually reducing the services at the intermediate points between Manchester and Leeds, because besides improving the speed on the track the other way you cut journey times is by cutting out stops as well. Again, it is this whole problem that the north does not consist of Manchester city centre and Leeds city centre; the north has hardly started by the time you get to Manchester. If you really want to rebalance the economy you have to invest in these inter-urban and inter-regional systems, which deliver more benefits to more people, more quickly, and cost a lot less money.

Lord Rowe-Beddoe: Do you have a comment on that, Mr Weston?

Bruce Weston: The only observation I would make is that I think I would probably go along with Professor Overman, who addressed you on this earlier, who suggested that if your priority is regeneration, then intra-urban investments are likely to be a better bet.

Lord Rowe-Beddoe: May I then just in conclusion ask this question? Is HS3, in your opinion, as useless to us as HS2? You have been quoted as saying that it will cost £175 million a mile, I believe. What is your solution?

Joe Rukin: Our solution, as I said at the start, is to start with developing a strategy, not a policy; £175 million per mile comes from the Prime Minister’s own figures—£7 billion for 40 miles. That seems rather odd, because, as I said, that was achieved by saying that it is going to cost the same amount as HS2 does per mile. Well, HS2 only costs about £122 million per mile or £143 million if you include the trains. It is not that HS3 as a concept is a bad idea; it is that it is being done without really looking at the consequences. To be perfectly honest, it looks like something that has been announced just before the election, very much like the way HS2 was back in 2010, without any real justification for what it is about.

Lord Rowe-Beddoe: Mr Weston, do you have anything to add?

Bruce Weston: If I could just throw in one thought, it is that if you are looking for a transport solution to rebalance the economy, you are probably looking in the wrong place. It is completely ignoring the problems you have with skills.

Q87 Lord Lawson of Blaby: We are running out of time, so I will just ask one very brief question, and perhaps you would give a very brief answer. If the answer is “nothing”, that is fine, but you have obviously been paying attention to the previous hearings that we have had in this inquiry. Is there anything you think that we have overlooked? Is there any point that we need to address, which has not come up so far?

Joe Rukin: Some of the previous witnesses have not been certain about the validity of looking at international comparisons. However, that might be something that you would like to spend a little time on. Just last week the Mayor of Calais gave evidence through a translator in front of a Select Committee, and it is clear that the French have been paying attention to us, because the Cour des Comptes—I hope I am pronouncing that correctly—referred to a National Audit Office report in a recent report they did on the TGV, in which
they said that the problem with the TGV was overoptimistic passenger numbers, and that it was a worn-out business model that is irrelevant today and an incoherent assessment of the socioeconomic impact. It was very similar to the arguments that we are making about HS2, but about something that is 40 years down the line. The other thing that they said was that there were unsustainable costs, which is very much in key with what we have been saying. I suggest that getting some input from international comparisons could be useful.

Bruce Weston: I would make just one point: there has been very little discussion of the issue of how you assess the benefits of HS2, which is the comparator. What has been used is a “do the minimum” solution that is less than the minimum, and it has some very odd properties that grossly exaggerate the benefits that you ascribe to HS2. For example, it assumes, except for projects that are already committed, that you have in effect like for like replacements in perpetuity, because it assumes no improvements in capacity, journey times, energy consumption, or anything else that you get pretty well for free when you have a renewable. Using this “do the minimum” might be okay for a short-term project improving a roundabout, which takes a couple of years, but when you are looking over the sorts of timescales that HS2 involves, to operate with the “do the minimum” means that we are simply ignoring what will happen anyway. You are assessing the benefits on the basis of a “do the minimum” that is not capable of handling the demand, so you get a big plus for reducing crowding but not crowding that ever really exists; it is a creation of the way in which you have modelled the improvements.

One of the things that really does merit looking at is the “do the minimum” basis against which HS2 is assessed, instead of a proper “do the minimum”. Indeed, I think best practice dictates that you look at the best alternative. It might be quite difficult to do that, because the great thing about “do the minimum” is that it is mechanical, but it just gives you the wrong answer.

The Chairman: Thank you very much indeed. Those were very helpful answers. That brings an end to this first session, and if you wish to listen to the next witnesses, please do sit at the back. Thank you very much.
The annotations in red are HS2AA’s rebuttal of the points raised on HS2AA’s written evidence by the Department for Transport (DfT), which is in blue and black.

This note is intended to respond to the evidence submitted by HS2 Action Alliance (HS2AA) and covers the key issues raised by HS2AA.

Benefits
Journey Time Savings

Summary of HS2AA points
There is no proper basis for the current values used for time savings. Time savings account for 79% (£46bn) of the benefits claimed for HS2. (para 6)
DfT has been forced to admit that time spent on trains is productive. Mobile technology has greatly increased the utility of on-board time. Rather than remove this benefit…DfT simply relabelled the unit value a ‘willingness to pay’ figure. This is despite there being no pertinent survey evidence to support the switch or the values adopted. (para 8-9)
A more robust approach would be to accept that time saved is 100% productive, and that time savings no longer have a productive value. (para 11)
The other time savings (for walking, waiting, station access, interchanges) that make up £15bn of the £46bn benefits are also over-valued. (para 12)
Leisure and commuter travellers: The evidence used pre-dates the arrival of mobile technology so the values cannot reflect the improved utility of on-board time (para 13)

DfT response
76. Businesses benefit from reduced travel times in a number of ways, including improved access to suppliers or customers. Therefore, it follows that businesses should be willing to pay for quicker journeys and it is this willingness-to-pay which forms the basis of values of working travel time savings.

There are several issues with the value of business time: for rail travellers
• What should the unit value(s) be?
• Should the same unit value be used for both unproductive and productive time?
• How should aversion factors to things people don’t like doing, like waiting or travelling in crowded conditions, be valued?

For the October 2013 assessment of HS2, DfT changed their approach to valuation in several ways334.

First, they used 2010 survey evidence on the earnings of rail travellers, instead of escalating the results from surveys 10 years earlier. This produced a third lower unit value for business rail travellers (£31.96/hour).

Second, DfT changed the basis of valuing business time savings from the ‘cost of the time saved’ to the business to ‘willingness to pay’. This was a new approach to business time

334 This was documented in ‘Values of Time and Vehicle Operating Costs: TAG Unit 3.5.6’, October 2013, Department for Transport IN DRAFT.
savings. However, it calculates the rate from the earnings information exactly as it was calculated when the cost of time was being estimated.

The new values employed no new survey information to indicate that businesses are actually prepared to pay the entire cost of the time saved irrespective of whether that time at issue was already being used productively (as it is on board trains). Not only was there no supporting direct evidence of this, but it seems inconceivable that businesses would be indifferent as to whether their employees are working or not.

The October 2013 case also involved changes to the ‘aversion’ factors. Previously if the train was also crowded, or the traveller needed to wait on the platform, this was regarded as an inconvenience to the traveller, and treated not at the business rate but in the same way as the same inconvenience was treated were the traveller a commuter (which is expressed in time and costed at the commuter’s willingness to pay based unit value for time savings). In the October 2013 case the inconvenience was costed at the five times higher business unit value of time. Again this was done in the absence of any evidence that businesses were actually prepared to pay that much for their employees avoiding waiting and crowding (on top of the time itself). It also ignored the evidence that business travellers are little affected by crowding due to their booking seats.

As an aside, commuter and leisure travellers have always had the value of journey time savings assessed on a ‘willingness to pay’ basis. We would now expect that because the increase in journey time utility also applies to commuting and leisure travellers, a lower rate to apply to their on-board journey time savings. No such adjustment has been made.

The business case and the justification of HS2 being ultra-high speed are both dependent on the journey time savings being sufficiently valuable. That the value of these time savings is highly questionable is a serious defect in the case for HS2.

To reflect this the Department commissioned a review of UK and international evidence on the business values of time\textsuperscript{335} which demonstrated that the values used in the appraisal of HS2 correspond closely with the average values from the available revealed preference evidence on the willingness to pay for travel time savings.

Almost the entire of the international evidence is of values that are based on the cost of the time saved to business\textsuperscript{336}, not on willingness to pay, ie they use the basis that DfT is claiming to give up. These approaches have not been adjusted to reflect the increasing utility of time on board trains. Willingness to pay evidence is needed that specifically addresses the position of the travelling time at issue being productive (or more enjoyable). DfT have not claimed that they have such evidence which supports their position.

\textsuperscript{335} Institute for Transport Studies, University of Leeds (ITS Leeds) (2013), Valuation of Travel Time Savings for Business Travellers

\textsuperscript{336} ‘Valuation of travel time savings for business travellers’ ITS Leeds, April 2013, table 2.5 page 34
77. This study commissioned by the Department examined whether values of time have fallen over time in response to increased opportunities to use travel time productively. They found no evidence of there being a trend reduction in values over time. Furthermore, a recent values of time study in the Netherlands suggested that the proportion of business travel time spent working on a train has not increased since 1997. This is despite the significant technological change since that date.

As business time values are based on earnings, and the values take no account of recent improvements in the utility of time, it is obvious that they would not show a decrease. However, when other countries take into account the large improvements in the utility of on board time, we would expected them to use a new and much lower value for on board time than for savings in other time.

There have been a number of studies in the UK — and paid for by the DfT — that show an increasing trend for working on train. It is concerning that the DfT make no reference to them.

78. This study however, raised questions about the suitability of using an ‘average’ value of time in appraising high-speed rail schemes. In their report the authors conclude that the evidence across a range of studies supports a higher business valuation in the context of high speed rail, the report states: ‘across the central values for each study, the value of time was on average around 50% larger than the gross wage rate, and across the six UK studies it was 40% larger’.

It is likely that the average income of travellers on high speed trains would be higher than for ‘classic’ trains, and hence the cost of their time higher. One reason is that high speed trains have substantially higher fares. However, the DfT has been reluctant to admit that the fares would be higher, or that it is a transportation mode for the affluent that will be heavily subsidised.

79. The higher observed values may be the result of a number of factors, including:

- the long-distances served by high-speed rail services;
- the higher productivity of business travellers that make use of the services;
- the larger time savings offered by high speed rail schemes; and,
- other effects such as the ability to avoid overnight stays, and the additional productivity achieved by being able to spend more time with the client.

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337 Significance, VU University, John Bates Services (2012), *Values of time and reliability in passenger and freight transport in The Netherlands*, page 113
338 In particular the SPURT studies
Avoiding overnight stays might be a material consideration. But journey times within the UK are already low enough that this is rarely necessary, or where it is that half an hour off the journey time would make a difference.

80. On the balance of the evidence presented in the ITS Leeds study, we think that there is good cause to believe that high speed rail schemes should be assessed with values of time that are higher than the standard WebTAG values currently adopted in the HS2 appraisal. When a higher value of time is adopted which reflects the ITS Leeds study the BCR for the Y-Network including Wider Economic Impacts rises above 3.0.\(^{340}\)

If the value for the on-board timesaving is adjusted for usefulness, the BCR does not even reach 1. Time savings are the biggest benefit in the business case, and over-valuing them is distorting the decision process.

81. The approach adopted to valuing walking, waiting, station access and interchange is consistent with that described in the Department's appraisal guidance (WebTAG) and used across all transport appraisals including those for other rail schemes.

This change, to use business time values rather than commuter ones may be a change to webtag, but that does not make it right. However it is not mentioned in either the consultation paper that preceded it or in the draft guidance that accompanied the October 2013 business case. Indeed the draft guidance appears to state the contrary:

2.2.16 In appraisal, travel time savings on employer’s business are valued the same regardless of the stage of the journey, e.g. there is no weighting to take account of passengers’ reluctance to walk or wait. \(^{341}\)

It is highly questionable to make such a change in this manner.

82. The Department has commissioned a review of the comparability of the estimates of leisure and commuter traveller values of time used in the appraisal of HS2\(^{342}\) relative to other studies conducted more recently. This shows that the values we use are consistent with evidence from these more recent studies.

**Current % of business travel**

**Summary of HS2AA points**

The estimated current proportion of long distance rail business travel is not credible. The latest business case increased the proportion of business users by a third – from 28% to about 38%. (para 14)

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\(^{340}\) HS2 Ltd (2013), The Economic Case for HS2, [http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf](http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf), page 89

\(^{341}\) ‘Values of Time and Vehicle Operating Costs: TAG Unit 3.5.6’, October 2013, Department for Transport IN DRAFT

The latest approach remaps ticket type data to journey purpose (using assumed conversion factors), rather than using the extensive readily available survey evidence. This is despite: (para 15)

- The fit of the new estimates to the survey evidence is very poor
- The survey evidence is consistent with the previous estimates of business travel
- The survey is large scale, frequent and the basis for commercial rewards, making it highly reliable.

Passenger Focus conduct the National Passenger Survey…….shows that Virgin Trains (the operator of the fast trains on the WCML) have about 30% of passengers travelling on business and all long distance services about 26%. (para 16)

DfT response

83. The National Passenger Survey data used by HS2 Action Alliance is not directly comparable to the data used in the economic case as it has a different definition of long distance trips. The HS2 Economic Case assumes long distance as being trips above 100 miles whereas the HS2AA have used data from the National Passenger Survey which considers all trips made on Train Operating Companies which provide long distance services, regardless of trip length. The journey purpose splits is adjusted using weighting supplied by the Train Operating Companies however, it is not clear what evidence these weights are based on.

DfT may be correctly reporting the proportion of trips that are on business which are made between city centres. Leisure and commuting travellers rarely have their origin in a city centre – rather than in a suburb or the hinterland. What matters is the journey purpose of the people on the trains, not that of the sub-set of those who are travelling only between the city centres.

The stopping patterns of Virgin Trains are such that if a passenger is travelling to or from London, they are very likely to be making a journey of 100 miles.

Virgin Train services are split by Passenger Focus into the various routes or services. The proportion of business travellers is actually highest on the services with the shortest maximum journey length (ie the London-Birmingham-Wolverhampton services). This offers no support to DfT’s view that the Passenger Focus percentage of business travellers is not representative of those making 100 mile or longer journeys.

84. Analysis of the National Travel Survey between 2002 and 2010 suggests that of those making long distance (journeys > 100 miles) weekday rail trips between London and the East Midlands, Yorkshire and Humberside, 41% are business travellers while for journeys between London and the West Midlands, North and West this proportion is 42%.

DfT has previously criticised HS2AA for using NTS as evidence that people are not making more journeys, specifically they have stated that the 7 journeys per annum is not

343 Department for Transport (2012), National Travel Survey
statistically reliable! Those making rail journeys account for 1.3 of these 7, and those meeting DfT’s specification only a proportion of this 1.3.

Passenger Focus use a far larger sample of long distance rail travellers. NPS now has a sample of about 350 long distance rail trips for the entire UK each year. Passenger Focus have a sample of about 1,230 rail trips for Virgin Rail alone every 6 months. It is a vastly more reliable basis for estimating journey by purpose.

85. Prior to the October 2013 HS2 Economic Case the journey purpose of trips was determined by using ticket sales data to examine the type of ticket sold (full price, open etc.) and making assumptions about the relationship between the ticket type and the journey’s purpose. This approach had the following limitations:

- The relationship between ticket type and journey purpose was based on national averages and did not vary according to distance or region; and,
- Analysis of the National Passenger Survey data, shows that more business trips are now being undertaken using reduced or advanced purchase tickets and this was not reflected in the data and assumptions used.

86. To reflect these limitations HS2 Ltd revised their approach to calculating journey purposes. Journey purpose splits are now directly sourced from the National Rail Travel Survey on a geographically specific basis recognising that the number of commuting/business/leisure travellers varies significantly by route and distance. This reflects both the nature of the destination – with large cities and conurbations attracting a significantly higher proportion of business trips – and the degree of competition with other modes for business travellers.

The National Rail Travel Survey reports a high level of agreement with the National Passenger Survey results. It is unclear why there is an apparent divergence between NRTS and NPS, as both surveys are large enough to generate statistically robust results, unless DfT is considering only ‘city centre to city centre’ trips, as suggested above. Prior to the October 2013 business case there was a close correspondence between the proportions of journeys by purpose used in the HS2 business case, and the results from NPS. NPS is produced twice a year, whereas NRTS is only conducted occasionally (last in 2010). DfT could ask Passenger Focus to extract the information on trips of over 100 miles from their data.

The October 2013 business case also assumes that 56% of the 26% of travellers who would be making entirely new journeys would be business travellers. The basis for this is unclear.

Crowding

Summary of HS2AA points
Crowding benefits (worth £7.5bn) are ascribed to HS2 on the basis that crowding will be less on HS2 than the “do minimum” alternative (which is based on currently committed developments only). (para 20)
The crowding benefits are entirely an artefact derived from the use of an unrealistic ‘do minimum’ comparator, rather than a realistic and credible alternative. (para 22)

DfT response

87. Modelling the impacts of HS2 requires the scheme to be compared to the alternative of not building HS2. If HS2 is not built there will still be growth in long-distance rail travel344 and there will be some investment that is already planned for the current rail network.

88. The HS2 do-minimum reflects all committed investment on the current rail network known at the time the modelling was conducted. Similarly our forecast of do minimum demand takes account of the latest evidence available at the time the modelling was done.

The Treasury Green Book defines the do minimum option to be:

‘An option where government takes the minimum amount of action necessary.’

The ‘do minimum’ option in the HS2 appraisal is, except for already committed schemes to keep the supply system as it is for the entire appraisal period (to 2092), which is less than, and different from, doing the minimum because:

- The supply is insufficient to support the forecast demand. The ‘do minimum’ demand is forecast without regard to the supply constraints inherent in the ‘do minimum’ supply case. As a result the forecast implies unrealistic levels of crowding in the ‘do minimum’ case, the relief of which by HS2 is a modelling fiction.
- It assumes perpetual renewal on a like-for-like basis. Assuming renewal with obsolete technology is perverse. As an example, for the intercity lines, ERTMS will be implemented on signalling renewal, with increased capacity, lower costs and shorter journey times
- The 51m Optimised Alternative is more realistic ‘do minimum’

89. This is the standard approach for assessing all transport schemes as specified in the Department’s Transport Appraisal Guidance, WebTAG.

This is not a matter on which the DfT should congratulate itself. Best practice requires performing cost benefit analysis against the next best alternative. A ‘do minimum’ should involve the minimum interventions (ie renewal on a new for old not like-for-like basis), and not only those improvements that are currently committed.

DfT’s approach to the ‘do minimum’ may make sense for short term schemes, but makes no sense for HS2 that is not complete until 2033 and is assessed to 2092.

90. While it is recognised that further investment in the rail network will continue beyond committed schemes and indeed, beyond the construction of HS2 itself it would not be appropriate to hypothesise about not least because it is likely that many future schemes will complement rather than replicate the benefits generated by HS2.

The HS2 assessment does not address the core questions: what benefits would HS2 deliver above those that will arise anyway or with the best alternative; and how much more does HS2 cost than the minimum needed, or the best alternative?

The approach taken in the HS2 appraisal of assessment against a ‘do minimum’ that has committed schemes and otherwise retention of the current state may be easy to model, but gives an entirely unrealistic view of HS2’s benefits.

It is necessary to develop a ‘do minimum’ which does not incorporate inadequate and perverse assumptions, and it is entirely appropriate to identify the best alternative and assess HS2 against it.

Taking such an approach would particularly affect HS2, because it is new railway that makes no contribution to transport until it is built, so that the ‘do minimum’ is largely a sunk cost with or without HS2, while HS2’s net benefits are materially reduced from the current assessment.

91. Further details of do-minimum assumptions can be found in Annex A. These committed improvements deliver a 10% increase in peak hour capacity from Euston.345

Costs

Summary of HS2AA points

The case for HS2 fails to include some major items (para 25):

- The cost of capital – funding for HS2 is currently treated as ‘free’ money
- The cost of connecting HS2 to existing infrastructure
- Incorrect cost escalation – a mismatch in the treatment of costs and benefits
- Social dis-benefits e.g. uncompensated property blight – their omission is illogical

DfT response

92. Departmental budgets are set by the Treasury, which considers the debt and financing cost implications of different budget levels. Therefore, for public investments, appraisal aims to demonstrate the benefits per pound spent from the available budget.

93. Incorporating a 2.5% real cost of capital in the construction cost estimate, could in fact improve the Benefit Cost Ratio (BCR). If HS2 is financed by debt, the cost would be spread over a longer time period, which could – depending on the exact terms of the loan and the interest rate – push down the Present Value Costs (PVC) and improve the BCR.

94. For example, if we assume an interest rate of 2.5% with an interest only loan covering the period of construction supported by a 30 year mortgage once operation of the full network has begun, the BCR increases from 2.3 to 2.6.

Assuming a cost of capital that is less than the discount rate and deferring payment of the capital, will naturally result in a lower net present cost.

DfT considered uprating the existing railway as an alternative to building HS2. In doing so they assessed leasing rolling stock rather than purchasing them outright. Leasing reduced the BCR, because the cost of finance increased the net present value of costs. On a consistent basis, taking account of the cost of finance would increase the costs of HS2.

95. Supplementary schemes to HS2 should be considered on their own merit with separate business cases. These schemes will generate their own benefits which have not been captured in the Economic Case for HS2. The benefits which have been calculated in the Economic Case for HS2 are not dependent upon the realisation of those supplementary schemes. The HS2 scheme is consistent with the 2013 Hybrid Bill and consultation.

Supplemental schemes should be considered on their own merits only when the assumed benefits of the core HS2 scheme are deliverable without the supplemental scheme. This is not always the case.

Take the example of Euston: dispersal at Euston is stretched currently. The arrangements simply could not cope with the additional passengers that would use Euston with HS2. Improvements must be made to the dispersal at Euston if the claimed door-to-door journey time reductions are not to be lost trying to get into and out of Euston. This is why TfL have insisted that Crossrail 2 is part of the cost of HS2.

96. The government aims to ensure that owner-occupiers whose properties (and property values) are most directly and specifically affected by the proposals for HS2 are eligible for compensation; and that those eligible for compensation receive fair and reasonable settlements reflecting the location and circumstances of their property.

The only costs for loss in property values that are included in the business case are those of the Government compensation schemes. These exclude the majority of properties that have lost significant value.
Properties included in the Government schemes are either those needed to be safeguarded or within 120m of the line in rural areas. A small number of additional cases (expected to be about 40-50 per year) will be covered under hardship scheme arrangements.

The statement made about eligibility is grossly misleading, as it ignores the fact that the majority of properties that have lost significant value are only potentially eligible under the hardship scheme, with only a minute proportion of owners in personal circumstances that will qualify as ‘hardship’.

97. While there is no real cost increases assumed beyond 2036, the same is also true of rail fares. Furthermore, no allowance is made for efficiency savings and productivity improvements which one would expect to occur over the lifetime of HS2.

Importantly real incomes, used for calculating the value of journey time savings, are assumed to increase right through to 2092. But labour costs for HS2 are assumed to stop increasing in 2036. It is the inconsistence of treatment between costs and benefits that seems wrong.

It is wrong to say that no costs are assumed to have real increases beyond 2036. The cost of diesel is modelled to increase. However, in the way that the sums are done for HS2, this is a benefit to HS2’s business case.

**Benefit Cost Ratio**

**Summary of HS2AA points**

There are also concerns with the BCR itself, particularly given the uncertainties (para 37):

- The “standard case” results are unsound – inappropriate use of value for money test; its ‘do minimum’ assumption, the period of evaluation and assessment of demand/use of the cap
- Inadequate sensitivity testing of the results

**DfT response**

It seems that DfT offer no response to the criticisms that:

- The period for including benefits (for 78 years into the future) is unrealistically long and effectively unforeseeable. A far shorter valuation period should be used and the resultant BCR would be much lower. Assessing benefits to 2050 reduces the BCR to less than 0.5.
- The ‘do minimum’ basis implicitly assumes like-for-like renewals to the end of the evaluation period, despite the certainty that renewal with even current technology would create improvements to capacity, reductions in journey times, energy savings, etc
- The ‘do minimum’ basis is entirely unrealistic as a characterisation of the rail system to 2092 and unsuited for use in assessing HS2
- The ‘do minimum’ basis is inconsistent with the demand that is forecast in the absence of HS2
• Best practice in cost benefit analysis does require comparison with the best alternative not an unrealistic ‘do minimum’
• The range of sensitivities considered fails to include reasonable low rail growth and low values for journey time savings
• The categorisations of value for money are misapplied to the BCR with Wider Economic Impacts and should be applied to the base BCR

98. The value for money test has been applied appropriately in the Economic Case for HS2, the BCR is presented both with and without Wider Economic Impacts as recommended in the Department’s Transport Appraisal Guidance (WebTAG).

As Prof Overman stated in his oral evidence, HS2 is in the bottom decile of DfT’s projects for value for money.

99. Modelling the impacts of HS2 requires the scheme to be compared to the alternative of not building HS2. If HS2 is not built there will still be growth in long-distance rail travel and there will be some investment that is already planned for the current rail network.

100. The HS2 do-minimum reflects all committed investment on the current rail network known at the time the modelling was conducted. Similarly our forecast of do minimum demand takes account of the latest evidence available at the time the modelling was done. This is the standard approach for assessing all transport schemes as specified in the Department’s Transport Appraisal Guidance, WebTAG.

While this approach may be suited to short term projects, where only pre-existing commitments need to be taken into account, this is not a satisfactory approach for a long term appraisal, as for HS2. It is unsatisfactory to implicitly assume that life expired equipment is replaced with the same obsolete equipment, rather than recognise that renewal will lead to improvements. On a timescale of 20+ years to the scheme’s full implementation, a better approach is needed.

101. While it is recognised that further investment in the rail network will continue beyond committed schemes and indeed, beyond the construction of HS2 itself it would not be appropriate to hypothesise about not least because it is likely that many future schemes will complement rather than replicate the benefits generated by HS2.

The journey time savings assumed cannot be realised without a resolution of the Euston dispersal problem. In assuming the time savings, DfT implicitly assume that the issue will be resolved, albeit they make no allowance for the cost.
102. Further details of do-minimum assumptions can be found in Annex A. These committed improvements deliver a 10% increase in peak hour capacity from Euston.  

103. A key principle of the Departments appraisal guidance WebTAG is that a defined appraisal period should be adopted which captures the planned period of scheme development and implementation and typically ends 60 years after the scheme opens. It is this principle which is adopted in the appraisal of HS2 and is consistent with other transport appraisals conducted by the Department.

104. The HS2 Economic Case has been tested against variation in a wide range of variables including:

- Demand growth and the demand cap;
- Values of Time;
- Construction Costs; and
- Fare growth;

This analysis shows that the Economic Case for HS2 is robust to a wide range of scenarios. In more than 75% of the scenarios tested the Y-Network represents high value for money.

The obvious sensitivities not tested were:

- Demand growth only in line with population growth (about 15% to 2036)
- The value of time for reductions in the on-board journey time, to be zero or half the normal values
- Classic rail savings are not achieved, and a far smaller proportion of travellers transfer to HS2
- The number of entirely new travellers induced by HS2 is far smaller than the 26% assumed

**Economic Growth and Transport**

**Summary of HS2AA points**

*There is no longer a relationship between economic growth and domestic transport – crucial to the HS2 case – in either the UK and other developed economies (para 48)*

*David Metz has demonstrated that the link between economic growth and domestic transport is broken…. While there was a clear relationship until about 1997, since then economic growth is not mirrored by a corresponding increase in domestic travel (para 50)*

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There is no evidence of saturation in rail demand – people are making more trips by rail than ever before. The distance travelled per person per year on surface rail has increased by over 30% since 2002.  

There is a persistent failure to put rail in context. Domestic transport has been growing only in line with population. Rail has gained a larger share of transportation.

The obvious questions are:

- At what rate will domestic transport grow?
- What will happen to rail’s share (bearing in mind it previously declined from the Second World War to the mid-1990s)?

Given the lack of growth in domestic transport per person as a whole, it must be reasonable to consider the possibility that it continues as it has for the last 18 years. Because projected population growth is concentrated in the elderly who travel little, this may actually be an over-estimate.

Rail’s share of domestic transport cannot grow indefinitely. Many journeys are unsuited to be made by train. To understand what is likely to happen a good understanding of the determinants of modal share is required. DfT have ignored the improvement of rail travelling time utility despite it being commonplace that this is a reason for the increased rail usage.

There is evidence of a strong positive correlation between transport demand and economic growth. Failing to invest in transport infrastructure may constrain economic growth, pushing the capacity of a network to the limit and thereby constraining (or even reducing) the productivity of an economy through negative effects such as congestion and overcrowding.

Evidence from the Organisation for Economic Co-Operation and Development (OECD) suggests that investment in infrastructure is important for growth and that building better transport links can have a stronger positive effect on GDP than other forms of investment. The CBI has stated that “Quality infrastructure is vital for boosting exports, unlocking business investment across the economy.”

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349 Department for Transport (2014), National Travel Survey, NTS04010
HS2 Action Alliance—Supplementary written evidence

UK, and supporting our leading firms – an essential element of a meaningful industrial strategy.”

108. In the IMF’s October 2014 World Economic Outlook, analysis finds a strong case for increasing public infrastructure investment in countries where conditions are right. The study found raising public investment by 1 percentage point of GDP would increase the level of output by about 0.4 percent in the same year and by 1.5pc after four years.

109. Transport is not an end in itself but an enabler which can unlock potential and help the economy to grow. By investing in transport infrastructure we can help connect people to employers and enable businesses to access a greater supply of workers. Transport also enables improved connectivity between businesses, their clients, partners and competitors.

110. Recent UK evidence indicates the role transport has in widening the pool of available workers for businesses. Network Rail concluded that GDP per worker tends to rise along with ‘effective density’ as a result of higher concentration of businesses in urban areas.

It is curious that Graham and Melo are quoted in this context. There seems no doubt that improvements to intra-regional transport can create agglomeration benefits. This was a material part for the case for Crossrail. But in work for HS2, Graham and Melo demonstrate that high speed rail will not result in appreciable agglomeration benefits, ie at most £10m/a for a larger high speed rail network.

111. A recent study by Centre for Cities on “Transport Priorities for Stronger Cities” suggests linking larger more productive cities with faster and more frequent transport. This can enable greater business to business connectivity and give business access to a wider pool of labour both of which can drive economic growth.

Demand


HS2 Action Alliance—Supplementary written evidence

Summary of HS2AA points

HS2 are at pains to argue that their demand estimates are conservative. This is transparently incorrect, when their estimates are set in the context of recent trends in domestic travel. (para 53)

A study of more than 200 infrastructure projects showed that there is a tendency to overestimate passenger forecasts by more than 100% on rail projects. HS2 does not look to be an exception. The demand modelling exaggerates demand for HS2 because (para 54):

- The projected background growth is unlikely to happen;
- The uplift in demand assumed from introducing HS2 is too large; and,
- No allowance is made for new technology that will remove rail’s current competitive advantage (from mobiles etc making on-board time useful), which may reduce rail demand.

Background long distance rail travel growth, i.e. without HS2, is unlikely to happen because (para 55):

- Domestic travel (all modes) has been a saturated market for a long time
- Long distance rail demand has now flat-lined
- The demand model used to predict large future rail growth is defective, and produces an estimate of growth 5 times greater than population growth.

Business travel generally is declining: Domestic business travel is also not growing in absolute terms (in kilometres per annum). It is not growing measured with either GDP or population. Since 1996 GDP has grown by 40%, population by 10% (and 5% since 2005) but business travel has fallen by 10% (and 16% since 2005). So a link to GDP growth no longer exists (para 58).

Defective rail demand model: The rail modelling for HS2 that predicts future rail growth (at 2.2%/a for next 25 years or 79% increase by 2036) is based on a version of the Passenger Demand Forecasting Handbook. It is defective and results in too optimistic a forecast (para 61).

DfT response

DfT offer no response to the evidence that domestic travel in total is saturated, which provides a crucial context against which to judge forecasts of rail travel.

112. The figure below demonstrates that long distance rail travel has grown faster than all other modes of transport.

**Figure 4 – Demand growth across all transport modes**
113. Rail travel has doubled over the past 20 years from 740 million to 1.5 billion journeys per year\textsuperscript{358} and the population of Britain will increase by almost 10 million over the next 25 years\textsuperscript{359}. In the decade from 2002 to 2012 the annual growth in long distance rail travel was 5.2\%\textsuperscript{360}. The figure below demonstrates this long-term trend growth in rail demand for services across the network including long distance journeys.

**Figure 5 – Long-term growth in rail travel**

\textsuperscript{358} Office of Rail Regulation, ‘Passenger Rail Usage’, \url{http://dataportal.orr.gov.uk/} [Accessed 3 September 2014]


\textsuperscript{360} Office of Rail Regulation, ‘Passenger Rail Usage’, \url{http://dataportal.orr.gov.uk/} [Accessed 3 September 2014]
114. There is no evidence of saturation in rail demand. The distance travelled per person per year on rail has increased by over 30% since 2002.\textsuperscript{361} The annual rate of growth for long distance rail is now much lower than the 2002 to 2012 average. Leading rail journalist, Roger Ford, recently published an article\textsuperscript{362} suggesting that rail growth had recently flat-lined, so some commentators think there is already evidence of ‘saturation’.

115. There are two reasons to believe that the assumption we make about long term demand growth in the standard appraisal may be conservative. First, our appraisal assumes demand growth equivalent to just 2.2% a year. Second, it assumes that after 2036 – only three years after opening – there will be no further growth in the number of people using HS2 for the next 57 years.\textsuperscript{363} This does not even allow for population growth to generate additional demand.

The 2.2% assumes that economic growth will drive greater rail travel per person, although this has not been occurring with domestic travel in total for decades. Also, HS2 is modelled as getting an additional 26% of its passengers as entirely new travellers because journey times are shorter, and another 5% transferring from car and air for the same reason. And there is nothing inevitable about rail travel increasing. From the Second World War to rail privatisation, total rail travel was roughly constant and rail travel per person consistently declined.

\textsuperscript{361} Department for Transport (2014), National Travel Survey, NTS04010
\textsuperscript{362} ‘The Growth Delusion’, Roger Ford, Modern Railways, August 2014
Had premium pricing been considered, the demand uplift and model transfer would be reduced because of it.

Long term demand forecasts are highly uncertain.

116. It is true that the average number of trips and miles per person made for business purposes has decreased over time. However, this is not true of rail. Whilst people travelled less on business by rail during the worst years of the recession (2007-2010), since 2010 the number of miles travelled on rail for business per person per year has increased by almost 60%\(^\text{364}\)\(^\text{364}\).

The business use of rail has increased. But the NTS data relates to mainline and the Underground, and the data are taken selectively. The 2009 rail business mileage per person exceeded the 2010 level by 28%. Due to the small sample sizes, the statistical errors on this mileage will be large. The mileages relate to an average of around 2 rail business trips per annum per person.

117. The overall cross modal decline in business travel is largely due to a fall in the number of business trips made by those driving a car (down from 26 in 2002 to 22 in 2012)\(^\text{365}\)\(^\text{365}\). It has been argued that this is likely to be largely caused by the declining use of company cars following the removal of free fuel allowances in the early 2000s.\(^\text{366}\)

118. It has been argued that telecommunications and travel have risen together through many historical technological advancements and there is no compelling reason to assume that current and future events will dramatically alter that relationship\(^\text{367}\).

119. Our general approach to forecasting demand growth is based on standard industry practice as described in the Passenger Demand Forecasting Handbook.

The PDFH is a short term model, extensively used for predicting ridership and rail revenues for railway franchises, particularly in bidding. The 2006 Eddington Transport Study summarised its capabilities as fit for forecasts up to 10 years\(^\text{368}\) specifically because of concerns about demand saturation. In the HS2 demand forecasts, a cap on demand growth is applied in 2036, 23 years from when the forecast is made.

\(^{364}\) Department for Transport (2014), National Travel Survey, NTS04010
\(^{365}\) Department for Transport (2014), National Travel Survey, NTS0409
\(^{367}\) Mokhtarian (2003), Telecommunications and Travel: The Case for Complementarity, Journal of Industrial Ecology, Volume 6 Number 2
\(^{368}\) ‘Inter Urban Rail Forecasts’ section 3.17. ‘Whilst the trends may be a consistent basis for forecasting forward through time, they do not account for saturation of demand in the rail market, and as such, confidence in such an uncapped forecasting procedure must reduce considerably for forecasts beyond 2016.’ Eddington, 2006
120. There is no systematic upward bias in the methodology used to forecast rail demand. The Department in its 2007 ‘Delivering a sustainable railway: White Paper’ prepared a set of demand forecasts which predicted demand 6% lower than actual data in 2012/13\(^{369}\). Had we predicted the economic downturn and accounted for it in our projections in 2007, the gap between predicted and actual demand would have been even larger.

It seems clear that one of the factors that has driven rail growth is the usefulness of onboard time because of the growth of mobile technologies, and this may have boosted rail demand through the recession. In his instructive account of rail demand modelling, Tom Worsley\(^{370}\) recognises that this factor may be important, accepts that no attempt was made to take it into account, but suggests that difficulties in predicting its future value and application to other transport modes (eg automated cars) tell against it.

Leaving something important out of a forecasting model is a double wammy: you fail to take account of it when it and its effects change; and you attribute the affect to something to which it does not belong. If Google cars (or something similar) take off, rail’s current advantage diminishes. How will that affect rail demand? For a long term forecast, this clearly matters.

121. Even with a more conservative approach which lowers demand cap by 20%, HS2 still has a strong economic case. The value for money of the scheme is lower but the expected BCR would be almost 1.5\(^{371}\). In reality, demand saturation is unlikely to happen overnight like a demand cap but more likely to slow gradually over a number of years.

DfT’s view of low rail growth is still pretty high, and they offer no rationale for denying there is a real prospect that rail’s share will cease to grow at some point – or even reduce. In our view 2.2%/a plus the uplift from reduced journey times is not conservative. 2.2%/a gives nearly 5 times the increase in population growth, and relies on both a link to economic growth and that technical advances do not erode train’s advantages.

Capacity

Summary of HS2AA points

It is argued by the Government, for example by Patrick McLoughlin and Baroness Kramer, that additional long distance capacity is urgently needed on the WCML, and this underpins the need for HS2. But the WCML currently has considerable spare capacity. (para 65)


\(^{370}\) Using the Passenger Demand Forecasting Handbook: On the Move – Supporting Paper 2, Tom Worsley, Dec 2012, section 5.5 page 21

.... The railway carriages are half empty. Data released to the High Court (as part of 2012 HS2 Judicial Review challenge) showed that the average evening peak load factor (the ratio of passengers to seats) for InterCity services from Euston was only 52% (or 229 passengers/train). (para 66)

This loading data is before 35 out of the 56 Pendolino trains used on the route were lengthened from 9 to 11 cars, completed by 2013 giving an additional 150 standard class seats in each train. This reduces the 52% evening peak loading to about 43%. (para 67)

It is the commuter trains and not intercity services (that HS2 is designed for), that have the chronic overcrowding on WCML. (para 68)

There is proven potential to increase capacity on the existing WCML route without HS2. (para 70)

The 51m ‘optimised alternative’ was costed by Network Rail at £2bn and Atkins for DfT gave it a net benefit ratio of 5.17 (compared to HS2 at under 2 at that time). Disruption to create the extra capacity is minimal and similar to ongoing current works.

DfT response

122. Extra capacity provided in recent years has filled up more quickly than expected. Since being upgraded, the West Coast Main Line has seen trip growth of 36% between 2006 and 2009. The congestion on the WCML also has a noticeably detrimental effect on the reliability of intercity and commuter services that use it, with performance targets regularly not met and below the national average.

Roger Ford (Modern Railways, March 2013) suggests that the growth is actually less than would have been expected on the basis of the previous WCML upgrade.

The long distance services on WCML remain exceptionally empty. DfT allowed an option to lengthen the entire WCML Pendolino fleet to be 11-car to lapse, leaving 21 sets as only 9-car. With average peak occupancy of only 53% it seems that seems to have been the right decision.

The Virgin Trains rolling stock is so empty that it is an embarrassment to Government in their pursuit of HS2. The Government refused to release passenger count information that shows just how empty they are, and only did so when forced to in court in 2012.

123. Latest data (originating from 2013) shows:

- On average 4,800 people are standing on arrival into London Euston in the AM peak with 4,200 standing in the PM peak.

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For trains arriving at Euston during the morning peak, 21% were over capacity and in total 50% had passengers standing.

Outside London, Birmingham had the highest number of passengers with 39,000 arriving into the city centre in the AM peak. On average there was 3,500 people standing on arrival into Birmingham.

Sheffield experienced the largest increase in crowding in the morning peak compared to 2012.

Analysis shows without HS2 by 2026 there would be:

- At least 150 people for every 100 commuter seats into Euston and Birmingham New Street in the peak hour; and,
- More than 100 passengers for every 100 seats on intercity West Coast Mainline services.

Quoting statistics on people standing on commuter trains obfuscates the issue of capacity. HS2 is a new long distance railway with at best indirect effects on commuting capacity. The new commuter trains being brought into service and planned for the future have fewer seats and more standing. It is policy to have fewer seats, directed at increasing commuter capacity.

The references to commuter and inter-city services being full in the absence of HS2 relate to an unrealistic ‘do minimum’ and a demand forecast inconsistent with it.

Government claims that released capacity on the fast lines could provide additional commuter and freight traffic are ill-founded as:

- Mixed traffic on the fast lines would greatly reduce their capacity
- The indicative service pattern published in 2013 leaves no spare capacity, as the potentially spare train paths on the fast lines are consumed by less efficient stopping trains to provide ‘intercity’ services to cities bypassed by HS2.
- Realistic pricing assumptions would mean that cuts in intercity services would be hard to make as many passengers would prefer to pay less and continue to use them.

The railway is effectively the same size as 15 years ago, but there are now around 4,100 more train services a day; an increase of c.25%. The West Coast Mainline is operating at a level of intensity that is making it extremely difficult to achieve target levels of performance reliability.

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374 DfT (2013), ‘The Strategic Case for HS2’, https://www.gov.uk/government/publications/hs2-strategic-case, Figure 7, page 17
375 See ‘HS2’s service plans’, Chris Stokes, ‘Modern Railways’, March 2013
376 HS2 Ltd analysis of data supplied by the ORR (1998/99, trains planned) and from the ORR Data Portal
The railway has been subject to numerous minor upgrades, and some major ones. The Office of the Rail Regulator in September 2014 granted permission for additional long distance services on WCML between Liverpool and Shrewsbury and London, so presumably they do not entirely share the DfT’s view.

126. The Public Performance Measure (PPM) is the rail industry’s main measure of punctuality and reliability, measuring the percentage of services arriving at their final destination on time. PPM in Great Britain has stayed fairly constant at around 90% since 2007/08, but has fallen in the last two years. Long distance operators such as those operating on the West Coast and East Coast Mainlines had the lowest PPM in 2013/14 at 87%.

Figure 6 – Rail industry PPM (all operators)

Analysis by Atkins shows that upgrades to the existing railway will not achieve our objectives. The optimized 51M option would only increase the number of seats out of Euston by 36%. At 2.5% per annum passenger growth, the extra capacity would be used up in the 2020s, with no further options to upgrade the WCML:

- It would fail to offer a robust solution to the problem of poor service performance.
- It may not support job creation to the extent of HS2 and not match the regeneration opportunities available;
- delivers much smaller journey time benefits; and
- would likely result in significant disruption to passengers during the

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The suggestion that there is insufficient provision of capacity in the 51m solution is incorrect. The additional capacity provided by the 51m solution needs to be set in context of the capacity already available that is greatly underutilised. The 51m solution accommodates all the long distance demand that DfT have forecast to 2036, and DfT have accepted this.

The only technical development that DfT seem to incorporate in their assessment of HS2 is high speed rail itself.

As an example, before the second phase of HS2 is complete the fast lines on the UK network should have been signalled with ERTMS. The Great Western route to south Wales is already being fitted. ERTMS allows more trains to be run on the same lines, with greater reliability and speed. It is expected to be implemented on signalling renewal, and cost less than the existing technology. The assessment of HS2 fails throughout to appraise HS2 in the context in which it would exist and against what seems to be the best alternative. The use of their ‘do minimum’ comparator grossly exaggerates benefits.

In consuming at least £45bn less capital for a practicable rail solution, the extra money that HS2 costs could be spent on the multitude of projects with higher return, creating more wealth and employment.

The 51m solution would produce smaller journey time savings, although we believe that they are worth less than DfT contend. But 51m would do miniscule environmental damage compared to HS2.

HS2 would result in massively more disruption to existing travellers than the 51m option. Rebuilding Euston for at least 10 years, during which platforms are reduced from 18 to 13 platforms and approach tracks reduced from six to four, will make it difficult to maintain more than an off-peak service, as HS2 Ltd previously admitted in evidence to the Transport Select Committee and is documented in response to Freedom of Information requests from HS2 Action Alliance.

Environmental Implications

Summary of HS2AA points
HS2 is opposed as needlessly environmentally damaging by a range of environmental pressure groups including the Green Party. (para 75)

DfT response

128. HS2 is a project that is vital for this country’s future economic growth but we all recognise that constructing a project of this scale is clearly not possible without some environmental impacts. By planning this project sensibly we have

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See the article reporting this: ‘Millions will face transport chaos because HS2 work ‘will cause a decade of disruption on West Coast mainline”’, Ray Massey, Daily Mail, 7 March 2014
sought to reduce adverse environmental effects as far as possible. For instance, of the 143 miles of the Phase 1 railway, over 79 miles is in cutting or tunnel.

The Government has admitted in their presentation to the HS2 Hybrid Bill Select Committee\textsuperscript{380} that there is no tunnelling at all planned for environmental reasons, despite cutting swathes through tranquil countryside, ancient woodlands and an Area of Outstanding Natural Beauty.

129. Environmental mitigation is something that has been considered from the very beginning of the project meaning that reducing environmental effects is hard-wired into the railway it is not something that has been bolted on at the end. The Government’s aim is to seek no net loss in biodiversity. This is incredibly ambitious for a project as big as this.

130. We have taken a responsible approach to the environment but ultimately, following the principles of sustainable development, a balance needs to be struck between the economic, social and environmental effects of a project.

131. Even the environmental effects are themselves a balance, as measures to avoid or mitigate one environmental effect might cause another. For example, to mitigate flood risk you might want to raise the railway above the ground but to mitigate visual effects you might want to lower the railway into the ground.

This confuses how the environment may affect HS2, eg flooding causing a cessation of services, with how HS2 affects the environment, eg by introducing massive noise and visual pollution. This is not an example of balancing environmental factors, but an explanation of why HS2 is as obtrusive as it is planned to be when it crosses flood plains.

132. The Environmental Statement published on 25 November 2013\textsuperscript{381} provided a balanced, professional assessment of the anticipated effects of the proposed scheme. This Environmental Statement represents the largest environmental impact assessment ever undertaken in the UK, and builds on the previous work in the Appraisal of Sustainability. In total, this represents over 3 years work so far by some of the best environmental specialists in the country.

On the Governments own admission the Environmental Statement is so deficient that they need to make a new ecological baseline study. The need for this was identified by the Commons Environmental Audit Committee. In the absence of this, the Governments ‘aim’ to achieve no net loss in biodiversity is pure window dressing.

133. In operation savings from mode shift, freight uptake of released capacity and tree planting exceed direct emissions from Phase One of HS2 – representing a saving of around 3 million tonnes of CO2 equivalent gases over 60 years from 2026 that

\textsuperscript{380} 20 October 2014
would otherwise accrue if HS2 didn’t exist and journeys had to be taken through other modes.\(^{382}\)

We have challenged these assertions on the basis of expert advice we commissioned for our response to the consultation on the Environmental Statement. We believe that carbon emissions are underestimated, due to incorrectly drawing the project boundaries, and because carbon reduction benefits from modal shift are not justified. We do not see how the reduction in road freight can be attributed to HS2, when no shortage of rail freight capacity is identified that HS2 relieves.

**Opportunity Cost of HS2**

**Summary of HS2AA points**

*It is surprising that a Strategic case for HS2 should not adequately review alternative investments (Para 84)*

**DfT response**

134. We have considered a wide range of alternative options to a high speed railway including:
   - the use of alternative modes,
   - a conventional speed line, and
   - upgrades to the existing rail network.

135. The appraisal of these alternatives has been the subject of several reports published since 2010, most recently in the Strategic Case for HS2 published in October 2013. The analysis demonstrates that whilst the alternative schemes may offer medium to very high value for money overall, they do not deliver the same scale of benefits as HS2. The benefits of the Phase One alternative would be 30% of those delivered by Hs2 Phase One. The benefits of the Phase One and Two alternative would be less than half of those delivered by the full Y-Network.\(^{383}\) They also fail to deliver the same level of capacity or journey time savings and would cause significant disruption on the existing rail network.

**Taking the 51m solution:**

- The additional benefits of HS2 are in the form of journey time savings, which are over-valued
- If 51m is treated as a ‘do minimum’, the incremental expenditure on HS2 has much worse return
- There is no virtue in creating capacity that is not required
- 51m would have negligible disruption effects on existing travellers (typical of ongoing upgrades) compared to HS2 and its rebuild of Euston

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\(^{382}\) HS2 Environmental Statement, Volume 3: Route-wide effects, p. 35

\(^{383}\) DfT (2013), The Strategic Case for HS2, page 133,
Costs under control

Summary of HS2AA points
It is plain that the Government are concerned to conceal an on-going lack of control of the HS2 project. Since the MPA first raised the alert status to amber-red, HS2’s costs have already risen significantly – from £32bn to £43bn for the infrastructure (in 2011 prices). (para 95)

DfT response

136. HS2 will be constructed within the funding envelope set out within the 2013 Spending Review. Sir David Higgins’ independent review of costs, published in March this year, confirmed that the cost estimate for Phase One is appropriate.

137. We have established a robust framework of delegations and approvals for Phase 1 in which to manage the funding thresholds held by HS2 Ltd, the Department and the HM Treasury ensuring there is a tight control and monitoring of cost as the Phase 1 project progress through Parliament and beyond.

138. The project has also established a a joint HM Treasury, IUK, DfT and HS2 Ltd Cost and Risk Group to ensure there is a shared and continued drive down on costs.

DfT continue to resist the release of the Major Project Authority’s assessment of HS2, which is certainly critical of DfT’s arrangements. Even at this stage HS2 Ltd’s expenditure on consultants has been reported as over budget. Costs have remained at £21.75bn (NPV in 2011 prices) for Phase 1, despite the revised Euston proposals being taken out of scope, as is any linkage to HS1, or a solution to passenger dispersal at Euston.

Subsidy Justification

Summary of HS2AA points
It might be expected that the Strategic Case explain why HS2 should merit a £30bn+ subsidy. (para 96)

DfT response

139. Our analysis shows that HS2 leads to substantial benefits to society as demonstrated by the economic case. The ‘standard’ point benefit-cost ratio (BCR) for the full HS2 network is ‘high’ value for money at 2.3, including wider economic impacts.

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384 It has been reported that consultants’ costs have exceeded budget on more than one occasion, and by 86% in May 2014. http://www.building.co.uk/revealed-hs2-consultant-spend-runs-l87m-over-budget/5068509.article
HS2 Action Alliance—Supplementary written evidence

140. The full HS2 network generates benefits to transport users of approximately £60bn and Wider Economic Impacts totalling over £13bn compared to net scheme costs of £31.5bn.

The recipients of the subsidy are likely to be the affluent, if they have the same socio-economic profile as existing long distance rail users.

Likely Economic Benefits of HS2 to the Midlands, to the North of England and to Scotland

Summary of HS2AA points
The claimed benefits, of more jobs and wider benefits, are not justified because (para 112):

- The weight of academic evidence finds little/no supporting empirical evidence to say the regions will benefit, and inequalities reduce. London is likely to benefit most
- While localities in the North and West Midlands close to new stations may benefit, it can be at the expense of their hinterland ie not a net regional benefit
- Reports for Government, such as that by KPMG have been shown to be based on false assumptions and are not robust statistically
- Even regeneration-related benefits at stations are not guaranteed. IEA research into the impacts of HS1 on East Kent do not reveal regeneration benefits
- To gain even these limited benefits requires complementary investments beyond that in the HS2 cost envelope.

DfT response

141. HS2 will provide a very significant expansion of the rail network’s ability to carry passengers and freight, resulting in improvements to rail services throughout the country.

142. HS2 will bring benefits to places throughout the UK including those with stations on the new railway such as Leeds, Manchester, Birmingham and London; to stations on the classic network like Liverpool, Darlington and Newcastle which will receive high speed services; and to other places on the existing mainlines like Milton Keynes, Rugby and Peterborough which will have better services from released capacity on the existing main lines.

143. Using the Government's standard approach to appraisal, we estimate that the overall net transport benefits are over £70bn, the majority of which can be attributed to trips which originate outside London.

386 This takes account of the capital and operating costs of the scheme as well as the revenues generated from the additional rail demand resulting from HS2.
387 47% of long distance rail journeys are made by the top 20% of households by income. Source: 'Modelling Long-Distance Travel in the UK', Charlene Rohr, James Fox, Andrew Daly, Bhanu Patruni, Sunil Patil, Flavia Tsang. RAND Europe, NTS 2002/5, income data 2005/6 ONS
Transport user benefits are dominated by the journey time savings, which are problematic. On the government’s own admission, the majority of trips will be visits to London. This is an economic benefit to London. People go shopping, visit attractions, and so spend money in London.

As Prof Venables explained, improvements to transport can create economic divergence or convergence. In the case of HS2 it is easy to see a case for divergence, but it is unclear how convergence is achieved. At best HS2 makes some Midland and Northern locations more accessible to London and other places on the line. It does nothing to change London’s location at the hub of radial transportation links that uniquely favour London as a centre for doing business in the UK.

144. The KPMG analysis is our first attempt towards filling an evidence gap, since standard transport appraisal may not capture all of the potential effects of large-scale transformational schemes such as HS2. KPMG have developed a practical and transparent methodology to quantify the economic impact of investment in HS2.

KPMG’s work was well known, having done similar work for a number of northern Local Authority Groups. It was also known to have methodologically problems. Mackie and Laird did an assessment of this type of work – and KPMG’s in particular – in 2010\(^\text{389}\). The review involved close involvement with KPMG and concluded:

‘…….. it remains clear that further work on methods and techniques will be needed before GVA assessment could become part of ‘mainstream’ appraisal.’

Similar criticisms were voiced by Prof John Tomaney in his 2011 review of the evidence. DfT therefore must have known what they were buying when they commissioned KPMG. However, KPMG could, on past form, be relied upon to come up with some reassuringly large numbers.

145. The methodology has built on analytical approaches that have been used in similar contexts. This has been based on a review of the existing literature, KPMG’s own experience, and consultation with HS2 Ltd’s independent advisory panel. There are technical issues with methodology, but this is a difficult analysis to do. There is no ‘off the shelf’ methodology that is widely used. We believe this work represents a valuable first step in improving the evidence base in this area.

The HS2 Analytical Challenge Panel was not consulted on the KPMG work, rather a new panel was created for the purpose. This new body did not include former members – such as Prof Overman.


\(^{389}\) ‘Review of Methodologies to Assess Transport’s Impacts on the size of the Economy’, Peter Mackie and James Laird, ITS Leeds, September 2010
A review of High Speed Rail investment overseas\textsuperscript{390} such as in France, Spain and Germany conducted by HS2 Ltd indicates how HSR has contributed to better connectivity, leading to regeneration and development which has transformed local economies.

This is not a consensus view. Prof John Tomaney reached quite a different conclusion in his analysis of high speed rail in five countries\textsuperscript{391}. It certainly does not concur with Dr Richard Wellings’ analysis of the impact of HS1\textsuperscript{392}.

Station investment will also act as a catalyst for regeneration, estimated to support up to 100,000 jobs around the stations\textsuperscript{393}. Ultimately, HS2 increases productive capacity and will lead to growth in the wider economy.

The Centro report into the possible results of High Speed Rail on the West Midlands showed that there was potential to create over 50,000 additional jobs in the region, this represents a regional rise in employment of 1.7 per cent\textsuperscript{394}.

A report by Steer Davies Gleave (SDG)\textsuperscript{395} argues that government policy can provide conditions needed to influence broad distribution of growth though it cannot precisely control location and level of economic activity. Their evidence suggests specific economic impact of transport investment depend heavily upon the wider economic, social and policy context. They conclude that the UK needs infrastructure to have spare capacity in order to exploit new opportunities as they emerge. This flexibility ensures that our transport networks are resilient to a range of potential economic scenarios in the future such as the “Northern Powerhouse”.

\textsuperscript{391} ‘The local and regional impacts of high speed rail in the UK: A review of the evidence’, Prof J Tomaney, May 2011, written evidence to the Transport Select Committee
\textsuperscript{392} ‘Failure to Transform: High-speed rail and the regeneration myth’, Richard Wellings, April 2014, IEA
\textsuperscript{394} Centro (2013), ‘How the HS2 Y Network will transform the West Midlands’, https://www.centro.org.uk/media/17256/HS2_Y_Network-new.pdf, page 6
\textsuperscript{395} SDG (2014) Transport Constraints and Opportunities in the North of England, page 19
Annex A

The ‘Do Minimum’ timetable assumptions are based on committed schemes as follows:

- **Chiltern railway:**
  - includes Evergreen 3, which allows for new London Marylebone-Oxford services via Bicester Town to be introduced, as well as a small amount of train lengthening on some peak services between Aylesbury and High Wycombe.

- **Cross Country:**
  - includes electrification, with an all-electric fleet, but with locomotive hauled service on non-electrified routes or sections of routes.
  - The timetable assumes no significant changes in journey times except where services are diverted via East-West Rail (e.g. Bournemouth to Manchester Piccadilly)

- **East Coast Main Line:**
  - Uses the Phase 2 timetable assumed in the DfT’s Intercity Express Programme (IEP) business case modelling.

- **Great Western includes:**
  - the introduction of an hourly service operating between Birmingham New Street and London Paddington to back fill for the diversion of Cross Country services via East West rail
  - increased service frequency from Bristol Temple Meads, Cheltenham, Hereford to London Paddington respectively.
  - removal of services to/from London Paddington starting/finishing at Didcot Parkway
  - a reduction in services operating between Oxford and London Paddington with new services introduced between Oxford and London Marylebone as part of Chiltern Line service pattern
  - replacement of local services operated by Great Western between Reading and London Paddington by service operated by extending Heathrow Express services to Reading

- **London Midland includes:**
  - timetable which allows for 110mph running on the fast lines, and therefore some improvements to journey times.
  - the additional path created by the future year West Coast timetable, with a consequent increase in service frequency between London Euston and Northampton
  - some train lengthening assumed in the future year timetable

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396 HS2 Ltd (2013), The Economic Case for HS2: PFM v4.3 Assumptions report
• East Midland:
  o assumes that electrification takes place, with appropriate shortening of the handful of services that currently originate (or terminate) on non-electrified routes (Leeds, Lincoln and York).
  o assumes all services into London St Pancras operate using electric stock with a mixture of formations, which results in an increase in capacity. Furthermore, the longer distance services stop less frequently, with related journey time benefits.
  o assumes substantial journey time improvements along the Midland Mainline, with reductions in journey time of 10 to 20 minutes

• West Coast Main Line
  o timetable was prepared by DfT which utilises the remaining spare capacity on the southern half of the West Coast Main Line.
  o In each off-peak, contra-peak and most shoulder peak hours there are two additional arrivals and departures at London Euston. One of these paths is allocated to London Midland and another to Inter City West Coast (ICWC)
  o An all-electric fleet is assumed, with electric trains being loco-hauled (with new diesel locomotives capable of rapid coupling/uncoupling manoeuvres) on non-electrified routes.
  o Most routes are assumed to use a mix of nine-car and eleven-car units, with the Birmingham to Scotland route using new-build six-car units

• TransPennine:
  o The indicative Northern Hub timetable was prepared by DfT for modelling purposes only

• East-West Rail
  • Assumes the East-West Rail western section (between Oxford and Bletchley) and is based on the DfT view of the likely service patterns as late 2012.

• Other services:
  o Crossrail services are based upon the late 2012 view of likely service patterns supplied by the DfT operating between Maidenhead, Shenfield and Abbey Wood.
  o A Western access to London Heathrow has been included within PFM4.3. The Heathrow Express service pattern is assumed to utilise this.

November 2014
HS2 Action Alliance—Supplementary written evidence

HS2, future long distance rail demand, and DfT’s National Transport Model

Thank you for your letter concerning my contribution to your Enquiry.

An important area of debate has been about future rail demand: without sustained and substantial growth in long distance rail demand, HS2 would provide additional capacity that is entirely surplus to requirements. The DfT’s response to a recent Parliamentary Question (PQ) on demand for future domestic travel highlights the weakness of the claims that such demand growth will occur, and the considerable uncertainty about the forecasts. For convenience I attach the response given by DfT, which can be found at http://tinyurl.com/HuppertPQ

HS2AA would like to comment on the DfT response, as it seems to us to be very pertinent to the debate, and your Enquiry.

The response to the PQ shows that using the National Transport Model (NTM) to make forecasts out to 2040, the DfT forecast a fall in future rail trips per person, with little change in their average length. Given the case being made by DfT for HS2, this looks surprising.

To put this in context, the business case for HS2 relies on DfT’s forecast of a 2.2%/a increase in long distance rail growth (ie a 79% increase in passenger km by 2036). Population growth increases over this period (by about 15%) so the forecasts equate to about a 1.6%/a increase per person (or 48% by 2036).

Some witnesses have told your Enquiry that the 2.2%/a is conservative – given rail’s recent (but not very recent!) growth. Others – including rail demand forecasting experts – see this rate of increase as about right. But this would only follow if the factors that have driven past growth can be expected to drive further growth in the future (or there will be new factors).

The DfT’s specific rail forecasts (not the NTM) rely on the specialist rail forecast model Passenger Demand Forecasting Handbook (PDFH), which is a fixed elasticity model used extensively for short term forecasting. This model assumes a link between income growth and long distance travel demand. Many of the experts from whom you have heard have been involved in developing this model.

Our view on demand is discussed at paragraph 48 to 63 of our evidence. We believe that the link through time between income and domestic travel is broken, that economic growth over the last 20 years has not been accompanied by increases in domestic travel per person (in total and for long distance trips), and that the recent growth in long distance rail has causes that are not included in the PDFH forecast model.

Technological changes have undoubtedly meant time on board trains has become more useful, which has reduced the generalised cost of long distance rail journeys by increasing the value of time on the train. However, we cannot expect rails advantage against other modes to continue to increase, on the contrary, we can expect other modes to catch up: air and car will also enjoy reductions to the cost of travel time from increased utility (as the use of mobile technology is supported on flights and developments like Google Cars occur). To
ignore such changes, as the PDFH rail forecasting model does, is plainly misleading and results in overestimating future demand for long distance rail travel – which in turn biases investment decisions.

Interestingly the NTM is much closer to our view than the one taken by the DfT for HS2. It confirms the picture of a saturated domestic travel market in which rail is no exception. The NTM does not forecast increases in long distance travel, with the average length of journeys increasing overall by a little over 5% (7.0 to 7.4) primarily because of an increase in the relatively long car journeys counterbalancing falls in trips by other transport modes (walking, cycling, buses). In distance travelled (the sum of trips by mode times length of trip by that mode), the increase is a modest 4% over the 25 years, with an increase of 2.5% in the first 10 years, and only 1.5% for the subsequent 15 years. This 1.5% equates to an annualised rate of just 0.1%. Population growth contributes a far larger increase. This is therefore a largely saturated domestic travel market.

For those that argue rail demand will rise, the NTM gives a contrary result. However, the NTM results are intuitively questionable. On the assumption that London and the South East continue to enjoy the lion’s share of economic and population growth, the proportion of rail journeys might be expected to rise, as commuting journeys are closely related to central London employment. This seems to be the logic underlying Crossrail, Thameslink and other rail and metro developments aimed at increased commuter capacity. If this is taken into account in the NTM, its view must be that long distance and regional rail will get less use per person.

We note the DfT state that the NTM is not the primary forecasting tool for rail, but it is hardly reasonable to have a suite of inconsistent forecasts to support transport investments – using whichever model gives the larger estimate for the mode in question!

We feel that there is a need for the DfT to sort themselves out and create a self-consistent view of future requirements, and to admit that long term forecasts are insufficiently reliable to provide a safe basis on which to commit significant public funds, so that alternative and more robust strategies to address future demand should be preferred (eg incremental increases in capacity).

Spending £50bn+ on one rail scheme does not look to be a priority expenditure or a sensible use of taxpayers’ money when major question marks remain over future rail demand, and hence whether HS2 if built would even be much used.

Bruce Weston

Director, HS2 Action Alliance

December 2014
Parliamentary written answer provided to Mr Julian Huppert MP by Mr Robert Goodwill on the 24th November 2014 (24 November 2014)

Written question - 214853

Asked by Dr Julian Huppert
 Asked on: 18 November 2014
Department for Transport
To ask the Secretary of State for Transport, what predictions are made by the National Transport Model from 2015 onwards for the (a) average number of trips and stages made annually per person in England and (b) average length of trips by transport mode in the (i) low, (ii) medium and (iii) high growth scenarios.

Answered by Mr Robert Goodwill
 Answered on: 24 November 2014
Holding answer received on 21 November 2014

Forecasts of trip by mode and distance were last published by the Department in Road Transport Forecasts 2011 at

The Department has more recently in 2013 produced estimates for the whole of GB using the National Transport Model (NTM). The trip information has not been published but is set out in the tables below.

Average Trips per person annually by mode (GB, RTF13 central forecast)

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual trips</th>
<th>Walk</th>
<th>Cycle</th>
<th>Car Driver</th>
<th>Car Pgr</th>
<th>Bus</th>
<th>Rail</th>
<th>Total</th>
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<tbody>
<tr>
<td>2015</td>
<td>307.4</td>
<td>22.1</td>
<td>447.6</td>
<td>231.8</td>
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<td>2020</td>
<td>302.4</td>
<td>21.1</td>
<td>465.3</td>
<td>225.8</td>
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<td>23.7</td>
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<td>483.8</td>
<td>219.0</td>
<td>73.3</td>
<td>22.9</td>
<td></td>
<td>1,117.2</td>
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<td>19.9</td>
<td>491.6</td>
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<td>71.2</td>
<td>23.4</td>
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<tr>
<td>2035</td>
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<td>20.5</td>
<td>500.8</td>
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<td>2040</td>
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<td>507.0</td>
<td>211.8</td>
<td>64.0</td>
<td>23.7</td>
<td></td>
<td>1,117.2</td>
</tr>
</tbody>
</table>
Average length of trips by mode (GB, RTF13 central forecast)

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<tr>
<th>Miles</th>
<th>Walk</th>
<th>Cycle</th>
<th>Car Driver</th>
<th>Car Pgr</th>
<th>Bus</th>
<th>Rail</th>
<th>Total</th>
</tr>
</thead>
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<td>9.1</td>
<td>10.0</td>
<td>7.9</td>
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<td>2025</td>
<td>0.8</td>
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<tr>
<td>2030</td>
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<td>2.3</td>
<td>9.2</td>
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<td>8.0</td>
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<td>2035</td>
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<td>10.1</td>
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<td>24.8</td>
<td>7.4</td>
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</tbody>
</table>

Notes on the tables:

- These are for personal trips based on main mode of travel. The NTM does not produce mode information for different stages of the same trip.
- These forecasts are based on the central forecast in the Road Traffic Forecasts 2013 (see https://www.gov.uk/government/publications/road-transport-forecasts-2013). NTM forecasts of trips by mode for the high and low demand scenarios have not been produced.
- The NTM Road Traffic Forecasts should not be viewed as what we think will actually happen in the future, or what we want the future to look like. They are based on our understanding of the way people make travel choices, the expected path of the key drivers at the time the forecast is made and assume no change in government policy beyond that already announced.
- The forecasts do not account for the Departments Cycling Delivery Plan, as this is still in development.
- The NTM is not the Department’s primary forecasting tool for Rail. Therefore the forecasts may not match with Rail forecasts the Department has published elsewhere.
HS2 Ltd—Written evidence

1. About HS2

1.1. HS2 Ltd was established by the Government in January 2009 to develop proposals for a new high speed rail line between London and the West Midlands, and to consider the case for high speed rail services linking London, northern England and Scotland.

1.2. HS2 Ltd is responsible for providing advice to the Government on the economic case for HS2 and analysing the potential value for money of the proposed HS2 scheme. It is published alongside and in support of the Department for Transport’s (DfT) strategic case which summarises the case for action, the full rationale for the scheme and considers the value for money of alternative proposals to HS2. The most recent versions of the economic case and strategic case were published in October 2013\(^{397}\).

2. Introduction

2.1. HS2 is much more than just a railway; it is a truly transformational opportunity, particularly for our cities in the Midlands and the North. It is an opportunity to invest in our future economic growth.

2.2. HS2 will deliver jobs, skills, and a new legacy for our railway engineering industry. HS2 will support rebalancing the economy and boost our international competitiveness. HS2 will deliver regeneration in key cities in the Midlands and the North.

2.3. The Business Case for HS2, published in October 2013, demonstrates the strong economic case for the scheme. However, as described in the report we believe this understates the full benefits of the scheme. In particular, conventional appraisal techniques may not fully reflect changes in businesses and households’ location in response to the scheme.

2.4. On the basis of our analysis, we reached three main conclusions:

- The standard cost-benefit analysis shows that the benefits of the HS2 network exceed the costs by a considerable margin and that under standard assumptions the economic cases for both phases of the project are robust and are resilient to a wide range of factors and events.

- Standard assumptions on the demand cap and the value of time (VoT) in the appraisal fail to capture large amounts of potential additional benefits from HS2. There is a significant chance that the return on investment in HS2 could be considerably higher than previous appraisals have suggested.

- HS2 has the potential to deliver productivity gains that will alter geographic distribution of economic activity in a way that cannot be modelled in our economic appraisal.

2.5. In recognition of some of the challenges of measuring the full economic impacts of major transformational transport schemes, DfT have commissioned an independent review that will inform future guidance.

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\(^{397}\) The Economic Case for HS2, HS2 Ltd (October 2013) [http://assets.hs2.org.uk/sites/default/files/inserts/5126EA9204_Economic%20case.pdf](http://assets.hs2.org.uk/sites/default/files/inserts/5126EA9204_Economic%20case.pdf)

The Strategic Case for HS2, Department for Transport (October 2013) [https://www.gov.uk/government/collections/the-strategic-case-for-hs2](https://www.gov.uk/government/collections/the-strategic-case-for-hs2)
2.6. HS2 is a once-in-a-generation opportunity which will have the greatest impact if it is co-ordinated with other investment. HS2 is working to maximise these benefits through the Growth Task Force, Regeneration Company and local growth strategies. Sir David Higgins’ second report will set out how HS2 will also improve the integration of existing networks.

3. **HS2 – The Economic Case is strong**

3.1. Our analysis shows that the economic case is strong. The ‘standard’ point benefit-cost ratio (BCR) for the full HS2 network is ‘high’ value for money at 2.3, including wider economic impacts. Even for Phase One alone the ‘standard’ benefit-cost ratio is estimated at 1.7 including wider economic impacts and there is estimated to be a high likelihood, greater than 75%, of Phase One being medium value for money or higher.

3.2. Economic growth exerts a strong influence over the value for money of the scheme as it affects the likely rate of growth in demand, and therefore revenues, and also the valuation that is placed on some of the benefits of the scheme. Even with historically low levels of growth, enduring for many decades, our analysis of the scheme would still most likely offer medium value for money.

3.3. We have included a wide range of construction costs in our analyses, from the target price that HS2 Ltd has been set for Phase One (£17.1 billion 2011 prices) to the highest estimate of cost including the maximum level of contingency (£21.2 billion 2011 prices). These conclusions are therefore resilient to a range of assumptions about cost contingency. However, lower levels of contingency are clearly associated with higher value for money which is why HS2 Ltd is determined to deliver the project within the target price set for the company as part of the spending review. Maintaining a vigorous and disciplined approach to cost control is a key priority.

3.4. From our analysis of the value for money of HS2, it is clear that some of the standard assumptions and approximations that are provided in the DfT guidance are exerting a strong influence over the results of the cost benefit analysis. In particular, our analysis suggests that the hard limit that is placed on the growth in demand and revenues by the guidance, and the use of values of time that do not vary with length of journey, are leading to a significant underestimation of the benefits that could be realised from the investment in HS2.

3.5. Furthermore, HS2 is an unusual proposal in many respects. It is both national in scale, and yet it strongly impacts on existing transport networks at a local level. It is a transformational scheme which: connects 8 out of 10 of the major cities in the UK; almost doubles capacity on north-south inter-city routes; and offers step-changes in journey times.

3.6. The standard appraisal approach assumes no demand growth beyond 2036 irrespective of future growth in population or GDP. While it would be unreasonable to expect demand for rail travel to continue to grow indefinitely, our view is that this assumption is probably conservative, and that the standard practice of conducting analysis for only one level of demand cap obscures the potential for much higher returns from further growth in demand. A 10% increase in that level results in the cap being reached in 2040 with a point estimate BCR of 2.8 and a very high probability of the BCR being in the high or very high value for money categories. A 39% increase results in the cap being reached in 2049 with a point estimate BCR of 4.5 and an even higher probability of the BCR being in the high or very high categories.
3.7. Another factor that is thought to lead to a significant understatement of benefits from HS2 is the practice of using a single value of time for all lengths of trip in the appraisal. We have conducted a test to illustrate the impact on the BCR of adopting alternative values of time as suggested by the Institute of Transport Studies. The test uses a business value of time of £45 per hour (2010 prices), this is 40% higher than the standard values of time of £32 per hour (2010 prices) but still lower than the value used in the August 2012 economic update (£47 per hour). The test also uses non-business values of time that have been adjusted to better reflect the length of trips that are affected by HS2 and other modelled changes in service patterns. Using alternative values of time derived from this research, HS2 delivers a return that is greater than £2 for every £1 invested in virtually all of the tested scenarios – even those with the most pessimistic economic growth, cost and demand forecasting assumptions.

3.8. Our analysis demonstrates that investment in HS2 offers strong returns that are resilient to a broad range of eventualities and risks around costs, demand growth and the performance of the economy. However, when drawing comparisons with other schemes it is important to recognise that our economic appraisal may not fully capture the full range of potential benefits from investment in a transformational scheme such as HS2.

3.9. HS2 will lead to greater opportunities for businesses and people in one area to connect with businesses and people in other areas. This is true for city regions benefitting directly from HS2 services, but also for areas which benefit from released capacity on the classic network. Greater opportunities to connect with others make these areas more attractive places for businesses and people to locate. We would expect people and businesses to take these new opportunities into account in their location decisions, and that this could ultimately lead to changes in future patterns of land use. The impact of such changes in land-use is not captured in our standard cost benefit analysis.

3.10. In order to understand the potential opportunity created as a result of investment in HS2, we commissioned KPMG to examine regional economic impacts measured in terms of productivity. The analysis approaches the question of economic impact in a different way to our appraisal, but is well grounded in economic theory, and considers the impact that investment in HS2 would have on economic output by understanding how such investment would influence regional economic performance, both in terms of overall economic productivity and, crucially, the location of economic activity. The results suggested that HS2 could boost all regions of the, and in particular the Midlands and the North.

3.11. It is difficult to draw a direct comparison between these results and our economic appraisal. Fundamental differences in methodological approach mean that it is not possible to directly compare results (and they are not additive), but it suggests that there may be additional benefits from HS2 that are not being captured in our economic appraisal.

3.12. These areas of potential additional benefits are all subject to on-going DfT research.

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398 Valuation of Travel Time Savings for Business Travellers, Institute for Transport Studies (October 2013)
399 HS2 Regional Economic Impact, KPMG (September 2013)
400 Understanding an Valuing the Impacts of Transport Investment, Department for Transport (October 2013)
3.13. The economic case can only ever provide part of the overall picture, and there are many other factors that should be taken into account.

4. **HS2 will deliver jobs, skills and build industrial capability**

4.1. HS2 will be the biggest construction project in Europe. It will therefore be a major generator of jobs directly linked to the project, across a wide range of disciplines and directly benefiting communities across the country.

4.2. Building the network will create nearly 25,000 construction jobs and thousands of supply chain jobs. Operating and maintaining the railway will create approximately 3,000 permanent jobs and HS2 stations will support up to 100,000 local jobs.

4.3. It is important that UK industry is well placed to take advantage of this opportunity, both from a business and jobs perspective. Work to upskill our future workforce has already started. HS2 Ltd is working closely with the Department for Business, Innovation and Skills (BIS), the DfT and industry to develop a new national college for high speed rail to train the next generation of world class engineers to work on the construction of HS2. It will be a world-class institution, focused on designing and delivering the high level skills needed for high speed rail, and other major engineering projects of the future. To date, our contractors have already given more than 700 graduate trainees or apprentices the experience of working on HS2. We expect HS2 to create more than 2,000 FTE apprenticeships in construction alone. This investment in human capital will build our industrial capability – particularly in engineering, construction, environment and create a lasting legacy for the UK as a country that can deliver major infrastructure projects.

4.4. High speed rail is a global industry. The project provides an opportunity to align industrial and infrastructure policy, and use HS2 to develop UK industries which can compete effectively on the global stage. Business contracts arising from a project of the scale of HS2 will be significant. HS2 is expected to lead contracts worth over £10bn in civil engineering and tunnelling including viaducts, bridges and tracks; around £4bn in station and depot works; £4bn in railway systems such as signalling and power supply equipment; and around £7bn in the design and manufacture of rolling stock. (These figures cover investment in both Phase One and Phase Two).

5. **HS2 will improve rail connectivity and capacity**

5.1. HS2 is designed to be a long-term transformational answer to the capacity problem of the UK’s railways. Over the past 20 years rail travel has doubled from 0.74 billion journeys to 1.5 billion journeys per year. The population of the UK is also forecast to increase by almost 10 million over the next 25 years. Without HS2 it is estimated that by 2026, maximum hourly demand could be at least 150 people for every 100 commuter seats departing Euston and Birmingham New Street, and more than 100 passengers for every 100 seats on intercity services departing Euston and Birmingham New Street.

5.2. The railway is effectively the same size as 15 years ago, but there are now around 4,100 more train services a day; an increase of c.25%. The West Coast Mainline is...

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403 Assumed Annual Growth Rate of 2.5%, The Strategic Case for HS2, Department for Transport (2013)
404 HS2 Ltd analysis of data supplied by the ORR (1998/99, trains planned) and from the ORR Data Portal
operating at a level of intensity that is making it extremely difficult to achieve target levels of performance reliability. Much of the growth in capacity up this point has been accommodated through train lengthening and additional service frequency. Yet on a typical weekday in 2013 approximately 120,000 passengers arriving into London in the morning peak had to stand. At Euston, 50% of trains in the morning peak period and 44% of trains in the evening peak period already have passengers standing. Overcrowding is not a problem confined to London. More than 10% of passengers arriving on morning peak hour services in Birmingham, Leeds, Manchester and Sheffield are standing. To try to simply maintain the status quo would be a missed opportunity.

5.3. The benefits of Phase One in terms of extra rail capacity south of Birmingham are obvious. Put simply, more track means more trains and therefore more space for commuters, long-distance travellers and freight. HS2 will ultimately provide up to 18 long-distance train services into London per hour.

5.4. Phase Two, as currently planned, will bring huge benefits to the North, substantially cutting journey times. The journey from London to Manchester would be cut by an hour, whilst that to and from Leeds would be substantially reduced as well. Similar savings would be achieved on the routes to and from other key northern cities. New classic compatible trains will serve major northern cities, with the capability to run at high speed along the new proposed line and then seamlessly switch over to conventional tracks beyond Manchester and Leeds to serve Newcastle, Preston, Carlisle, Edinburgh, Glasgow and beyond.

5.5. HS2 is predicted to increase the total number of people who can reasonably access employment opportunities in HS2 station city regions by rail by and the number of businesses accessible from firms in HS2 station cities. Improving connectivity will increase growth potential and provide opportunities for long-term job creation in the wider economy.

5.6. It is expected that 301,000 passengers will use HS2 each weekday and that it will increase evening peak hour departure capacity departing London Euston threefold, to approximately 34,900 seats in total. In addition to increasing capacity, HS2 will also release train paths on the existing West Coast and East Coast Mainlines for new local passenger services and freight services.

5.7. Additional capacity will also support greater agglomeration, as high-value businesses cluster around the network. This will make it easier for businesses to connect, trade, and specialise, while also expanding labour markets which makes them more attractive locations to invest, work and live. The productivity boost from investment in HS2 will help put our great cities on a path to higher growth, giving businesses in the North access to larger markets in the South and an international stage.

6. **HS2 will help to rebalance the economy**

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405 The Strategic Case for HS2, Department for Transport (2013)
406 HS2 Regional Economic Impact, KPMG (September 2013)
407 The Strategic Case for HS2, Department for Transport (October 2013)
408 The Strategic Case for HS2: PLANET Framework Model v4.3, HS2 (October 2013)
HS2 Ltd—Written evidence

6.1. In the UK, the distribution of decision-making top-end roles is unusually geographically concentrated. Sixty six FTSE100 companies have their headquarters located in London and the South East of England\(^{409}\) while just six are located north of Birmingham. Business densities in London are also considerably higher than in other HS2 station cities\(^{410}\).

6.2. Productivity in London is twice as high as in other HS2 station city regions (£37,200 per head in Greater London and £15,300–£19,100 per head elsewhere)\(^{411}\) and since 2008, population growth in London (9%) was twice that in the other station city regions (4-5%). London accounts for 13% of the UK population, whilst the Birmingham, Leeds, Manchester, Sheffield, Derby and Nottingham city regions together account for 17% of the UK population\(^{412}\). Similarly, London accounts for 13% of UK employment whilst Birmingham, Leeds, Manchester, Sheffield, Derby and Nottingham city regions together account for 19%\(^{413}\).

6.3. London also demonstrates the economic potential for other city locations. Average pay and disposable income in London are higher than elsewhere, with high labour costs reflecting high productivity\(^{414}\). At £21,466 in 2012, Gross Disposable Household Income per head was 28% higher in London than in the UK as a whole (£16,791)\(^{415}\).

6.4. However, housing pressure and congestion is far more acute in London and the South East than elsewhere. In June 2014, average house prices in London and the South East were £499,000 and £326,000 respectively, compared to £276,000 for England as a whole\(^{416}\). Average road speeds in London are typically much lower than elsewhere in the country. In 2012/13, average road speeds on locally managed A roads were just 16.7 mph in London, compared to 24.9 mph for England as a whole. Road speeds in 10 of the 14 Inner London Boroughs were amongst the slowest in the country\(^{417}\).

6.5. Economic geography explains some of the variation in the economic performance of the UK. A paper written for HS2 Ltd on the economic impacts of HS2, by Bridget Rosewell (Volterra Partners) and Tony Venables (University of Oxford) explains the mechanisms by which connecting places may lead to additional productivity gains. The paper describes how transport improvement can allow more economic activity to concentrate, at high density, in a particular place. Commuting capacity enables this, giving rise to a larger and more effective labour market and this was a core argument for the investment in Crossrail. A large body of empirical work tells us that large and high density agglomerations of activity are highly productive.

6.6. Businesses in London benefit from the agglomeration effects associated with dense markets and access to a deep pool of labour. These agglomeration benefits are not as strong in other UK cities because they don’t have the same access to markets and labour – they are not as big and they are not well connected to each other. Compared

\(^{409}\) HS2 Ltd analysis of company details from London Stock Exchange (17 July 2014)

\(^{410}\) UK Business Activity, size and location 2013 and UK Standard Area Measures (ONS)

\(^{411}\) ONS Regional GVA, 2012, Table 3.3 (Workplace based GVA per head indices NUTS3 at current basic prices)

\(^{412}\) HS2 Ltd analysis of ONS 2013 mid-year population estimates

\(^{413}\) LI01 Local labour market indicators by unitary and local authority, 2013

\(^{414}\) Median, ONS Annual Survey of Hours and Earnings (ASHE), 2013

\(^{415}\) ONS Regional Gross Disposable Household Income, 2012

\(^{416}\) Table 2 of House Price Index (HPI), Reference tables - monthly and quarterly tables 1 to 19, ONS (data from Communities and Local Government) http://www.ons.gov.uk/ons/rel/hpi/house-price-index/june-2014/rft-monthly-and-qty-may14.xls

to other European countries there is a large disparity between the population of the UK’s capital city and its ‘second tier’ cities.\footnote{Based on HS2 Ltd comparison of top five cities with largest population in Germany, Spain, UK, Italy and France using data from the OECD INDIC_UR population on 1 January 2011 (except Italy =2012) and the National Institute of Statistics and Economic studies (INSEE) 2011 Census}

6.7. HS2 provides opportunities to bring cities closer together and improve access to other businesses and people access to a wider range of jobs. In addition to reducing journey times between London and regional cities, HS2 will better connect cities outside of London to each other. For example, Nottingham to Leeds would be reduced from 106 minutes to 47 and Leeds to Birmingham would be reduced from 118 minutes to 57 minutes.\footnote{High Speed Rail: Investing In Britain’s Future Consultation on the route from the West Midlands to Manchester, Leeds and beyond, July 2013 http://assets.hs2.org.uk/sites/default/files/consultation_library/pdf/P2C01_PhaseTwo%20Consultation%20Document.pdf}

6.8. City regions in the Midlands and North do not attract enough business investment, but there is scope for them to play a bigger role. In 2008-2012, London experienced at least 5 times as many new business start-ups than any other HS2 station city region.\footnote{HS2 Ltd, analysis of ONS Business Demography, 2012} Since 2010, 79% of net private sector jobs growth occurred in London, while Britain’s next nine largest cities accounted for just 10% of all net new private sector jobs created.\footnote{Cities Outlook 2014, Centre for Cities, 2014} Our forecasts suggest that investment in HS2 could mean that Phase Two city regions in the north of the country (particularly Yorkshire and the Midlands) experience an improvement in their competitive position relative to Greater London and the rest of Great Britain.\footnote{Ibid. KPMG, 2013}

6.9. HS2 Plus flagged the challenge of poor connectivity in the North, not just between the region and London, but also east-west between Liverpool and Manchester, Manchester and Leeds, Leeds and Hull.\footnote{HS2 Plus: a report by David Higgins (HS2 Ltd, 2014) http://assets.hs2.org.uk/sites/default/files/inserts/Higgins%20Report%20%20HS2%20Plus.pdf} For example, commuting between the Manchester and Leeds city regions is around 40% lower than expected given the characteristics of the two cities and the physical distance between them.\footnote{Strengthening Economic Linkages between Leeds and Manchester: feasibility and implication (April 2012, Overman et al)} Less than 0.5% per cent of Leeds commuters came from Manchester and vice versa.\footnote{HS2 Ltd analysis of the ONS Annual Population Survey, 2011} In 2011, one in five people working in London travelled to work by rail. Whilst, infrastructure largely dictates the use of rail, the rate for those working in the Northern HS2 station cities is much lower than in London and England and Wales as a whole (from 1% in Greater Manchester and the Nottingham and Derby city regions to 4% in the West Midlands and West Yorkshire city regions, compared to 20% and 6% respectively).\footnote{HS2 Ltd analysis of Method of travel to work table from 2011 Census outputs, workplace population, ONS}

6.10. Transforming connectivity between our biggest cities creates a major opportunity to fundamentally change the way our cities work together. City links: integration and isolation (Centre for Cities, March 2008) recommended that national government should invest in new infrastructure linking more isolated towns to regional economic hubs.\footnote{City links: integration and isolation (Centre for Cities, March 2008)}

6.11. The Rosewell/Venables work also describes the outcome of a number of studies that have looked at the relocation of business activity from New York and other major US
cities to secondary cities. For example, Strauss-Kahn and Vives (2009) study the location decisions of 30,000 US headquarters, around 5% of which relocate every year. Headquarters have become increasingly concentrated in medium sized service-oriented metropolitan areas. The areas that have received most inwards moves (and moves which have not then been reversed) are those with a high level of business activity, relatively low wages and, above all, good business transport links (in the US, airports). Giroud (2013) establishes that opening an airline route which reduces travel time between a firm’s HQ and a plant increases, on average, investment in that plant by around 9% and productivity by 1.3%. Studying the effect of telecommunications, Loannides et al. (2008) argue and present some evidence that better communications have tended to promote convergence of city size.

6.12. The One North report recently stated that HS2 would lower barriers to trade with the South, multiplying the benefits of investment in high-speed rail to the benefit of the country as a whole. It also recommended that HS2 and the North’s interconnected city regions will together make the North a new destination of choice for mobile international businesses; and that HS2 is a key catalyst for northern city regeneration, not simply a means to shorten journey times.\(^{428}\)

7. **Investment in HS2 will drive regeneration around station areas**

7.1. HS2 will also generate economic opportunities and development beyond the impacts of the direct expenditure which can deliver significant benefits to local economies. HS2 Ltd forecasts that commercial development brought forward as a result of HS2 in areas immediately surrounding HS2 stations could support up to 100,000 jobs.

7.2. Stations serve millions of passengers each day and act as a window to visitors creating lasting first impressions. New or renovated stations can have a considerable impact upon their locale by improving its appearance, improving retail and leisure offerings and increasing non-travel footfall.

7.3. Station regeneration can have wide ranging economic impacts for an area. The economic impact of the Sheffield Station Gateway Project\(^{429}\) suggested by the change in property values in the immediate locale was estimated to be equivalent to an inward investment of £74 million compared with station investment of £25 million. This, in turn, could be expected to generate a further uplift in annual GVA of £3.4 million. The direct impacts on employment for Sheffield were estimated to be 185 additional jobs, and the increase in employment in areas around Sheffield Station increased overall by 2,800. Within a 400 metre radius of the station, total Rateable Values (RVs) rose from £8.7 million to £14.7 million between 2003 and 2008, an increase of 67%. This is more than three times the corresponding increase for Sheffield as a whole and reflects the increase in both the quantity of commercial development and value per square foot.

7.4. In London, investment in Crossrail is already driving property development around new stations before they open. GVA\(^{430}\) estimated that Crossrail could help create additional residential and commercial value of as much as £5.5 billion along the route between 2012 and 2021. Crossrail will support the delivery of 57,000 new homes and

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\(^{428}\) One North, A Proposition for an Interconnected North (July 2014, 1North)

\(^{429}\) The value of station investment, Steer Davies Gleave, November 2011


[http://74f85f59f39b887b696f-ab656259048fb93837ecc0ecbc0c557.r23.cf3.rackcdn.com/assets/library/document/c/original/crossrail_property_impact_study_main-_small.pdf](http://74f85f59f39b887b696f-ab656259048fb93837ecc0ecbc0c557.r23.cf3.rackcdn.com/assets/library/document/c/original/crossrail_property_impact_study_main-_small.pdf)
3.25 million square metres of commercial office space that have been identified for development within one kilometre of stations along the route, and there will be significant increases in residential capital values of 25% immediately around stations in central London and 20% in the suburbs.

7.5. In addition to supporting up to 100,000 jobs, HS2 stations are also expected to support at least 10,000 new homes. HS2 is committed to maximising the benefits of regeneration through:

- The Growth Taskforce – we are working with Government and local partners to support the development of local growth strategies;
- The establishment of a Regeneration Company – we are developing proposals to establish a central regeneration company to ensure that potential growth around station developments is unlocked, accelerated, and enhanced; and
- The forthcoming report from Sir David Higgins – we are working with Network Rail/DfT to maximise connectivity between HS2 and the existing transport system to ensure the benefits of HS2 are widely spread beyond the network.

8. **HS2 should not be viewed in isolation**

8.1. HS2 will not operate in a vacuum. It will provide a step change for UK transport capacity and connectivity, and connections with other networks (across all modes). It will improve access to international gateways and ports, release vital capacity on existing lines for passengers and freight, and ensure the benefits are spread well beyond the line of route.

8.2. To date, the discussions about how to realise the potential of the second phase of HS2 have tended to focus on the line itself. This underestimates both the transformation that HS2 could bring to the regions and the potential change if HS2 is seen as part of the wider transport network. Issues such as how to considerably improve the trans-Pennine line between Leeds and Manchester; or whether to re-open the Wortley Curve to improve services to Bradford and Wakefield; or the potential for electrification from Leeds to Hull; or the impact of the East Coast upgrade are not within HS2’s remit, but remain relevant to final decisions on the route.

8.3. HS2 and the future of the existing network need to be considered together to maximise the synergy between them – and both need to be considered as part of the much wider overview of how to regenerate the North as a whole. Equally, through the Growth Taskforce, HS2 will work with local authorities to enable them to develop their own vision of how best to use HS2 to regenerate local areas by planning development around stations and interchanges.

8.4. HS2 will bring new opportunities for regeneration and development of land around stations, and better connectivity will bring new opportunities for people and businesses to locate outside of London and the South East. Increasing use of flexible working patterns and high speed connections between London and other core cities will create more opportunities for people and businesses to have a permanent physical

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431 London-West Midlands, Environmental Statement, Non-technical summary, November 2013 (HS2 Ltd) and High Speed Rail: Consultation on the route from the West Midlands to Manchester, Leeds and beyond, Sustainability Statement, Volume 1: main report of the Appraisal of Sustainability, July 2013 (A report by Temple-ERM for HS2 Ltd)
base a long way from London, taking advantage of lower property and business costs.

8.5. HS2 will boost the productive potential of the UK as part of the national infrastructure plan and investments in local growth deals to support future economic growth and help to rebalance the economy.

September 2014
TUESDAY 13 JANUARY 2015

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Griffiths of Fforestfach
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Skidelsky
Lord Smith of Clifton
Baroness Wheatcroft

Examination of Witness

Sir David Higgins, Chairman, HS2

Q236 The Chairman: Sir David, can I welcome you to the Economic Affairs Committee? This is, in fact, the last day of our hearings, and we then get into writing mode, so you have an opportunity to certainly give us your views as we start to consider how we are going to frame our report. Thank you very much for joining us.

When he appeared before us last month, Lord Deighton said that he had charged you with considering how the cost of construction could be reduced, and in particular learning from the practices applied abroad. You made some comments in front of the Transport Committee in November 2014 when you pointed out that the French seemed to be able to complete some of the construction work rather more quickly than we were planning to do, and that there were possibly some lessons that could be learnt. I wonder if you could give us a sense of the target that you have set yourself to reduce the cost to, and what to date you have learnt from the French experience that could benefit us, both in terms of reduced cost and improving the timetable.

Sir David Higgins: First, thank you for the opportunity to appear before this Committee. Indeed, I did refer to that in my last report, which came out in November: that we should look at international best practice. I have another role, which is chairing the Construction Leadership Council, which has been mandated by the Government and BIS to look at construction practices. We set a target by 2025, which is one year before hopefully the
completion of phase 1, of reducing both the time of construction and the cost of construction, in each case by 25% in real terms. We believe that is certainly achievable. Our challenge for the country is that we really have to achieve those targets, because it is not just HS2; we have a huge programme on nuclear programmes, a massive roads programme—a huge amount of capital works. Our industry is incredibly fragmented; it is disparate, it is small, and it is subject to boom and bust. We never invest long-term in the skills. A massive electrification programme on the existing railway today follows 15 years of no electrification programme; the same on train carriage construction. There is a long history of stop-start. What we see from overseas, and in particular for France—I cannot say that all France’s high-speed projects were very low-cost, but the one we were interested in in particular was a project from Tours to Bordeaux; it is currently under construction. They spent some three to four years just in the planning stage alone, and then they started construction in 2012, and this year they finish all of the civil works, bridges and everything, for a project that is the same size of phase 2, and they do all of that for €6 billion or €7 billion and it looks like they will achieve that. There are no stations included, there are no branch lines, there are no tunnels, because it is through open countryside, and there is no rolling stock, so there are differences. We have already had a team over there, and we are spending teams to Spain as well, and there is absolutely no doubt that rigorous planning, just in time construction where you look at the logistics and you plan for that in advance, can deliver substantial savings in all construction sectors for our national economy, and particularly high-speed. We need to think that this is not a railway, because every time we talk about a railway the costs go up, because our industry has never built a new railway line, besides High Speed 1 of course, which was designed by the French and built by Americans. We have not built a mainline railway line here for generations, and therefore our thinking about contractors, supply chains and designers is built on contingency and things going wrong. We should think of it as a motorway, because that is essentially what it is: a motorway with steel tracks on top. The vast majority of the risk and the cost exposure on High Speed 2 is in the civil works.

The Chairman: Your contention would be that some of the contingency may be able to be saved if we were able to adopt the processes that have been perfected and developed over many years in France?

Sir David Higgins: And other countries too—the work done in Italy for the high-speed network, or Spain, or in China. Contingency can be saved. I would be more conservative. I would say that we need to do this to ensure we can be responsible and deliver this budget within the amount set out by Treasury. It is essential and, as I have said, with my other hat on it is essential for the entire construction industry that we do not just go down the repeat of the typical cycles.

The Chairman: Have you done an exercise to determine, if we had French levels of productivity and skills, what the construction costs would be in the UK?

Sir David Higgins: We launched a report into the rail industry’s efficiency about four years ago, took a standard bridge, and they costed it in the UK, in Holland and in France. What they discovered there was not a lot of differential cost in the actual raw materials; French aggregates are slightly cheaper and there were a few things like that, and French power sometimes at a cheaper rate. Essentially the issue was access and planning, and the reason the costs here are substantially higher than both those countries was track and access time, and planning. That was in that looking at the existing railway.
We have a commission to study, which will report around mid this year, that will take on
the lessons from European best practice, but also, as I say, go further afield and look at what
China has been able to produce. Also we should look at Japan: Japan has had a long history
of building high-tech and also a level of resilience. Another feature about railway lines is we
want a railway line that does not break.

The Chairman: Do you not think we are getting off on the wrong foot by saying, “Well,
here is the budget for this. We are then going to add a Treasury contingency in”, which
everybody assumes is going to be spent. I thought the purpose of a contingency was that it
was for the unexpected, for a rainy day, but it seems to be assumed that it will all be spent.

Sir David Higgins: The history of both Crossrail and the Olympics was that there were
significant gateways put on the levels of contingency. For the Olympics, for example, the
civil works on facilities and venues had an £8 billion with a £6 billion project budget, a £1
billion first-level contingency, and a £1 billion second-level contingency. It was very clearly
set out what those contingencies were, force-majeure risks or government taxation policy,
or whatever. The gateway to accessing those contingencies and the use of change control
was rigorously enforced, and in the end £1 billion of that contingency was never spent on
the delivery of the venues and the infrastructure. We will have the same disciplines on this
project.

You are absolutely right: you should not assume that contingency will be spent, but what I
did not want to do in either of these two reports was to suddenly declare that I had found
savings. We have not done anything yet, and therefore that would be a facile statement, but
in terms of a determination to look at how we can save money, we should absolutely be
very determined to save substantial money and, as I say, it will not come down to pouring of
concrete; that is not where the saving is. It is: what are you building? Why are you building
it? Do not change your mind. What is the supply chain delivering that? Have we been
ambitious to import procedures from the rest of the world in terms of how we deliver
things?

The Chairman: Is there not a fundamental difficulty, because phase 1 has been done to a
level of granularity, whereas phase 2 is an estimate, which has a lid on it from the
Chancellor? When the work is done it could end up 10 miles south of Manchester?

Sir David Higgins: You are right. The two projects are at an entirely different stage of
development. The design of Phase 1 is more detailed; the big focus on phase 2 now is
scope: why are we doing it? Which cities do we need to connect to? How do we enter
those cities? How do they link into the existing infrastructure? Even on phase 1 we have
the hybrid Bill going through a Committee, this House at the moment, and hopefully in two
years’ time that will come through the process approved. At the same time now we have a
team of engineers with strong construction experience, a number drawn from overseas,
who are now looking at and saying, “How will we build this more efficiently? We might
have a certain curtilage that we can use; do we need to use that? Are there quicker ways?”.
Can we use the example in France, for instance, on this railway I spoke of? They decided to
build the railway as a road, a bitumen road, so they used the railway as their main logistics
and access track and then they put the ballast on top of that when they had finished using it
as a road, rather than having built separate haul roads and other access points.

Q237 Lord Lawson of Blaby: The projects that you referred to earlier—the Olympics
and the Crossrail—were constructed during the worst recession that we have had for a
very long time. This enabled the Government to put downward pressure on contractors.
We hope that we are out of the woods now, so the danger of overrun is very considerable, and we took evidence from the French that the TGV estimates overran and, indeed, most big projects in this country did, apart from the ones during the recession.

There is another element, and that is the configuration of a track, and you pointed out the need to have tunnels and so on. The configuration of the track is substantially affected by the speed at which the trains are going to run. HS2 is planned to run at a speed hugely in excess of the French TGV. Have you looked at the possibility of having a train that runs at the same speed as the TGV—it is perfectly acceptable; I live in France myself and use it occasionally—and make substantial savings through the configuration of the track by having a TGV speed, which is not to be sneezed at, instead of this hugely faster speed that is planned for HS2 for reasons that I fail to understand. Simply, I suppose, so we can boast for having far away the fastest trains in Europe, but I cannot see the point in that when it is going to cost so much more. Are you prepared to have a look at that?

Sir David Higgins: Indeed, your point is very relevant. French trains travel at 225 miles per hour, so 360 kilometres per hour. They often operate at around about 350km per hour. HS1 is rated at 300; the French side is rated at 360. Our line has parts of it rated at 400.

Lord Lawson of Blaby: Which determines the configuration of the track.

Sir David Higgins: Yes, that determines the configuration of the track, and the width of the tunnels, and the distance the tunnels are apart. We have made efficiencies, so the tunnels will not be designed for 400 kilometres per hour, or areas where there is a premium cost on doing that in terms of the tunnel. They will be designed for 360; some of the approaches and the curves as we go into particularly the Eastern leg of phase 2 will not be designed for 400; it would just be too expensive. We will want a train that will probably travel at either 350 or 360; it depends if there is a premium track cost to be going for that extra 10 kilometres an hour, and what the regulations are in Europe, and whether it justifies that extra 10 kilometres an hour.

Regarding the importance of the 400, I have asked the same question as soon as I arrived. I have heard all the stories that we can save a huge amount of money—9% of the whole project cost—by cutting the speed down by 50 kilometres an hour. The answer is that I do not believe that; I do not believe you can save that money. You could save some money by not building the at-grade sections or the sections on embankments at 400 kilometres per hour. The only concern there is it is not a massive amount of money; it is not the 9% that has been rumoured. The question there is once you do that, that is it. So if we want to get to Glasgow in three hours in however many years’ time—10 years, 20 years, 30 years—someone will eventually say, as they do now on tunnels, the Dartford Tunnel or other things, “Why in the hell did we build the tunnel so small?”, or, “Why did we not spend the extra bit of money to enable”—because who knows what is going to happen with train design? At the moment it is very efficient to run trains at 225 miles an hour; the Japanese and the Chinese are designing trains that run much faster, and aerodynamics are key to that whole operational cost. If they do that sometime in 30 years’ time, it would be a shame to have sections of the track that are relatively low-cost to upgrade from 350 or 360 kilometres per hour to 400 kilometres per hour, and lose for ever the flexibility of getting that speed on those long sections.

Lord Lawson of Blaby: You are paying a very high price for that flexibility, and the evidence that we had from Mr Prout was that the 9% saving was a 9% saving if you used exactly the same track and exactly the same configuration. Since you would use a different
configuration, because you would have more flexibility, you could do sharper curves—and you know far more about this than I do—the configuration would not have to be the same; in fact, the true saving would be considerably more than 9%.

Sir David Higgins: Yes. To repeat what I said earlier on, one of the first things I did when I arrived was to go to the chief engineer and say, “I have been briefed by various quantity surveyors who are not involved in the project that we could save substantial money; I want to see all the reports”. They came back with the reports and said, “We can save money on tunnelling. You could space the tunnels out slightly closer and save a huge amount of money”. There will be substantial cost on the actually design of the track itself, which we need to think about, of how we do something called the slab track, like where the track in middle of Channel Tunnel is on concrete. Do we put it all on concrete or do we do it on ballast? That is a decision we have yet to make. We will exhaustively look at the premium from going between the 350 to 360 kilometres per hour. You would not want to go less than 350 kilometres per hour, because that is all European—

Lord Lawson of Blaby: At the moment you are planning to go up to 400.

Sir David Higgins: In some sections; not everywhere.

Lord Lawson of Blaby: That determines the configuration of the track to a considerable extent.

Sir David Higgins: It determines the alignment in certain areas.

Lord Lawson of Blaby: The alignment, okay.

Sir David Higgins: The alignment is how flat it is and how sharp the curves are, so certainly, as I said, on parts of phase 2, or some of the approaches in the Chilterns area, we are not going anywhere near that speed, because it would just be too expensive to do that. It is a case of rigorously reviewing the design.

Lord Lawson of Blaby: We are paying a very high price for simply, on certain sections, being able to go at that speed?

Sir David Higgins: I do not believe we are paying a high price. If I thought we were we would really challenge that extra cost. What we are talking about is the difference between 350 or 360 kilometres per hour and 400 kilometres per hour. If I thought there was a 10% saving on the entire project by eliminating that 400 kilometres per hour speed, we would seriously look at that, I can assure you.

Lord Lawson of Blaby: Are you seriously looking at it?

Sir David Higgins: We are looking at everything: the job of the new design team that come in now and were recruited in the last six months is to say, “Here is the design that is going through Parliament. Obviously we have to work within the context of the hybrid Bill, but are there ways of building it quicker, faster, more efficiently? We want you to challenge everything”. We still have to have a railway line that goes from London to Old Oak Common and, of course, through to Birmingham but—

Lord Lawson of Blaby: There is a very high opportunity cost, because the higher the cost of HS2, the more it crowds out other projects.

Sir David Higgins: You are absolutely right. HS2 is a lot of money. We have to prove that we spend it very wisely. The biggest way in which we can waste money is constantly changing our mind, and that is unfortunately the history of many projects when they go
wrong: the client is not clear on the brief. We need to have these debates now and exhaustively have them. We have the time, because I believe phase 1 and phase 2 can actually be built quicker, but that means we can create time. We did that in the Olympics. We said, “Besides the tunnel underneath the Olympic site, do not build anything for two years. Stop, work out why you are doing it, plan everything properly, isolate the individual projects and then build everything in four years instead of allowing six”, and that is what we did.

The biggest thing we can do now is make sure the northern communities—the communities in Birmingham, and Euston and Camden—really understand why we are doing it and what we are getting out of it, and we have the best solution, because the tragedy is when you are halfway through construction or just about starting procurement and you have to redesign; that is a disaster.

Lord Lawson of Blaby: That is absolutely right, so therefore the critical time to change your mind is now.

Sir David Higgins: Correct, and we have an expert team, we have resourced them from the best in UK and around the world, and many of them are just coming on board now. Their brief is, “You have to build this. Is this within the constraints of what we have approved within the hybrid Bill, because we cannot verge out of that or misrepresent what has been approved by that, but are there more effective or efficient ways and what are the premium costs for that 10 kilometre difference?” We will look at all those things intensely, I can assure you.

Lord Lawson of Blaby: In a nutshell, the last question: what, in your view, is the great advantage in being able to travel at this ultra high-speed for a short section of the journey? Where is the advantage?

Sir David Higgins: I suppose the simplest way I can describe it is to describe the fundamental weakness of the existing railway network. Yesterday I was hiking in Cumbria and I drove down the M6; I do that quite a bit. As was typical, once you get below Preston before Wolverhampton, the two lanes on the left-hand side going down were completely chock-a-block with lorries, you could not move between them, and all of us, trying to keep within the speed limit but move faster, were quarantined to one lane. I know that on current forecasts by the Highways Agency that that M6 section is going to have 60% more traffic in the next 12 years. The railways are the same, so the problem with a mixed-use railway is everyone essentially goes at the speed of slowest train—a freight train or a commuting stopping train. The reason why you build a high-speed railway line, which only has trains that do exactly the same speed, and stop at exactly the same stations, is that your efficiency and utilisation of the track becomes incredibly more effective and therefore your cost of running that train and the cost of maintaining the track comes down extensively.

The problem we have in maintaining the existing track is that access is incredibly difficult, and utilisation is very poor, because you have this combination of all sorts of trains trying to use the same track. That is why, whether it be Japan, China, or all of Europe, many, many years ago they started creating dedicated, high-speed trains that get people over big distances. I know it is not just about speed, but when it takes you two hours to go from Birmingham to Leeds, and it really is, I have to be honest, a hopeless service today, a poor service, and that can be cut to less than an hour; or from Sheffield Meadowhall into Leeds in 14 minutes as opposed to 45 minutes. That is going to transform that industrial belt, which
is laced with high-tech industries, where people at the moment cannot commute and do not commute between those centres of employment.

**Lord Lawson of Blaby:** Although what you said was very interesting, I do not think it answers my question at all, but you reckon then that the French made a huge mistake in having a TGV that has a top speed of 200 miles per hour instead of the 250 miles per hour for HS2?

**Sir David Higgins:** They run their trains at 225 miles per hour—that is 350 kilometres per hour—so you could question why we did not build our link across to the tunnel at 360 kilometres per hour, because the trains speed up as soon as they go across the tunnel into France. Their railways line is rated at 360. Ours will be rated at 400 per hour, and most of the rest of it will be rated at 360—in parts less than that. It is going to be a case of not having one standard speed over the entire network. It will be: what is the most cost-effective solution? But what we want to have is a train that runs at 225 miles per hour, 360 or 350 kilometres per hour, but, for parts of the track where it is economical to, to have the capacity to future-proof it. Therefore if technology changes in 20 years and you have more efficient trains at high speeds, then you can at least use it.

**Q238 The Chairman:** Could you help us with another important element of cost: the Department of Transport told us that all the infrastructure that is required to allow HS2 to run on the dedicated line is included in the £50 billion. We heard from Transport for London that Crossrail 2 has to be built before HS2 can arrive at Euston, because otherwise they would not be able to cope with the number of passengers who are coming in. When we took evidence in Manchester for the cities in the north, they all listed infrastructure that would have to be built in order for the city to be able to connect itself with the new station, which was either close by an existing station or, in some cases, out of town. Would it not be appropriate to include these additional items in the overall budget if this system is to work efficiently?

**Sir David Higgins:** It is a very important question, and the simple answer is that the budget for £50 billion includes projects that are necessitated by HS2 for it to work. Sitting in that budget is what you need to get HS2 to work where it meets other stations and tracks. I am sure Manchester and other cities will want to maximise the benefit of it, but the most important discipline is it does not force or commit the Government to do other ancillary regional or metropolitan transport systems.

To answer the question on Crossrail 2, can I be clear that we do not need Crossrail 2 to do phase 1 of HS2; it should be tied in, because we need Crossrail 2, because Waterloo has a finite capacity and it is very close to that now. The Wimbledon line is completely stressed out, and the capacity that goes to Liverpool Street is really, really desperate. I was part of the team that launched the consultation on Crossrail 2 some three years ago. Knowing the need, I know why we are doing Crossrail 2. It is not a necessity; the additional transport capacity that comes with phase 1 of HS2 has catered for Old Oak Common, so a third of everyone that comes on the new service will get out at Old Oak Common; they do not get out today. If HS2 does not happen Old Oak Common does not exist as a platform; you could not even get there on Crossrail, so that takes a huge amount of relief on to the Crossrail line and Euston will be able to cope on phase 1. Certainly phase 2 needs to be co-ordinated with the long-term upgrade of Euston and, of course, Crossrail 2, but well before phase 2 is finished Crossrail 2, I am sure, will be well under way, if not finished.
Q239 Lord Shipley: Can I just move us on to the issue of cost-benefit analysis, Sir David? We have taken evidence from a number of witnesses who have doubted the suitability of the cost-benefit analysis that has been used for a very large infrastructure project such as this. In other words, for small infrastructure projects by the DfT it may be satisfactory, but actually is it fit for purpose for something of this scale? Have you a view about that?

Sir David Higgins: I have read the transcripts of this Committee, and I have also read the exchange of letters that have come between the Committee and the Department on this whole issue. I suppose you could say that the whole issue of cost-benefit is something that will continually evolve. What you have heard from experts is the current web tag process is, as we stand today, at world’s best practice, and it seeks to identify all the benefits that will come from infrastructure projects. Therefore I would say, in terms of the amount of work and effort that has been put into that, I think it is as good as it will get.

Does it capture everything? I would refer to, and I know you have already heard this from the Secretary of State, the story we all know of the Jubilee line and the Limehouse Link, and the Victoria line, and the second crossing in Wales—and I could give you three or four others where the cost-benefit analysis had grossly underestimated benefits. It is very difficult to capture the benefit of infrastructure that enables a city regeneration, but I would say that it is to be relied on. What does it do? It is not mean to be a discounted cash flow that you can take to a bank and raise money. It is meant to be a method of rating various infrastructure projects against other infrastructure projects to determine which is the most important. What would be nice, of course, would be to have a national transport strategy against which to measure that; that would be a discipline that would improve the whole debate on how you analyse individual projects. We do not have that today.

Lord Shipley: We do not. I think I heard you say that what we have had is as good as we can get.

Sir David Higgins: Yes.

Lord Shipley: However, the Department for Transport has recently concluded, and I quote, “that due to uncertainties and inconsistencies in the existing evidence”, fresh evidence is required on the value of travel time savings and they have commissioned new research. That is important, because the majority of benefits in the cost-benefit analysis for HS2 derive from the value placed on a rail passenger’s time. If we have to get new evidence as to whether that value is correct, surely the cost-benefit analysis may not be as good as we can get?

Sir David Higgins: I think we will constantly refine the cost-benefit analysis. As you know, it was refined in 2012 and further worked on. Roughly 50% of the cost-benefit comes from travel-time saving. We have also put some artificial brakes on the entire modelling as well: we have set the limit of growth at 2.2%, and we cap it at 2036. We know that, for the last 18 years, passenger growth on long distance, particularly west coast, went up 4.8%. If you change that and you extend it from 2036 to 2045 it goes up a factor of four instead of 2.2. These things are very sensitive on the upside, but—I know it was in the letter David Prout sent you on the 7 November—they have rated it, it sits in the high VFM range, and we should continue to analyse these issues. In the end, if it is 2.1 instead of 2.2, is this something we are not going to do? History has shown on these major public transport upgrades on existing demand routes, we have underestimated them every time.
Q240  Lord Skidelsky: On cost-benefit, we have a note from one of our witnesses who wrote: “For infrastructure typically comes in systems, not discrete bits. Choosing what sort and level of infrastructure to supply is not a marginal decision … Marginal analysis—as the core of cost-benefit analysis—has little obvious to offer”. Have you found it easy to use cost-benefit analysis to decide between different types of rail systems or, indeed, between a road and a rail system? How far have you been helped by the analysis that has been done on the problems connected with HS2, either HS2 versus another rail system, or to put in a rail system as opposed to a road system?

Sir David Higgins: Certainly we have used it to good effect. On the second report I brought out in November, I wanted to go back to basics on phase 2, because there was a lot of challenges, particularly on the eastern leg from Birmingham through to Leeds, saying, “Surely we could spend less than the budget allocated in phase 2 for that section, and get nearly as good a result in terms of capacity and speed and operational cost-efficiency”. We did use cost-benefit ratios for analysing four different schemes exhaustively and that was a very, very good measure.

I have not looked at it comparing road versus rail. The big thing about this rail project is that it will relieve a huge amount of capacity; that journey I was on yesterday on the M6, on the existing network, the west coast, we will free up 20 freight paths every day, so that has the potential of 40 containers on each of those freight trains; if you use the full potential of that, it is 1600 lorries off the M6, if you use the released capacity on the west coast properly—what is the cost? You know that when you have lorries on a motorway, that is what damages the motorway; if it was just cars on the motorways you would never have to maintain them. Look at the M6 toll: it is a fabulous toll way, hardly any trucks on it. It is a very good track in terms of surface, so what is the true cost in terms of comparing a project that can release that amount of capacity and get those lorries off the road.

Q241  Baroness Wheatcroft: Building on that, Sir David, you have been given a particular task to do and you are obviously intent on doing it as efficiently as possible, but you did say it would be nice to have a national transport strategy. Do you think it would be sensible to be starting with a national transport strategy before spending potentially £50 billion or more on one particular piece of rail?

Sir David Higgins: You cannot fault your logic; it would be sensible to have a national transport strategy. I argue that point long and hard in this report—that it got into the report—because many of us do not like the discipline of a proper 30-year strategy, but if ever there was something that needs it, it is rail and long-term transport requirements. Having said that, I do not think there is ever going to be any debate that will ever convince me or anyone that has worked in the railway that providing new relief, to the west coast in particular, and then the journey time of east coast, there is any other alternative. I worked on the railways for three years; I ran it. I looked at the challenges of maintaining the west coast. £10 billion later the railway line has increased capacity: it is an absolute nightmare to maintain. If you were travelling into Euston this morning, I noticed when I got up, there were severe delays into Euston. What was the reason? Emergency engineering at Watford. I have walked around all the junctions at Watford Junction myself and looked at the state of the track, and the sleepers, and the ballast; it is a nightmare junction—it is a really, really complex junction. It will take two years to properly upgrade and replace that junction and it is urgent to do. If you had a clear run at it with no trains on it, and looked pretty seriously at it, that would take two weeks to do, but you cannot take the railway line out, because
you shut the nation’s freight corridor. Forty per cent of the nation’s freight travels on the west coast every day and at night.

Back to your question: any national transport strategy has to have rail to complement road as a major corridor for long-distance travel. It delivers to such an important key part of the country. I am passionate about the country having a national strategy for transport tied into national strategies for other key utilities, be it from roads through to other things. You have to co-ordinate roads. What is the solution to the M62? That is a nightmare, is it not? Another one? I do not think so.

Q242 Lord May of Oxford: This is a slightly sideways point, but it relates very strongly to the point of having a national strategy that looks at rail and road. You pointed out that our roads, with all the heavy freight on them, can be awful. The last two summers I have driven from Munich Airport down to a place called Achensee in Austria and the roads there are good, simply because in Germany there is a very simple solution: big trucks cannot use the fast lane. There is something we could do that costs absolutely bloody nothing that would make a huge difference.

Sir David Higgins: Yes. That is not in my powers, but I agree with you.

Lord May of Oxford: You might note it; you can do more about it than I can.

Q243 Lord Carrington of Fulham: If I could come on to the fundamental reason as to why we want a new rail track, what I understand you have been saying to us is that the pressure is in freight, and it has been suggested to us by other witnesses that there is no overcrowding in terms of passenger services. Would that be right?

Sir David Higgins: No, it is both. It is in commuter, it is in long-distance, and it is in freight. Building two brand new tracks and taking off the long-distance frees up the west coast now. Freight often is the back of the queue, so it is crucial that those train paths, which are like Heathrow landing slots, are dedicated to freight and that the logistics centres are enhanced to get that transport off the M6. Otherwise I do not see how we can continue to function in 20 years’ time. It has got to be both; you look at the passenger growth on the train services—look at Virgin service through to Manchester and the growth that that has experienced. I have read transcripts and you talked about 60% occupancy at peak hours; that is right. The trains went from nine cars to 11 cars two years ago, and so you would hope that everything was not crowded out.

What we need to get into our head is that building infrastructure, when you have gone past the responsible level of capacity, is a very expensive thing to do, and it is incredibly inconvenient, and it actually costs the economy. Countries that invest in infrastructure in advance of need—Hong Kong, Dubai, Singapore, or Germany for that matter—build it more efficiently and cheaply, and the economy then grows into that. The best example we have seen of that is that the nine railway lines at Stratford mean that Stratford is now a vibrant commercial centre with jobs, office jobs, retail, and strong employment growth. The same will happen, or should happen, at Old Oak Common. That and Canary Wharf would never have happened unless big decisions were made to invest in Channel Tunnel Rail Link or in the Jubilee line.

Lord Carrington of Fulham: Let us park for the moment the freight and the commuter, because we can come back to the commuter side, but can I probe you a little bit on the long-distance passenger traffic? As you have said, we have had some evidence, which I am
sure you have seen, which suggests that the only real overcrowding is when the pricing structure changes on the trains leaving Euston; that the real crowding is when everybody gets their cheap tickets to go at 7 in the evening, or indeed at weekends and whenever else. That does rather suggest that the long-distance passenger traffic is not really the pressure point, because that could be adjusted by pricing policies or whatever perhaps; but that the two real issues are freight and commuter, and it is essentially commuter into London. Is that correct?

Sir David Higgins: It is all three. It is definitely commuter; we know the crowding capacity on commuter lines coming into London, and the desire for people to work in London because of the high returns for employment here. Therefore people are commuting from further and further every year, and stressing an existing rail system. In terms of long distance, during the Virgin franchise it has more than doubled—14 million to over 30 million people a year. The growth that has happened since the global financial crisis indicates that that is not going to slow down; that it is going to increase. Now, next week I think I go to Manchester, Birmingham, and on to Sheffield and Leeds. That is a day trip; each one of those is a day trip.

Now, the Manchester service to London is two hours and 15 minutes; 15% of the time it is more than 10 minutes late, so that means it is more than two and a half hours, so I have to provide for that, because I cannot turn up late for a meeting. Therefore, a trip to Manchester for business is a day. If I knew guaranteed it was an hour, that is a morning. It is a very different relationship. It is not surprising that no FTSE100 companies are based in Manchester or Leeds, because there is a cost to that. The concentration of FTSE companies all around London and the south-east is quite bizarre when you think about it, and when you look at a map of the skills and the map of people who commute into London, it is massive. Millions commute into London every day, but hardly anyone commutes between Birmingham and Leeds, or even the 35 miles from Leeds to Manchester—less than 0.5%. It is a massive loss of skills, because people just do not use mass transit to commute around this country for work. If you are Jaguar Land Rover wanting to expand at Solihull, you will have to recruit people around Solihull, because no one is going to be able to get there efficiently from Derby or from Rotherham where there is a lot of other high-tech skilled jobs.

Lord Carrington of Fulham: You were suggesting in that answer that the growth is going to come in business travel.

Sir David Higgins: If you look at a lot of the growth, Trans-Pennines had huge growth; Wales, massive growth. The Welsh franchise, Arriva, was let on zero growth. The history of that franchise has been an absolute boom in rail travel in Wales, and Trans-Pennine the same.

Lord Carrington of Fulham: Has it not predominantly been growth in leisure travel?

Sir David Higgins: That is leisure, correct. Those two examples I used are leisure. I commute in on Western, and that is business; that is not rich people.

Lord Carrington of Fulham: No, I am not suggesting—

Sir David Higgins: They are regular commuters. You try getting on a train coming in from Western. Now, of course, £7 billion or 8 billion has been spent to upgrade the western rail link, and you can do that because that line was built by Brunel and it is very wide, very
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straight, and very flat, thank heavens. That commuter service, with Crossrail and other upgrades and IEP, will start to cope with that demand.

Lord Carrington of Fulham: There are two different arguments, are there not? There is an argument in favour of building new rail track for business travel, which has an economic benefit to the country. There is a different economic benefit providing rail track for leisure travel.

Sir David Higgins: Yes, of course; leisure is an important part of the economy. But when you are talking about business, it is not all people in suits sitting in the front end in first class. It is people who will commute to work: engineers, technicians, who want to move. We forget that technology crescent that goes effectively from Birmingham and Solihull, through Derby with Rolls-Royce, and on to the Rotherham and Barnsley area, and then up into Leeds. That is a hugely productive area of 8 million people and 4 million jobs, but they cannot commute between each other. It is really unrealistic to commute in that area.

Lord Carrington of Fulham: One of the problems we are tackling, where we are trying to come to grips with, is that it has been suggested to us that the reason for this rail track is really, when it is boiled down to its fundamentals, to relieve the commuter congestion problems into London. What this is doing is spending £50 billion to effectively produce a better rail service from Watford. That does seem to be a somewhat expensive way of providing a solution to that problem.

Sir David Higgins: Part of the £25 billion for phase 1 you could say does deliver 18 new train paths into London, which will free up commuter services on the west coast. There is absolutely no doubt it will do its equivalent of Crossrail; it will relieve a lot of commuter services in there, but that is not the sole reason for doing it. It comes back to this principle of a mixed-use railway; it is very old fashioned, it is really inefficient, it is very high-cost, and it does not really satisfy anyone. It does not satisfy freight, it sure as hell does not make for efficient running of long-distance, and it is a really high-cost railway, because it is poor utilisation, and it is maintaining an old Victorian system, which, as we have seen at Christmas, is incredibly difficult to plan, unpredictable, and very inconvenient to the public.

Q244 Baroness Blackstone: Could you tell us what proportion of travellers on the West Coast Main Line are business travellers, and what proportion are travellers for some other reason?

Sir David Higgins: I do not have that figure offhand, I have to be honest. I do not know that figure; I could always find that out for you.

Baroness Blackstone: We asked the Department for Transport, but they seemed to be reluctant to tell us, and it was a bit puzzling as to why they should be. Can you think of why they should be?

Sir David Higgins: I do not know; they should have the figures. We do not directly have the figures; it would be a combination of Virgin and London Midland that would know those figures. I do not know: do people classify themselves as business travellers and visiting friends and relatives and tourists? I am not sure of how they make that division. I can certainly ask on your behalf; I can ask the Department. You did request it from the Department.

Baroness Blackstone: That would be very helpful if you could do that.
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Sir David Higgins: Sorry. I thought I had most of the letters from you, but obviously that one I had not seen.

The Chairman: We have had some difficulty in getting that information out of the Department because of the confidentiality arrangements that they have with the operators.

Sir David Higgins: The train operating companies? Maybe that is an issue that the train operating companies defend strongly, because I travel that line quite a bit and I know that London Midland is always saying that if you are a business traveller it is only a few minutes longer, and it is cheaper. Maybe it is part of their marketing pitch; I do not know. Those train operating franchise agreements are complex, and it is not something that I am—

The Chairman: To say the very least, it is most unfortunate that this Committee and the public generally do not have the data on which to be able to judge the capacity argument. I think that must make your job rather more difficult.

Sir David Higgins: The general issue we know, which I think is compelling: 14 million journeys to over 30 million; compound 4.8% growth in long-distance over 18 years. If Heathrow or the roads were coping with that they would have failed years ago; they could not possibly cope with that level of growth. We have basically been able to dine out on the Victorian infrastructure. We have stretched it, we have stuck a couple of extra train cars on, we have done everything we can to squeeze everything out of this infrastructure, and it is honestly not just the west coast. I saw the headline today that there is a train that has never run on time on Southern. Well, we all know why: because there are too many trains on too limited a track, and that is the result of long-term underinvestment in infrastructure. We have to decide what is important.

Q245 Lord Griffiths of Fforestfach: I would like to come on to the question of pricing on the railways. When HS2 is up and running, who actually determines the pricing and what is possible?

Sir David Higgins: The Government. Again, I have read the questions and the discussions, and I know you know that the model is based on matching the existing price and there is no premium business. All I would say is that is all up for the debate. That is an interesting way to develop the current model, and you have to have some model to determine it, but we all understand that the decision will rest with a future Government of the day during the franchising, if it is going to be franchised under a traditional model. If that is how it is going to be run, fine, but all I would say is that when you build a train service that will have 18 train paths an hour, and each train can have 1,000 people in it. You want to fill it. People in 20 years’ time will not be buying a paper ticket, or queuing up or waiting for a seat allocation. How people expect to travel on trains will be very different. I would say, “How is it going to be franchised? How will it be priced? How will people access the train service?” Not in the way that it is done today, because I would hope it has moved on substantially by then.

Q246 Lord Carrington of Fulham: On pricing, would you see HS2 being able to charge a premium price?

Sir David Higgins: You may well decide, “I want to have conference facilities on these trains, first class dining cars, separate suites as you arrive at the major stations”, because people would use these as business venues as they do a first class lounge at Heathrow
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Terminal 5. Why not? That could certainly be considered, or you may say, “I want it to be everyday low prices, turn up and go, and I do not want to have to pay a premium because I just decided today to travel on the trains”. All those debates. Technology will enable a lot of that, but we are building the capacity for a future Government to decide how you want to use this release capacity.

Lord Carrington of Fulham: In the model that you have, if the west coast and the east coast lines could actually compete, and they determine that themselves, what implication would that have for the cost-benefit analysis?

Sir David Higgins: I know you have been through this, so you know that HS2 adds an incremental additional revenue—you would hope it would—to the entire railway itself. What we have now is huge requirements from open-access operators to operate on both the east coast and west coast, and we know they cannot do it, because there are no train paths. I am sure I have seen press articles even in the last few weeks about open-access operators complaining and saying, “This is a restriction of freedom”. There is certainly pent-up demand for new train paths, and it has been restricted because of capacity of lines, and the inevitable performance consequences.

How many more people could you get off the roads and have moving by rail if you had more competitive policy and different pricing policies? It is an interesting debate, but the important thing is that all that is there to be maximised over the next 10 to 15 years. It is not cast in stone today. We will build something that has the flexibility and is future-proofed to allow that sort of flexibility. All we have done is done our model and said, “If you were to leave it exactly as it is today”—. I am sure it is not going to be the same way you get on a train in the future.

Q247 Lord McFall of Alcluith: You mentioned your support for the national transport strategy. Are you doing a service to your ambition for that by endorsing the west-east train line in your document Rebalancing Britain, where you want it built alongside HS2 at a cost of £15 billion? Was this not the time in your Rebalancing Britain document to say, “Look, we are taking a deep breath here, and we are asking where we are going strategically with our transport policy”? Are you not just adding a bit piecemeal on to this and defeating your noble ambition?

Sir David Higgins: That is a very good point. What is the ultimate long-term network? Where does it go? Does it go to Scotland? We have done initial work on that for the Department, and it will come back no doubt and ask us to do further work on that. You are right; we should have that. I do not think we were even talking about east-west six months ago, and as I started spending time with northern politicians, a number of them said, “Why do you not at least consider the issues, particularly of freight?”. People forget. People think the issues of the north are all about transport. The north is much more dependent on cars. It has had good motorways, but if you look at some of those motorways now, the M56 and so on, they are the arteries that move freight around that area of the Midlands, particularly east-west.

The more I thought about it the more I thought that this debate needs to be had, and the reason I said that is that if you are planning a station in Manchester and in Leeds, you had better at least think about whether you ever want to upgrade east-west, because when we asked that question, it became obvious that Leeds station is at its capacity already. If you just manage to squeeze in a few more platforms for a high-speed train service but forget about the fact that there are only a couple of trains an hour, there is a limited capacity
between Manchester and Leeds and that should be trebled, and you could cut the service time down to something reasonable, how many people would actually commute between Manchester and Leeds?

**Lord McFall of Alcluith:** I think you have answered my question, Sir David, in that you were talking to these people over the past six months, and you thought, “That is a good idea, so we will do it”.

**Sir David Higgins:** You are right, so it is not a national transport strategy. All I am saying is it is short-circuiting a process. I am saying that when you do a national transport strategy you are going to say that the east-west corridor—Liverpool to Hull, freight, commuter—has to be addressed, because it is an emerging problem because the motorways cannot cope.

**Lord McFall of Alcluith:** Given that we are writing this report, should we keep that in mind when we write it?

**Sir David Higgins:** Absolutely. I think you need to say, “There needs to be a national transport strategy. It needs to cover freight. It is also commuter”. We are not building phase 1 for long-distance, and we are not building it for commuters; we are building it for all of it, because we are trying to get capacity.

**Q248 Lord McFall of Alcluith:** In an answer to the Chairman when he appeared before the Committee, Lord Adonis said that the sum was £42 billion, which included the cost of all station infrastructure, HS2 itself, including London Euston, the new city centre station in Birmingham, the new city centre station in Manchester, and so on. Could you give us a precise figure for that at the moment?

**Sir David Higgins:** There is this report, which I put out in March. This is quite detailed on phase 1. I got external cost planners and planners to come in, and we went through it quite strongly. I was able to say the budget is adequate. I did not recommend—

**Lord McFall of Alcluith:** What is the figure?

**Sir David Higgins:** It is £24.4 billion. I am saying that the budget is certainly adequate. It covers those stations. In Euston it covers the high-speed station, so there is £2.5 billion allowed to upgrade Euston. When you look at Euston you have to look at the rest of the station and the upgrades necessary for Crossrail 2, but also a 42-acre site, which has a huge amount of oversight development.

**Lord McFall of Alcluith:** So that will be extra.

**Sir David Higgins:** No. The £2.5 billion will deliver us high-speed, but we have to think of Euston—

**Lord McFall of Alcluith:** If we are going to have a decent Euston station.

**Sir David Higgins:** You have to have a plan. The best example is King’s Cross. It will take 30 years, from 2000 when the contract was awarded to Argent, to develop the upgrade of King’s Cross. Work was well under way with the engineering works, but it will take 30 years, from 2000 until 2030, to finish King’s Cross. Euston will be the same, and over that period, with 42 acres, Euston should be a huge community asset and a major commercial centre.

**Lord McFall of Alcluith:** We will have to dip into the purse again at some stage in the future probably.
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Sir David Higgins: And claim the value. There are air rights over Euston that I think will be worth an enormous amount of money.

Q249 Lord McFall of Alcluith: One of the things this Committee has to wrestle with when it comes to support is that we are talking here about a £50 billion package. Now, given that you are in charge, if you were given £50 billion and the freedom to spend £50 billion regarding the future demands in this country, would you say, “Listen, give me that £50 billion and we are going to spend it on HS2 and HS3?”

Sir David Higgins: Yes.

Lord McFall of Alcluith: You would look at all demands and you would say, “This is a real urgent demand”.

Sir David Higgins: It is a question that was put to a number of the northern leaders of the major cities across the north: “Why do we not give you the money for HS2 and scrap it and you can use it on a local tram system or whatever you want to do?” They said, “It does not solve the issue of why London, since the Great Financial Crisis, has grown by over 12% and the north has grown by less than 4%. It does not solve our competitiveness or why we have substantially underperformed, so we do not want that. We want the north-south connection there”.

Lord McFall of Alcluith: There is a question there as well, because you told the Transport Committee that a journey time of only an hour from London to Manchester is going to be transformative to business. Can you explain how to us, because the Department for Transport have given us figures that show that there were more than 250,000 people working for 26,000 companies across greater Manchester in 2012. Is HS2 really going to be that transformational to business in Manchester, given those stats?

Sir David Higgins: Why is no bank based in Manchester, Leeds or Birmingham? It is not the same in America or Germany or China, or even Australia. The idea that every single bank has to be either in the City or Canary Wharf, which is the most expensive place in the world to hire an employee—

Lord Lawson of Blaby: That is not going to change.

Lord McFall of Alcluith: No, of course. I have spoken to tons of bankers over the past 10 years; they are coming out of my ears. Not one has said to me, “Get an HS2 and we will go to Manchester, Leeds or Scotland”. I think you are waffling there, Sir David.

Sir David Higgins: I will give you a tangible example. When I started on the Olympics I went to a number of big investors and developers here in the UK. I said, “We want to build a major shopping centre in East London at Stratford”. I said, “It will cost between £1.5 billion and £2 billion”. They all said, “Why would anyone want to build a shopping centre in East London in that location? It is full of poor people. They have no money”. I said, “This will be the most strategic location in London for shopping, and when you build it no more shopping centres will be built for 3 million people”. It now has Europe’s highest turnover, highest footfall and rents just a fraction below Shepherd’s Bush. It has been a massively successful shopping centre.

I had the same debate with a number of businesses and said, “Would you locate to Stratford?”. The answer was, “Where is that? We all live in west London and the Thames corridor”. I said, “You will not in future”. The fact now that 25% of all the office space in Stratford has already been taken up, and there are banks moving there, and there are banks
already talking about moving to Birmingham on the strength of HS2—it will change, because the banking cost structure in the UK is one of the poorest in the world; the cost-to-income ratio, which is the cost that a bank operates as a domestic operation compared to the income coming here is about 60% more than banks in Australia. Therefore they cannot afford to have the operations. They will have to go or they will go out of business.

**Lord McFall of Alcluith:** Your talents are renowned, Sir David, but we cannot really depend on you as an evangelist to ensure that all these things happen. People go to Manchester and then people go to London. We need to plan strategically, and there is still a big issue here about bolstering the city centre, rather than the regions, and that is to be answered yet.

**Sir David Higgins:** The question we need to answer is: do you know how much money we are going to spend in the next five years on the existing transport network capital-wise? Any guesses? I will tell you how much we are spending on High Speed 2 in that period: £16 billion. We are spending £72 billion in that period on patching up the existing rail network and the roads. That is what we have done all the time; for that we get no new major motorways and no new major rail systems. You have to ask yourself: is that balance of capital expenditure, £72 billion on trying to upgrade existing lines in Manchester or into London, the right balance? That is what we have done.

**Lord McFall of Alcluith:** So we really need a national transport strategy.

**Sir David Higgins:** We do need it, because at the moment we are spending the £72 billion on existing legacy stuff, and what we have seen does not provide the answer long-term. We are always chasing our tail. No sooner do we finish Crossrail than it will be at capacity and will lead to Crossrail 2.

**Q250 Lord Rowe-Beddoe:** I think the national transport strategy is perhaps one we could go a bit further on. Over the evidence that we have taken, the political arguments for this project have changed in the last four or five months that we have been sitting. One major argument, as I am sure you realise and which you have touched upon, is the increase in economic activity in the north and how important, therefore, a high-speed link is. Obviously, we talked to high-speed links in France. I am sure you know that the Cour des Comptes did an analysis of Paris-Lyon and discovered, surprisingly, that more people seemed to go from Lyon to Paris than they did from Paris to Lyon; whether they were business or not really matter. There are major problems as to whether or not, by bringing Birmingham closer to London, we will allow Birmingham commuters to commute to London more easily than they do now, and whether or not you would say the banker will now go to Birmingham instead of being in London. What is your view on that? You have expressed it in a way, but I would like serious comment, because there are big debates.

**Sir David Higgins:** It is a big debate, and I would just let economic forces force that. You can look at the ruthless process that is now under way in the oil industry, the supermarket business or banking. I sit on one of the world's biggest banks' board and I know how incredibly ruthless the threat of Google and Apple destroying traditional businesses is. It is scary what these new entrants will do. Every company will have to reinvent its cost structure and its access to skilled people over coming years. Anyone who does not think that is incredibly complacent. Does that mean that Birmingham will be able to compete? At the moment, Birmingham and Manchester have one hand tied behind their back: they have a sub-standard transport link. I would just go and talk to the leaders of those cities. Ask the
leaders of the north, the leaders of Liverpool, Leeds, Manchester and Wakefield. Ask them, “Do you want High Speed 2 or do you want something else?”.

**Lord Rowe-Beddoe:** We have done that, Sir David. We have heard from the north. In fact, Liverpool would take HS3.

**Sir David Higgins:** Not before HS2.

**Lord Rowe-Beddoe:** Yes, they would.

**Sir David Higgins:** Joe Anderson has never said that to me. I have spent time with him. In fact, he fights for a further extension of the high-speed line into Lime Street itself.

**Lord Rowe-Beddoe:** Perhaps we heard him differently. Coming back, if I may, in other words, are we doing it the right way round?

**Sir David Higgins:** Do you mean should we start with the north first?

**Lord Rowe-Beddoe:** Yes.

**Sir David Higgins:** That is a question. I would say there is no option. You may have considered it five or six years ago, but the legislative process is such that getting the second phase through Parliament will take, if things go well, until 2021. That is just the process we have here. It is quite different in France, I have to be honest; it is a different process of approval. If we were to say today, “Why do you not start at the north first?” everything would have to stop.

The other point is that if you are trying to free up capacity, which is a big part of why we are doing this, there is not a lot of point building a lot of railway lines at the top that then hit a bottleneck as you approach London. The biggest area of capacity-constraint on the entire national network is from Rugby south to Euston, and it is absolutely chronic. You would not solve that by building the line from Manchester to Crewe first; you would only exacerbate it. That being said, I do not believe that you have to wait to do things in the north. If you can say, “There is definitely going to be a high-speed station in Manchester at this location, and it will come sometime between 2030 and 2035”, business will move there. Business will start planning to invest around that station if they know it is definitely going to happen.

**Q251 Lord Monks:** You mentioned to the Transport Committee in November that HS2 is the only strategic intervention that provides both capacity and connectivity. Do you think that both these things can be met? We have had a lot of evidence from the antis that connectivity is one of the biggest weaknesses of HS2: the lack of feeder lines, the lack of junctions and so on, which may help connectivity between the main cities and London, but does not do much, say, for Coventry or somebody who does not seem to have much of a connection. Are capacity and connectivity compatible or in opposition to each other?

**Sir David Higgins:** Capacity and speed are linked, because, where you have a train line and trains travel at 200 miles per hour, there are 18 per hour and each one has 1,000 people on it, if you run it at 100 miles per hour, you are going to get half the capacity on that train line. Connectivity is a very important point and we will not get the full benefits of HS2 if we do not seriously address that. Certainly, my first report laboured really intensely on the whole issue of hub and connectivity. This line links eight of the 10 biggest cities in the country, it directly goes into the four biggest cities in the country, and it means that one in five people in the country will be able to travel on this easily.
That will only happen, particularly at the hub stations, at Crewe, or in the East Midlands or Yorkshire, if these work properly. Their connectivity to road, rail and tram is absolutely essential so that cities like Coventry can benefit or are at least given the choice. Therefore, my recommendation was that Crewe, rather than just being a railway junction, be a proper station. I know people say, “People will never get off a train”, but you do get off a train in Europe. If you travel in Switzerland or Germany, you get off a train, because there is another train coming in 10 minutes’ time. You can walk conveniently across the platform and get the other train, and it is very reliable.

Therefore, if we can create hubs people know they can come to and in 10 minutes’ time there is going to be another train service that is always reliable taking you into London, or back out again, I think that will work. You are right to say, though, that connectivity and capacity are not necessarily linked, but the project fails if we do not address the issue of connectivity very strongly. We listened to Leeds. Leeds has been telling us, “You are telling us you want to build a station 500 metres away from the existing station. We are telling you we do not think that is the right thing”. We sat back and said, “Maybe they have a point, because if you have people commuting in from Bradford, Wakefield or Barnsley into Sheffield Meadowhall, they are not going to walk 500 metres dragging a suitcase”. You have to address the issue of integration. We are working much better with Leeds now, and we will come up with a solution that works for the passenger.

Lord Monks: On the same point, you have the ones who feel they are missing out, like Stoke, and I mentioned Coventry earlier. Do you have you any good news for them?

Sir David Higgins: The first thing that it does with these other cities is relieve capacity. Putting in a new spine that takes pressure off the existing spine will relieve capacity in Stoke. I have had long discussions, because there is the debate about whether it should be Crewe or Stoke. My recommendation—it is not my decision, it is the Secretary of State’s decision, and the decision has not been made—is Crewe, and the reason for that is that Crewe has about six different railway lines converging on it. It is accident of history that they are there, but they are there. They were built 150 years ago and connect you to Wales, Shrewsbury, Liverpool and Manchester. It is an obvious place—the term “All change at Crewe” was logical—so I cannot recommend changing it to Stoke. However, there is the perfectly good line that comes out of Manchester, through Macclesfield into Stafford, and there are two good Pendolino services an hour at the moment. My recommendation was that they should have that, but they should also look at having a train that would start on the outskirts of Manchester, come down through Stoke and Stafford and come on to the high-speed line at what is called the Handsacre junction just north of Birmingham, because there is one spare slot.

My argument for now is that I will not recommend to change the location of the railway line, because it does not justify it—many of those cities are disadvantaged—but I will recommend that the Government make a decision on train paths, which I think could enhance the service to Stoke. I have not been to Coventry in the last few months, but Coventry’s services are, again, tied into the regional services and the road access as well into Crewe and into the Birmingham interchange, which is very close to them.

Q252 Lord Skidelsky: I wonder whether the debate has not been a bit skewed, sitting here in London. A great deal of emphasis has been on increasing passenger capacity and increasing passenger speed, whereas we get a barrage of evidence from the north that what they are interested in is getting east-west freight going. They do not give speed as a huge
consideration, just capacity. There seem to be two sets of arguments, which are being artificially put together. What is your comment on that? I am thinking of what the Mayor of Liverpool and other experts have said to us: “You have to get the stuff from east to west, not concentrate on increasing passenger speeds from London to Birmingham, or even to Manchester”.

**Sir David Higgins:** My argument on that is: why rely on London to make those decisions? Crossrail 2 has got ahead of steam. No one really knows the full details of it; it is not even budgeted and it does not have Treasury support at the moment, but the general public know about it because there has been a very effective campaign to get in the public’s mind that we all need Crossrail 2. There is no equivalent campaign for east-west rail, and that is because it is a fragmented political group. One thing that has developed very successfully over the last year is that the north, particularly those five cities across the M62, has come together. Why not let them make the decisions on priorities?

There are no easy answers to the freight challenge. You need new capacity, but what would they trade off? Would they build High Speed 3 first or resolve freight? Would they continue with electrification or get greater access into their existing cities? I would rely on the transport experts who live in those cities and the fact they have a democratic mandate to say to them, “Do not ask Whitehall or Westminster to have to pick and choose. Why do you not, as a team, come back with a sensible strategy?”. I think they have the capacity to do that.

**Lord Skidelsky:** I would like to press you a bit on that. “Leave it to them”, you say, and you have explained part of what you mean, but what about the funding of such an initiative?

**Sir David Higgins:** Transport for London is very eloquent. I know that they came here and said that we have to have Crossrail 2 to even do High Speed 2. They are certainly very effective in lobbying for budget, because they know how to get money. Transport for the North, which we hope will be a northern body, will then speak as one voice, have strong political leaders and make their case. I am not sure you have had a chance to read it, but I have a chart in here that shows the amount of money spent on London in the national transport budget over a long period of time. Nearly half of all of our transport money nationally is spent on London. That is the cost per head of consumer. The big blue one is subsidy to London commuters. These are all the northern cities. It is a scandal, is it not?

**Lord Skidelsky:** So it is their inadequate lobbying.

**Sir David Higgins:** It is that everyone is based in London. You are here, Parliament is here, all the bureaucrats who run the Departments live here. So much power and decision-making in this country, whether it be local government or whatever, is concentrated here. Every single company has to have a major office here. Every single consulting firm needs to be based in London, because they know it is a very centralised unitary government process, unlike in most other countries in the world. Therefore, the north suffers, as these figures clearly show.

I took them up to Birmingham and Leeds, and I said, “Look at this amount of money. You have Northern Hub. It is a fascinating project. It is worth £600 million, but Crossrail 2 is £25 billion. You are not fishing in the same pond. You have to have an aspiration for building a proper east-west corridor. Why should you not have that on the same radar screen as Crossrail 2, which is, as I said, essential? Why should it not be also considered as part of the national priorities?”
Lord Skidelsky: I have one last question, if I may. Are you suggesting that that initiative should then run parallel with or be part of?

Sir David Higgins: It feeds into. I believe Transport for the North needs to feed into the department. Ultimately, it has to be the Department for Transport that makes the final decisions on allocation of budget, but in the end why not base those decisions and priorities on the expertise and political mandates that sit in the north, and ask them? “There are going to have to be difficult decisions. There is not enough money to do all these projects. Which are the ones that you want to prioritise and how do you want to connect in to the national infrastructure that we have built?” Let them come through as a unified voice on that.

In certain regions, that has gone extremely well. I am up in Sheffield next week, and my message to the four cities that make up the 1.5 million people of Greater Sheffield is, “Have a single voice about what you want out of high-speed rail into Sheffield, because, fragmented, you will not get anything”. Greater Leeds has come together, in the same way in which Greater Manchester now has in the last year, to say, “We are clear what we want. For high speed, it is very important that it integrate at Leeds station”. The East Midlands has done the same.

The point is when these traditionally competitive cities realise they need to work together and come up with a strategy. It was interesting that when I went over to Doncaster, they said, “Whatever you do, do not take away the airport station for Manchester, because we all consider Manchester to be our international airport. If you eliminate that, you cut off forever the north to have access to an international-standard airport. We do not consider Leeds Bradford to be international. We consider Manchester to be”. The north does consider Manchester to be their major international airport. That sort of thinking helps the national transport strategy, rather than turning it into a political battle where people are just fighting for their individual pet projects.

The Chairman: Have you considered moving the head office of HS2 to Manchester?

Sir David Higgins: We are moving it to Birmingham.

The Chairman: For that reason?

Sir David Higgins: Yes, because of skills. We moved Network Rail’s head office to Milton Keynes. We have moved it to Birmingham, so all the construction will be delivered out there. We will obviously have a base here, because we have people who are in Parliament every day, and we have temporary space down at Canary Wharf. We looked at trying to get space at King’s Cross, but at £75 per foot, when we can get it at less than half that price in Birmingham, it is pretty clear what the decision needs to be.

Q253 Lord May of Oxford: I want to ask you a slightly different question, which derives from that fact that Lord Deighton told the Committee some time ago that the Government had asked you to consider how the cost of construction could be reduced, possibly through learning from practices applied abroad. In particular, he pointed out to us that you, in a meeting with the Transport Committee, had explained that the new Tours to Bordeaux line in France was carried out in two years, and Lord Deighton felt that similar works were required for phase 2 of HS2, but they are expected to take five years. Why such a difference? Secondly, he suggested to us that you told the Transport Committee recently that the cost of putting down a cubic metre of concrete in France is probably the same as England. I am quoting you, I believe: “I think it is everything above that where the costs
start to balloon”. I wonder if you could say a little bit about what the ballooning costs that you were referring to are, how they start and what we can do about it.

Sir David Higgins: Everything he said is correct and that is the case. What is it? I was an engineer here—scary—in 1979. I believe I could still be an engineer in the UK with the same skills I had in 1979. That is a pretty scary thing to say, is it not? It is not a high-tech industry. It is a very, very fragmented industry. We buy on lowest cost all the time. We never invest in skills. We have a supply chain that is fragmented and low-cost. We have companies that are undercapitalised. People have been gobbled up by American consulting firms. We do not have the equivalent of the big Spanish, German or French multidiscipline contractor companies that have strong revenue streams from owning airports or telecommunications companies, so no one invests in skills. I saw a Spanish company, ACA, and I said, “How much do you invest in R&D?” They said, “€400 million a year, across our business”. If I went to Balfour Beatty or Carillion and asked them the same question, I think I know what the answer would be.

We have a chance. One thing about a project that is going to run to 2025 and the nuclear programmes is that we have a chance to change what we are currently doing. We have to accept that the industry as it is today—on 2 February, I chair the next quarterly meeting of the Construction Industry Council, and I do not think there would be anyone around that table who does not recognise this—is fragmented, low-cost, low-margin, buying on the lowest common denominator, not investing in long-term skills, and we are all paying the price for that.

To answer your question, it is not the concrete; it is the design process. To take a rail project from conception to delivery normally takes three to five years. It takes two years to book the access charges normally. If you were designing a new car that way, you would be out of business. The biggest buyer of construction in this country is the Government, and the Government need to buy on terms other than, “I am just going to screw you to the lowest possible cost. I am not going to worry about your commitment to R&D or investment in skill”. Have I answered your question?

Lord May of Oxford: It sounds to me as if the optimum strategy, if it were politically possible, would be to get the French, the Germans or somebody else to build the thing.

Sir David Higgins: When I met this French company, I said, “We will send a team over”. This person came into my room and said, “Can I sit and talk to you?”. I said, “Sure”. I said, “I have heard all these pitches before”. He said, “Just watch the video, all right? That is two years ago”. I said, “How long does this helicopter trip keep going for?”. He said, “For another 200 kilometres, if you want to watch that”. I said, “Okay, you have impressed me. I am sending a whole team over to talk to you”. He said, “Well, if you want to change, do you want us to have our local subsidiary run this on British terms?”. I said, “No, I want to buy what you have over there. I want to buy your international practice. I want your R&D, your specialist issues of launching trusses and the way you do your just-in-time delivery of logistics. I want all that technology to come in here and change the market. Why would we not want that level of delivery?”.

I can say that the construction industry is frustrated, because it is having a real tough time. We are caught in the usual pincer movement when a market recovers. They have fixed-price contracts. The supply chain, of course, is highly fragmented, but as soon as anything recovers, pressures go up on all costs. It is not in a good state, our industry, and yet we are the biggest industry in the country. We are bigger than financial services, and we
are an input cost into everything that makes the UK competitive, so reforming our sector is really, really critical.

**Q254 Baroness Wheatcroft:** My question really leads on from that. You were committed during the Olympics to the vast majority of the work being done by British-based businesses. I think there is optimism that the same may be the case with HS2, but judging by what you just said, does that imply that the costs will undoubtedly be higher than they would be if we did let the French build it?

**Sir David Higgins:** No, I do not think so. You are right. We also had a target of 10% local, so, in the four Olympic boroughs, 10% of the people who worked on the workforce would be long-term unemployed coming into that. One of the things we noticed on this French project is that a lot of their people and the suppliers are sourced locally, in that local community. Therefore, there was less opposition to driving the railway line quickly through their areas. A lot of the accommodation was used in local hotels. The money went back into the local communities.

Whether it be Crossrail or the Olympics, the vast majority of all the money is spent here. It is interesting to think back 30 years ago, when Bechtel first moved into the country and was brought in, sensibly, by the Government to look at the Jubilee line and finish it. They did not bring a lot of people over from America. They brought some key skilled people. We looked at the rest of the organisation. They are all British, but they brought in some disciplines and controls—change control, design disciplines and management decision-making—that proved to be world-standard.

We should be open to considering consortiums. A totally overseas company landing in a market thinking that they can compete will not survive, because there is local custom, practice and supply chain. No one would do that; they would find local partners, so I do not think it is a case of exporting everything overseas. We have a history here of taking the best of the world, adapting it to our market here and making it thrive. We need to do that in our construction industry, as has happened in other industries such as insurance or financial services.

**Baroness Wheatcroft:** The other issue that is said to add hugely to costs of schemes in this country is of course planning and the amount of compensation that is often demanded by those who are affected. Could you tell us how much has actually been spent so far on buying properties from people who have been affected by HS2?

**Sir David Higgins:** I had this question at the Transport Select Committee the other month, so, rather than off the top of my head, I can send you to the actual answer that went through, which I think was up to end of November. We will send that through to you on compensation.

You are right. How do the compensation issues work? It is more complex here, because we are three times as dense a country as France. It is easier to build a railway line through wheat fields than it is the Chilterns.

**Baroness Blackstone:** You said in October that you were preparing advice for the Department for Transport on extending high-speed rail services to Scotland. Could you tell the Committee what advice you have given the Department on this?

**Sir David Higgins:** We have done a preliminary report, and that has just said, “If you wanted to have a high-speed railway line to Scotland, what is the most effective way—east
or west?”. Oddly enough, it is not easy, when you look at the geography, because you have national parks and constrained geography going north, but we have done a first-stage preliminary report, which went to the Department just before Christmas, which they are considering. I am not sure when the Department will release that.

They have certainly consulted Transport Scotland. I am up in Scotland next week for a day to talk through with their Minister and the head of Transport Scotland on how the report has gone. They have been centrally involved in the preparation of that report too. It is work in progress, and I am not sure what date the Secretary of State will release it, if he is happy with the current report. I think the reality is that more work needs to be done on the combination of: “Is it additional? Is it a series of upgrades or a new line?”

Baroness Blackstone: How, in your view, would this compare with HS3 in terms of priority—in other words, an east-west link as against an extension to Glasgow? Which, in your view, makes more sense?

Sir David Higgins: By recommending that the west coast goes to Crewe earlier—so 2027 rather than 2033 or 2035—it will bring benefits to everyone coming from the north in terms of new track and more capacity, so I think there is a benefit there, but asking me to choose between east-west and so on are the challenges we have come into before. All I did in this report here was to say, “There is a case for east-west rail and it needs to be addressed. I do not have the answer of the particular route, but you can achieve it and it is probably done within a realistic budget”. We are not at that stage in Scotland.

Baroness Blackstone: What would that budget be?

Sir David Higgins: The east-west?

Baroness Blackstone: Yes.

Sir David Higgins: It depends. You would never build a 225 mile per hour railway line between Manchester and Leeds. You would be getting off just as you sat down. I know there was a figure put out there that was £7 billion—I read it in the transcripts of the Committee here—which is obtained by multiplying the cost for High Speed 2 by the number of kilometres between those two cities. That is a blunt instrument. It certainly would not be any more than that; that is for sure.

Lord Shipley: I just wonder if I might pursue an answer Sir David gave earlier on about the location of stations, and in particular the one at Leeds, because you made a comment that it is a good thing that local people had said it is not a good idea for people to have to walk 500 yards between stations. As I understand it, those transferring from Euston to St Pancras are going to have to walk 500 metres. In Sheffield, there is still a strong body of opinion that is saying that the station should be in the centre of Sheffield, but not at Meadowhall. We received evidence from two or three witnesses to say that the best location for an HS2 station was always in city centres. Do you have a view about this, both on connectivity and on how easy it is for passengers to get around when they have arrived at one terminal but want to transfer to another one by foot?

Sir David Higgins: It is a complex and politically fraught question. Something that I keep coming back to when we have this debate in Sheffield and in other areas is that we are building a spine; we are building a motorway, not an A-road. Therefore, it will defeat the purpose if this railway line has to weave through every city—if it has to go through Derby, Nottingham and Sheffield city centres the whole way up.
As to the debate on Sheffield, there are four cities that make up the 1.3 million people who are in Greater Sheffield. Three of them passionately want Meadowhall, and they see that as critical for all the jobs. The high-tech job growth in that area is coming in Rotherham and Barnsley, and a lot of the railway jobs and new academy are in Doncaster. All I have said to them is, “You need to be united. It is no use you fighting amongst yourselves on this issue”.

I did not recommend changing the line in Sheffield in my report here because it is at least £1 billion more to go through the city centre of Sheffield. It disadvantages the other three cities, because access to them is not as good, and it adds seven minutes to the journey time to Leeds, York and everywhere north. What I was saying is that it would have to be a really compelling reason as to why you could justify that additional cost and impact on performance from going to Sheffield. I am up there next week and I am hoping we will have a debate that comes to a solution.

To your other cases, the issue with Euston is the connectivity. I recommended in this first report dropping the link between HS2 and HS1, because what was proposed was substandard, it was going to disadvantage freight and the North London line, it was going to allow a train at 25 miles an hour a couple of times an hour at that point, and it was really only going from Old Oak Common anyway, so it was really looked at as another service from London to Paris with a separate station, and we know how effective that has been at Stratford.

I actually think people want to go to a station where there is frequency of destination. Within 10 years, trains from St Pancras will go to Amsterdam; they will no doubt probably go to Germany, as well as of course the major destinations in France and the south of France. The fact that you will come to a station where there is a multitude of different services means that it is crucial to have that hub. You need those two stations linked, and that is the planning of Euston that is so critical.

High Speed 2, of course, will be much closer to Euston Road when it is built, so people will get out closer to Euston Road than they do today, and the connections through to the Circle, Hammersmith and City and District lines there are the obvious way to move people between Euston and St Pancras, because there are trains coming every minute, going on that line; you would come out of the train, get on that and go down.

You can look at what the commercial connections are between St Pancras and Euston. Crossrail 2 is critical to that, because Crossrail 2 station is smack in the middle between those two stations. How you integrate that into it is another part of the debate.

Q255 Lord Lawson of Blaby: You said early on that quite a lot of rethinking needed to be done, which should be dealt with now, not later on when it has caused all sorts of problems. You also indicated that there was a lack of flexibility as a result of the long-winded parliamentary process that is involved. Do you think it would be advantageous if we could have, in addition to high-speed rail, a high-speed parliamentary process?

Sir David Higgins: Or even if we could have two hybrid Bills at the same time.

Lord Lawson of Blaby: That would be increasing the speed, yes.

Sir David Higgins: We will face a logjam. The advantage of the hybrid Bill process is that it is like a massive planning application. I have to say, the Committee is doing an amazing job, and it is sobering to see people being able to turn up in Parliament and make their case about their house, as you saw yesterday, with the nine year-old, hopefully a future engineer,
appearing before the Committee and challenging our mathematics. That is a very open process that we should support, and I would hate for that ever to be ridden roughshod over, but your point is absolutely right. We have to build Crossrail 2. I would hate to be coming into Waterloo in 20 years’ time if we do not have Crossrail 2, but at the moment Crossrail 2 is going to fight with phase 2 of High Speed 2 and probably east-west or whatever. We have this logjam of a legislative process. The custom and practice is that you cannot put another hybrid Bill in until the first Bill is back to the House. Why? You cannot have two Bills going through the House at the same time. If your report could say anything about it, there is a real challenge in future in building infrastructure and it is a cost. I have said it here in this report. The biggest risk to High Speed 2 is the legislative process.

The Chairman: Is there not another risk, which is superfast broadband and autonomous vehicles combining to change the way that we work?

Sir David Higgins: I spent about seven days in Silicon Valley in September on a research project, meeting all the top technology and venture capital companies. What was really interesting was that the hotels we stayed at absolutely teemed every evening with venture capitalists, people doing deals and coming up with new schemes, and thousands of different proposals. It was mindboggling—this combination of technology, entrepreneur, venture capital all brought together by a motorway that connects Silicon Valley. That is how it really started. You realise that it matters that people are connected together via a major motorway. Why do they all want to huddle together? Because that is how business is done.

You are right. Broadband will get more and more, but ever since they invented the fax and said it would reduce the utilisation of paper in our offices or the need for people to travel, it does not seem to have. Face-to-face clusters seem to be more important than ever.

The Chairman: I thought you were going to tell us that you had found some private investors who wanted to invest in HS2.

Sir David Higgins: Oh, they have, do not worry. They are there. There is a massive appetite for infrastructure investment around the world, particularly the Chinese. I am sure you have seen some speculation of them wanting to invest around Birmingham, and certainly investing in the delivery of High Speed 2. When the time comes and we go out to look at appetite, it is a decision for a future Government as to how they ultimately want to deliver the project and, potentially, to fund it.

The Chairman: Sir David, thank you very much indeed
Hull and Humber Chamber of Commerce, Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce and North East Chamber of Commerce—Oral evidence (QQ 133-142)

Evidence Session No. 12  Heard in Public  Questions 133 - 142

TUESDAY 18 NOVEMBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Skidelsky
Lord Smith of Clifton
Baroness Wheatcroft

Examination of Witnesses

Dr Ian Kelly, Hull and Humber Chamber of Commerce, Ross Smith, Director of Policy, North East Chamber of Commerce, Joe Anderson, Mayor of Liverpool, and Steven Leigh, Mid-Yorkshire Chamber of Commerce

Q133 The Chairman: Gentlemen, thank you very much for joining us for this session. What I would like to do is to start off with a general question but, in answering it, could you also please just give us a brief idea of who you are representing? As a matter of course, during this session, because there are four of you, if you agree with what the previous speaker has said, a nod will suffice, so that not necessarily everybody has to answer every question. Mr Anderson, could you start us off please? The general question is: are you in favour of or against HS2 and, if so, why?

Joe Anderson: Mayor Joe Anderson, representing the Liverpool City Region and the businesses in the Liverpool City Region. Yes, I am in favour of HS2. I have been a big supporter of HS2 and, if that is the kind of straightforward answer that you wish, that is fine, but I have plenty of other things I would like to say about having connectivity to Liverpool and to Liverpool City Region as well.

Ross Smith: I am Ross Smith. I am Director of Policy at the North East Chamber of Commerce. We represent about 4,000 businesses in an area between the Scottish Borders
and the top end of North Yorkshire. Yes, I would say that we are in favour of investment in rail capacity, including HS2. As a relatively remote region within the context of England, connectivity is vitally important to the north-east of England and to its businesses. The East Coast Main Line is one of our major transport assets and it is going to hit severe capacity constraints in the next 15 years. HS2 has to be part of the solution to addressing those constraints, but there are some caveats to our support, which I will come on to later.

**Steven Leigh:** I am Steven Leigh. I am Head of Policy for the Mid-Yorkshire Chamber, which covers Wakefield, Kirklees and Calderdale in West Yorkshire. I am a Director of the Chamber. Am I in favour of HS2? Our answer to that is we are very much in favour of a UK high-speed rail initiative, but we are not in favour of the HS2 proposals. In our view, HS2 has had little regard to social, economic, environmental or operational railway considerations. As we progress through the afternoon, I will give some reasons why that is what we believe to be the case.

**Dr Kelly:** Ian Kelly, Hull and Humber Chamber of Commerce, the other good-looking mouth of the Humber from my part of the world. Our point of view is that we have no objection to HS2, but I do not think we would definitively go so far as to say we are in favour. We would like a clearer picture of where it fits in, in terms of displaced rail spending, because there is some immediate-type rail spending that would certainly benefit our part of the world. By way of comparison, we do very much like HS3, particularly if it is what we call the Hullerpool line, going right through from Hull to Liverpool. That is a particularly good idea and offers much more significant, immediate benefits to our part of the world.

**The Chairman:** Mayor Anderson, would your enthusiasm for HS2 in any way waver if there was no direct link from Liverpool to HS2?

**Joe Anderson:** In all honesty, no. I believe that it is good for UK plc. It is good that the country invests in its infrastructure and its transport systems. It is absolutely crucial if we are to keep pace with competitors around the world. However, the concern for me is not having a connection to Liverpool. It is that what it will do, instead of rebalancing the economy as it is suggested it may well do, is create more inequality, because there will be those who are connected, who benefit, and those who are not connected, who will not benefit. That is the real concern.

Of course, as Liverpool invests in the SuperPort in Liverpool, which opens up the west of the country to freight from the Far East and America, we have to have increased capacity in order to get that out. We have invested £320 million in what we call a SuperPort, which is post-Panamax, so we can take some of the biggest ships in the world, and we have to make sure we are able to get that freight out.

It is going to cost a spur. We have asked for an FOI from the relevant departments to ask what the cost would be for 20 miles, because that is connection from Crewe to Liverpool. We are talking about round about £650 million. That is a very small price to pay for the estimated—not by me but by independent people—10,000 jobs that would be created. It would boost the GVA of the local economy in the city region by a massive amount. We are talking literally billions. It is absolutely, for want of a better description, a no-brainer that we should invest in the spur that connects Liverpool. What I would also say, my Lord, is that as far as I am concerned, if I had a choice between HS2 or HS3, I would go for HS3 all
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the time, because it is seriously about connecting cities to drive economic growth in those cities to genuinely rebalance the economy.

Q134 Lord Lawson of Blaby: I have two connected questions. Listening to the Mayor of Liverpool, it seems to me that your case—and I accept the fact that you think HS3 is more important than HS2—is not the one the Government, and not just this Government but the previous Government too, have been making about the great saving of time for businessmen and, to some extent, for commuters. Your case, as I understood what you are saying, is based more on the needs of freight transport. Is that the case?

Joe Anderson: Absolutely, yes.

Lord Lawson of Blaby: This is something that seems to make very good sense to me, but we have not really had a worked-out case from the Government on that, even though logically that clearly makes sense. All of you, but those particularly from Yorkshire who are sceptical of the priority accorded to HS2, apart from HS3, which you are all in favour of, are there any other improvements in rail links that would be more important to you than HS2 and that you think could be done sooner and probably more cheaply? Is there an alternative that you would think more sensible?

Steven Leigh: That is a very interesting question. Our members, the businesses with which we liaise in our parts of the world, are far more interested in local transport links and trans-Pennine connectivity than they are about north-south connectivity. You mentioned, Lord Lawson, HS3. As far as I know, that has only existed as a concept for three or four weeks and it certainly has not been worked out in any great detail.

If you imagine taking a different route from HS2, which is the basis to our objection to HS2, by going straight up the country on what is called the M1 corridor where there is an existing railway, and if you then imagine a spur from that north-south railway right up to Sheffield, straight up the country, going over and getting to Manchester through a reopened Woodhead Tunnel, then the alignment of that route is naturally going straight to Liverpool. It is very easy to continue. Manchester would therefore become a through station, not a terminus station.

Now, billions of pounds are being bandied around in all of this, and somebody put an estimate of £7 billion for some concept that HS3 would be different from HS2. In our alternative view on this, HS3 would not exist, because our version of the high-speed line would already encompass HS3. Likewise, coming out from Liverpool through Manchester and the Woodhead Tunnel at a triangular junction somewhere east of Woodhead, it would go south to Sheffield and north to Leeds. That then opens the whole of the north-west to a high-speed route. Not only does it go to Leeds but it opens up an opportunity to carry on to Hull and farther north to Newcastle, at a saving of £7 billion.

Yes, I like HS3, but I do not think it is necessary in the context of our alternative design. On the whole, not only is an alternative route up the central spine of the country beneficial in almost every way, but the total savings on the present HS2/HS3 project are around about £20 billion, and that is why I feel it is important enough to come here today from Yorkshire to say that this is big bucks. If £20 billion is an exaggeration, even £1 billion is almost impossible to imagine, but very considerable savings could be made if this flawed HS2 route were not adopted and a far more logical connected route were to be adopted.
Q135 Lord Carrington of Fulham: My question probably follows on from that. The whole basis of HS2 is to cut the journey time, is it not, for passengers, not for freight? Insofar as it affects freight, as I understand it, it is because it removes congestion from the existing freight lines. Is that your understanding of it?

Steven Leigh: The original reason given for HS2 was speed. Predominantly, ordinary people around the country were against that, because the most common statement made was 10 minutes or 20 minutes does not make any difference from Manchester to London. The raison d’être then became capacity and, in fact, HS2 does not give you a tremendous amount of additional capacity, which is a concept I can further explain, but it became capacity. I now think that freight movement and connectivity have started to come into it. Hence, the new spur to Crewe, because the fact is that HS2 does not connect to the existing railway system. In simple layman’s terms, I say to people that you would not build the M1 with no junctions on it.

The first phase of HS2 goes from London to Birmingham, with no stops and no connectivity. It is a two-track railway, which is tremendously vulnerable to problems. It is tremendously vulnerable to even routine maintenance. Because of the high speed of these trains, its own capacity is quite limited, because these things have to go so quickly they have to have a larger separation between trains than conventional trains, so you can only process about 19 trains an hour. In fact, these are fatuous arguments about the capacity that HS2 brings; because it does not connect to the rest of the network, it is very difficult for the rest of the network to derive benefit from it.

Lord Carrington of Fulham: You do not see any advantage in reducing the passenger journey time from the north-east and the north-west down to London.

Steven Leigh: I absolutely do. The alternative plan that we have is, on average, on all national routes, 40% quicker nationally because it connects to the network. On the specific city pairs of HS2, it is minutes slower on two of them and minutes faster on the rest of them.

Lord Carrington of Fulham: If HS2 were built, you have suggested, Mr Leigh, that perhaps that would have a negative impact on other intercity services. How does that work? I do not really understand why that would have an effect.

Steven Leigh: If HS2 were built, there is no connectivity between London and Birmingham. If it goes off in that direction, there are other problems we know about in terms of the damage that would be caused by going in that direction. The cost-benefit is lost, because going straight up the country demands less track. Our alternative plan is a four-track high speed railway that we will build, and it connects with everywhere else in the country. Our concern is, if we embark on this first phase on HS2, the damage is done and the opportunity to avail ourselves of a far more logical, sensible network of high-speed rail will be lost, and we will pay about £20 billion more for the privilege of choosing the wrong route.

Lord Carrington of Fulham: Can I just ask, just to clarify, if you all agree with that?

Ross Smith: No. From our perspective, capacity has always been the biggest issue for the north-east. I can see the speed argument for some of the regions that will get a bigger relative increase in speed but, as far as the north-east is concerned, capacity is the biggest benefit. That capacity is only going to be realised in full if we make investments on the conventional lines at the same time as we are creating HS2. We need to make investments
in the East Coast Main Line, particularly north of Northallerton, in order to ensure that the capacity for both passenger trains and freight that will be freed up by HS2 delivers the full benefit to the north-east.

**Lord Carrington of Fulham:** Does just removing traffic from the existing network on to HS2 not then free up capacity on the existing network in a sufficient quantity?

**Ross Smith:** Once you get north of Leeds, then you are putting the trains back on to the existing line. As things currently stand, that would mean reducing some of the conventional services on there, so you would have marginal benefit. If you make some increases in capacity in passing places at speed on the East Coast Main Line, particularly north of Northallerton, then you can significantly increase the benefit that you are going to get to the north-east from the HS2 investment.

**Lord Carrington of Fulham:** You were shaking your head as well, Dr Kelly.

**Dr Kelly:** From our point of view, the capacity issue is key. If you are going to have a world-class rail system, it does need to be about the long-term as well as the short-term issues. The impression I have got in meetings with the Secretary of State for Transport is that there is no alternative to this, if you will excuse the phrase, in terms of the long-term vision and looking at Britain’s railway system—a Victorian-based structure. We have had a transformational world in the past, with Isambard Kingdom Brunel and his ideas. However, given the fact that the World Economic Forum puts the UK 27th in terms of overall quality of infrastructure—the second-worst in the G7—it is hardly world class in terms of where we are currently. There is an open-mindedness to a world-class, long-term vision, not based on knocking 10 or 15 minutes off a journey time but the fact that passenger numbers have doubled and, therefore, there is a huge capacity issue, it appears.

Our issue is more the finely tuned argument about immediate needs, in terms of spend now, to keep the show on the road, as it were, because there are so many problems and bottlenecks. About a quarter of rail freight for the UK comes out of the Humber, and work on a couple of pinch points at little places you have never heard of, like Barnetby and Gainsborough, are the sorts of things that could do quite a lot transformationally in our area, with miniscule amounts of money. It is more about ensuring the current transport spend does not miss out, as well as having the vision for the longer term objectives.

**Q136 Lord Shipley:** Could we just explore in a bit more detail the capacity constrains? Each of you can think and then talk about the area that you are based in. Look at capacity; we would like to know how you define those capacity constraints. Some of it we have heard, but some of it we have not. Look at it from the perspective of commuting, regional and sub-regional; intercity, both London and Scotland, but also cross-country; and then freight, and in particular access to ports, because the Humber is not the only port we have represented here. It would be useful to get that perspective, and then could you just look at the issue of, for commuters or passengers or, indeed, for freight, having longer trains? On some of the lines that we have now, which may be pressured in terms of capacity, you might solve it by simply having longer sets of carriages.

**Joe Anderson:** I would just like to re-emphasise the point that, for me, HS2 should happen. I am really disappointed that the debate and the politicians who are going to make this decision are gripped by some sort of inertia because of austerity. The fact is that this is a long-term investment for 30 years, and that is the way we should look at it. If you are going
to invest, you have to do that properly. If you are going to refurbish and develop your property, you do not leave half the roof off.

For me, HS2 put forward the strategic case themselves, and with your permission I will just give a quote, and it is on the argument for capacity. It says, “We believe the demand for carrying freight by rail will only grow. Industry is concerned by rising diesel prices, which they predict will rise by 36% by 2040. They see rail as playing an increasing role in transporting freight to maintain affordable prices for goods in the future. The Government also see an increasing role for rail freight in transporting goods around the country. The congestion and carbon benefits that this can provide, as lorries are moved off the road, will increase economic activity and support the recovery”.

On your question, Lord Shipley, in terms of the issues that we face, there is no question that the investment in the SuperPort in Liverpool causes anxiety and concerns, in the sense that it is predicted that there will be an increase of between 400% and 500% in freight coming into the west through Liverpool. Seventy-eight per cent of goods consumed north of Birmingham come in to the south of England, and then are transported from the south of England up north. The SuperPort is post-Panamax, so we can now bring the biggest ships in the world into Liverpool. That means we have to get that freight out of the city of Liverpool. Otherwise, it goes on to the M62 and on to the M6, which becomes a car park.

Looking long term for the next 10 or 15 years, it seems to me absolutely common sense to look at that investment now and create that spur into Liverpool, which frees the capacity to take the goods and the freight from the SuperPort and out across to the Humber and across to Hull, so it goes into eastern Europe as well. That, for me, is the most crucial and important thing in this debate. Yes, the argument should be about investment in UK plc. If we are serious about rebalancing the economy, it is absolute madness to invest so much money. It is like investing in your house and forgetting to do your roof. It is just nonsensical to me. This means that investment in the SuperPort in Liverpool can benefit the UK. We are talking about 14,000 jobs being created in the city region, as a result of that spur coming in. We are talking somewhere round about £11 billion GVA increase into the Liverpool City Region. That is something that we should want in this debate: that our cities grow and we unleash the potential for our cities to grow. Leaving out that connection will only, as I say, create inequality, and it will be those that are connected and those who are not connected.

**Lord May of Oxford:** If I understand you correctly, you do not have complete confidence in the Department for Transport.

**Joe Anderson:** The point that Lord Lawson made before is an absolutely valid point. He picked up on what I said about freight. I do not really think there has been a clear case made for, or an economic look and scrutiny of, the benefits. It has just been based on speed. Yes, that is important; it is important to a UK economy competing with our global competitors, but it is also important to recognise that it frees up that opportunity to move freight.

Can I just make this case as well, in terms of the length of trains? Lord Shipley mentioned the length of trains. Just to accommodate HS2, we will have to upgrade our main line station, Lime Street station. We will have to invest heavily just to accommodate the length of trains. Again, we make that investment. We have to do that because HS2 is going to happen, rather than creating the opportunity to build a spur into Liverpool. That frees up
capacity, and we can make a contribution to that, as a port city, and to the UK and to its growth.

Ross Smith: In terms of passengers, numbers on the East Coast Main Line have grown by something in the region of 40% over the last eight years. That scale of increase is forecast to continue, and that is going to put the East Coast Main Line at capacity within about 15 years, so we need to make investment just to protect the efficiency of the transport links that we have from the north-east. If the right investments are made, it should also enable more direct links to London from both Middlesbrough and Sunderland, so creating extra connectivity from different parts of the region as well.

In terms of the commuter trains operating within the north-east, yes, there is certainly a case for investing in more and better carriages, and we have a couple of key franchises coming up where we would like to see that included.

In terms of freight, there are forecasts over the same 15-year period for an increase in rail freight traffic to the north-east of potentially about 50% but, speaking to some of the users of rail freight, there are concerns that an increase in the order of about 5% would see the line gum up. At that point, because of the lack of passing places, it becomes difficult for freight and passenger trains to use the line together, so we do need to make that kind of investment, both in the East Coast Main Line and in some extra routes that could support that. One in particular is the Leamside Line, which would run parallel to the East Coast Main Line through a large stretch of the north-east and be very supportive of getting rail freight into the port of Tyne.

Steven Leigh: The first thing I said was that we are very much in favour of a high-speed rail system, so I do not want anybody to believe that we are not, because we are. It is gratifying to hear my Chamber of Commerce colleagues say that capacity is the issue because, on our alternative proposal, which if you remember I said is a four-track railway, as opposed to a two-track railway going through the Chilterns, the magnitude of difference between two tracks and four tracks is greater than two. The amount of capacity freed up by our alternative proposal is a lot more than you get with HS2. Whatever that is, I am agreeing with my colleagues and we get more with our alternative.

I also mentioned earlier that the very route that we will be taking gives us this trans-Pennine connectivity by cutting through Woodhead straight into Manchester, with an easy alignment into Liverpool. My colleague on the panel from Liverpool has aspirations for the northern cities. Those aspirations are met already by our version of this, without any talk of HS3, because it opens up the prospect of connectivity all the way from Liverpool to Hull. We get all of that. We agree with all of the good things about HS2: the jobs, the infrastructure spend and all of those things. It is just that HS2 is the wrong route.

Q137 Lord Shipley: Could I just ask you to look at the capacity constraint question that I asked about West Yorkshire? You are representing Kirklees, Calderdale and Wakefield. Could you talk about the capacity constraints that exist now in that area, and how you would like to see those solved?

Steven Leigh: There are a number of capacity constraints, and that is mainly because Leeds is absolutely full up. All routes lead to Leeds. There are alternatives that could be looked at to free up capacity in West Yorkshire generally. One of those might be where you have heard of the connection called Crossrail in Bradford between the two stations, which are
both terminus stations half a mile apart. If they were linked, that would open up north-south connectivity to the north.

For Manchester connectivity with Leeds, there are two tracks, the Calder Valley Line and the TransPennine Line. They are both full up. On the proposals being made under HS3, whatever they might be, all I have heard is an upgrade to particularly the TransPennine Line. On the one hand, there is a proposal to just upgrade the TransPennine Line; on the other hand there is a proposal to reopen a third line, which brings a massive quantum leap in capacity across the Pennines by utilising the Woodhead route. Not only do we get HS3 for nothing, compared with spending £7 billion on it following an HS2 implementation; we also get the benefit of that massive capacity increase. Incidentally, the work on that closed-down line through Woodhead would not affect anybody else. We could start it now. It would not slow the whole system down, and that is a quantum capacity increase that is possible and available to us if we want to take it.

The Chairman: Could we just hear from Hull and Humber about their capacity problems?

Dr Kelly: If you will forgive the Irish in me, if I was going there, I would not start from here. The last Labour administration prioritised education and health—Governments make choices. That was understandable at one level, but we have historically fallen back on transport and we are in a worse place from a business perspective that we would like to be. That is why there are issues about catch up immediately to keep the show on the road, as I say, whilst at what point do you hit your vision. Is it 2035 or 2040 in terms of those judgment calls to be made?

I was part of the delegation led by Alan Johnson, at the time, with the support of Lord Prescott and Hull City Council, to get a Hull train service direct to Hull. That has been transformational for our city. That capacity to go from listening to Chris Garnett at GNER saying you can only have one route in in the morning and one route back at night to the seven direct rail routes that we have now has made Hull somewhere that is not, as Larkin called it, “the end of the line”, but is now obviously the gateway to Europe and much beyond. The serious point is that the growing transformation of Hull as a city has been heavily predicated upon that.

As we come towards a Hull City of Culture, the fact that we want that to grow and to get rail electrification, for example, is absolutely essential. It is the same into Cleethorpes from Doncaster, otherwise dare I say, Lord Lawson, that we may or may not get the offshore renewables opportunities on the Humber. That transformational opportunity for our part of the world that usually gets Cinderella-scale transport investment could be lost. An extra few or longer trains will not help there, but it does come back to the argument about East Coast Main Line capacity being freed up for passengers or freight, which is advantageous for us, even if this HS2 goes to some other places in other parts of the north.

Q138 Baroness Wheatcroft: There has been a lot more discussion this afternoon about freight than generally takes place around HS2. I wondered, bearing that in mind, whether you feel that the potential alternatives to HS2 have been given proper consideration. I know that you, Mr Leigh, obviously feel that your scheme probably does deserve more consideration, but generally I would like to ask you all whether you feel that there has been a fair hearing: a proper investigation of the alternatives and the amount of money that needs to be spent just on keeping what we have working as well, so that one looks at it in the round. Perhaps we could start with you, Mayor.
Joe Anderson: My own view is that, yes, there has been a fair debate, if you like, of the arguments and rationale for investment in high speed. It is something that I believe has been made. It is something that I agree with. As I said earlier, my view is that we should, as a country, be investing in high speed, but it is not just about high speed. It is about an opportunity and a long-term investment. For me, it is important for us and this Select Committee to understand the opportunities of a faster connection and, equally, more capacity in the case of Liverpool as a port. The reality is that businesses are making decisions as we speak, maybe as the country is coming out of recession, about the long-term future for themselves and investment. If we are not connected, and cities are not connected, it comes back to my point about the inequality that will result. It is important that Parliament, and you as this Select Committee, as important as it is, understand that we need vision and aspirations to invest now for the future.

This is why this debate is being constrained on the back of austerity and people not being afraid to speak out and say we should be investing in the long-term future and making sure we connect cities. I liken London to a magnet that is sucking the life out of cities. We need to give some power back to cities, not so that we can suck the life out of London, because we all want London as a capital to be successful, but equally to let cities grow and city regions grow and prosper to make an impact to the UK’s economy.

Baroness Wheatcroft: Our previous witness this afternoon, from France, told us that the major beneficiary from high-speed rail had been Paris.

Joe Anderson: That is a concern, yes.

Ross Smith: Freight is clearly important, but passenger rail capacity is extremely important as well. The scale of the challenge there requires new lines to be built. If you are going to build new lines, then there would be a question of why you would choose to invest in substandard technology, rather than to go for a high-speed line as you do that. My comment would be not so much that the alternatives have not been explored enough, but that there has not been enough focus on some of the complementary investments on the conventional lines that need to go alongside that. For example, there is an assessment that the economic benefits from the eastern leg of the Y are about £4.6 billion, but that could potentially double if you make the investments in the East Coast Main Line at the same time. We need to see this as part of an overall strategy for increasing capacity in our rail network, and see HS2 less as a single standalone project.

Baroness Wheatcroft: Thank you very much. It is part of an overall strategy. That makes sense.

Steven Leigh: I do believe that there are alternatives. I emphatically do not believe that they have been given fair and adequate consideration. If any of the statements that I have made this afternoon sound too good to be true, well then I challenge, together with the designers of HSUK, which is our alternative system, anybody from HS2, anywhere, anytime, to come and refute what I have been saying. It has been almost impossible to have the debate, and that is what I most object to.

The Chairman: Have you had any engagement with the Department for Transport on this? Have you had detailed discussions?

Steven Leigh: We have attempted to have detailed discussions. The designer of HSUK is an observer to these proceedings now. He has been engaged with the House of Commons.
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on this. The fact is that there is a series of consequences that have been at work here. The first thing was that somebody decided 400 kilometres an hour was a speed that might be appropriate for high-speed rail. If a train runs at 400 kilometres an hour, the track has to be as near as damn it dead straight. It does not allow for any bends. At a slightly slower speed, which is our design, of 360 kilometres per hour, that track can be laid within the confines of the existing M1 corridor, whereas it cannot at 400 kilometres an hour, hence the decision to go in a north-westerly direction across the Chilterns and hence the massive additional cost to be incurred there, because they have had to put it in tunnels to placate the people, quite understandably, who live in that area.

It is just a simple decision somewhere: “Let us go at 400 kilometres an hour”. The people who then picked that up and designed it have taken that statement absolutely literally, and common sense appears to have gone right out of the window. It does not make any sense to have a new two-track railway between London and Birmingham that does not connect.

Specifically on your connectivity question, essentially HS2 only connects with the cities that are on it now, so that would be London, Birmingham, Manchester, Leeds and Sheffield, and several of the stations are out of the city. Ours integrates with the whole of the network. The city pairs on HS2 are about 14. The city pairs on ours are 55. It is hugely more connected than anything that can be delivered by HS2.

Baroness Wheatcroft: Dr Kelly, is there anything you would like to add?

Dr Kelly: We had a very nice presentation from some people at HS2, who came to see us recently, and one particularly therapeutic picture they gave us made rail travel seem very pleasant and certainly not always like the journeys I have when I come down to London. I am very seized, Baroness Wheatcroft, by your remark about France and the benefits to Paris, as to the rest of the country. For me, not having the technical expertise to argue with transport experts, I sense that HS2 could be equally as good for London as it could for the north.

The bigger issue that hit us is that, if you can spend £15 billion on Crossrail crossing one side of London to the other, that would be a powerful spend on the north of England to create Hullerpool in terms of a northern hub, as was said to be the Chancellor and Prime Minister’s ambition when they came to Leeds recently. He did not mention Hull and Liverpool quite as much as the Mayor and I had hoped, but that is powerful in terms of our economic development opportunities. I understand the congestion issues in London, but the economic development opportunities, which would rebalance Britain’s economy, were very powerful there.

Q139 Lord Monks: Can I just move on to this area that is being pursued about the balanced economy? It takes more than a transport link to build up an economy. We have been receiving evidence about the role of local enterprise bodies, to which I think some of you are connected, and what they can do to generate the kind of entrepreneurial and business activity that you need around the various railheads that would exist in a high-speed network, leaving aside for the moment some of the arguments about where that is. How do you see the role of LEPs as an important ingredient in maximising the benefit of high-speed rail?

Joe Anderson: My answer to that, Lord Monks, is simply to say that, clearly, if we were aware that there would be a spur into Liverpool, we could argue how it could be beneficial.
The Local Enterprise Partnership has produced a report that sets out the economic case for the spur into Liverpool in their view, and the private sector as well as the LEP have created a campaign called 20 Miles More, because that is all it is from Crewe. It is less than 20 miles more into Liverpool. They have produced reports that set out that case.

Clearly for me, there is no question that a spur into Liverpool Lime Street would be able to attract new businesses and investment around that particular area, and that is absolutely clear. It would revitalise that part of Liverpool and that part of the city centre. Clearly that will not happen if there is not a connection coming into Liverpool. Even if HS2 just takes place as it is, we will have to modernise to a certain extent Lime Street, which is our mainline station, to accommodate the length of the new trains coming in. Clearly if we were to do that, I would like to do a lot more than that to create more jobs, more businesses and more growth within the particular area of central Liverpool.

Ross Smith: That is perhaps a bigger issue if you are talking about Birmingham, Leeds or Manchester, the cities that are going to be directly on the HS2 route. Clearly from a north-east perspective, it is an important link, but then so are the investments that we are seeing in the A1 and the A19, and so are the rail gauge enhancements that we need to our ports or our flights to Heathrow, Dubai and New York. I would expect the LEPs to take an interest in all these issues.

In terms of the wider question about rebalancing, that has probably been slightly overdone, but that does not mean that you do not invest in the link. If the argument is that a link between the north and London only benefits London, then the logic would be we should start sabotaging the roads and the rail lines that we already have, but I do not think any of us are intending to go out and do that.

Steven Leigh: The benefit of east-west communication across the north is the key to trying to close this north-south divide, far more important than any north-south activity, especially when there is a suspicion that most of the sweeties go to the big city. You have heard that this afternoon. That east-west connectivity is very important. The LEPs in our part of Yorkshire are also very important. That, together with the idea of core cities and more localism in decision-making, is certainly welcomed in my part of Yorkshire anyway. The problem with the LEPs thus far has been that the funding has not exactly been adequate. Amongst the business community that we engage with on a daily basis, there is still some suspicion about the LEPs—that maybe they are an extra layer of government that we do not need. Our Chamber’s view is that we work with them; we hope they will succeed. We hope the funding is going to be improved, and with the LEPs across the north of England all beating the same drum, I think that we can do well to narrow the north-south divide.

Dr Kelly: From our perspective in the Humber, we would probably say the LEPs are still a work in progress, particularly the evolving relationships between individual local authorities and the LEPs, and also the combined authority concept and the LEPs, and where power lies, because there are many local authority colleagues who do think that this is probably their money and they should largely be shaping that agenda as democratically elected people. There may be colleagues around here that take a similar view, and I would not disagree with the logic of some of that.

From a business perspective, we had four local authorities in the Humber when we established the Humber LEP. They were all at slightly different variances. Greg Clark as Minister was kind enough to come to the Chamber so that we could help get a common
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line for a Humber LEP and capture the enterprise zones before we missed the chance. You would have to ask one of your colleagues, Lord Haskins, because we passed the baton on to him, about how he enjoys herding the cats that are the LEP stakeholders. The essence of our thinking on transport, which is important to business, is that one northern transport body has the greater strategic capacity we need than just relying on individual LEPs to make strategic transport decisions.

**Q140 Lord Rowe-Beddoe:** Mayor Anderson, we have heard an interesting session so far, in what you have been saying. There does seem to be some commonality that we need a high-speed link, although there is a variation, as to what we have heard. My set of questions is really about the rebalancing of the UK economy, bearing in mind what Baroness Wheatcroft said with regard to London perhaps benefiting more. What can we do to rebalance? That is really my fundamental question. Apart from building the thing, then what?

**Joe Anderson:** If we are serious about rebalancing the economy, we have to rebalance the way we fund cities and certain areas of the country. That is absolutely clear. The spend in the south and around London, as has just been explained with Crossrail, is about 10 times the amount that is spent in the north. I have made it absolutely clear that, if I had the choice about which I would build, whether HS3 or HS2, I would build HS3.

There is absolutely no question that for cities like Liverpool, core cities across the UK and others, austerity is really hurting. The fact is that, with further cuts coming down the line, and we know that, each city has to try to make its area sustainable and be able to not be reliant on Government grant, which is being reduced now. In order to do that, Liverpool needs to be able to be competitive, and I am speaking on behalf of Liverpool—that is why I am here: for the Liverpool City Region. It also needs to be able to attract business and it needs to be able to sustain itself for the future. I think the disadvantage to Liverpool from HS2 will seriously impact on the economic growth within the Liverpool City Region. There are 1.5 million people. It has a bigger economy than Wales; it can make even more of a contribution to the UK. As I say, that can enable us not only to fend for ourselves but make a bigger contribution to the UK.

I believe the rhetoric around rebalancing the economy is ad hoc sometimes, especially from politicians down in this particular palace. I do not think there has been any real transport strategy for the UK. That is absolutely missing. You cannot disengage that from an economic strategy for the UK as well. For me, rebalancing the economy seems to be a throwaway strapline without any serious thinking. As I pointed out before when I made the comment, the real concern for the Liverpool City Region—and I do not speak for it, but I guess it is the same for the north-east, and particularly the likes of Newcastle and Hull—is that, if we are not connected, investment, as businesses look to invest for the future, will be more favourably looked at towards those that are connected. I would call on this Select Committee and call on people who are going to make the decision to look beyond the austerity constraints that we now face and look to the future. This is a 30-year project and, for me, I just think and believe that we should be making the case for further investment to connect right across from west to east, as well as that HS2 connection, to really benefit the whole of the UK. That is the only way that we are going to rebalance the economy.
Lord Rowe-Beddoe: I am interested that you have referred to austerity. I do not see much austerity with a £50 billion project that has been bandied about. That is a big slug of money. We are trying to figure out whether it is the right way to spend it.

Joe Anderson: I believe it is. Quite simply, it is over a 30-year period. If you buy a house, you cannot not do the repairs that are needed to your house, otherwise your investment will go down the drain.

Lord Rowe-Beddoe: What about this with your house? Why do we always have to start at the London end? Perhaps we should start at the top end with the roof.

Joe Anderson: I have made it absolutely clear that, if I were the Prime Minister, I would be investing in HS3 before HS2. There is also an equal argument that we do not need reminding of what has just happened in the devolution debate north of the border, and how people feel disconnected. We have a real opportunity here to reconnect the northern cities together, so that they do not feel disenfranchised from what is going on elsewhere. I would rather see connections to Glasgow, Edinburgh and other cities in Scotland as well, rather than the emphasis being on London. I make the point that I am still in favour of investment in HS2, quite simply because that is what other global cities worldwide are doing, and we do not want the country to be left behind.

Ross Smith: In terms of rebalancing the economy, we need three things. One is some specific investments in the north, and the parallel with Crossrail is a fair one. Secondly, it is decision-making that, in a north-east context, is suited to north-east conditions rather than being suited to London and south-east conditions. Thirdly, it is a much more sophisticated recognition around Government as to how decisions over different policy areas have different levels of impact in different parts of the country, rather than being blind to that. Transport is one element of that, but there is a whole series of other policy areas that are different elements to it as well.

In terms of the cost, I had my pie chart from the Chancellor through the door this week. The little orange segment that is devoted to transport I do not think is going to get that much broader in future years as a result of this investment in our railways, but we do, again as Dr Kelly referred to earlier, have an infrastructure deficit in this country, and our members very clearly want to see a greater share of our public spending going on that infrastructure investment.

Dr Kelly: In many respects, it is what you might call a classic demand and supply issue for us, insofar as demand follows congestion at the moment to alleviate the congestion that we have on our transport situation, because of population growth in London and the like. You can see why transport spend is chasing the tail of the tiger, as it were. There is a large body of economic development evidence that highlights how transport infrastructure, if you put that as a supply-side proposition and put it in place, generates growth in itself. That tackles some of those problems about the inequalities between the two. I am particularly reluctant to agree with those policy wonks who take the view that we should close down the north of England and all move down to London here, which could only make your congestion problems worse.

Lord Rowe-Beddoe: I do not think anybody is suggesting that, are they?

Dr Kelly: I have heard policy wonks who have talked about “Forget Hull. Forget northern places of deprivation”.

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Hull and Humber Chamber of Commerce, Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce and North East Chamber of Commerce—Oral evidence (QQ 133-142)

Lord Rowe-Beddoe: To answer the question, would you start it from the north?

Dr Kelly: I would say yes. That investment, in terms of value-for-money impact, is one occasion where I would say top-down rather than bottom-up.

Lord Rowe-Beddoe: Thank you. Lastly, I am sure the alternative proposal has something to say here.

Steven Leigh: Many of my proposals are very similar to those of the other members of the panel. Success breeds success. There is evidence—we have heard it many times and seen many published reports—that, where places are connected, clusters of excellence develop. We have heard it this afternoon from France. If the connectivity exists, the opportunity for businesses to create clusters of excellence becomes more readily available. Therefore, in my opinion and my Chamber’s opinion, this east-west connectivity in the north is absolutely vital. If those towns and cities, all the way from Liverpool to Hull, have that faster connectivity, then clusters of excellence will develop that will mean that people will not necessarily have to go to London, which is largely the case. People come to London because London is connected with everywhere. On that basis, a consequence of the transport work in the north would be a tendency to rebalance the economy and close the north-south divide.

Q141 Baroness Blackstone: Whether you start in the north or whether you start in the south, can I press you all on whether you are happy about the level of public subsidy that is likely as a result of this project? If we assume about £60 billion to construct it and then about £30 billion back in revenues, that is still a huge hole there, something like another £30 billion that the taxpayer is going to have to fund. Is this something that you think is acceptable? Is the value of this so great that that degree of subsidy is desirable?

Joe Anderson: The idea that we do not invest in infrastructure, to me, is quite simply reckless.

Baroness Blackstone: You are not answering my question. I am not saying that we should not invest in infrastructure. It is this bit of infrastructure, in terms of a project, as against the alternatives.

Joe Anderson: If we were talking about this over a one-year period and we were talking about £50 billion over a one or two-year period, I would agree with you but, at this juncture and this time, we have more things to defend and more things to do. Over a 30-year period, it is absolutely right. In fact, I would argue that we need to invest more. I call it invest to earn. Quite simply, if you invest money, you will get a return on it if you do it properly and you do it well. That is what this is about. That is why I say the ambition has to be to make sure that the whole UK grows as a result of this investment, not just high speed, but freight.

Steven Leigh: I agree with the point that you are making. Obviously, a £40 billion project is a better investment than a £60 billion project, and I am sure that every politician in the land could do something very useful with £20 billion, if that is a saving. My view is that we definitely agree with the high-speed rail network. We want to invest, but with any investment, the less you invest, by definition, the better the return. Particularly if the services delivered are also greatly better on an alternative plan, I see a tremendous return on the investment. On HS2, I see a disastrous return on investment, because it could be so much better.
Hull and Humber Chamber of Commerce, Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce and North East Chamber of Commerce—Oral evidence (QQ 133-142)

Ross Smith: I have not seen a serious alternative to address the major capacity issue that we have and that investment simply has to be made. I would probably agree with Mayor Anderson that we should be investing more. Clearly, you would expect me to say this: in due course, we want to see this as part of a full national network that goes beyond Leeds through the north-east to Scotland.

Dr Kelly: When it is put as starkly as £60 billion worth of costs and £30 billion worth of subsidy it does look rather eye-watering. You have to combine that with what it leads to in terms of greater economic growth for the country, and that needs to be put into the equation. I have not done those figures, but I would broadly agree with the assumption that transport spending does generate economic growth, certainly compared with some other types of spending.

Q142 The Chairman: Our previous witness struggled to find a relationship between transport investment and economic growth in France, so there are obviously different opinions. It seems to be clear that the four of you are very much in favour of what has been called HS3, which is a trans-Pennine link. If that bit of the pie chart is not to grow, that might possibly be your priority. I am putting words in your mouth. You can disagree.

Ross Smith: There is a strong argument for those east-west connections. It is something that clearly needs to improve in the north of England. Anyone who is travelling across the Pennines would echo that very readily. However, we still need to invest in that capacity on our main north-south rail routes. We cannot get away from that. We need to make an investment that will address those issues.

The Chairman: Thank you very much indeed. That brings this session to an end. Thank you for your helpful answers.
Institute for Economic Affairs and 51m Alliance of Councils—Oral evidence (QQ 88-99)

Institute for Economic Affairs and 51m Alliance of Councils—Oral evidence (QQ 88-99)

Transcript to be found under 51m Alliance of Councils and Institute for Economic Affairs
The following data are provided in support of my assertion that the economies of the West Midlands and the North of England are dominated by government spending rather than genuine wealth creation. The third column of figures shows that public expenditure accounts for roughly 60 per cent of GDP/GVA in these regions. The 2014/15 figures would probably be about 2 percentage points lower due to the recent spending cuts.

**UK general government expenditure in 2009-10 by country and region on a residence basis**

<table>
<thead>
<tr>
<th>Country</th>
<th>Scaled public spending 2009-10 (£m)</th>
<th>Estimated GDP at basic prices 2009-10 (£m)</th>
<th>Ratio to GDP at basic prices in 2009-10 (%)</th>
<th>Ratio to GDP at basic prices in 2004-05 (%)</th>
<th>Change in basic-price ratio 2004-05 to 2009-10 (%)</th>
<th>Ratio to GDP at market prices in 2009-10 (%)</th>
<th>Proportion employed in public sector in 2010 Q2 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-East</td>
<td>30,054</td>
<td>41,231</td>
<td>72.9</td>
<td>63.5</td>
<td>9.4</td>
<td>65.5</td>
<td>24.6</td>
</tr>
<tr>
<td>North-West</td>
<td>77,962</td>
<td>121,622</td>
<td>64.1</td>
<td>54.1</td>
<td>10.0</td>
<td>57.6</td>
<td>21.9</td>
</tr>
<tr>
<td>Yorks &amp; Humber</td>
<td>53,943</td>
<td>88,984</td>
<td>60.6</td>
<td>50.9</td>
<td>9.7</td>
<td>54.4</td>
<td>22.0</td>
</tr>
<tr>
<td>East Midlands</td>
<td>43,109</td>
<td>78,872</td>
<td>54.7</td>
<td>45.2</td>
<td>9.5</td>
<td>49.1</td>
<td>18.2</td>
</tr>
<tr>
<td>West Midlands</td>
<td>57,117</td>
<td>93,125</td>
<td>61.3</td>
<td>49.5</td>
<td>11.8</td>
<td>55.0</td>
<td>20.5</td>
</tr>
<tr>
<td>East</td>
<td>53,395</td>
<td>120,313</td>
<td>44.4</td>
<td>36.2</td>
<td>8.2</td>
<td>39.9</td>
<td>16.4</td>
</tr>
<tr>
<td>London</td>
<td>94,818</td>
<td>246,417</td>
<td>38.5</td>
<td>35.3</td>
<td>3.2</td>
<td>34.6</td>
<td>20.9</td>
</tr>
<tr>
<td>South-East</td>
<td>78,278</td>
<td>193,873</td>
<td>40.4</td>
<td>33.7</td>
<td>6.7</td>
<td>36.3</td>
<td>16.5</td>
</tr>
<tr>
<td>South-West</td>
<td>51,643</td>
<td>97,303</td>
<td>53.1</td>
<td>44.5</td>
<td>8.6</td>
<td>47.7</td>
<td>20.5</td>
</tr>
<tr>
<td>England</td>
<td>540,319</td>
<td>1,081,174</td>
<td>50.0</td>
<td>42.5</td>
<td>7.5</td>
<td>44.9</td>
<td>19.8</td>
</tr>
<tr>
<td>Scotland</td>
<td>63,744</td>
<td>104,742</td>
<td>60.9</td>
<td>54.5</td>
<td>6.4</td>
<td>24.8</td>
<td></td>
</tr>
<tr>
<td>Wales</td>
<td>35,064</td>
<td>45,468</td>
<td>77.1</td>
<td>66.8</td>
<td>10.3</td>
<td>69.2</td>
<td>26.1</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>23,234</td>
<td>28,860</td>
<td>80.5</td>
<td>70.7</td>
<td>9.8</td>
<td>72.3</td>
<td>29.1</td>
</tr>
<tr>
<td>UK</td>
<td>662,360</td>
<td>1,260,811</td>
<td>52.5</td>
<td>45.0</td>
<td>7.5</td>
<td>47.1</td>
<td>20.8</td>
</tr>
</tbody>
</table>


*November 2014*
Kings Bromley Stop HS2 Action Group—Written evidence

• **Is there an economic case for HS2?**

  No, because the investment is too heavily in debt and it doesn’t stop at enough places to pick up fee paying passengers. Costs are based on 2011 estimations and therefore it will never come in on budget.

• **Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project?**

  Yes. Reasonable / satisfactory / realistic compensation for blighted property owners, land owners and businesses within at least 1km of the line. Also realistic compensation for anyone affected by construction, noise and disturbance.

• **Is the expected range of the benefit cost ratio persuasive?**

  No, because it is not realistically thought out and the number of passengers using it is limited. HS2 have massaged the figures by reducing the value of land which therefore inflates their figures.

• **What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?**

  We do not believe there are any economic benefits to the Midlands eg the government are not financing Birmingham City Council to set up the Enterprise Partnerships, BCC are having to find the money up front themselves for this.

  It will not help the North of England or Scotland as HS2 will pull labour down to London. Unless you live within 10 miles of connecting city centres, time saved on the train journey will be lost on commuting to the station.

• **Might some parts of the UK suffer economic disadvantage from HS2?**

  Yes, HS2 will pull labour down to London from the rest of the UK.

• **Is London likely to be a main economic beneficiary of HS2?**

  Yes, for every job created by HS2 in other cities and towns apart from London one will be lost. Eg France TVG all labour has been sucked out of Lille into Paris.

• **How might the expected benefits of HS2 to the national economy be realised?**
Kings Bromley Stop HS2 Action Group—Written evidence

There will be none, it will be a drain on the Treasury, why was HS1 sold off? It would be preferred to adopt High Speed UK’s option which would benefit more towns and cities than the HS2 proposal, as this mainly uses existing lines rather than virgin countryside.

- How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

  We don’t think that HS2 should be operated in its present format. We also don’t agree that it should be franchised and it certainly shouldn’t be in competition with West and East Coast Main lines. This is because HS2 has limited station stops.

- Should travellers expect to pay higher fares on HS2 than on other lines

  No.

- Does the prospect of HS3 affect the economic case for HS2?

  No, because they are planning to upgrade an existing line for HS3.

*September 2014*
KPMG LLP—Written evidence

Introduction

1. The House of Lords Economic Affairs Committee is conducting an inquiry into the Economic Case for HS2. Lewis Atter, Head of Infrastructure Strategy at KPMG, has been asked to provide oral evidence as part of the inquiry. This note provides supplementary written evidence to Mr. Atter’s oral evidence.

2. The ‘written evidence’ in this note is concerned with the whole HS2 network (Phase 2 or Y-Network) given that this is the subject of the inquiry. A one page summary is provided below. Unless otherwise stated all financial figures are at 2013 prices.

3. In line with the questions raised in the ‘call for evidence’, published by the Economic Affairs Committee, we have structured this note so that the following questions are addressed:
   - Is there an economic case for HS2?
   - Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?
   - What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?
   - Might some parts of the UK suffer economic disadvantage from HS2?
   - Is London likely to be a main economic beneficiary of HS2?
   - How might the expected benefits of HS2 to the national economy be realised?
   - Does the prospect of HS3 affect the economic case for HS2?

Summary

4. The most recent update of the Economic Case for HS2 includes benefits to transport users and wider economic impacts, using the current wider impacts methodology. For the full HS2 network, the core benefit-cost ratio is 1.7 excluding wider economic impacts and 2.3 when these are included.

5. However, the conventional cost-benefit appraisal framework has some major shortcomings when applied to a national-level intercity network like HS2, particularly when it comes to addressing “real economy” impacts. WebTAG assumes that: the size of the economy is fixed by the DfT’s future employment forecasts; and the assumptions that underpin the WebTAG approach to measuring connectivity artificially reduces the impact of long distance travel improvements on productivity. In addition, a number of important impacts are not accounted for by WebTAG, including: the relationship between connectivity and regeneration; regional impacts; the international dimension; and freight markets.

6. Against this background, KPMG responded to a tender issued by HS2 Ltd in 2013 that focused on some of these issues, in particular the relationship between connectivity and the ‘real economy’ at the regional level. Our provisional analysis, published in September...
2013 reported that HS2 could lead to an annual uplift of £15bn in 2037, equivalent to
0.5% of the expected size of the UK economy in 2037 (compared to the Office of
Budget Responsibility’s trend growth forecast). The analysis, which did not assume an
increase in total employment compared to the future employment forecasts employed
by DfT, also reported greater proportionate impacts on the economies of the North
and the Midlands compared to London.

7. Some commentators have challenged our analysis on the grounds that it employs
relationships between connectivity and productivity that are out of step with those
reported in the literature. As we explain in this note, we do not believe this to be the
case. Inevitably, judgements were necessary in producing our analysis. We stand by
these, and remain of the view that overall our impact assessments are conservative,
although we continue to explore alternative approaches and new evidence.

8. We would also note that the overall economic impact of the project will be heavily
influenced by what is done alongside the project and in parallel to help rebalance the
economy. In practice this means the HS2 real economy debate is about much more than
the project itself and appraisal methods. It is also about the extent to which a country
we really want to use investment to drive better and more balanced economic
outcomes.

**The Economic Case for HS2**

9. The Government has set two key objectives for its High Speed Rail policy. The first one
is the need for a step change in capacity across the UK’s rail network, specifically in the
West Coast Mainline where capacity is set to be exhausted by 2024. The second is
enhancing connectivity between the UK’s main cities which is expected to transform
their economic prospects. In the context of the Economic Case, both objectives are
important since they impact on transport users and the wider economy, albeit in
different ways.

10. The most recent update of the Economic Case for HS2 was published by the
Department for Transport (DfT) in March 2014, updating the evidence in the Strategic
and Economic Case released by HS2 Ltd in October 2013. As a background, the ‘value
for money’ appraisal (essentially the Economic Case) for HS2 is carried out in line with
the DfT’s conventional cost-benefit appraisal guidance, as set out in WebTAG. The
economic benefits are measured through two channels: first, the welfare benefits to
transport users; and second the wider economic impacts of the transport investment.

11. The core benefit-cost ratio (BCR) for transport appraisals requires the estimation of
impacts on transport users (sometimes referred to as economic efficiency or welfare),
namely through:
   a) Journey time savings;
   b) Increased frequency;
   c) Reduced congestion; and
   d) Increased safety/reliability.

12. However, in recognition of the fact that benefits to transport users fail to fully account
for a number of important economic impacts (SACTRA 2006), the DfT has developed
guidance on the measurement of Wider Impacts (or wider economic benefits). The
guidance on Wider Impacts provides methodologies to quantify the following:
a) Agglomeration economies;
b) Output change in imperfectly competitive markets;
c) Labour supply impacts; and
d) Move to more/less productive jobs.

13. Table 1 below shows a summary of the economic benefits, disaggregated by type of benefit and highlighting the major items within each benefit type for the full HS2 network. On the estimated net present cost of HS2 to DfT budgets, the core BCR is 1.7 excluding wider economic impacts and 2.3 when wider impacts are included.

Table 1: The breakdown of the estimated benefits of the standard HS2 case

<table>
<thead>
<tr>
<th>Grouped benefit</th>
<th>Disaggregated benefit</th>
<th>Full Network</th>
<th>£m</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport User Benefits</td>
<td>Reduction in journey times</td>
<td></td>
<td>£31,007</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Reduction in crowding</td>
<td></td>
<td>£7,514</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Reduction in waiting</td>
<td></td>
<td>£8,081</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Greater reliability of HS2</td>
<td></td>
<td>£5,496</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£59,852</strong></td>
<td><strong>84%</strong></td>
</tr>
<tr>
<td>Wider Economic Impacts</td>
<td>Agglomeration</td>
<td></td>
<td>£8,706</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Imperfect competition</td>
<td></td>
<td>£4,053</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Increased labour participation</td>
<td></td>
<td>£535</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£13,293</strong></td>
<td><strong>19%</strong></td>
</tr>
<tr>
<td>Other impacts(^{432})</td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£788</strong></td>
<td><strong>1%</strong></td>
</tr>
<tr>
<td>Loss of indirect taxes</td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£2,912</strong></td>
<td><strong>-4%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£71,020</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: The Economic Case for HS2, October 2013

14. On this basis, HS2 provides medium value for money in the core case and high value for money when wider economic impacts are included.

**The shortcomings of the conventional approach**

15. In terms of what we would describe as the “real economy” (ie jobs, productivity, tax receipts) impacts of HS2 the key issue with the conventional approach in WebTAG is whether the methodologies used to measure wider economic impacts are fit for purpose. The WebTAG methods used for the HS2 appraisal were developed in the context of the wider economic benefits of Crossrail, essentially a relatively short distance commuter network. Whereas HS2 is a national intercity rail network, which will transform capacity and connectivity across large swathes of our rail infrastructure through dramatic reductions in long distance journey times; capacity release; integration with local transport networks and other transport modes; and will impact on freight services. It is expected to provide commuter network benefits as well, but a significant proportion of its impacts are of a very different type from those provided by Crossrail.

\(^{432}\) Other impacts are mostly environmental, such as reduction of car noise and reduction of accidents.
16. In the context of HS2, the WebTAG approach also suffers as an appraisal tool by imposing what amounts to a fixed economy assumption, under which the shape and make-up of the economy does not respond to the changes in connectivity that HS2 delivers. This means that although there are real economy impacts within the wider economic figures in table 1 above, they focus on productivity impacts at the national level (assuming a closed economy, and fixed total employment) and do not address the impact of HS2 on the distribution of economic activity across the country. This means that the appraisal cannot help answer questions about the potential impact on the north south divide or more generally about the likely impacts on the economic prospects of particular places.

17. Of these two issues, concerns about the appropriateness of the wider economic impacts methodology as a tool for addressing the productivity impacts of HS2 matter most when it comes to addressing the net national case for the investment, whereas the fixed economy assumption matters most in terms of its impact on issues such as the north south divide. (This said it should be recognised that the productivity question is also an important part of addressing the distribution impact of HS2.)

18. The principal concern about the approach to productivity impacts relates to the way in which WebTAG measures connectivity, particularly between businesses. This is likely to be the key driver of the impact of HS2 on productivity, and the concern is that the methodology used understates the significance of longer distance connectivity for businesses. In the context of something like HS2 this clearly matters.

19. The WebTAG approach to connectivity is derived from academic work that addressed the importance to a business of proximity to other businesses in terms of productivity on the basis of distance, with this work being converted to address travel costs (time and money) on the basis of a number of assumed relationships between distance and cost. While these assumed relationships may be appropriate for investment such as Crossrail, there are significant doubts about whether they hold for longer distance travel.

20. For this reason, KPMG’s preferred approach (which was used in our 2013 Regional Economic Impacts report for HS2) is to base these connectivity measures on a combination of cost data and what actual behaviour suggests the relationship between connectivity and cost really looks like. This means addressing what the data actually says about business people’s willingness to travel by rail at different cost levels.

21. To demonstrate the significance of this point we have looked at how business connectivity differs for Manchester under the behaviourally based method we used for our 2013 work for HS2 and the measure that we would have derived had we used the standard WebTAG method. Figure 1 below provides the comparison, in this case for the important producer services sector.

22. The contrast is stark, with differences in both the slopes of the two curves (which affects how responsive connectivity is to changes in cost) and their height (which affects the contribution of a given place to another’s total amount of connectivity) mattering in terms of the impact of HS2 on connectivity.
23. As an illustration of the importance of these differences, we find that while under our preferred method London contributes some 16% of Manchester’s total business to business connectivity once HS2 is in place, the comparable figure under the WebTAG method is less than 6%.

Figure 1: Comparison of business to business connectivity measures for Manchester (KPMG compared to WebTAG)

Source: KPMG Analysis

24. Figure 2 below shows the difference, again using producer services in Manchester as our example, between the impact of HS2 as a whole on business to business connectivity in our preferred method and what we would have found using WebTAG. The difference is substantial with the WebTAG method producing less than half the percentage impact of our behaviourally based approach. Other things being equal, this would mean less than half the expected impact on productivity.

25. With an eye to the discussions of elasticities below, figure 2 also includes an estimate of the impact on business to business connectivity we would have found had we used the assumptions about the relationship between cost and connectivity used in the SERC (Spatial Economics Research Centre) analysis of the impacts of rail improvements for the Northern Way. Here we find the SERC relationship to be much closer to the data on actual behaviour, although other things being equal, the SERC assumption would still result in materially lower reported impacts on productivity.

Figure 2: Total change in Manchester’s business to business connectivity due to HS2 in 2037
26. The Public Accounts Committee (PAC) recently conducted a review of the progress of the Crossrail programme, published in July 2014. The review covered the progress of the programme as a whole and risks to delivery; it also considered the way investments in transport interventions are appraised in the UK. In the case of Crossrail, the conventional BCR was less than 2 and a number of other interventions actually scored higher. However, the business case for Crossrail involved an assessment of the wider benefits which improved the business case significantly. Without these wider assessments Crossrail may not have been approved.

27. This prompted the PAC to conclude that there was a risk that “transport projects are assessed using benefit-cost ratios that do not capture the full benefits, thereby understating the case for investment”. The Committee therefore recommended that the “Department needs a clearer understanding of the wider economic benefits of transport projects which should be included in its investment decisions”.

28. As a result of our work for HS2 and others, we believe it is equally clear that the conventional BCR will not capture the full extent of the economic benefits of HS2. In addition to the points above in terms of productivity impacts, we believe the appraisal gaps include:

a) Given rebalancing of the economy is an explicit Government objective, there needs to be a better understanding of business and household location decisions (our work on regional economic impacts was specifically concerned with this question and we discuss this in the next section of this note);

b) The extension of the appraisal framework to account for localised regeneration impacts, which will come through better connectivity and new station developments, and which, under the right conditions, can mean additional connectivity and thus productivity benefits;

**Impacts not accounted for in the Strategic and Economic Case for HS2**

Source: KPMG Analysis
c) The extension of the appraisal framework to account for impacts on freight, which is currently unaccounted for; and
d) A better understanding of the international dimension, specifically around how HS2 could enhance the competitiveness of the UK economy through making it more attractive for international investors and increasing the competitiveness of UK companies in international markets.

29. In addition to the above, we would note that in keeping with all DfT appraisals, the debate should not focus solely on the benefits side of the equation; the approach to quantifying costs matters too. Currently, the costs against which benefit-cost ratios are measured define costs solely in terms of the impact on DfT (and related) budgets. This means that although farebox revenues over a 60 year appraisal will serve to reduce net costs (and thus increase a BCR) there is no allowance for either the short term (multiplier) or longer term (supply side) impacts of investment on total GDP and thus total tax receipts. Where a project has significant productivity impacts (which would mean significant GDP and thus total tax impacts), the current approach is likely to overstate total long term net costs to the taxpayer, and thus potentially significantly underestimate what a more complete BCR would be.

30. We would expect this more complete approach to increase the importance of wider economic impacts analysis within appraisals.

31. Some of these points having been made, it should be noted that the Strategic Case for HS2, published in October 2013 did expand the analysis to include a section on the potential regeneration benefits of HS2. At the time, the only available information related to some provisional work on the scale of potential property developments in the vicinity of the newly constructed HS2 stations.

32. This position should improve as the results of joint work between HS2, DfT and other departments and the HS2 cities progresses on local HS2 growth strategies becomes available early next year. This work draws on the work of the HS2 Growth Task Force, but (at least in terms of Whitehall engagement) is largely focused on the phase 1 programme. As things stand, this means it will be some time before this work can provide a full picture of the true local potential a comprehensive approach to HS2 could provide.

The regional economic impact of HS2
33. We suspect that the highest profile piece of work undertaken to date on the regional impacts of HS2 outside of conventional appraisal is KPMG’s analysis for HS2. This resulted in a provisional report in autumn 2013. This work was undertaken by KPMG in response to a tender from HS2 Ltd, who wanted to reach a better understanding of the likely impacts of HS2 on the ‘real economy’ and how these impacts may be spatially distributed. As noted above, these are questions that WebTAG is not designed to address.

34. In order to address regional impacts, the KPMG work first addressed the impact of HS2 on regional productivity – a key driver of regional competiveness and thus the distribution of economic activity. As a by-product of this element of the work, KPMG generated a national net productivity estimate – in essence the sum of the regional
impacts before competition between regions affected the distribution of economic activity.

35. It was this net total estimate of an additional £15 billion in annual Gross Value Added (GVA) from 2037 through productivity that received most attention in the aftermath of the publication of the report, including from the Treasury and Transport Select Committees in autumn 2013.

36. In order to understand this £15 billion figure it is first necessary to put it in context, and in particular to understand what it means against the background of forecast economic growth between now and 2037. By 2037, the Office of Budget Responsibility is forecasting total GDP to be nearly £3 trillion per annum at 2011 prices. This means our provisional estimate of a £15 billion increase as a result of HS2 amounts to an increase in 2037 GDP of only 0.5%. This is equivalent to 3 months worth of annual growth, or, to put it another way, it is equivalent to the OBR’s forecast for June 2037 being met in April of same year instead.

37. This means that although the estimate is significant in absolute terms (particularly given it would represent a permanent step up in annual output) and in relation to the total estimated costs of the project, it is relatively modest in relation to the size of the economy in 2037.

38. At the same time we believe it is also important to put the estimated costs of the project in the context of the likely total public sector investment over the construction period – i.e. to 2032/33. The 2013 Autumn Statement set a target of getting total public sector investment to 3% of GDP by 2017/18. If this target is delivered, and the ratio maintained (and we use the same OBR forecasts as above), total public investment to 2032/33 would have amounted to some £1.2 trillion. On the same price base, HS2 is currently expected to cost £42.3bn. This means it would represent perhaps 3.5% of potential total public sector investment spend between now and when it is expected to open, or to put it another way for every £ expected to be spent on HS2, £27 remains available for other things.

The scale of economic impact in the KPMG analysis of HS2

39. One of the key drivers of the results of our work, and in particular the £15bn figure is the estimation of productivity elasticities - i.e the responsiveness of productivity to the kind of changes in connectivity HS2 would bring. For example, if the elasticity value is 0.05, this suggests that a 10% increase in connectivity would lead to a 0.5% increase in productivity, all other things equal.

40. Commentators have wrongly attributed the scale of our provisional £15 billion estimate to the use of significantly higher elasticities than found in the literature. For example, it has been suggested that the rail elasticity derived by SERC, as a result of their work for the Northern Way433 suggests that our estimated GDP impact is six or more times too high. As set out below, when compared on a like for like basis, the elasticities we used in

our work are not significantly above directly comparable estimates in the literature, including those derived by SERC.

41. Figure 3 below sets out the productivity elasticities used to provide our preliminary results on a basis that allows for a proper comparison to be made with other elasticities in the literature, and in particular the work undertaken by SERC for the Northern Way. The SERC work focused on the impact of rail journey time improvements between Manchester and Leeds on average wages. Although wages account for only 65% of GDP, we believe the wage impacts addressed in the SERC work serve as a good proxy for productivity and therefore provide the basis for a sensible comparison.

Figure 3: KPMG and other elasticities on a comparable basis

42. On this basis, the correct comparison is between our whole economy elasticity (labelled E), and the SERC equivalent (labelled G). Our whole economy elasticity reflects both a weighting between four sector elasticities (Labelled A, B, C, and D) and a further weighting to reflect the fact that these four sectors only account for 64% of total employment (our analysis assumes a zero impact on the remaining 36%). These weightings are necessary to provide a like for like comparison between the elasticities we used for our September 2013 report and the whole economy or average wage elasticities found in the literature. The weightings are based on 2010 employment levels.

43. Figure 3 shows both the KPMG business to business elasticities and the KPMG labour market elasticities, together with the combined totals. The relevant KPMG whole economy elasticities for comparative purposes (labelled E) are: 0.009 for labour markets and 0.035 for business to business; for a combined total of 0.041. This combined elasticity means that for a 10% increase in both labour market and business to business connectivity we would expect a 0.41% increase in average productivity.
44. We believe the comparable SERC elasticity to the above is 0.049. This is the elasticity SERC use to provide estimates of the impact on average wages of journey time improvements between Manchester and Leeds in the 2010 paper referred to above. This elasticity includes the downward adjustments SERC make following statistical analysis of labour quality and experience effects. It is important to note that the SERC elasticity reflects analysis of business to business effects, whereas the combined KPMG elasticity of 0.041 includes both labour market and business to business effects. We do not know what a SERC elasticity would be that included labour market effects but it is unlikely to be 0 (still less negative), suggesting that a SERC type combined elasticity would likely be higher than 0.049.

45. This comparison leads us to conclude that for a comparable proportionate change in connectivity the predicted impact using the KPMG elasticity would be lower than that generated by SERC. The SERC 2009 paper reports average wage impacts of between 0.2% and 0.5% across the Manchester and Leeds city regions as a result of a 20 minute reduction in the Leeds to Manchester rail journey time, with the range reflecting differences in the impact of this reduction in journey times on the SERC measure of connectivity across the two city regions. The average impact is some 0.35% for an average change of 7.1% in the SERC measure of labour connectivity. For the same percentage change in our measures of connectivity the comparable combined KPMG elasticity generates a productivity gain of 0.34%.

46. Figure 3 also includes:
   - A productivity elasticity reported by Graham et al in 2009 (labelled H), although it should be noted that this is a distance based elasticity not a rail time and cost related elasticity. This elasticity is 0.04; and
   - The rail business to business elasticity implicit in the sensitivity test reported in our 2013 report where we weight our road and rail elasticities by a mode share estimate (labelled F). This elasticity is discussed at page 51 in the September report. In Figure 3 it is weighted for employment shares in the same way as that at E in order to allow it to be compared with the other elasticities. On this comparable basis the elasticity is 0.014 - i.e. less than 30% of the SERC elasticity. As we set out in the September report, when applied to the connectivity improvements generated by HS2, and adjusted for changes in sector mix and background growth between now and 2037, this elasticity generated a national GDP impact of £8 billion.

47. In addition, there has been significant comment on the judgements we made in reducing the rail elasticities used in our report. We made these adjustments in the light of our statistical analysis which showed, for example, that these elasticities could be reflecting the impact of road connectivity, which is often correlated with rail connectivity. As we made clear in our original report, these adjustments were based on judgement and experience of similar work, rather than standard statistical methods. We applied these judgements because at that time we had found no statistical technique that did not bring with it equal or potentially greater challenges, because judgements (in practice less transparent ones) would still be required. A prime example of this would be an approach based on weighting between rail and road on the basis of market share. A sensitivity test based on this approach is included in our report, and, as noted above, produced a central estimated GDP increase of £8 billion in 2037 on an assumed rail
market share of about 15%. While superficially attractive, this approach is heavily reliant on an accurate forecast of the split between rail and road business travel, accurate at the level of the individual places and business sectors most affected by HS2 some 25 years from now. Even small changes in these assumptions would have a significant impact on the forecast GDP impact, with even a one percentage point change in the assumed relevant rail mode share in 2037 changing the estimated £8bn GDP impact by £0.5 billion.

48. We stand by our judgements, although we continue to investigate alternative approaches. Where judgements are necessary, as is always likely to be the case in this kind of analysis, we believe they should be clear and transparent, as we highlighted in our report, rather than buried out of sight in the modelling. The detailed analysis presented above also showed that once comparisons are made on a like for like basis, the elasticities that our judgements produced are not out of line with those found in the literature, including the SERC study.

49. As noted in our September report, pending further work, all the results presented, including the £15 billion headline figure should be treated as provisional. There are a number of areas where we currently see potential for significant changes in the £15 billion figure:

a) Updates to the HS2 and wider network plan. Our work reported in September 2013 was based on the 2012 definition of the network. This excluded the now planned station at Manchester airport and was based on early work of the use of freed-up capacity, which has since been updated. Other things being equal, we would expect the 2013 plan to increase the impact of HS2 on business and labour connectivity compared to that used for our preliminary work. If this is confirmed it would point to an increase in the £15 billion figure;

b) The inclusion of freight capacity benefits. Rail freight delivers significant productivity benefits to UK businesses by offering, for a proportion of freight movements, a cheaper option than road. Increasing congestion on the rail network risks limiting the extent of these benefits, and the capacity released by HS2 could help to remove this constraint. Other things being equal, making an allowance for these benefits should increase the £15 billion;

c) International impacts, including through improved terms of trade. Our preliminary work was based on the GB economy only, ignoring the international trade dimension. Including international trade should increase net national GDP impacts;

d) Impacts over time. Our preliminary work was based on a single year – 2037, and we would expect the value of productivity gains to increase over time beyond 2037 as background growth continues, increasing the absolute value of productivity gains delivered by HS2;

e) Labour participation impacts. Labour inputs were held constant in our preliminary work, and we would expect relaxing this assumption to affect the overall forecast impact of £15 billion. The SERC work on mobile labour suggests that the principal effect will be to redistribute the £15 billion rather than change it;

f) Adjustments to the value of time. The sensitivity testing we carried out as part of our preliminary analysis suggests that GDP impacts are less sensitive to changes in the assumed value of time than conventional transport appraisals, with a 50% reduction in the assumed value of in-vehicle time for business rail travellers only reducing our headline impact estimate by £3 billion to £12 billion. DfT’s recently
announced reduction in the business value of time for use in appraisals is less than our 50% sensitivity, but viewed in isolation we would still expect it to reduce the overall 2037 GDP impact figure to somewhere between £13 billion and £14 billion on a like for like basis;

g) Further development of the methodology. We continue to consider alternative statistical approaches. This work is potentially showing ways through the problem of overlapping impacts (between road and rail and between business and labour market impacts) that do more than simply require one judgement to be substituted for another. At the same time, this work is suggesting that the relationship between connectivity and productivity may be non-linear, with a given change in business to business connectivity for better connected places delivering higher impacts than similar proportional changes to less well connected places. This would be consistent with a view that economies adapt to take advantage of higher levels of connectivity, and having adapted then become more sensitive to future changes in connectivity. If confirmed, this could increase the scale of our preliminary estimate of the impact of HS2 on future output, but it could also mean impacts are significantly more concentrated;

h) We would also expect future work to extend our analysis beyond the four business sectors analysed to date (producer services, consumer services, construction and manufacturing). This matters, because by 2037 these sectors’ share of total employment is forecast to dip below 60%. If this work uncovers a positive relationship between connectivity and productivity for this remaining 40%, other things being equal, it could be expected to increase the £15 billion; and

i) Updates to the underlying transport and socio-economic models and forecasts. Updated modelling can change the expected impact of any scheme, sometimes significantly, and in any direction. As yet we are not aware of any changes that would affect our analysis, but it is possible that such changes will emerge as our work continues.

50. Taking these factors into account, we believe that our provisional £15 billion is conservative and any additional work that may be undertaken is likely to lead to an increase this figure.

The impact of HS2 on the Midlands, North and other parts of the UK

51. One of the key aspects of our work on regional economic impacts is that it allows for the estimation of spatial impacts. Although these are also provisional, they give an important contribution to the debate around whether HS2 is set to benefit London and the South East only. Table 2 below shows the estimate of the economic impact for those regions where an HS2 station as planned based on the 2012 definition of the HS2 network.

Table 2: GVA impacts by region

<table>
<thead>
<tr>
<th>Region</th>
<th>GVA Gains per Annum from 2037 (£bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater London</td>
<td>2.5 to 2.8</td>
</tr>
<tr>
<td>West Midlands</td>
<td>1.5 to 3.1</td>
</tr>
<tr>
<td>Derby-Nottingham</td>
<td>1.1 to 2.2</td>
</tr>
</tbody>
</table>
West Yorkshire | Around 1.0
Greater Manchester | 0.6 to 1.1
South Yorkshire | 0.5 to 0.9
Rest of Great Britain | 5.0 to 7.0

Source: KPMG Analysis

52. The key point to bear in mind in these provisional results is these should be measured against the size of the economy in each of these regions. For example, while the impact on London is the largest in absolute terms, it is not the largest in relative terms. For example, an uplift of £0.5bn to £0.9bn in South Yorkshire’s productivity is equivalent to 1.6% to 2.8% of its current economy, with an additional £1bn in GVA in West Yorkshire is equivalent to 2.3% of its current economy, and an uplift of £2.5bn to £2.8bn in London is less than 1% of its current economy.

53. Our analysis has also shown that some areas of the UK will be disadvantaged by HS2. The key point to note is that it is unrealistic to expect that government interventions benefit everyone equally or that there is a straightforward mechanism to ensure that no one is disadvantaged. The current geographic distribution of government funded transport investment, which is perceived to significantly favour London and the South East, will also be having an effect on the distribution of future economic activity across the country.

54. Other comments on our September 2013 report have focused on the need for complementary measures and planning policies to support the cities in maximising the opportunities offered by HS2. While this is fair comment in terms of the distribution of the overall impact of HS2 across the country, it would not affect the £15bn productivity estimate, which is estimated before allowing for the redistribution of activity, which planning and other policies would need to support. We would also note that these supporting initiatives are precisely what the Growth Task Force initiative and the local HS2 growth plans now being developed are about.

Proposals for northern connectivity (HS3)

55. Recent proposals to enhance transport connections between cities in the North are an important development. Although these proposals are still in early stages, a look at the state of connections between cities in the North gives some perspective on the likely economic impacts of enhancing connectivity between these cities (see Table 3 below).

Table 3: Distances and travel times between cities in the North

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Distance (miles)</th>
<th>Journey time by road</th>
<th>Journey time by fastest train</th>
<th>Frequency</th>
<th>Average train speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheffield</td>
<td>Leeds</td>
<td>29</td>
<td>49 min</td>
<td>40 min</td>
<td>1 tph</td>
<td>44 mph</td>
</tr>
<tr>
<td>Sheffield</td>
<td>Manchester</td>
<td>33</td>
<td>72 min</td>
<td>51 min</td>
<td>1 tph</td>
<td>39 mph</td>
</tr>
</tbody>
</table>
56. In the context of HS2, the relevance of enhancing connectivity in the North is twofold. First, the economic benefits of HS2 itself are more likely to be shared across a wider geography as connectivity improves to Liverpool and Newcastle. Second, the proximity of the Northern conurbations to each other suggests that there is potential to create a polycentric economic area in the North, similar to some of the European regions. These include the Randstad in the Netherlands, the Rhine-Rhur in Germany and the Flemish Diamond in Belgium. The cities that sit within these regions have performed much better than the Northern English cities, benefiting from access to larger markets and increasing economic specialisation.

57. A similarly successful region in the North of England could provide a counterweight to London and the South East, which in the context of HS2 would mean that it becomes more able to attract businesses and workers than the current economies of the area are able to. The One North report provides a more detailed vision for these proposals, and makes the point that from the perspective of the North HS2 and One North can be expected to act as multipliers on each other: HS2 lowers the barriers to trade (and competition) between the North and South by boosting the productivity of the Northern cities. One North and similar initiatives mean the North would be better placed to take advantage of these lower barriers.

*September 2014*
TUESDAY 21 OCTOBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Griffiths of Fforestfach
Lord Lawson of Blaby
Lord McFall of Alcluith
Lord May of Oxford
Lord Monks
Lord Shipley
Lord Smith of Clifton

Examination of Witnesses

Lewis Atter, KPMG, Jim Steer, Steer Davies Gleave Consultants, and Bridget Rosewell, Volterra Consultants

Q24 The Chairman: Good afternoon, ladies and gentlemen, and welcome to the Economic Affairs Committee. This is the second evidence session of our inquiry into the economic case for High Speed 2. Ms Rosewell, Mr Atter and Mr Steer, welcome to the Committee, and thank you very much for coming today. Would any of you like to make an opening statement or shall we go straight to questions?

Jim Steer: Chairman, if I may, I will just make one point of information. I have supplied a brief summary of who I am, and you have kindly identified me as a director of Steer Davies Gleave consultants. In that capacity I should perhaps mention, having subsequently seen the questions, that I advised the Department for Transport in the preparation of its strategic economic case document of October 2013. I just wanted the Committee to be aware of that.

The Chairman: Thank you, and if I may hazard a forecast, it is possible that there will be a Division before the end of this session—if the bell rings and we disappear, we will be back.

To what extent does the October 2013 strategic case convincingly articulate a narrative for HS2 within an overall UK transport policy? Professor Glaister, I think, was quoted in the FT in August 2013 as saying, “Both this government and the last promised a national policy statement on surface transport, yet still there is no sign of it. How can hundreds of millions of pounds have already been spent on something as hugely significant as HS2 without the context provided by an overarching strategic picture?”. Who would like to start?
Bridget Rosewell: I do not mind. I would like to start with the strategic case for HS2 before maybe opening it up into that broader question of whether it does or could fit into a wider case. For me, the October 2013 case—Mr Steer can close his ears to this—is a lot better than the previous cases that we have seen, because it articulated a narrative that I think was missing from the previous ways in which we had thought about having HS2, which to some extent seemed to rest on saying, “Well other people have got lots of high-speed railways, so maybe we must have some too”. It articulates a case for an engine for growth.

What I am not totally comfortable with is that it has not yet gone far enough in making the distinction between a case based on, if you like, a standard evaluation in a static economy and an analysis based on infrastructure generating dynamic change in an economy that we are trying to improve. In some ways, it was trapped by the fact that we started off with the first phase, the engineering of the case to Birmingham. We therefore started off with people, quite reasonably, being able to say, “So, we are just building this to save 20 minutes off the trip to Birmingham”. If that was what we were doing, it would indeed have been bonkers. If we had started off with a more strategic case, thinking about the network that we need, and the one that we have and its capacity constraints, then that piece actually fits into a rail strategy quite well. We have a shortage of capacity to Birmingham, but we made the case for speed. When you get into more northern areas of the country, you need a case for speed as well as capacity, and we might have now moved a bit too far into saying that HS2 is all about capacity when it is actually about both. If we had had a broader rail strategy, it might have been easier to fit that in.

However, to just come back to the broader strategy, if we always wait for all the “i”s to be dotted and the “t”s to be crossed and until we have a complete strategy for everything, we will never do anything. In fact, in many ways, our infrastructure decisions in this country are bedevilled by too much analysis and too many pointy-heads trying to run too many models and to come up with the absolute precise answer, whereas, for an investment that is going to last for 150 years—given the age of our existing investments—there will not be a precise answer. What there must be is a debate around those big judgments. To my mind, therefore, the October 2013 strategic case moves us in the right direction. I think it could have gone further.

Lewis Atter: I would support that. It is definitely a step in the right direction but it does miss context—not just in terms of wider transport strategy but in terms of the north-south divide. When we looked at these questions, we felt that we were being asked to look at this in isolation and were not really being asked to look at how HS2 fits into a broader strategy designed to eliminate the north-south divide. The strategy is missing those pieces of critical background, but it is an improvement and as this debate develops around HS2 and more of these questions are asked, we will begin to look further into these questions.

Jim Steer: It triggers in my mind the first time I read a call for a national transport strategy, which I think was in a Sunday Times editorial well over 40 years ago, which I think the paper has rerun at 10-year intervals ever since. We have never had one as such, although we have come close to it. The only observation I would make about the October strategic case is that it was not the first government paper on this subject: and not the first time the case for HS2 was set out. That was in Command Paper 7827, in March 2010, which set out the case, precisely as Bridget has described it, in terms of capacity and connectivity. At that stage, it talked in terms of regional development rather than rebalancing the economy, but that
comes to much the same thing. The argument was presented in the same form, but we now have more evidence, which is what was able to be brought forward in October last year.

**Q25 The Chairman:** Would you expect a strategy to set out certain aims and objectives and then to evaluate what the options are to achieve those? That seems to be missing from the literature that has been published.

**Jim Steer:** In the widest sense, as soon as you start saying that the wider strategy is regional rebalancing, the question is what the different ways are of achieving that. In the narrower sense, the question is whether there are other ways to achieve that in transport terms as well as what the transport options are to give capacity and connectivity. That is certainly something that the October case attempted to cover. It talked about whether telecommunication improvement was an alternative and whether we could expand the highway network, upgrade the existing rail network or just leave the problem unaddressed. Those things were covered in that document.

**The Chairman:** Do you think that the October 2013 document is as good as it is going to get?

**Jim Steer:** It would seem unkind to say that it is as good as you are going to get from the Department for Transport, but in the sense of a transport story, yes; in terms of a wider economic story, one would have to look elsewhere.

**Bridget Rosewell:** Indeed, there has been further work looking elsewhere with Lord Deighton’s growth task force which was all about how we make sure that this is integrated into the wider economy, if you like. One of the tricks that we missed, not perhaps in terms of the strategic, is that we need an effective and competent transport network to link together all parts of the UK and into international markets. The next step is about what is the best way of devising a rail network to do that. That could and should have involved local authorities and, in particular, the cities more effectively at the outset. We would then not have needed the growth task force, because we could have had some of those discussions around how the route should be devised and where it should go rather than devising it on an engineering basis and then coming back to the economic regeneration and economic generation points after we had done the engineering.

From my perspective, I would have liked to see more of that discussion up front before we got delving down into the engineering. There is definitely feedback there. It is not a simple thing because engineering feasibility is very important. If you cannot do the engineering, you obviously have a problem, but I do not think there was enough to and fro at the beginning of this to bring the economic development side of it on board, particularly the cities and local authorities that are going to need to respond to the opportunity if it is going to generate the growth.

I certainly said on various occasions that transport is necessary but not sufficient for economic development. It is necessary, but one of the things that has made me much more optimistic—in fact, I think many of our numbers are underegged—is that we now have cities, local authorities and agents who are generally willing, able and ready to take up the challenge of the opportunities that this will open up.

**Lord May of Oxford:** This is probably an embarrassingly silly, ignorant question, but when you speak of rebalancing the economy, rebalancing it with respect to what? When in historical times has it balanced?
Jim Steer: I take it that the phrase has at least a geographic dimension. In what I have read of government statements on this it also obviously has sectoral, business and employment implications.

Baroness Blackstone: Before I ask my question, can I pick up on something that Bridget Rosewell said, although any of you can reply because you all seem to be agreeing. You said that there can be too much analysis in preparing for something like this, partly because of the hugely long-term nature of the outcomes, and I understand that point. On the other hand, this is a £50 billion project. Can there really be too much analysis in trying to inform us about whether this is a desirable and sensible thing to do in terms of the investment being repaid in terms of its outcomes?

Jim Steer: I mentioned the first government publication on this document, which itself contained a lot of analysis, and there has been quite a lot since. Whether it has been too much or too little, I am not sure. That analysis followed earlier work by the Government that was eventually published on their website in, from memory, 2003, which was a preliminary look at north-south high-speed rail and, indeed, how that compares with all the other options. An organisation that I established, Greengauge 21, then published a very considered, large-scale piece of work funded, in fact, by all the regional development agencies and some of the city councils, looking at the same thing. It was another piece of analysis. Both those studies concluded that there is a reasonably good business case in conventional cost-benefit terms.

There has been a lot of analysis and there is now better evidence than before. I have no view on whether there is too much or too little, but there has been about 12 or 13 years’ worth of serious study on this. Some people would say that we spend too long on it; others say that we do not have enough evidence. I do not have a view.

Lewis Atter: I think there is a difference between whether we have enough and whether we could have more. Would I like more than we have at the moment? Absolutely. Do I think we have enough to take the next steps on this? Yes.

Q26 Baroness Blackstone: It is not only quantity; it is also the quality of the evidence. Do you think that the evidence that we currently have that connectivity will make a transformational change to regional economies is really of such high quality that we can rely on it?

Bridget Rosewell: I do not think that we will ever have enough evidence to prove anything, so far, in social science. The standard of proof that you would expect in engineering or other scientific disciplines is higher than the data that we currently have available to us or will have available to us, particularly over the timeframes that we need to think about. We have a 60-year horizon for calculating present values at the moment. That is given, rightly, for long-term infrastructure projects. What can change in that period is, well, everything if you look back 60 years and think about how things have been changing. It becomes much more about the ability to make qualitative judgments and having the right information, or as much information as you can gather, to make those qualitative judgments than it is about having more and more complicated or complex models that appear to have, if you like, spurious accuracy associated with them.

That is effectively what I mean when I say that we sometimes do too much analysis. We continually try to get more and more detail when in fact we are trying to collect detail...
about things that it is pointless collecting detail about because that detail is not going to be relevant in future. We are trying to make a qualitative change. In my mind, the whole point of High Speed 2 is to make a qualitative change to the opportunities that are available for economic activity. It becomes a matter of judgment. The question is about what is informing those judgments about whether we will be able to take advantages of the opportunities that that creates and get the return in economic benefit, by which I mean output, employment and jobs in northern cities, as well as in London, that will make that a worthwhile investment.

What is the evidence for that? There has to be, not so much a lot of quantitative evidence, but qualitative evidence of how things have changed in other places and whether there is the appetite to take advantage of those opportunities, rather than a lot of very detailed modelling about things that are going to be changing.

If you want that kind of quantitative evidence, I would say that that is the wrong question to ask. It is asking a question about things you cannot know the answer to. I used to be an economic forecaster, but I gave that up. The accuracy that you can achieve is poor. You can do it for the long term—I am doing it for the long term for London—but then you are looking at those long-term trends. After all, the whole point of this is to change some of those long-term trends. As I said a little earlier, my judgment is that the evidence before us about the capacity to take advantage of these opportunities is there and therefore, in broad terms, this becomes an investment that has a payback. There are other ways of supporting that, such as productivity analysis and so on. These are long-term trends. Loads and loads of detailed modelling will never give you a reliable answer.

Q27 Baroness Blackstone: Accepting that detailed modelling might not be the right approach, how do you deal with the counter examples? Doncaster is often cited as a place with very good connections yet a very feeble, poor local economy. Why can it not take off even though it has superb rail connections in all directions?

Jim Steer: That is an interesting question that has been examined. Indeed, an examination of cities in Britain that have particularly good fast links to London formed a piece of work that the late Professor Sir Peter Hall undertook, and Doncaster emerged as the anomaly. There were many other places that you could look at, such as Bristol, which have particularly good and improved—this is looking back over the past four or five decades—rail links with London that have prospered very well, but Doncaster has not. I think that perhaps reflects some of the points that Ms Rosewell has been making that you can analyse and analyse. Let us face it: Doncaster was a largely mining economy 30 or 40 years ago. Would the kind of employment in Doncaster and businesses that might develop there really be helped by very strong links with London? Possibly not, but could they be attracted? Yes, but would they be? All that depth of analysis would have to be done, and then you would have a range of views on it.

I do not think it is surprising that there are some places that in that sense are ‘sticky’. If you look at France, you find similar things where TGV stations—high speed train stations—have been opened but the local authority was not particularly proactive and there has not been much economic stimulus, and there are many other places where there has been a major economic stimulus. I think that is a very good illustration of some of the complexity that was being mentioned in this kind of analysis.
I come back to something much simpler: connectivity, which is a fancy word for faster journeys and a few other things. The conventional appraisal looks at that. You, I think, had a number of professors last week and asked them about what it shows. It shows that the benefits are forecast and that growth are based on reasonable assumptions—I am paraphrasing what they said. At the very least, I suggest, we need to do those conventional appraisals and be comfortable that it looks as though the benefits are broadly twice the costs entailed. Indeed, that work has been done and I think it is reasonably robust against the sensitivities that have been taking place. All the consequential effects—the wider changes that might or might not happen in Doncaster, or in this case Leeds, Birmingham and Manchester—are not in that analysis, but they are probably going to be moving the overall picture upwards.

Q28 Lord Griffiths of Fforestfach: I shall carry on with Baroness Blackstone’s question about methodology. As I understand it, you argue that HS2 gives you greater connectivity. It is a necessary but not a sufficient condition to give you the kind of growth and returns that we are looking for after spending £50 billion. Then you said there would have to be an appetite to take advantage. If we as a Committee were to come out and say that we think HS2 could be really successful, we would have to make a judgment that is not in any detailed calculations, as I understood it, about an appetite to take advantage. I think that was Baroness Blackstone’s concern. How would we know how to make such a judgment?

Bridget Rosewell: There are several routes to do that. First, there is the review of how local economic strategies are developing and emerging. There is lots of evidence around that, and there are lots of people writing about it and talking about it at the moment. I have been sitting on the City Growth Commission, and it has been interesting how much appetite there has been and how much interest and excitement there is around precisely taking advantage of these kinds of investments. The stress in these areas is about the need for that transport investment and that connectivity, as Mr Steer says, to make those things possible. That is the political economy part of this: what are the views and what are people saying around how they think this thing should happen and what they need out of it?

The second way you can think about this is around how local economies are being and have been transformed, over the past 10 years in particular, but starting further back from that. The transport connectivity in London was one of the things that made it possible to make London the powerhouse of growth that it has been. The spare capacity that existed in the public transport system in London is one of the things that made that possible. We have seen those sorts of transformations in other cities over the past 10 to 15 years, and we can see evidence—Mr Atter’s models are one of the things that support that—of how that has generated productivity increases. Increasing the scale of that enables you to continue to do that. You also have some historic evidence that suggests that a trend exists that enables you to connect that upward path.

If you look at the relationship between the density of employment and wages—a good indicator of productivity and the statistics are better than they are for output in my view, so that is the one I tend to concentrate on—you can see that upward curve coming into play in places such as Birmingham, Manchester, Sheffield, Nottingham and other cities, including Bristol, although it is not on HS2, obviously. All these have higher densities generating higher wages and hence higher productivity. Those pieces are in place: cities, high wages, higher productivity and the relationship with connectivity. The appetite is a political
KPMG, Steer Davis Gleave Consultants and Volterra Consultants—Oral evidence (QQ 24-37)

The economy question that you can gauge from talking to those kinds of authorities and their LEPs, for that matter.

**Lewis Atter:** There is a continuum here. You can imagine the impact something like HS2 will have if the economy does not respond very much at all. That is the sort of space where a conventional Department for Transport appraisal is looking. Then you can ask questions. If individual businesses react but do not necessarily move location—that is the kind of approach that sits underneath our figure of £15 billion, which I am sure we will get to a bit later—then you can ask what the full potential is here. What is the full potential in a place such as Birmingham, which requires the opportunities around Curzon Street to be maximised? That needs another set of compatible interventions around and on top of that. It is that last area where the Government’s Growth Taskforce is homing in and where we absolutely have to have that joint work between the cities and the national Government.

**Q29 Lord Smith of Clifton:** I believe my question is largely addressed to Mr Atter. KPMG’s 2013 report into the effects of HS2 on the real economy concluded that there could be an annual uplift of some £15 billion by 2037. Can you explain the reasoning behind that conclusion please?

**Lewis Atter:** I will put the £15 billion number in a bit of context. It sounds like a big number—it is—and it is an estimate that we made of the difference there would be in the 2037 economy with and without HS2. The £15 billion is less than 0.5% of the economy as forecast in 2037, so in big picture terms it is about three months' growth. While the OBR is forecasting X for the middle of 2037, we get to X maybe three months earlier—call it March. That just puts it in context. Where does that figure of £15 billion come from? It comes from an analysis that we have undertaken looking, in the real world today, at what differences in connectivity between cities translate into in terms of differences in productivity between those cities. The analysis looked at that and said: “If city A has connectivity X and city B has connectivity Y, what is that difference helping us to understand about productivity in those two different places?” In that approach, we addressed what evidence is out there today about the relationship between connectivity and productivity and asked, on the basis of the evidence provided to us by HS2 and DfT, what difference HS2 would make to connectivity. So there are two parts: step 1 is asking what we have done to connectivity, and step 2 is asking what the evidence out there says that changes to connectivity do to productivity. It is the net of those that gets to our £15 billion a year.

**Lord Smith of Clifton:** As you know, Professor Overman has criticised the methodology of the report, describing it as “essentially made up”. How do you respond to his criticism?

**Lewis Atter:** We need to understand his criticism. His points on our work focus in on the second part of that equation: on the relationship between changing connectivity and changes in productivity. We have had a look at the work of Professor Overman’s team, the Spatial Economics Research Centre, which has done a lot of work for the Northern Way on the impact of changing connectivity on productivity. We looked at those relationships. It is kind of an elasticity question: if I change connectivity by X, what do I change productivity by? We looked at his numbers, and they are actually higher than ours. We can let the Committee have a note on this, but when we repeated our work—not using our way of measuring connectivity or our elasticities but substituting them with the SERC ones—we found that we came to very nearly the same number. It was actually slightly higher than our £15 billion, but still rounding out to near that. As things stand, we do not recognise how a view could
be arrived at of our work suggesting that SERC’s work points to a higher number being significantly overstated. We can understand how that impression might have come about, because one of the things that Professor Overman’s team have done, which is very valuable, is to look inside the question of why cities might be more productive. There is a people versus place debate going on here: are cities more productive because the people who want to live there are more productive or is it that, having moved there, people are more productive? Through this analysis, Professor Overman’s team tried to take out the people effects, leaving the pure place-based effects. Our analysis has a relationship in terms of place that is smaller than what he is left with. Because we did not adjust for people effects—as the data did not allow it—he thinks that our number will be significantly higher than his. But actually, although we get there via a different route, our approach to actual application is very similar. If anything, his approach produces a bigger number. As I said, I will let the Committee have that note. That is a technical explanation but, to cut a long story short, we wind up from very different routes to round about the same sort of place.

Lord Smith of Clifton: Of course, your report did not include its findings that some places would be very disadvantaged, such as: Aberdeenshire, minus £220 million; Cardiff, minus £68 million; Dundee and Angus, minus £96 million; and Norfolk West, minus £56 million. These are the estimated changes in annual economic output measured in terms of the potential impact of investment in HS2. These are pretty severe negatives, are they not, for those areas?

Lewis Atter: One thing to remember is that any investment, whether it is HS2 or something smaller, is going to have bigger impacts on one place than on another. The reality is that businesses have choices about where they locate and people have choices about where they live. If one place benefits more than another, you will tend to see people and businesses flow towards that place. HS2 is not unique in that. Every investment project funded by the Department for Transport will have that sort of impact.

The Chairman: I am afraid that we are going to have to cut you off here, but you can come back to this.

The Committee suspended for a Division in the House.

Q30 Lord Lawson of Blaby: May I ask a supplementary? Mr Atter said at the beginning of his long explanation that if you increase connectivity by X, further things follow. I do not understand what that means. What does “increase connectivity by X” mean?

Lewis Atter: If we have a few moments, I will take you through an example that I used at a board at KPMG recently. It is a London example. Let us imagine that we wake up tomorrow and every rail journey within London and from London to the outside by tube, conventional rail or the Docklands Light Railway takes twice as long as it does today and costs twice as much. I am a commuter from Brighton, and I work in Canary Wharf. That is round trip today of three hours; it would be six hours. It is not £5,000 a year; it is £10,000 a year. Imagine journeys like that right the way across London, within London and from London to outside. Everybody is the same physical difference apart. Brighton is no further away than it was the day before, but everybody will feel further apart. Everything that London tries to do, every thing that a London business tries to do, is more difficult. Serving
other businesses or customers, even getting the right kind of people to do the right sorts of jobs would be more difficult because London’s labour market is smaller. It does not have me in it, for a start, with a six-hour round trip and £10,000 a year from Brighton. That is what I mean by connectivity. It is a big change.

In terms of the measures that we used in our report, the measure of connectivity for businesses under that scenario—double everything up—would go down by 60%. The measure of connectivity that the Spatial Economics Research Centre used for its work for the Northern Way would halve in that nightmare scenario. We have a measure of connectivity based on how easy it is for businesses to do business with each other, how easy it is for them to recruit, that is halved in the SERC example and is down by 60% in our example. What does that mean for London? London would be less productive than it would otherwise be because it is less connected, but how much less productive? The analysis that SERC did on the basis of differences in connectivity and wages between people depending on how connected they are and taking out all those people—controlling for skills and experience—says that if you halve rail connectivity you will reduce productivity by 2.5%. Our version of that says that if you reduce connectivity by 60%, perhaps you lose 2% in productivity.

What does that mean in my example for London with that doubling of rail fares and rail time? On the SERC example, it means that the average worker loses productivity of maybe an hour a week, and in our example it means perhaps 50 minutes a week. That is the kind of relationship that we are using in our analysis. When I hear that—my colleagues can comment on this—and think, “Gosh, double rail journeys and double rail fares and all I lose is an hour a week per average worker in London”, that does not sound like a big response, but it is that relationship between connectivity and productivity that we use in arriving at our £15 billion number. We have significant changes, not necessarily in our numbers, producing significant changes in output. It is why some commentators suggest that our numbers are, if anything, on the low side.

Lord Lawson of Blaby: I do not think that answers my question because I do not see how you get your X.

Lewis Atter: The X in terms of the relationship between—

Lord Lawson of Blaby: You are saying that if you increase connectivity—I understand you to be saying that connectivity is improved if transport times and fares are reduced, or at least not increased—but I still do not know where you get your X from. It seems to me that you just pluck figures out of the air.

Lewis Atter: What we and SERC did in deriving our numbers is that we looked at the differences in connectivity between places. Let us have a look at the connectivity score for Manchester, Leeds—

Lord Lawson of Blaby: How do you put a number on it?

Bridget Rosewell: That is a slightly different question. One of the ways of measuring it would be to ask: how many people can I reach in 45 minutes? Or, in 45 minutes, how many businesses can I reach? You use different measures of the amount of time that you want to allow. In London, it is quite often 45 minutes. That is the average commute time into London. You would say, “For my measure of connectivity for this particular location, how many business can I reach within 45 minutes or how many jobs can I reach within 45
minutes?” That is one way of thinking about the X, the measure of connectivity. That changes according to the capacity and the speed of the journeys that you can make. Is that the sort of information that you are looking for?

Lord Lawson of Blaby: It is a bit closer to it, yes.

Lord Griffiths of Fforestfach: Is that not a very static analysis? Let us assume that what you said happens, but you know that in, say, two weeks it will be different, we will be back to where we were. That is one way of looking at it. Let us now assume that it is permanent. As a result of that, if I am now running a business in Brighton, I may say to myself that I have to invest in more videoconferencing because of the cost of all this. It is not obvious to me that it is a one-off productivity fall. It is a very static computation, whereas if you have a dynamic computation, with the resourcefulness of business you will not get such a simple result.

Lewis Atter: One of the reasons why the relationship between that disaster scenario for rail and the productivity impact is quite low is that it is based on the differences between cities that we see today. Cities have adapted to their differences in connectivity levels. That is what you are seeing out there. Businesses run differently in Manchester because they do not have the same connectivity levels as London. That is what we are doing. There is very clearly a limitation on this. We are saying that differences in connectivity today translate into these sorts of differences in productivity. You could argue that the future looks different. It could be that the 45 minutes, the 2 hours, in future delivers more or less than it does today. We are neutral on that. We are saying that the importance of connectivity to productivity in the future is no more and no less than it is today. If you think it is more important in future, the number goes up; if you think it is less important, it goes down.

You are also right that there is a second round here. There is a productivity impact, and then businesses move and people move. Businesses adapt. That would take you into some of the areas that we have looked at in terms of differences between cities, and that is the point at which other policies really begin to matter. Productivity gain in Birmingham may well encourage businesses to move to Birmingham, but if the land is not available because the growth strategy is not there, they cannot, in which case the impact on Birmingham is less than it would otherwise be.

Bridget Rosewell: There is one caveat.

The Chairman: We must move on.

Q31 Lord Shipley: I will ask a fairly open-ended question then. What complementary policies to HS2 do you think are required if regional cities are to benefit from HS2?

Jim Steer: First, I would say better interconnectivity between those regional cities themselves. HS2 does that to some extent—there is, for example, Birmingham to Leeds and Birmingham to Manchester—but there are an awful lot of other linkages. Contemplating the question of how businesses will react, I think they will react to an all round improvement in connectivity, and not just to London, which is extremely important, but also to other cities.

To go back to the question about this being a creator of economic opportunity, to grasp that opportunity I would point to there being shall I say sympathetic planning policies: policies on housing, policies on skills being adopted. That is the public sector side. There also has to be some entrepreneurial appetite, which can be fostered by the public sector, to
exploit these opportunities. A great deal of things seem to me to go with significant investment in HS2 to bring economic benefits.

**Lord Shipley:** Can I quote to you what Buckinghamshire County Council has said? It has said that the "very substantial cost of the regional economic and transport spending necessary to realise the wider benefits should be included in the [benefit-cost ratio] but this has not been done". Can you comment on that?

**Jim Steer:** I think we can all understand that this is going to cost a lot of money. Yes, but all of this will also bring its own benefits. It is not as if it is a matter of saying, "We should incur the cost of all these things, but it won’t bring any benefit". There may be joint benefits, in truth. You need a really efficient, bigger-capacity transport system, which is what HS2 provides, and you need these other things too; they create joint benefits. But nobody has looked at these extra benefits, just as in some senses they have not looked at the cost.

The other answer, of course, is that some of this is about location: doing things in places that can take advantage of this that might have been done elsewhere and might have had less effective outcomes.

**Bridget Rosewell:** One of the things that I would add would be devolution: allowing more local authorities to do more of their own thing. Many of those would argue that doing that will enable them to spend the same budgets and take advantage of these opportunities for less money, not more money. There are some tradeoffs in all that as well. Flexibility and the ability to take advantage of these opportunities need not cost money.

**Lewis Atter:** We do, however, have to recognise that HS2 and the regional focus on it comes as an overlay to some very big imbalances between spending levels on these other things between cities. One of the statistics that I like is that the amount of money Greater Manchester gets in a year to spend on its transport systems London gets every week. London is about six times bigger than Greater Manchester, but it is not 52 times bigger. We have an HS2 proposition that is an overlay to a funding proposition that at the moment does not feel balanced.

Going back to an earlier question, I do not think that anyone has really asked, in the context of our kind of work, what impact we think public expenditure on transport in the UK over the last 10 years will have had on the economic distribution of activity in the UK. Our report on the green dots, the positive impact of HS2, and the red dots, the negative impact of HS2, got a lot of attention. I wonder what that map would look like if you applied the same approach to total public expenditure on transport in the last 10 years. We know that there would be at least one big green positive, and we would be sitting underneath it. Would there be any other green positive across the rest of the country? That is a very interesting question.

**Q32 Lord May of Oxford:** Do you think there are improvements in rail projects, for example those put forward by an alliance of 18 local authorities that call themselves 51m—which is rather infelicitous, I think, because I originally read my question as: do you think there are alternative rail projects, for example 51 million proposals—for improvements to the existing railway that would provide higher rate of return than HS2? You of course know what they are. They are rather simple suggestions, such as reconfiguring some of the first-class carriages to second class, lengthening the trains and so on. What is your view on that?
Jim Steer: These options have been looked at. Certainly in capacity terms we know what they can do. We know that around 11,000 seats an hour are provided on all peak-hour trains to Euston, for example - HS2 is really in its first phase in the Euston corridor. If you lengthen all those trains to the maximum length and do other things such as changing a first-class coach to second class, that gives you a few more seats, and if you squeeze a few more trains in, as 51m very sensibly says if you have some small schemes here and bring some improvements there, you could increase that 11,000 by about 36% and get it up to about 15,000 seats per hour. This is in a context where growth in usage at Euston is running at about 5% per annum, so very roughly that would buy you about five years’ worth of growth—and these trains are pretty full already.

In capacity terms, I am not critical of a 51m kind of package; there are some good ideas in there and they are probably good things to do, but they do not get you very far. HS2 will not get implemented for another 12 years. Presumably it will last for decades. What capacity increase does that give you? It trebles the number of seats out of Euston, basically by adding high-speed train services into the existing network. These two things are quite difficult to compare and contrast. In my view, the 51m proposals probably have some merit as an interim kind of measure, but once you take responsibility for the longer term you cannot really contend that they provide the capacity needed. I accept that there are other questions, but on that specific measure I think the 51m measures fail.

Lord May of Oxford: One aspect of this sort of question is particularly important, and it is whether HS2 would be better value for money if it was designed to run at slower speeds. The current proposals are very ambitious: 250 miles an hour. We have had evidence suggesting that they will do at most 80% of that, and that once that threshold is exceeded the economic benefits are questionable. What is your view?

Jim Steer: I tend to think it is a bit of a non-issue, quite honestly. As far as I understand the position, the infrastructure has been designed exactly as you say: to allow for a 250 mile an hour operation where it is possible to do so, such as going into and out of London. Actually, in any lengthy tunnel, the economics of accommodating incrementally higher speeds once you get above a certain speed means that it becomes cost-ineffective. Actually, the contemporary design of a high speed train has a top speed of—I am sorry, I am going to put this into kilometres an hour rather than miles an hour—360 kilometres an hour.

Lord May of Oxford: About 220 miles per hour.

Jim Steer: Yes, so in a sensible approach to procuring the train fleet, the first phase of HS2 will be to buy trains that can do 360 kilometres an hour. That is not 400 kilometres—250 miles—an hour. Have we lost something in that? I would have thought not. I think you have to cast your mind back to the Brunel era: a railway was built from London to Bristol and the maximum speed of a train was 60 miles an hour at the time, and it is happily supporting trains travelling at 125 miles an hour. Why would you not build in a bit of flexibility for uplift in technologies?

Incidentally, the analysis that supports all these economic questions is based on assuming a train that can travel at a maximum speed of 360 kilometres an hour and allows for the fact that it cannot do that everywhere and that it will not operate at that speed in the timetable anyway. It will run at about 330 kilometres an hour, and if there is any minor delay the float will be used, in the way high-speed rail services are operated, to get back on schedule. A lot has been made of this, but these numbers are coming down—360, 330. Bear in mind that...
High Speed 1, the Channel Tunnel rail link, runs at 300 kilometres an hour. There is a range there. There is proven technology, these things run reliably and safely at that speed, and you add a bit in for future technological development.

**Bridget Rosewell:** Otherwise, technology regret is where you might end up. The East Coast Main Line electrification was done about 30 years ago and it was done on the cheap, and as a result we are regretting it. They put the struts too far apart, they did not put fixed bars across the top—there are technical terms for all this which I can never remember. The East Coast Main Line is unreliable because our thinking was that we would do it as cheaply as possible. Of course, to go back and fix that now is an immensely difficult and expensive task, so my plea would be to allow for the possibility of technological change and to increase our headroom, if you like, to make that happen.

The West Coast Main Line was built god knows when—some time in the 19th century—with lots of curves in it, because nobody thought that trains would go very fast. That is one of the main reasons for the difficulty of getting extra capacity on it now, and one of the reasons why we need a new railway.

**Q33 Lord McFall of Alcluith:** I note that the transport user benefits were calculated using fixed values of time, as it is denoted, for different types of rail passengers, and that the values of time were defined by the Department for Transport as what people and businesses would be willing to pay for quicker journeys. Given that background, I also note that the vast majority of the benefits presented an economic case based on an estimate of the amount that businesses are willing to pay for quicker journeys. Do you think the estimate of £59.8 billion, which accounts for 84% of the benefits, is a robust estimate?

**Jim Steer:** It is entirely consistent with the kind of estimate that has been used for every other transport project for the last 10, 20, 30 years, so my first answer is that at least it is consistent with everything else. If this is wrong, the case for Crossrail was wrong, as was the case for the Jubilee Line extension, which was not very good incidentally—it seemed to ignore some of the effects that Mr Atter talked about earlier. If this is wrong, all these things were wrong. It is pretty robust; this is based on what we can observe—in various ways: how businesses value the time spent by their employees.

I will give you just one statistic, which may or may not reassure you. I do not think that people have understood in general just how dominated by business travel our long-distance rail network now is. I can recall a time when business travel was in a bit of a minority. Most people were travelling on leisure journeys. That has changed. The growth in business travel by rail over a 10-year period to 2005 was 168%. There has been a huge uplift in business travel by rail: this is based on research done using national travel survey data. It is interesting because it has coincided with the advent of all this wonderful mobile technology—iPads, mobile phones and all the rest of it—which means that travelling by rail is pretty productive. So there is a lot of business travel, and I think there is a long pedigree of evidence behind the estimates of the time savings to business travellers.

**Lewis Atter:** In the light of the controversy about business values of time on rail, we applied a sensitivity to our analysis. We said: what if the Department for Transport’s number was halved? I am not saying that it is half, we just applied it, and our £15 billion-a-year estimate fell to £12 billion a year. So in practice, when we looked at the impact on productivity and the real economy, the actual value of time you plug into a conventional appraisal did not make a significant difference.
Lord McFall of Alcluith: I note that the reduction in crowding would account for £7.5 billion of benefits, but we have heard from elsewhere that perhaps in peak time the trains will be just as crowded as they are in the moment. Could you give us an insight into that?

Jim Steer: I can only say that the increase in capacity that HS2 brings is huge. Having said that, of course, one wants the trains to be well used, and it becomes a management question to some extent. Despite 50 years of developing transport appraisal techniques, we do not have brilliant ways of measuring the benefit of reducing overcrowding. As I think your Committee is aware, the appraisals use reductions in journey time, which is not quite the same thing, so we are looking at the different values that people put on travelling in crowded and less crowded conditions to try to get at that benefit measure.

The prognosis without an increase in capacity is very severe overcrowding, and this is a solution to it.

Bridget Rosewell: Another way of looking at the crowding question and whether it ends up at pretty at much the same level is essentially to say that more people will be making more trips. If they are making more trips, they are making them for a purpose. If you have that value of time perfectly right, that value time becomes the value of the trip you are making. Of course, we will not have got it completely right, but the idea is that if you are still willing to have the crowding and you get on the train it is because there is a purpose to the trip. That purpose has value. It might have economic value because you are going to do new business, it might have a leisure benefit because you are doing a leisure trip, but it will have a value.

Lord McFall of Alcluith: Then the reduction in overcrowding for £7.5 billion goes out the window.

Bridget Rosewell: But that £7.5 billion of crowding benefit turns itself into £7.5 billion of economic benefit because you are now doing that trip for a purpose.

Lord McFall of Alcluith: I never realised there was such symmetry to it, but there you are.

Lord Smith of Clifton: There is some contradiction here. There has been an increase in business travel and, as I know when I go north, that is because all sorts of people are working on their laptop. If it is crowded, they will not be able to get their laptops out. There is a disjunction between these two sets of assumptions.

Jim Steer: The comparison is between a rail network that is pretty much as today, perhaps with some minor improvements, which will be very overcrowded on all the projections we have, or that plus an investment designed to relieve that overcrowding, in which case there will be some more people travelling but we have a fighting chance of tackling the overcrowding problem.

Q34 Lord McFall of Alcluith: Can I go back to what Ms Rosewell said at the beginning? You said that we can be bedevilled by too much analysis. If this Committee is going to make a recommendation on behalf of HS2, what core analysis should we make in order to base our judgment?

Bridget Rosewell: There is a set of core things. The reason for making a decision in favour of HS2 is that there are a number of different pieces of analysis, some of them done in quite different ways, that all end up in the same kind of place. For example, KPMG’s analysis
shows the productivity benefits that are coming out of this way of doing things. If you use somebody else’s numbers in the same kind of way, you get to a similar number. To me, that is a very strong place to be. If you look at all the different iterations over the years on the user benefits—welfare benefits are not real money, although we put a pound sign on them, but time savings are welfare benefits, not output benefits—they all come up with amounts of benefit that more than give a return.

On top of that—Mr Atter mentioned this at the beginning, and this is the point I could not make earlier, so this is great—is the fact that this is within a fixed pot. This is all at the minimum end of what this investment could achieve. All the analysis that we have seen so far, whether standard user benefits or productivity benefits, are all within the constraint of everybody who has a job wants a job. Essentially, all this analysis does is move things from one place to another. So when you say that there is a negative for Aberdeen, say, it is because it is all within a fixed pot, which is something that is going to happen. Growth gets moved to Manchester and away from Aberdeen. To the smallest extent that this investment creates more growth in the UK economy, that is not counted in any of the numbers that we have on the extent to which that could happen. If 10% of the jobs created along the line of High Speed 1 and in Kings Cross and St Pancras were new jobs to the UK economy, it more than paid for all the spending on High Speed 1. That is all it needs.

Q35 Lord Griffiths of Fforestfach: I assume that the case made by the Department for Transport in presenting its business case is that fares charged by the operating companies would, perhaps with some adjustment for inflation, be what they are today. In other words, there is no premium fare charged for travelling on HS2. If you now assume that premium fares were charged for travelling on trains on HS2, what difference would that make to the strategic case?

Jim Steer: It would probably improve the numbers, in short. It is clearly a simplifying assumption. It makes it much easier to do the analysis. The demand projections are based on thinking reflecting on growth, population growth and all the rest of it. There is going to be a lot of demand for these services. You could probably put the price up and still get a very healthy return. The question is how you get the optimum revenue, given that you have invested in this. You could probably increase the fares and improve the revenues. Governments may take a view on that: “I have spent all this money and I want the fares to be reasonable”.

You can look at the precedents. For instance, Eurostar, which is still partly a government-owned company, is given a free hand to set fares and it has chosen to keep what it calls an entry-level fare going pretty much since it started, which is actually 20 years ago. It said that if you want to go to Paris and you book ahead for a weekend you can travel on Eurostar for £59. I think the equivalent fare is still £69. It has certainly not kept up with inflation. Of course, there is a stack of higher fares if you are a business traveller or want flexibility and all the rest of it. You can see that if a similar regime was applied to the operator on HS2, perhaps a similar thing would happen. I do not think we have to be terribly nervous about this and think that this is some great new world. I stood on Crewe station six months ago without a rail ticket needing to get back to London and thought, “What’s my choice?”. The choice was £50 on a fast train and £10 on a train that took an hour longer. There are these choices in existence at fairly specific places on the rail network today. It will not destroy the system. It also shows that you can have competition. We are not in a world where you only have HS2 and perhaps it charges premium fares. Nobody has taken a view on this yet.
You can have the lower-cost alternative. We are not going to close the West Coast Main Line because we have built HS2. There will be services on it, and they will probably be cheaper.

**Lewis Atter:** In terms of our number—the £15 billion impact on the economy—other things being equal, higher fares will reduce that £15 billion because they reduce the connectivity gain as a result of HS2. To complete the analysis, we have to ask what the revenue you generated was spent on. If you have spent that revenue generated on something that created even more connectivity, then the number might go up net, but just looking at the impact on fares, it would reduce the connectivity gain from HS2, which would reduce the productivity number.

**Q36 Lord Carrington of Fulham:** All your conclusions follow your assumptions about the way people behave if they have high-speed rail, which is fine. I do not have a problem with the analysis that you are doing on the basis that people will become more productive if they have faster communications. My concern is whether they will behave in the way that you think they are going to behave. In other words, if you have a faster rail link to Birmingham—that, after all, is what we are talking about, although Manchester would be nice and the Y at the top would be wonderful and it might well be built sometime, and equally given the nature of government projects it might not be built—and you look at the regeneration of Birmingham from the construction of HS2, it has been suggested to us that it might have the opposite effect to the one you are suggesting. It might actually suck people from Birmingham into London to work rather than people generating productivity in Birmingham. There is no way of knowing the answer to that—I accept that—except perhaps by looking at what has happened in other countries. Do you have a view about how successful high-speed trains in France have been in creating prosperity in places such as Bordeaux, Lille, to some extent, and Avignon, for instance, where I think the high-speed rail link to the south of France ends? How successful has it all been in doing what you think it will do in this country?

**Bridget Rosewell:** The French experience is quite instructive because of the differences in the experiences. It supports the contention that we are all making that it is what else you do that will really make a big difference. Lille is not far from Paris, and there could well have been a draw from Lille to Paris and people would have gone there to work. The reaction of the local authority and local leaders to the high-speed train was extremely positive about how they would make sure that they could get an advantage out of it, redevelop and link to other places in the vicinity to create a new economic centre. I think the whole of the Lille region would say that that has been a huge success.

Avignon, on the other hand, built an out-of-town station. There is no city-centre station. The local authority really did not want it and pushed the whole thing away, with the result that there is a car park and a car hire location and you can drive somewhere else nice that you might want to go to. At least, that is what I did when I went to Avignon. There was nothing there at all. That is really because there was a pushing away of making anything happen. It comes back to that point.

Bordeaux has not got there yet, so that is still a game to be played. The Lille and Avignon comparison is quite instructive. You will certainly see more people going between Birmingham and London, but probably also more people going in the other direction too.
Jim Steer: The best answer I saw on this subject was given by a senior person from SNCF, who was asked about this by the Transport Select Committee next door. He explained that some of the complexity of the dynamic changes that they had looked at happened in relation to Lyon, which was the first city linked to Paris by TGV in 1981. Instead of four hours, it took two hours. It was a massive change and had a huge impact. He was asked what the impact was. He said that it has changed over time. There is evidence that some of the businesses in Lyon, which had been set up in what was then a relatively remote regional provincial city, decided that they did not need to be there and could be serviced from their Paris headquarters, so the office in Lyon closed, which was not good for a regional city. Over time, that reversed, driven apparently, so the analysis mainly suggested, by the cost of having a larger headquarters than was needed in Paris. That kind of rings a bell for me. I have a business with offices in London and Leeds. If you connected the two by High Speed 2, would we close the Leeds office? No. Would we do things differently between them? Possibly. It is very hard to judge the balance. We would certainly be able to work better together.

It will be complex but on the £15 billion question out of Mr Atter’s work, quite honestly whether it is £15 billion or £17 billion does not massively change my view of this project. What should change views on this project was an incredibly helpful piece of evidence. It is the answer to the question about the distribution of benefits in particular between London and the south-east and provincial cities in the Midlands and the north. Having been subject to various sensitivity tests, there is a clear answer: the Midlands and the north benefit more. That is one analysis. You could look for lots of evidence and you quite rightly point to European experience and you will get these complex pictures, but the only piece of analysis—which is why I thought the KPMG work was terribly interesting—that specifically sought to address this question came up with that answer.

May I add one last point? The first phase of this project in infrastructure terms is just London and Birmingham, but in service terms it is London-Birmingham, London-Manchester, London-Liverpool, London-Glasgow and probably London-Edinburgh and London-Chester too. There are a lot of cities that are going to get half an hour off the journey time to London from the first phase, not just Birmingham.

Lewis Atter: Perhaps I could unpick that. A lot of attention has been given to our £15 billion figure, which was all about productivity. Actually, that was a by-product of our report, which was really addressing this question of what the likely net impact for the south versus the Midlands and the north is likely to be. The thing to remember about something like HS is that it does two things: it affects the productivity of different places by different amounts and it also reduces the barriers to competition between them. To unpick what happens, you have cities in the north where, per head of population or per worker, productivity is lower than in London, but you have higher costs in London. When you look at the comparison between the two, you have net unit cost advantages in the Birminghams, the Manchesters and the Leeds, but that does not translate into a better balance because the costs of doing business between them are so high. What we are doing with HS—or anything else that would do the same amount of bringing together and lowering the costs of trade—is lowering the barriers to competition between more competitive and cost-effective locations in the north and London. At the same time, because the connectivity improvements outside the high-speed to the Manchesters, the Birminghams and the Leeds are also boosting their productivity, we do two good things for them. When it comes to the net impact, we ran various versions of analysis of how all this works, and did not find the combination of
assumptions that, net, would suck jobs south, because of the cost advantages of the north and the fact that we had lowered the barriers to trade and competition between the two areas. In practice, both north and south won, but the movement of jobs was north not south.

Q37 Lord Carrington of Fulham: I shall ask a more detailed question following something that we talked about with respect to Avignon. You were saying that a station out in the countryside with a good car park is wonderful if you are going to Nice, Grasse and such places and are going to bathe in the sea. We are planning stations in the wilds of Yorkshire, as I understand it, because we will not take them into the towns. Are you saying that that is a serious mistake and that HS2 has to go pretty much to the population hub that it trying to serve, otherwise it will not work?

Bridget Rosewell: Yes, that would be my position. Getting into the city centres is one of the key things that you have to do. You may want something on the edge of the zone—for example, having the Birmingham interchange with access to the airport and the capacity for some new development there is a big positive—but you need to go into the city centre as well, whether it is Birmingham, Manchester, Leeds or Sheffield et cetera.

Jim Steer: There are two reasons for that. One goes back to this story about having employment where the most productive jobs are. That is the place that you want to stimulate in economic terms. The other point is that that is where all our access transport systems are focused. Going back to the question about whether you have to add on all these other local cost effects, if you build a station 'in the sticks', you have to solve an access transport problem, which can be expensive. It is much better, for those two reasons, to focus on city centres.

The Chairman: I think we are going to have to draw this session to a close, somewhat late in the day, because we have another witness. Thank you very much indeed. You are very welcome to stay and listen to the other witness if you wish.
HS2 Wider Economic Impacts Briefing Note:

KPMG 2013 and SERC 2009 Approaches Compared

Purpose of this note

1. The result from the 2013 KPMG HS2 Regional Impacts work that has received most attention was the estimate of a £15bn (2013 prices) increase in 2037 GDP as a result of the high speed and conventional rail improvements Government was expecting to be generated by HS2.

2. Most of this attention has focused on suggestions by some commentators that the KPMG figure was implausibly high, and likely to be orders of magnitude higher than would have been generated by comparable methodologies, most notably the 2009 LSE Spatial Economics Research Centre (SERC) work for the Northern Way on the economic impacts of rail transport connectivity.

3. The SERC work sought to address the economic impact of rail via detailed analysis of the linkages between rail connectivity and wages. It can be argued to be particularly relevant to understanding the plausibility of the KPMG results because:
   a) the wage impacts addressed by SERC can be interpreted as a good proxy for the productivity impacts being addressed by KPMG;
   b) the SERC analysis focused in particular on the impact of rail based business to business connectivity, which accounts for 87% of the KPMG £15bn estimate; and
   c) the SERC methodology sought to separate out skills and other factors that might lead to an overstatement of the impact of connectivity changes on wages (and thus productivity).

4. Against this background, this note reports on work that seeks to understand the difference applying the SERC 2009 methodology, rather than the KPMG one, would have made to the 2013 £15bn estimate.

5. This means replacing the KPMG elasticities and connectivity measures used in the 2013 report with those reported from the SERC 2009 work. Save for two adjustments

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necessary to make like for like GDP comparisons (see below); all other inputs used for the 2013 KPMG analysis are retained. This includes official base case GDP forecasts and the representations of generalised costs of rail travel (with and without HS2) supplied to KPMG by HS2 Limited for the 2013 work.

Summary:

- Some commentators have claimed that differences between SERC analysis of the economic impact of rail improvements for the Northern Way and the approach KPMG used for its 2013 HS2 Regional Economics work point to the KPMG estimate of a £15bn real impact on the 2037 economy being orders of magnitude too high.

- Although there are clearly differences between the two approaches, once they are compared on a like for like basis they produce remarkably similar overall estimated GDP impacts for HS2. The SERC approach produces an estimate of £14.7bn for rail impacts, compared to £14.5bn for the KPMG method.

- The difference between the two methods is small (equivalent to 0.01% of forecast 2037 GDP), and it is difficult to conclude that the SERC work supports arguments that the KPMG estimate is orders of magnitude too high.

- The key factors in this result are: (i) a SERC elasticity for economic reactions to changes to business to business connectivity (the single most important factor in the analysis) which is actually higher than the comparable KPMG figure, once the comparison is made in a consistent way; and (ii) connectivity increases resulting from HS2 under the SERC approach which, although lower than KPMG’s preferred behavioural measure, are not as far below the KPMG estimates as might have been expected.

- In practice, the above means that the SERC method actually produces a £1.2bn higher estimate for business to business GDP impacts than KPMG (£14.7bn SERC versus £13.5bn KPMG); with the gap narrowing to £0.2bn once KPMG’s estimate for labour market effects is included. (The SERC analysis does not include a separate estimate for labour market effects.)

- The work reported in this note does not compare the KPMG and SERC methods with DfT’s (ie WebTAG) estimates of wider economic impacts, which would require information (eg on forecast mode shares) to which KPMG does not currently have access. The modest contribution DfT wider economic impacts have to the overall estimated conventional Benefit Cost Ratios for HS2 suggest, however, that the DfT methodology produces very significantly lower impacts than either the SERC and KPMG approaches.

Making Like for Like Comparisons Between the SERC and KPMG Methods

6. Although the KPMG 2013 and SERC 2009 approaches address a very similar question (the impact of improvements in rail connectivity on the real economy), they do so in different ways drawing of different underlying datasets. The KPMG approach uses base
year (2010) data on economic output (GDP) across four sectors of the economy (some 60% of the total) at a level of geography consistent with the transport models used by HS2 and DfT to appraise HS2 to derive relationships between output per worker (productivity) and connectivity based on behavioural measures of connectivity (e.g., proportion of business travel at or below a given cost). The SERC method is more bottom-up and addresses the question via a very detailed database on wages of people working in particular places and information on travel costs between places.

7. In order to make like-for-like comparisons between the two approaches two adjustments need to be made to data within the modelling to allow for:

i. the difference between wages (the focus of the 2009 SERC work) and GDP (the measure of output being addressed in the KPMG report). Here it has been assumed that GDP and wages rise proportionately – in other words a 1% increase in wages forecast under the SERC methodology is reflective of a 1% increase in GDP under the KPMG approach. This means treating the SERC wage elasticity as if it were a productivity elasticity; and

ii. the whole economy approach adopted by SERC. The SERC analysis considers all wages across all sectors in the economy, and therefore produces what might be described as whole economy elasticities. The KPMG work focuses on the four sectors in the economy expected to be most affected by changes in connectivity (consumer services, producer services, construction, and manufacturing), and assumes no impacts on the remainder (some 40%) of the economy. This means that in order to produce like-for-like comparisons the SERC elasticities have to be applied to whole economy measures of output and KPMG ones need to be applied (as they were for the 2013 work) to only the four sectors to which they relate.

7. The KPMG £15bn estimate is the combined impact of changes in rail business to business connectivity (£13.5bn), rail labour market connectivity (£1bn), and small improvements in car connectivity (both business and labour) as a result of reductions in congestion from modal switch between road and rail (£0.2bn). Given the modest nature of the road based changes in connectivity, these effects have been excluded from the comparison.

8. The SERC analysis does not derive a separate rail labour market relationship and uses instead a single measure based on business to business (B2B) connectivity. This means changes in labour connectivity have no separate impact on the SERC version of the analysis but do on the KPMG version. Given that we do not know what effect allowing for a separate labour market effect would have on the SERC B2B elasticity (it could reduce it), it is not clear whether a fair comparison should be based on the KPMG estimate of B2B impacts alone (£13.5bn) or the KPMG figure that also includes labour market effects (£14.5bn), and we suspect the truth lies somewhere in between.
Business to Business Connectivity Measures

9. Both the SERC and KPMG approaches measure business to business (B2B) connectivity of a location with reference to the number of other businesses (measured by the total number of employees in those other businesses) that can be accessed from that location and the cost in terms of time and money of making those connections. A business “further away” in time and financial cost will have a lower value than a business of the same size (same number of employees) that is “closer” in terms of time and money.

10. Under this approach, rail and other transport improvements improve connectivity by bringing businesses “closer together”, increasing their value to each other. The rate at which the value of businesses to one another is assumed to decline (decay) as time and money costs increase is a critical part of the analysis. The KPMG approach is based on observed business traveller behaviour – ie the % of business trips undertaken at a given time and money cost. The SERC method employs an imposed decay relationship under which value reduces proportionately as time and money costs increase (ie double the cost = half the value). As shown in figure 1 below the SERC approach results in a significantly steeper decay relationship than KPMGs behaviourally based approach, with longer distance (higher cost) connectivity having lower value under the SERC approach than KPMGs.

11. These differences matter when addressing the impact of interventions like high speed rail which deliver some of their most significant impacts over longer distances. It is worth noting, however, that the SERC method is a much better approximation of actual behaviour than the decay relationships employed by DfT, with figure 1 showing the DfT WebTAG decay curve for business services as well as the KPMG and SERC equivalents.

Figure 1: KPMG, SERC and DfT Business to Business Decay Curves
12. The above differences in the approach to measuring connectivity translate into differences in the expected impact of HS2 on connectivity. Figure 2 below sets out the B2B connectivity changes derived using the KPMG and SERC methods, with both being based on the same generalised costs (time and money combined) forecasts provided by HS2 limited for the 2013 KPMG work.

Figure 2: Changes in Rail B2B as a result of HS2, KPMG (2013) and SERC (2009) Methods Compared

13. The KPMG behaviourally based measure results in significantly higher changes in B2B connectivity both on average (KPMG 14% versus SERC 9%) and across most of the distribution. The differences are not, however, uniform across places, with the impact on Birmingham connectivity (KPMG 23% versus SERC 22%) being relatively close, and others (eg Manchester; KPMG 19% versus SERC 13%) being much further apart.

14. Other things being equal, one would expect these kinds of differences in connectivity to translate directly into similar differences in expected impact on productivity, with on average the KPMG figure being some 45% above the SERC equivalent. In practice, however, differences in elasticities mean the productivity impacts do not follow this pattern.

**Elasticities**

15. Connectivity changes need to be combined with the appropriate elasticities in order to complete a comparison of the two methods.

16. As explained above, in order to provide for a like for like comparison with the KPMG £13.5bn to £14.5bn figure it is necessary to treat the SERC elasticity as if it were also a
productivity elasticity, and then apply the resulting SERC productivity numbers to whole economy measures of output, rather than the narrower measure used by KPMG. This is what is done to produce the results at paragraph 22 below.

17. A like for like comparison of the SERC and KPMG elasticities, however, means converting the KPMG estimates into whole economy equivalents. This means the combining the four subsector elasticities (production, consumer services, producer services etc) employed by KPMG in the 2013 work and allowing for the fact that these subsectors together only account for 60% of the total economy. This is done in figure 3 below, which also shows the whole economy SERC 2009 elasticity.

**Figure 3: Elasticity estimates from SERC (2009) and KPMG (2013)**

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<tbody>
<tr>
<td>N/A</td>
<td>0.060</td>
<td>0.019</td>
<td>0.073</td>
<td><strong>0.032</strong></td>
<td><strong>0.049</strong></td>
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18. Figure 3 shows that the whole economy equivalent KPMG elasticity for B2B productivity is 0.032. This is significantly below the SERC 2009 wages elasticity of 0.049. This means that for a given change in B2B connectivity the KPMG elasticity will translate this change into around two thirds of the economic impacts produced by the equivalent SERC measure.

19. In terms of overall results it is important to remember that the KPMG approach also includes labour market impacts, where the whole economy equivalent elasticity is 0.009. These effects account for about 7% of the overall KPMG estimated impacts, so allowing for them in the above would tend to narrow but not eliminate the gap in elasticities above.

20. The above comparison of elasticities will surprise some observers, who would expect the SERC elasticities to be lower than KPMG’s because the SERC method includes an explicit allowance for people (skills) effects which can be expected to contribute to higher productivity levels in better connected places. Other things being equal, one would expect a connectivity elasticity that controlled for skills effects to be lower than one that did not. Although KPMG investigated a skills effect as part of our 2013 work the data on which the KPMG 2013 elasticities were based did not support such an adjustment. The KPMG work also faced challenges as a result of correlations between the different measures of connectivity used (eg between car and rail and between business connectivity and labour markets). These correlations risked introducing an upward bias in the most important elasticities (particularly the rail business to business
relationship) for the HS2 analysis. To address this risk KPMG applied a very substantial downward adjustment to this critical elasticity – in effect dividing it up amongst the elasticities it was correlated with in recognition that these other measures of connectivity may be contributing to what appeared to be business to business rail effects.

21. This pragmatic approach had a very substantial impact on the elasticities used in the KPMG analysis, reducing the critical business to business elasticities by more than half, with similar impacts on the rail labour market elasticities. These very substantial adjustments, together with the fact that the KPMG elasticities were applied to only 60% of forecast GDP (the proportion accounted for by the 4 sectors addressed in the KPMG analysis), mean that KPMG’s effective B2B elasticity is actually below the SERC equivalent, even though the latter controls for skills effects and data problems meant the unadjusted KPMG elasticities did not.

Results

22. Combining the elasticity estimates from figure 3 with the changes in connectivity summarised in figure 2 and applying the relevant measures of base case output (whole economy for SERC and four sub-sectors for KPMG) allows comparisons to be made of the economic impacts of B2B connectivity changes resulting from HS2 under the two methods. These are set out in figure 4 below.

![Figure 4: Comparative 2037 GDP impacts from B2B improvements](image)

<table>
<thead>
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<th>2013 prices and (% of 2037 base case GDP)</th>
<th>KPMG</th>
<th>SERC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2037 GDP impact</td>
<td>£13.5bn (0.40%)</td>
<td>£14.7bn (0.43%)</td>
</tr>
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23. Adding in the KPMG estimate of rail based labour market impacts increases the KPMG GDP estimate to £14.5bn (0.42% of the 2037 economy).

24. This means that in spite of the differences in approach between SERC and KPMG, when applied on an equal footing to the same set of generalised cost data they produce remarkably similar results at the headline level with, if anything, the SERC method producing slightly higher overall impacts.

25. Overall the picture is one of the higher SERC elasticities slightly outweighing the higher KPMG connectivity changes resulting in a marginally higher estimate for the economic impacts of HS2. As noted at paragraph 13 above, the difference in connectivity measures is not uniform across places. This means that the SERC method will not produce marginally greater impacts everywhere. For example, the narrower gap between connectivity scores in Birmingham (plus 22% for SERC versus plus 23% for KPMG) means that the higher SERC elasticity will dominate and SERC based productivity estimates there are likely to be significantly higher than the KPMG equivalent.
October 2014
Sir Tim Lankester KCB—Written evidence

HS2 - Evidence to House of Lords Committee

1. I am a resident of Albert St in Camden Town, London NW1 7LY and likely to be seriously affected in terms of blight and loss of amenity by the present proposals for HS2. I am also concerned, both as a citizen and as a result of personal experience, about the likely misuse of public funds if the project goes ahead.

2. I was permanent secretary at the former Overseas Development Administration from 1989 to 1994. As the ODA’s Accounting Officer, I sought and received a formal written direction in 1991 from Douglas (now Lord) Hurd, then Secretary of State for Foreign and Commonwealth Affairs and responsible for ODA spending, in respect of aid to Malaysia for the Pergau Dam project. This was on the grounds that I had concluded that spending on this project represented extremely poor value for money. The aid for the Pergau Dam was later heavily criticized by the Public Accounts Committee and in the media, and was eventually declared unlawful by the High Court in relation to the Overseas Development and Cooperation Act 1980.

3. HS2 is an immensely costly project. Even on the Department of Transport’s optimistic estimates of its costs and benefits, it does not rank as “high” amongst its value for money categories for transport projects. Public spending on HS2 is therefore bound to be at the expense of the numerous smaller, “high” value for money projects in the transport sector that are available to be undertaken over the next decade and more. This means wasteful and uneconomic use of taxpayer’s money and, given its size, very substantial economic benefits for the nation foregone. Most of the criticisms voiced by the Public Accounts Committee in 2013 remain valid.436

4. HS2 as presently conceived fails to meet the standard test for all public spending that it must provide good value for money – i.e. it must meet the test of efficiency and effectiveness. There are more efficient and less costly ways of improving the nation’s transport network. Serious questions continue to be raised about the project. I mention some of the key ones below. Taken together, they suggest that the purported benefits are insufficient to justify the huge expense and social costs that would be involved in its construction.

5. It is a little surprising in these circumstances that the Department of Transport’s Accounting Officer has so far not insisted on a formal direction from his minister before authorising continuing expenditure on the project, as he is required to do under Treasury rules if the value for money test fails to be met. (He did ask for, and receive, such a direction from his minister recently in respect of the proposal to issue invitations to tender for the Northern and Transpennine Express franchises. In his letter to his minister dated February 26, 2015, he states that there “may be better ways of achieving value for money…” – which is precisely the situation with HS2 but with vastly greater costs to the Exchequer).

6. The cost/benefit assessments undertaken or commissioned by the Department of Transport and by HS2 Ltd over the past several years are defective on several counts:

A. The Benefit-Cost Ratio (BCR) calculations include very substantial figures for government revenue from the project (£13.2 billion for phase 1, table 5 in “HS2 Outline Business Case 2013”). The revenue assumptions are unrealistically high. This is because they assume that HS2’s fares will not be affected by competing non-HS2 train operators offering lower fares to capture market share from HS2. Competition is bound to affect HS2’s ability to charge the high fares that are assumed.

B. The valuation of time savings, especially for so-called “brief-case travellers”, is critical in justifying the cost of HS2. This is an immensely complicated issue but it seems that in their base case, the Department’s various assessments have continued to assume that the value of time saved is approximated by the employee’s salary, which is assumed to be equal to the employee’s productivity at the margin. In other words, for every minute saved by faster speed, there would be extra employee value-added equivalent to his/her salary. (See para 1.22 of “HS2 Outline Business Case”). But this entirely ignores the fact that, especially with wifi-enabled trains, “brief-case travellers” increasingly work on train journeys. In addition, at a time when salaries of top business executives have increased much faster than company productivity and profitability, it has to be questioned whether – even if the traveller is not working - it is right to assume that time saved would lead to increased value-added equivalent to his/her salary. The existence of an imperfect labour market at the top indirectly exaggerates the value of time saved with HS2. Instead of including a sensitivity test with much higher values for time savings, the Department should have included a sensitivity test for much lower values.

C. As regards the need for additional rail capacity, the Department has failed – despite many requests - to provide a convincing rebuttal of the proposition that substantially larger capacity can be achieved on existing lines through infrastructure and rolling stock upgrading at a fraction of the cost of HS2. The document referred to earlier (“HS2 Outline Business Case”) did consider some alternative “packages” to HS2 which would require infrastructure and rolling stock upgrading rather than a new line. Table 7 of that document indicates that an alternative “package” involving no new line could add 87,900 all day seats to existing capacity (128,200 seats) for London-Birmingham, whereas HS2 phase 1 would add 110,400. The net cost to government would be £4.3 billion, against £16.7 billion for HS2 phase 1. The BCR for this alternative “package” is estimated at 2.0, compared with 1.7 for HS2 phase 1. In short, the added capacity benefits of HS2 are quite marginal, yet the extra costs are enormous and the BCR is significantly lower. The Department reject the alternative “packages” on the grounds that they provide less extra capacity (but as just noted, this is only marginal); they would involve greater disruption to passengers during construction (yet the Department virtually ignores the disruption to the lives of people near the new line during HS2 construction – see below); there would be less performance reliability (they do not explain why); and less journey time savings (but the value of these are almost certainly exaggerated anyway).
D. The official assessments have failed to factor into the overall costings the enormous social costs that will be incurred by communities – especially in northwest London – during the construction phase. The plight of rural dwellers has received considerable attention, but the costs to urban dwellers have been virtually ignored. In areas such as Camden Town, residents face the prospect of years of housing blight (loss of social housing and inability on the part of private owners to sell at a reasonable price), and added air pollution, noise, accident risk and congestion due to construction vehicles and the construction itself. Any serious social benefit/cost analysis would have placed an estimate on these costs and factored them into the overall assessment. To the extent there is to be financial compensation, urban dwellers will also receive far less generous terms than their rural counterparts.

E. In paragraph 1.11 of the “HS2 Outline Business Case”, there is an estimate for the cost of “landscape impacts” in rural areas. Albeit highly uncertain, this estimate would have reduced the BCR ratios by as much as 0.1. Unaccountably, it was not included in the key cost and benefit tables. Furthermore, as others have argued, the estimate of 0.1 is almost certainly too low – especially because of the permanent damage to the Chilterns Area of Outstanding Natural Beauty.

F. The various assessments include estimates of “Wider Economic Impacts” which are added to the direct transport benefits to produce total benefits. These Wider Economic Impacts are estimated at £4.8 billion for phase 1 and £15.4 billion for the whole network (see Figure 5.7 in “HS2 outline Business Case”). These estimates are highly speculative. The “Agglomeration” effects are the largest and are to do with released capacity on other transport services due to HS2. Their valuation seems to be little more than pure guess-work. The next in importance are the so-called “Imperfect Competition” benefits. These rely heavily on travel time savings whose valuation, as already noted, is almost certainly exaggerated. Without the inclusion of the Wider Economic Impacts, the BCRs would look considerably worse. The record of high speed rail elsewhere in bringing Wider Economic Impacts has been nearly always disappointing – as the experience of high speed rail in France and in Kent with HS1 has demonstrated.

G. Quite apart from the assumptions underlying the calculations, the benefit-cost ratio (BCR) methodology used by the Department in assessing the business case for HS2 provides a only a partial measure of whether the project is worth undertaking. The BCR methodology attempts to show the benefit to society per pound of public spending. It does this by netting off revenue which will accrue to the government, which in the HS2 case will be very considerable. This is very important insofar as the transport budget is clearly constrained. On the other hand, it does not provide a true economic assessment of HS2 – and in particular whether HS2 offers maximum efficiency in the use of the nation’s scarce resources both public and private. For this a Net Present Value assessment is required. This would compare all benefits and costs irrespective of whether there is revenue accruing to the government. Because of the relatively large revenue component in the BCR calculations for HS2, it is likely that from an overall economic standpoint HS2 would come out even less favourably relative to other transport projects.
7. Most recently it has been repeatedly asserted by HS2 supporters that the project will in itself reduce the **economic disparities** between London and the southeast on the one hand and the north and midlands on the other. (This is the so-called “strategic” or “transformational” case). In reality, this is no more than wishful-thinking. There is little doubt that improved transport links will improve Britain’s overall economic competitiveness, but whether it will reduce economic disparities between north and south is another matter. The southeast is already so dominant and the benefits from its economies of scale, its skilled labour force and proximity to the continent are so large that improved transport links to the north may simply further increase this dominance. At the very least, it would be a mistake to try to justify the project on the grounds that it will close the north-south economic gap.

8. Finally, there is the argument, voiced by supporters of HS2 across the political spectrum, that “we need high speed rail because other countries have it.” This is of course absurd. The case for high speed rail depends on each countries’ situation and on the respective costs and benefits for each country. Even in France where distances are much greater, the benefits from spending on high speed rail have been increasingly questioned; and in any case we already have routes which are technically high speed – ie where speeds exceed 125 mph

**Summary.**

9. HS2 is a marginal project at best, and at worst an extremely wasteful one, given the huge amounts of money at stake and the likelihood that the same money could be used to fund far more beneficial projects.

10. Government ministers and Opposition spokesmen would do well, if they have not done so already, to read the recent volume by Anthony King and Ivor Crewe, “The Blunders of our Governments” (Oneworld Books, 2013) – which offers a vivid account of the vast sums of public money that have been needlessly wasted over the past three decades on foolish projects. If HS2 is allowed to proceeds as currently planned, there is a high probability that it will turn out to be another such project and on a grander scale than any before.

*March 2015*
Leeds Chamber of Commerce and West Yorkshire Combined Authority (QQ 182-191)

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Evidence Session No. 16  Heard in Public  Questions 182 - 191

TUESDAY 25 NOVEMBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Griffiths of Fforestfach
Lord Rowe-Beddoe
Lord Shipley

Examination of Witnesses

Councillor James Lewis, Chair, Transport Committee, West Yorkshire Combined Authority, and Ian Williams, Director of Policy and Business Representation, Leeds Chamber of Commerce

Q182 The Chairman: Thank you very much for joining us. We are running just a little short of time, so concise answers would be very much appreciated. Mr Williams and Councillor Lewis, perhaps I can start off by saying that support among the public has not been as great as support from the leaders of councils and the like. It would be interesting to get your perspectives on that. Secondly, what reservations and concerns do you have about HS2, particularly in so far as it affects Leeds and West Yorkshire? An allied question is: to what extent do you believe HS2 will generate economic activity in Leeds?

Cllr James Lewis: If I could lead on that. I have a perspective on this that Mr Williams does not, because, as an elected politician, I have this curious habit of knocking on doors and asking, out of the blue, for people’s views on current affairs. HS2 has been a talking point on the doorstep. There are a number of things. First, the public are seeing a big overall cost for the project—a global cost for building all three legs and ancillary works—at a time when there is a deficit in public spending in the economy. Secondly, if you are standing on a basic suburban rail station in West Yorkshire waiting for a two-car rail bus that may turn up late, will be overcrowded, where you sit on a bench seat, not on an ordinary seat, to commute into work, and you are doing that every day, something that happens 20 years in the future may not seem the most relevant project. Thirdly—I say this specifically for the area I am a councillor for; I represent the ward that the route is proposed to go through—the people who are directly affected by the route have expressed their objection to the scheme very strongly, as people do when any major infrastructure project is proposed. We have wind farms in the area, motorways, open-cast coal mining and things like that. A change in the environment understandably creates a negative reaction from people who are affected by it. That has occupied part of the debate.
I have answered the first part in three parts. I will have a go at the second part, which was about my reservations about the scheme. I have two. First, I am concerned that the eastern leg has the least political consensus. You referred to other leaders of local authorities as evidence of support. I think the eastern leg has the least consensus about it. Even authorities that support it—you have heard from colleagues from South Yorkshire and the east Midlands—still have concerns over station locations. I worry that it would be the section of the route that would be easiest to withdraw or to put on hold. Secondly, whereas the Government and the Opposition Front Bench show great determination on delivering HS2, the ability to deliver some of the other aspects of transport investment—improving the local rail network, improving the road network and other transport schemes—the delivery mechanism and funding is far more opaque than the funding for HS2. We need the complete package to release the full benefit.

Ian Williams: Thank you very much. Before I answer your question, please could I pass on the apologies of Nigel Foster, the president of the chamber of commerce? Unfortunately, Nigel has not been well over the last few weeks. He very much wanted to come along this morning. In fact, I met him at York station. I advised him that he did not look that well and that he should not be travelling, but he did want to make sure that you were aware of his apologies.

You mentioned public support for the scheme; obviously I come from an organisation that represents the business community. This chamber of commerce has very much been behind HS2 from the word go. As much as we would like to think that we influenced thinking about a Y configuration of HS2 coming north when it was initially proposed—possibly going through Manchester and across the Pennines—that was because we firmly believed that this would firmly be about connectivity, about improving capacity and about travel times. So it is a package; it is not one or the other, but a whole package.

When we initially asked our members whether they supported those sorts of improvements, more than 90% of the businesses that responded said yes, they supported HS2 coming to Leeds. Similarly, I have heard from chambers of commerce, not necessarily in Leeds, about their concerns. They say, “Okay, we can see it coming to Leeds, but how are we going to benefit if our business is not located in Leeds?” That is why a serious piece of work has been undertaken to look at connectivity within the Leeds city region, to see how everyone can get the benefits that HS2 will bring. That is a major piece of work that is being undertaken at this moment.

You asked whether I or the chamber of commerce had any reservations about the project. It is a lot of money and a significant amount of investment. It is important that we look at this as investment, not necessarily as a cost. Again, talking to the businesses, they do not expect that it will be blank chequebook that will be passed and that if we want any more money it will be forthcoming. It has to be well managed. We have a good track record on that—look at the Olympics. That really raised the status of UK plc’s management and project capability on the world stage. HS2 cannot be an open chequebook. We would expect it to be built on time and on budget. We would expect regular reports back to hear how things are progressing.

On economic benefits, sometimes we focus too much on the regeneration benefits that HS2 will bring. Yes, it will bring regeneration benefits. It will also be a development opportunity for many places. If I were an investor based outside the UK and looking at where to put my investment in cities, I would look at those that are well connected. Certainly, I would see HS2 coming to your city as one of the ticked boxes that would be looked for in terms of
where you would get the best return on your investment. That is hard-headed business people saying, “Where would I get return on my investment? That city region is well connected; I’m afraid that one isn’t. That’s where I’m going to put my money”.

Q183 Baroness Blackstone: I am interested in what you just said, but I will go on to the question that I want to ask. It has been said that there is danger that greater connectivity with London and Birmingham will suck economic activity away from Leeds, rather than bring it to Leeds. What is your view on that?

Cllr James Lewis: First, I note the chairman’s comments about brevity. I will just say that I agree with everything I heard Councillor Collins say in the previous session about the high cost of doing business in London and the disproportionate amount of economic activity that appears in London. I add one further point. Certainly from a Leeds city region perspective, we have specialisms in the economy that are not a duplication of what happens in London. Some aspects of our economy may reflect London, particularly in financial services.

Baroness Blackstone: Can you say what those specialisms are?

Cllr James Lewis: Yes. The Leeds city region has more modern manufacturing jobs than any other city region in the country. To give you a little example, two-thirds of the world’s turbochargers for car engines are manufactured in the Leeds city region. We have two of the big four supermarket groups headquartered in the area: Morrisons and Asda. In the financial sector, we have a significant number of building societies located here. There are specialisms in our area that would benefit from better connectivity and are perhaps not at risk from the drain effect that you referred to because they are parts of the economy that occur only in our part of the world.

Ian Williams: Going on from that, again recognising what has been said before, if we connected up the Midlands, the Birmingham area, the east Midlands, the West Midlands, South Yorkshire and West Yorkshire, there is a massive manufacturing base for UK plc. As we have heard, Leeds city region has the highest manufacturing concentration in terms of jobs. If we can better connect those areas, just think of how much more business those places could do, just by being able to reach each other much more quickly. I speak from personal experience: it took me three and a half hours to get to Birmingham from Leeds by road the week before last. That was just one way. So on a motorway network I averaged just over 30 miles per hour. That is not really what should be happening in modern times, but that is often the dilemma that many businesses face if they want to talk to clients—to customers in the Midlands, in the Birmingham area. If I go by train, it is two hours; if I try to risk it on the road it takes three hours plus. Yes, there are lots of roadworks, but business needs certainty. It needs to be able to say, “If I have a meeting in Birmingham at 10 o’clock, I can get there at 10 o’clock”, not at 11 o’clock, which I unfortunately experienced. That certainty is key for many businesses.

Baroness Blackstone: So as regards what appears to have happened in France, which is that Paris is developing more from the TGV than quite a lot of the regional cities that are linked to Paris by the TGV, are you both saying that you are not worried that London may benefit more from HS2 than Leeds or some of the other cities that will be linked up?

Ian Williams: I think that there is a slight risk. As you heard from Councillor Lewis, we have expertise and specialisms in the city regions and in other parts of the north—

Baroness Blackstone: Which you have without HS2, as it happens.
Cllr James Lewis: Indeed.

Q184 Baroness Blackstone: May I move on and ask what your views are on having a new station in Leeds rather than HS2 coming into the existing Leeds Central station?

Cllr James Lewis: I think it is a matter of record, going right back to our earliest engagement with HS2 Ltd from a Council and transport authority perspective, that we are very keen to have a single station in Leeds. We warmly welcome the recommendation by Sir David Higgins in his recent report that we work very closely with HS2 and Network Rail to bring that about, it is important to reflect that—again, making the point that if there was no HS2—if it just remained a twinkle in somebody's eye and never moved any further, we would look at significantly rebuilding the station. It is not fit for a city of the status of Leeds in my view. There are certainly huge capacity constraints on the number of trains that can get in and out of Leeds station, so providing an additional station to the city which is the largest city in England with only one station, would be a huge benefit. People may be familiar with Leeds station; actually the current Leeds station is two stations from the Victorian era that have merged. Merging in a new HS2 station is absolutely critical to our aspirations as a city, and I am very pleased that we have been asked to work on achieving that. But however you look at it, Leeds station needs new platforms. My final point is that our experience in the late 1990s and early parts of the 21st century, when the last big rebuilding of Leeds station took place, shows that you can spend huge amounts of time and money and have a disruptive influence on the rail network that echoes for months and months, but then very quickly you end up with a station that is full to capacity. We need a step change, not an improvement, and that is very much where we are heading with this station.

Ian Williams: I think that it is an opportunity for the city to remodel quite a lot of its transport infrastructure. We do not just see Leeds city station as a facility for HS2 or the passenger network—we would like closer integration with the local bus network, and possibly with the tram-train network. So we look at some form of modern transport interchange that can accommodate those various modes of transport. There is no doubt that there will be significantly increased demands on local, regional and national services, and the station we have at the moment cannot cope with that.

Q185 Lord Shipley: Could you say something further about the complementary policies that are required for Leeds to maximise the economic potential for HS2. Councillor Lewis, you said earlier that it is all about the complete package; you talked about road-rail, existing rail and the road network infrastructure needing things to be done. I shall assume from that, and I would like you to confirm it, that you have things elicited and that it is pretty clear what you want to happen. I would like you specifically to say how you think these will be funded. Does Leeds City Council have the powers and the funds required to implement that package of policies that you want to see developed?

Cllr James Lewis: I shall start by talking about the actual package of improvements. As regards where we start with this, we had a city region transport study done in 2007-08. Unfortunately, Nigel Foster was the author of that and he cannot be with us today. However, I will talk about some of the things that were included in that. Fundamentally, it did not mention high-speed rail, but it did mention improved east-west and north-south connections, and I think high-speed rail delivers that. It also talked about a significant step change in the inter-regional services on the rail network. People familiar with West Yorkshire will know that we have some very good suburban and short train journeys, for example, the Ilkley and Skipton lines, which has modern electric trains. We also have some
very poor-quality local and inter-regional rail services. A hobby-horse of mine is the Pacer railbuses. You can bounce your way from Leeds to Bradford to Manchester—three of the cities in the north—on what is effectively a 1980s bus on rails, in a very long journey time, travelling very slowly. So we need to pick up the inter-regional rail network as regards linking together all the centres of West Yorkshire. We also need to make passenger-focused improvements; for example, having an Oyster-style single ticketing system for West Yorkshire would be a huge improvement to connectivity. Again, we need to look at the efficiency and capacity of the highways network. We still have significant centres in West Yorkshire, Halifax, for example, which link to the motorway network with one single carriageway roads that wind their way through the hills. So there are still some constraints on the highways network that we need to address as well.

The second part of the question was how we fund that. We took a proposition forward for having a West Yorkshire transport investment fund, but we said that we would raise the transport authority levy in people’s council tax bills, and we were prepared to take that as a proposition to the electorate. In the spirit of localism, the current Secretary of State for Communities and Local Government said that we could not do that, so we worked with the Treasury to secure what is effectively a capital grant to achieve some of those objectives for about £1 billion of transport investment in West Yorkshire. Again, I do not want to repeat the point that previous witnesses have made about the imbalance in investment, but we need to work with central government funding streams like that and look at our ability to raise money locally through retention of business rates and, as I say, through the transport precept that is already charged from people’s council tax bills, to be able to fund a package of investment.

The final point, particularly on the railways, is on securing devolution of the local rail franchises as well, so we have not only greater ability to determine how local train services are specified and run, but because, unlike other aspects of public policy, public transport has a ticket income, and when more people use the transport network, we are able to retain that income in the north of England to improve our services rather than it being kept as the operator’s own, or put into a national pool.

**Q186 Lord Griffiths of Fforestfach:** Last week, the Mayor of Liverpool told us that he would prioritise east-west links over HS2. Could you comment on that please?

**Cllr James Lewis:** Mayor Anderson is a great character and advocate for Liverpool, and has never shied away from speaking for the city. The view I take on that is, first, he is on the western leg of HS2, where, as I said, the certainty of delivery is much stronger. Once again, I think once the recommendation of building to the Crewe hub is complete, Liverpool will have its connection to HS2 pretty much guaranteed. So he is in a different position from us in terms of the status and deliverability of the project. The second thing is that for us in Leeds, HS2 provides significant interregional connectivity, which in effect is what east-west links are about. Reducing journey times from Leeds to Sheffield from 50 minutes to an hour down to 19 minutes—or around that depending on the final decision on the station—and bringing the travel time from Birmingham down from over two hours to under 45 minutes represents important regional connectivity for us.

The final point is that HS2 delivers access to London, which is a global economic city in the way that no city in the north of England is. That is pretty unique. When the Government sort themselves out over their London airports policy, that will give us access to one of the world’s biggest and most important hub airports. Again, east-west connectivity, important
though it is, does not give us that. There are important interregional links from HS2 that maybe are not as important to Liverpool. HS2 also gives us access to London and international gateways, but east-west does not.

**Ian Williams:** This is not an either/or. It is not, “You can have HS2 but not HS3; you can have HS3 but not HS2”. We want the lot, because our connectivity is poor. As you have just heard from Councillor Lewis, Leeds, as the major regional capital it is, needs those London links as well. When I speak to my members, they tell me that connectivity to London central is important, but equally we want to be able to access Heathrow so we can get those international connections as well, to those long-haul destinations that are not well served from other places. But yes, east-west is important, and it would be wrong of me not to say that. We want both, not either/or.

**Q187 Lord Rowe-Beddoe:** I have a two-part question at this stage of the day. One is for northern cities in general. What co-ordination do you think the Government need to, or should, undertake to help realise the economic benefits that HS2 proposes to achieve?

**Cllr James Lewis:** There has been a great deal of focus on devolution and decentralisation down to northern cities. I will not start a debate on that, but in terms of some of the transport infrastructure we need to deliver, collaboration is actually tremendously important. Forming Rail North as an organisation to bring together 30 transport authorities across the north of England to co-ordinate our work on awarding the next Northern and TransPennine rail franchise demonstrates that we can bring that co-ordinated and strategic approach to bear on transport questions. I believe, over time and through the One North report published in August, it will become a more strategic, Transport for the North-style body that can provide that co-ordination. The trick that we have to pull is to aggregate out the correct level of decision-making. For example, local bus services are something that will probably always be determined on an authority-by-authority level, whereas looking at how to link Liverpool to Manchester to Leeds to Hull to Newcastle is something for which you need a powerful level of collaboration—not just between the big cities on the route but between all the transport authorities as well, crossing over some of the regional boundaries. Having a Parliament for Yorkshire would not answer that. We need to work with the north-east and Lancashire, as those links are as important as what happens within the boundaries of Yorkshire.

**Ian Williams:** I think that we are on the cusp of a really exciting time, because the northern cities are beginning to flex their muscles. We heard earlier that the disparity in the level of investment between the capital and the south-east on the one hand and the north on the other has long irked many of us in the north. However, that is where we are; now is the time to look forward. We could have bodies that take those strategic local decisions rather than for ever having to go down to the DfT and explain our case and justify why we want the investment for anything over £5 million. We should be able to do it locally.

From the chamber of commerce’s point of view, it will give us an organisation that we can hold to account. If it says that it is going to do X, Y and Z, we will want to see that it does X, Y and Z. So I very much welcome that opportunity for that decision-making capability in the north. As I say, we are on the cusp of some very exciting times, if that goes ahead.

**Q188 Lord Rowe-Beddoe:** Gentlemen, a Leeds-specific question if I may. What estimate or assessment has been made of the time and the cost of the new station?
Ian Williams: We are in very early days there. We were initially looking at an add-on to the existing station facility, but we are now talking about a complete remodel. A group has been established in which the chamber of commerce is represented, so the private sector has a voice around that table, looking at what Leeds really needs to happen. We very much welcome Sir David Higgins’s report saying that we really need to have a rethink. We certainly want to have that transit time between the classic network and HS2 as small as possible. What we do not want to do is to improve our local connectivity so, let us say, you have 30-minute travel times for anywhere around the Leeds city region but you then have a 20-minute walk. That defeats the object surely, so we very much welcome the opportunity to remodel Leeds city station. It needs it, as you heard previously from Councillor Lewis. We are virtually at capacity, certainly in terms of train services and, at peak times, in terms of passenger numbers as well. So we welcome that opportunity to remodel. It is just a bit too early to actually say what the costings might be.

Cllr James Lewis: I would add to that by saying that, fundamentally, part of this is also about remodelling a large area just outside the city centre in Leeds. The centre of Leeds is expanding southwards with two significant brownfield sites just to the south of the city centre. The Yorkshire copper works and Tetley’s brewery have moved out of the city centre and we have significant regeneration potential. We know that employment in the city centre is going to grow and that there is an appetite for future office development. We also want to make the city centre more liveable, so that maybe some of our 1960s urban motorways should no longer be part of the transport aspect and we have a more of a walking, cycling and public transport-friendly city centre. Rebuilding the station is a significant part of that.

In terms of the likely timescale, Mr Williams is right that we do not know. What I would like to see is for us to be able to start work on some of the wider projects as soon as possible. Like I say, the comparator that some of our land use planners use is that the area of the city centre that could potentially be regenerated through the high-speed station is equivalent to the New Town in Edinburgh. We are talking a significant scale of development here and the station is a part of that.

In terms of numbers of passengers using it, at its highest and incorporating other local transport aspects including bus services, you could be looking at a transport interchange that is larger than Gatwick Airport. The amount of land it could alter and improve, and the amount of people who would use it, are significant, and we would like to start work on that as soon as possible. That is very much the case that we made to Sir David Higgins. Leeds comes towards the end of the HS2 programme in terms of when the trains will roll into the city, but the work we can do on improving the city in the time between now and then is significant. We have to start that sooner rather than later.

Baroness Blackstone: What has Sir David Higgins’s response been to this request? Has he said, “Go ahead and get on with it; you need it”? Or are you going to suffer a sort of planning blight, where you cannot do anything until the HS2 project is clear, the legislation is in place and it is on the road?

Cllr James Lewis: Inevitably, there is a statutory process that has to be gone through for the powers to run HS2. We are in phase 2 of that, so it has still not entered that process. However, there have been positive aspects. I am at the risk of making two contradictory statements here. Going back to our early engagement in 2011, we were very clear about the need for a single integrated station. It has taken until 2014 and the Rebalancing Britain report for that to be accepted by HS2 and for us to now be asked to do some work on making
that happen. We appreciate the breathing space we have had effectively to try to remodel and reshape HS2, which could affect how the line runs through other parts of Leeds and some of the areas where there are lots of concerns for residents. However, once you come to a conclusion about where, it should not take too long. We would like to be able to start as soon as possible on being able to plan around that, to work with significant landowners in the city centre on what their regeneration and redevelopment plans are and, again, to look at how the regeneration vehicle that is running with HS2 can support the work we are doing in the city centre as well. So I say “as quickly as possible”, but we also want some time to get it right. I hope that is not too contradictory.

Q189 The Chairman: You made the point about the station being full to bursting. You described the rather antique nature of some regional and local connectivity. They are things that need to be dealt with quite quickly. The argument for HS2 is capacity—and HS2 is possibly not a big issue at this stage, although it may become a big issue if the growth projections are correct—so would it not be your preference to get the local problems sorted out first rather than wait until 2033?

Cllr James Lewis: Letting the Northern Rail franchise for 2106 will address some of those local problems immediately. Working with Network Rail and the Department for Transport on how the control period of infrastructure investment beginning in 2019 affects our area is the next step of that, and HS2 readiness is a big part of the argument for funding that work. The final point is that HS2 actually solves some of our local problems. I would consider Sheffield, if not Nottingham, as part of our local area, and HS2 is a fairly comprehensive tool for addressing our local connections. I believe that 50% of passenger traffic on HS1, the London to Europe line, comes from north Kent and is people making commuter journeys into London from north Kent. If we see a similar replication—we are not quite there on some of the service plans—on the eastern leg of HS2, it would be an answer to some of our local service problems. We would never build a high-speed railway just from Leeds to Sheffield—I accept that it is part of the wider project—but it gives us some solutions to some of our problems.

Q190 The Chairman: Would you advocate then that HS2 should start in the north rather than the south?

Ian Williams: Yes. We made those representations to Sir David Higgins to have the project started in the north.

The Chairman: Did Sir David enthusiastically embrace that suggestion?

Ian Williams: Yes he did.

The Chairman: So that remains a possibility.

Ian Williams: To echo what Councillor Lewis said on local connectivity, HS2 has been a catalyst to look more closely at how we can improve local connectivity across the city region. That is an important aspect of it: it is across the Leeds city region. It is not all about services coming into Leeds; it is also about connecting Selby to Bradford, Huddersfield to Harrogate and places which have virtually no unemployment to places where there are high levels of unemployment and where one of the difficulties at the moment is travelling between the two. By improving that transport connectivity, we would help those areas and those people who unfortunately at the moment have no employment.
Cllr James Lewis: Again on connectivity, perhaps I am a little guilty of talking about Sheffield and Birmingham, but HS2 has a link north from Leeds and it should be in the forefront of my mind as this section runs through the ward I represent as a councillor. That connectivity linking to York, Newcastle and the north is an important part of HS2. It gives us that link to the East Coast Main Line and services going north as well as providing some additional capacity in the York-Leeds-Sheffield corridor which is quite an important commuter route.

Q191 Baroness Blackstone: Have you done any costing of the disruption that HS2 is likely to lead to in Leeds? I imagine it will be quite substantial. Have you done any work on this? What do you anticipate in broad terms the cost will be?

Cllr James Lewis: In general terms, the experience in infrastructure, particularly rail infrastructure, has often been that where you try to build around the existing railway, the disruption is significant. Although we have not quantified it, because we have not needed to, the last time Leeds station was rebuilt, the impact was weekend closures, night-time closures, limited platform accessibility and the current half-hourly service to London being only an hourly service because of the ability to get trains in and out of the station. The experience of building around the rail network is that it is far more complex and disruptive and potentially expensive—I believe that was the experience on the West Coast Line—than starting afresh and building a new route that is not interrupting existing services and means that you are not having to take possession of the rail network. I believe that we have to get the connectivity right, but there is something in building a brand-new station in Leeds adjacent to—where it is adjacent to is still up in the air—the existing station rather than being under the roof or under the floor—if I can use that sort of terminology—of the existing station where you potentially would have to close platforms and reduce services.

In terms of the wider impact, I think that I painted a bit of the picture. The area of Leeds city centre where the new station and the route in are proposed will be significantly changed in future, regardless of what happens. I feel that that is an area where disruption is a good thing because it needs a lot of work doing to it.

Ian Williams: I was about to add the same comments. The chamber had a proposal from Network Rail about 18 months ago about improvements to Leeds city station, and it literally got laughed out. The city is desperate to see an upgrade to its station. It does not reflect the modernity of the city of Leeds in any shape or form. Certainly, in terms of passengers et cetera, it is reaching its capacity, so HS2 brings an ideal opportunity to remodel the station as we will have to do something anyway.

Baroness Blackstone: Do you know why it was dropped? Do you know why Network Rail did not include in its proposals? Does it have something to do with HS2?

Ian Williams: No, it has now brought back different proposals to the chamber of commerce and the city which it will hopefully start in the new year in terms of some basic improvements but still costing around £100 million. Those improvements are welcome, but they do not go as far as many in the city would like to see.

The Chairman: Mr Williams, Councillor Lewis, thank you very much indeed.
Liverpool City Region—Written evidence

Introduction
1. The Liverpool City Region (LCR) comprises the six Local Authority Districts of Halton, Knowsley, Liverpool, Sefton, St. Helens and the Wirral. The LCR not only has important economic connections with the neighbouring hinterland and the other major UK City Regions, but also across the globe; trading through Liverpool provides easy access to around 32 million individuals in the UK within just a few hours. The LCR itself has a population of 1.5 million people and a vibrant and growing economy worth around £23bn.

2. The LCR has seen a renaissance in recent years. Unprecedented levels of investment and development have improved the region’s economic performance. Liverpool city centre has changed beyond all recognition with its Waterfront now a world-class visitor destination; the look and performance of the city’s business district has been transformed and the city’s retail and cultural offer is amongst the best in the UK. The LCR has been successful in attracting private investment to support regeneration zones on the sites of former industries and turnaround of some the LCR’s major business such as Jaguar Landrover and Unilever. New industries have also started to emerge, such as life sciences which now account for over 57,000 jobs, with pharmaceutical companies such as Eli Lilly, Novartis and Bristol-Myers Squibb having important bases in the region. The economic outlook has passed a turning point with reversal of declining employment trends. Population and GVA is now forecast to grow steadily.

3. The LCR is seeking to build on these successes and pursue an agenda for growth, with a vision to be “a globally connected City Region delivering sustainable growth, opportunity and prosperity for people and businesses”. One of the key enablers is the LCR’s transportation system. Rail forms a major component of the LCR’s infrastructure. A successful growth strategy will require an efficient and high quality rail system which is integrated with other public and private modes, that provides both regional and national connectivity for passengers and has the capacity and capability to accommodate increasing freight flows to and from the region’s industries and port facilities.

4. The Port of Liverpool is the largest Freeport Zone in the UK and one of Northern Europe’s top 20 container ports. It has trebled its volume of freight since 1985 and handles 5.3% of the total freight of UK ports. Two major projects totalling £1bn of capital investment have just got underway. The Mersey Gateway project (£660m) and a deep water berth at the Port of Liverpool (the ‘Liverpool 2’ project - £340m) are both strategic necessities from which further economic opportunities will emerge. In 2007 the Liverpool Cruise Terminal opened and is set to strengthen Liverpool not only as a major cruise destination (voted ‘Best UK Port of Call’ by Cruise Critic in 2013), but also as a point of embarkation, creating a new market for cruise travel serving the north of England.

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437 Liverpool City Region Growth Plan & Strategic Economic Plan (LCR Local Enterprise Partnership (LEP), 2012)
5. Key to delivering the vision of a globally connected City Region, the LEP has identified four key objectives, all of which depend on interventions in the region’s transport (including rail) networks:
   - Deliver the SUPERPORT Action Plan (to 2020) – building on LCR’s port, airport, rail and logistics assets.
   - Invest in transport and key site infrastructure to capitalise on the LCR’s unique connectivity opportunity in the national context.
   - By 2023, to have a City Region Visitor Economy supporting 57,000 jobs and worth £4.3bn.
   - Develop transport infrastructure with improved connections to other core cities and a local network that ensures the efficient movement of people and goods maximising its contribution to a thriving economy.

6. A more resilient economy is emerging, where the successes of advanced manufacturing businesses such as Jaguar Landrover, Pilkington and Unilever are supporting around 34,000 people working in 3,000 firms in the core LCR and many more in the wider urban region. Life sciences, creative and digital industries and financial and professional services support a further 150,000 jobs.

Economic Outlook
7. After a period of decline, LCR has seen its population start to grow (since 2008) and employment has seen an upsurge since 2011. GVA and productivity are also showing early signs of improvement. Updated baseline forecasts for the region to 2030 (excluding HS2 impacts) indicate positive growth trends with rises in population by 1.5%, employment by 5%, and productivity by 55%. Growth in GVA over the same period is forecast to be above national levels (69% vs 62%). Overlaying a ‘Policy-on’ scenario438 to reflect the impacts of known major developments taking place within the LCR impacts shows significant increases to these trends (see Figures 1 to 4).

438 This reflects the expected effects of the City Region’s land use policies designed to facilitate development around key sites.
8. Despite these positive trends, there remain some very significant challenges for the LCR. The LCR underperforms compared to others with noticeably lower levels of employment, productivity and business formation. In comparison to the national average, the Strategic Economic Plan for LCR437 cites a deficit of 18,500 businesses and 90,000 jobs and a gap of £8.5bn GVA. The region needs, and can readily accommodate, significant inward investment to rebalance and revitalise its economy. But the current rate of “wins” is inadequate, and the resources and structures in place to attract inward investment are insufficient to the task. Improving the capability of transport infrastructure (especially rail) is a key enabler to attracting inward investment and developing indigenous business.

Rail in the Liverpool City Region
9. Thanks to the investment made in the 1970s in developing a cross-city network in Liverpool City Centre, most parts of the LCR benefit from a relatively high level of rail connectivity. However, with average speeds on many routes below 25mph and even less than 20mph on some, journey times are relatively uncompetitive with other modes.

10. Liverpool has benefited from the major upgrade of the West Coast Main Line and is now connected with London Euston every hour in just under 2½ hours (average speed 88mph). By comparison, the journey time from Manchester and from Leeds to London are also very similar. However, these cities benefit from higher frequencies (every 20 minutes and 30 minutes respectively) which reflects the higher levels of demand on those routes.

11. Compared to other UK major cities Liverpool has comparably poorer city-to-city connectivity. Liverpool has direct train services to only 7 of the 11 other largest cities in Britain. By contrast, neighbouring Manchester has direct train services to all 12 of Britain’s largest cities and at an average frequency twice that of Liverpool as illustrated in Table 1 below.
Liverpool City Region—Written evidence

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12. There is a significant level of freight traffic using rail to access the Port of Liverpool and industries in the LCR. Key commodities carried by rail include intermodal, coal, automobiles, and metals:

- Intermodal – Seaforth provides linkage to the UK rail network for shipping lines calling at the Port of Liverpool whilst the Merseyside Multi Modal Gateway (3MG) at Widnes also provides substantial traffic flows. Planned developments within the Liverpool City Region indicate an expansion of intermodal traffic at these and other facilities.
- Coal – with traffic operating from the Liverpool Bulk Handling Terminal primarily serving Fiddlers Ferry power station (near Widnes).
- Automobiles – growing levels of traffic generated from two major car production plants, one at Halewood (Jaguar/Land Rover) and one at Ellesmere Port (GM). An automobile terminal at Speke also forms a key point for imported cars to the region.
- Metals - Dee Marsh receives a stable flow of three steel trains per day from South Wales. The Port of Liverpool also deals with metals for recycling and paper in addition to the intermodal traffic.

**HS2 and the potential benefits for the Liverpool City Region**

13. The Strategic Case for HS2 highlights the acute problems created by the capacity constraints of the current network and the forecast growth in demand for both passengers and freight and, most importantly, the consequences for stifling economic growth. ‘Improved connectivity, through reduced journey times, can help deliver additional benefits and more economic growth than comes from extra capacity alone. It can help re-balance the economy by stimulating and strengthening regional economies and help to make Britain more attractive in the global marketplace’

14. HS2 will deliver significant journey time reductions. On completion of Phase One, current plans would see the journey time between Liverpool and London reduced from around 2hr 10min to 1hr 50min. By comparison Manchester would be within 1hr 40min of London and Leeds (served from Kings Cross) within around 2 hours. The plans for Phase Two would see further journey time reductions, but these would be larger

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439 HS2 Strategic Case (HS2 Ltd, October 2013)
440 HS2 Project Specification (HS2 Ltd, October 2013)
for Manchester (1hr 08min from London) and Leeds (1hr 23min from London) than for Liverpool (1hr 35min and 1hr 46min). Whereas Manchester and Leeds would have a continuous dedicated high speed rail line between London and their respective city centres, Liverpool would continue to depend on the existing WCML route north of a connection with HS2 near Crewe. Furthermore, with the benefit of fully dedicated high speed rail infrastructure, Manchester and Leeds would also be able to benefit from the extended maximum train length of 400m permissible on HS2, allowing higher capacity trains to serve these routes. Clearly there is a risk that with a disparity between the service offer between London and Liverpool and that of some other cities such as Manchester and Leeds, Liverpool would be at a comparative disadvantage in the competition to attract inward investors and potential employers to its City Region.

15. However, implementation of the recommendation of Sir David Higgins for the early construction of HS2 Phase Two as far as a new hub at Crewe would help offset this disadvantage. LCR would be able to gain significant early benefits from HS2, whilst retaining competitive journey times relative to Manchester and Leeds. But even with a new HS2 hub at Crewe, the WCML north of Crewe would remain a capacity constraint and a critical impedance to growth in rail freight serving the ports and industries of the LCR.

16. Lord Heseltine and Sir Terry Leahy in their report ‘Rebalancing Britain: Policy or Slogan’\(^\text{441}\) pressed the need for Government to ensure that Liverpool will be firmly on the HS2 map if it is to enjoy the much needed economic benefit - an indirect, slower or later link could badly damage local growth.

17. The Liverpool City Region Growth Plan and Strategic Economic Plan\(^\text{437}\) recognises HS2 as a major economic opportunity but also highlights that the economic impact can be increased significantly if its implementation better reflects the LCR opportunity. The plan recognises that SUPERPORT will require increased rail capacity for its full economic potential to be delivered and this can only be achieved by the LEP working closely with Government to identify what needs to be done and to then co-invest with Government so that opportunities are fully grasped.

18. In preparing for deposit of the Parliamentary Bill for HS2 Phase One, the business case for the project was set out in a suite of documents that included a Strategic Case\(^\text{439}\) and an Economic Case\(^\text{442}\). However, the supporting analysis underpinning the business case included economic forecasts that drew on 2008 data for the LCR. As highlighted above, the economic outlook for the region has shifted positively in response to the recent transformational investments and evidenced by the 2011 census data which showed a somewhat more optimistic picture. In the light of this it was felt only appropriate to revisit the implications of HS2 for LCR as the case may have been considerably understated.

19. To take account of the latest economic forecasts and to help prepare that case, a recent study undertaken by Steer Davies Gleave examined the economic impact of HS2 on the LCR. The study considered a number of options that modelled different scenarios for

\(^{441}\) Rebalancing Britain: Policy or Slogan? LCR Building on its Strengths (RT Hon the Lord Heseltine and Sir Terry Leahy, October 2011)
\(^{442}\) HS2 Economic Case (HS2 Ltd, October 2013)
Liverpool City Region—Written evidence

HS2 service provision. These options included HS2’s current proposed service (for “Policy-On” and “Policy-Off” growth scenarios), an alternative service pattern that would omit calls at Stafford, and an extended high speed route into Liverpool.

20. The study indicates that the direct connection could generate the following benefits for the Liverpool City Region:
   • An uplift in Gross Value Added (GVA) of the order of £550m on a single year basis and £8.3bn on a 60 year NPV basis.
   • An increase in employment of the order of 14,000 jobs (with the potential for a total of 26,000 jobs).
   • A business rates uplift of up to £30m per annum.
   • An uplift in city centre property and land values of up to £180m.
   • A population uplift of up to 20,000 residents requiring 10,000 new homes to be constructed.

21. In addition, should a direct connection facilitate additional capacity for rail freight the economic benefits of 21 additional daily freight services has been valued at up to £40m on a single year basis and £630m on a 60 year NPV basis.

22. The nature of the current HS2 proposition means that while it will release capacity on the southern section of the West Coast Main Line, it will not release rail freight capacity north of Crewe. The Strategic Case for HS2 is in part predicated on the benefits of the capacity released on the West Coast Main Line, including accommodating growing demand for intermodal freight traffic from the southern ports of Felixstowe, Thames Ports and Southampton. The development of SUPERPORT will increase the volume of inter-modal traffic passing through the LCR and if this is to travel by rail – the most economic and environmentally friendly way of moving containers throughout the country – attention needs to be given to the capacity and capability of rail links between the LCR and the capacity that will become available on the West Coast Main line.

*September 2014*
Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce, North East Chamber of Commerce, Hull and Humber Chamber of Commerce—Oral evidence (QQ 133-142)

Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce, North East Chamber of Commerce, Hull and Humber Chamber of Commerce—Oral evidence (QQ 133-142)

Transcript to be found under Hull and Humber Chamber of Commerce, Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce and North East Chamber of Commerce
1. **Introduction**

1.1 This is the London Borough of Camden’s written response submission to the House of Lords Economic Affairs Select Committee Inquiry into the Economic Case for HS2. The London Borough of Camden (the Council) welcomes the inquiry and the opportunity to provide evidence on the economic case and implications of the scheme.

1.2 The Council is not opposed to high speed rail in principle. Camden is a growth ready borough and as the host to the HS1/Channel Tunnel Rail Link (CTRL) terminus at King’s Cross St. Pancras, recognises the benefits that high speed rail can bring.

1.3 However, the Council remains opposed to High Speed Two (HS2) as currently proposed because of the negative impact the scheme will have on Camden’s communities. HS2 will force the demolition of hundreds of homes, cause significant disruption to local businesses and a loss of local jobs, plus severe impacts on important local services, community facilities and open space.

1.4 The following sections provide evidence relating to the economic case for HS2. It outlines the economic disadvantages that Camden will face as a result of the scheme, the measures required to minimise economic and social costs and the essential provisions to ensure that the economic potential of HS2 is realised at both a local and national level. The Council also endorses the submission to the House of Lords inquiry on behalf of the 51M group, of which Camden is a member.

2. **Economic dis-benefits in Camden**

2.1 Much attention has been given to the economic benefits to London but Camden as a borough faces a serious economic disadvantage as a result of HS2. Benefits must be weighed against costs and so far the true magnitude of HS2’s economic and social costs in Camden has not been recognised.

2.2 Across the Borough, HS2 will result in the demolition of 215 homes in the Euston area including 136 units of social housing with a further 250 homes put at risk; hundreds of businesses will be adversely affected by construction; over 20,000m² of open space will be lost including a nature reserve and historic burial ground plus serious impacts on schools, community facilities and heritage assets. The duration of major construction work is expected to span a generation in Camden, causing unprecedented disruption to local communities and the economy.

2.3 Euston’s business community will be subjected to the worst levels of construction related disruption along the entire HS2 route. Over 500 businesses are located in the areas of Camden affected by construction, with 56 businesses forced to

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443 Camden Council estimate based on local records and HS2 Environmental Statement 2013.
move or relocate due to demolition of their premises\textsuperscript{444}. The severe disruption resulting from HS2 poses a serious threat to Euston’s annual contribution of £3.37 billion in Gross Value Added (GVA) to the UK economy\textsuperscript{445} and puts 3140 jobs at risk in the borough\textsuperscript{446}.

2.4 The works endanger Euston’s world-leading university, knowledge and scientific sectors, which includes the Bloomsbury university quarter, professional services firms, membership organisations and creative and cultural industries. Euston also has a thriving visitor economy, being located in close proximity to London’s West End and cultural core. HS2 threatens the visitor economy, estimated to account for £342 million of visitor spend and almost 3 million visitors per year\textsuperscript{447}.

2.5 HS2 will have adverse implications for the local independent business community. The renowned restaurant and food shop cluster at Drummond Street has a long established cultural connection with the local Bengali community. It is a local asset, acclaimed by its customers from across London and further afield. Located adjacent to Euston Station, this highly valued street will be partially demolished. Remaining businesses will suffer the major construction works associated with the station on their doorstep for 10 years or more, including blocked access, noise, dust and construction traffic. Despite being located a matter of meters from the main construction site, these businesses are excluded from compensation and have been offered no mitigation. As a result, this group of independent traders, many of whom live and work locally could see their family businesses destroyed by HS2.

2.6 The blight and disruption caused by HS2 will deter and delay investment for an extended period of time. If the blight is not addressed, it will lead to the break-up of communities, significant reputational damage and could jeopardise the future growth potential of the area and the HS2 scheme as a whole.

2.7 The socio-economic costs of HS2 in Camden have been severely under-represented by HS2 Ltd\textsuperscript{448}. Alongside the under-estimation of costs, there are many impacts on the community that cannot easily be quantified, such as the human costs as businesses and jobs are lost.

3. **Blight must be addressed if growth is to be enabled**

3.1 If HS2 does proceed despite the opposition of Camden and the disbenefits outlined, it will be necessary to address the severe blight that the project will cause. HS2 Ltd must therefore commit to a comprehensive blight mitigation strategy to minimise the adverse impacts of the scheme and enable growth.

\textsuperscript{444} Camden Council estimate based on HS2 Environmental Statement 2013.

\textsuperscript{445} Costs to Camden Study: LSH July 2013.

\textsuperscript{446} HS2 Environmental Statement 2013- Euston and Primrose Hill to Kilburn CFA’s- Jobs at risk of loss or displacement.


\textsuperscript{448} Camden Council Response to HS2 Environmental Statement for Phase 1, February 2014.
3.2 Effective mitigation would enable the economy in this important part of central London to continue to function so far as possible, retaining jobs, maintaining economic output and attracting investment throughout the extensive construction period. By putting measures in place to minimise the adverse economic costs at source, the overall economic prospects of the scheme will be enhanced and most importantly the impact on communities reduced.

3.3 The mitigation provisions set out in the HS2 Environmental Statement do not go far enough in addressing the significant effects of the scheme. The Council has worked with the local business community and considered industry best practice to identify mitigation measures. These include specialist business support, marketing and promotional activities to maintain a ‘business as usual’ environment, temporary start-up and creative uses for vacant property and a compensation package designed to enable business occupiers to survive the construction period. The local business community have also put forward their own mitigation requests to HS2 Ltd.

3.4 A comprehensive mitigation strategy will reduce the effects on businesses. However, residual impacts in some cases will be unavoidable. In such circumstances, compensation to support business and enable them to continue to operate must be provided. The Council and the local business community have made numerous representations identifying the inadequacy of the current proposals for business compensation. The Council call for the revision of compensation proposals to provide additional discretionary measures for businesses in Camden.

3.4 Whilst discussions are on-going, HS2 Ltd has failed as yet to formally commit to mitigation measures to reduce the socio-economic impacts of the scheme or provide satisfactory compensation. To build trust in the local business community and confidence in the local economy, HS2 Ltd. must commit to the provision of mitigation now.

4. Maximise regeneration potential at Euston

4.1 Maximising the potential for economic growth across the UK is central to the case for HS2. Euston as the proposed London terminus is vital to the scheme’s national growth prospects and success. Current hybrid bill proposals for Euston Station fail to unlock the full regeneration and growth potential of this prime central London location. The fact that Camden’s communities rank amongst the 10% most deprived in the country is often overlooked in the national debate on HS2. The local need for regeneration is therefore as real in Camden as anywhere else along the HS2 route. David Higgins’ report ‘HS2 Plus’ outlines the need to raise ambition for Euston and it is essential that this is achieved through working with the community and local partners to get the right scheme for

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449 Camden Council Mitigation Asks, February 2014.
450 Office of National Statistics. 2011 Census profile
The London Borough of Camden—Written evidence

Euston. In particular, providing additional housing that is genuinely affordable to local people must form a significant part of any development proposal.

4.2 The Euston Area Plan (EAP), the draft local plan for the area developed in partnership with Camden Council, the GLA and TfL, sets out the vision for Euston up to 2031. It envisages a Euston area that will be rejuvenated as both a local hub of activity and a gateway to London, through new high quality comprehensive and transformational development above and around a world class transport interchange at Euston Station.

4.3 The EAP outlines three main options for station design. The first and original HS2 option was for a sub-surface comprehensive station redevelopment, with platforms and tracks sunken to allow for ground level development above the station or ‘level deck scheme’. The second and current HS2 Hybrid Bill Scheme is a new high speed terminus alongside existing station. The third is for redevelopment on the existing station footprint, which would include proposals such as the community-led double deck down (DDD) scheme.

4.4 The Hybrid Bill scheme, also known as ‘Option 8’ significantly limits the potential for regeneration at Euston, whilst resulting in the same levels of demolition and offering few of the benefits. The EAP outlines that a level deck approach to station design would increase the number of new homes the scheme could deliver from 2,800 to 3,800, increase employment floor space from 180,000m² to 280,000m² and nearly double the number of jobs from 7,700 to 14,100. A level deck option would outperform Option 8 against all the EAP regeneration objectives.

4.5 Euston is already part of a world renowned multi-sector knowledge, scientific and research cluster with institutions such as University College London (UCL), the Wellcome Trust and the future Francis Crick Institute. Euston has significant growth potential in this field, which is a major growth sector and a key driver of global competitiveness. Creating a high quality environment through comprehensive regeneration will be crucial in attracting further growth in this sector.

4.6 Whilst no proposals have as yet been made public the Council is aware that HS2 Ltd is revisiting proposals for comprehensive redevelopment at Euston, including a level deck. It is essential that HS2 Ltd. set up a programme of local community engagement in the development of emerging proposals and the Council stresses the need for thorough public consultation. The Council also highlights the requirement for proposals to align with local objectives and the Euston Area Plan, as endorsed by the Council, GLA and TfL and for local accountability and autonomy in decision making.

4.7 Notwithstanding the long term economic potential of a level deck scheme, it is likely to result in a longer construction period and this is an issue of community concern. This is likely to accentuate the economic and social dis-benefits of the scheme, causing further disruption to local businesses, costs to the economy and

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disturbance to the local community for an even longer period of time. The costs and benefits must be carefully considered and measures to minimise construction duration and impact, and those of any associated over-site development, will be essential to ensure the impact on surrounding communities is mitigated as far as possible.

4.8 HS2 Ltd should also properly consider alternatives that minimise community impact and avoid the loss of homes, businesses and community facilities. This should include options that retain the existing station footprint, which would not produce the same level of regeneration opportunities as a level deck scheme, but would significantly reduce the severe disruption to neighbouring communities. Assessment of such alternative options has been totally inadequate and the DfT and HS2 Ltd should reconsider their unwillingness to undertake further analysis.

4.9 If a level deck scheme was to be pursued, viability is recognised as a constraint. Independent research undertaken by consultants demonstrates that the scheme is sufficiently close to viability to pursue a transformational scheme and investigate ways to address any funding gap. It is important to stress that a transformational scheme at Euston would deliver a variety of regeneration benefits that cannot directly be quantified. These include integration with the wider built environment, the re-connection of communities, dramatically enhanced public realm, greater prospects for securing high quality investors and businesses, and delivery of a world class station fit to act as a UK gateway for commerce and trade. These benefits go beyond the limitations of the standard economic appraisal approach yet hold significant substantive weight and must form part of considerations at Euston.

4.10 It is essential that HS2 delivers regeneration and growth locally as well as nationally. To maximise local economic opportunities and secure benefits from the scheme for the worst affected communities, HS2 must put measures in place that deliver local employment, training, and other opportunities for local people including opportunities for local businesses.

5. **Build on the success of King’s Cross St. Pancras**

5.1 At award winning King’s Cross Central located in Camden and adjacent to Euston, a brand new central London destination is being created that will eventually provide 1,900 homes and 29,000 jobs. The success at King’s Cross, catalysed by HS1 and realised through extensive local partnership working under LB Camden as the planning authority, is already apparent and the development is cited by the HS2 Growth Taskforce as an exemplar of station led regeneration. HS2 should aspire to and build upon the success of King’s Cross, learn lessons from it and utilise the existing local expertise and experience in the delivery of such projects.

5.2 HS2 is an extremely costly national investment. If the project is to proceed contrary to Camden’s objections then it must deliver value for money against a

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sound economic case. The scheme must be transformed from the unsatisfactory position it is in today to be a truly outstanding project. The genuine nature of economic costs and benefits must be understood. It must challenge boundaries and deliver an infrastructure project fit for the 21st Century and beyond. It should lead the way in protecting communities, businesses and economies along its route through innovative mitigation and scheme management and deliver growth at a local and national level that unlocks regeneration and creates real positive differences to Camden’s community and others along the route.

September 2014
London Borough of Hillingdon—Written evidence

1. Summary

1.1. The London Borough of Hillingdon is deeply concerned about the impacts HS2 will have on its borough and residents. The scheme is being promoted as having significant 'national benefit' which is seemingly being used to justify considerable harm local on the route.

1.2. The Council does not believe the case has been made appropriately enough to warrant the scale of impacts or the expenditure of £50bn and that it is in the 'national interest'. The following sets out the Council’s concerns specific to the economic case. The Council is not presenting third party data to refute HS2 Ltd’s assertions; instead it is asking for closer scrutiny of the information contained within parts of the Environmental Statement (ES) which has a direct bearing on the business case.

1.3. The evidence stems from information provided as part of the transport assessment for the ES. This information does not appear to have been reproduced in any other report but was included within the ES to assess impacts on passenger dispersal around stations. If an individual wanted to scrutinise the business case, then appendix 5, part 4 of the ES is not the likeliest place they would consider. However, it would appear this is the first time that complex modelling data has been translated into simple data on the expected number of HS2 passengers. The Council wishes to draw the committee’s attention to this data because its own scrutiny reveals:

- At no point would the 'expected' service pattern of 400m trains at 11 per hour (18 in Phase 2), with 1100 available seats on each be remotely close to feasible or sensible.

- Only 16,150 people will be travelling into London in the AM peak period on opening of Phase 1 and 11,860 will be travelling out of London. The expected service pattern provides for 72,600 seats at the AM Peak period of which only 28,010 will be used.

- The evidence shows that the extended 400m trains would rarely be required across the three hour peak period (AM or PM). Only the peak AM hour of 0800-0900 into London would see a consistent need for extended trains but still not to the extent where they are needed across the whole peak hour.

- Outside of the peak hour into London, even running 200m trains, i.e. half the service expected by HS2 Ltd, would still result in excessive capacity.

- Across the whole of Phase 1, all trains heading out of London would have spare capacity, with as much as 75% on the 'expected' service pattern.
Far more people will be travelling into London than out. This raises significant questions over whether HS2 will ‘rebalance’ the economy.

2. Introduction

2.1. The Council does not believe the case for HS2 has ever been clearly made. The Council notes that the objectives of the scheme have changed from high speed, to capacity, to solving the north-south ivied, but whilst the rhetoric has been kept under review, the project has not.

2.2. In Hillingdon the scheme will have a significant adverse impact with no tangible benefits. A map is attached at appendix 1 showing the construction boundary for the scheme. This includes the areas for dumping spoil, creating a new railhead, several construction sites, and feeder stations, alongside the areas identified for habitat creation such as planting woodland in open countryside. It does not show the impacts from noise, the impacts on landscape, the loss of rights of way, the congestion from construction vehicles or the general perception that parts of the Borough will be a ‘nightmare to live with’ as one resident summed it up.

2.3. The Council is therefore keen to ensure that the merits of the scheme are not misplaced, overstated or simply made up. Importantly, the details of the scheme must stand up to close scrutiny once all the theories and assumptions have been stripped away. To that end, the Council see there are two questions that go to the heart of the scheme, 1) can HS2 carry a sufficient amount of people, and 2) will HS2 carry a sufficient amount of people?

2.4. The Council believes that the evidence to answer these questions already exists but has not been properly considered by the promoters. The information within the ES was not intended to be used for economic assessments; however it did need to provide specific usage data to allow an assessment of passenger dispersal around stations. The Council would therefore like to draw the Committee’s attention to this information in the context of the business case.

3. HS2 Passenger Numbers

3.1. The business case so far has been presented using convoluted forecasting scenarios and modelling but this has never been translated to what it will actually mean for HS2, i.e. how many passengers will be sat on HS2 trains and at what time. The following question was asked of HS2 Ltd in May of this year through a freedom of information request (FOI14-1054). The response is also provided:

[Question] 5 – Can you provide the passenger data on how many people will travel to and from London and specifically Manchester in the peak hours on opening of Phase 1, and separately on opening of Phase 2?

[Response] In relation to question 5, we do not hold this information. The model used in the appraisal of the scheme only produces daily forecasts of passenger demand. (FOI14-1054)
3.2. It is interesting that the response stated ‘we do not hold this information’ when it is contained to some extent in the ES. The ES needed to consider detailed passenger numbers in order to determine the environmental impacts around stations from passenger dispersal. It therefore takes the passenger demand forecasts and provides an analysis as to what this means in terms of passengers using HS2. The ES therefore provides the raw data on just how many people are expected to use HS2. This information does not appear to be held in any other document.

3.3. The relevant information is contained in Figures 6.117 and 6.136 as well as tables 6.114 and 6.115 of the Volume 5 Technical Appendix, Traffic and Transport, Part 4: London Assessment. The two relevant figures showing Phase 1 and 2 usage are included as appendix 2a and 2b.

3.4. Before considering this data on passenger demand though, it is necessary to set out the capacity of HS2 i.e. how many people can HS2 carry? This information is provided within the main Volume 1 of the ES and forms a significant part of the promotional material. A £50bn railway scheme needs to be more than few trains an hour and the ‘expected’ service pattern set out in the ES is of a magnitude that reflects the importance of the scheme:

*Trains are expected to be 400m long during peak hours and a mix of 200m and 400m long trains at other times. Up to 550 passengers will be accommodated on each 200m long high speed train (i.e. up to 1,100 passengers for each two-unit train).* (Para 4.3.4, Volume 1) [emphasis added]

3.5. These 400m trains (roughly twice the capacity of existing Virgin Train services to Birmingham) will operate with extreme frequency. The ES states:

*The currently assumed initial service pattern (year of opening) is for 11 trains per hour (tph) in each direction during peak hours.* (Para 4.3.6, Volume 1)

3.6. The ES focuses on the passenger numbers across the AM and PM peak periods. Throughout the 3 hour AM peak period there will be 33 trains with 1100 seats available on each train. This gives a capacity of a 36,300 available seats leaving London for the West Midlands and beyond. At 22 trains per hour (11 in each direction) across the whole network, HS2 will have a total of 72,600 seats available throughout the 3 hour AM peak period. This must be considered a considerable supply and one expected of HS2.

3.7. Supply is one thing, the key is whether there will be demand for all these seats. The actual ‘expected’ usage of HS2 is set out in figure 6.117 of Volume 5: Traffic and Transport Part 4 and is reflected in the diagram below alongside the available capacity.
**HS2 Demand in relation to 'expected 'Capacity (36,300 maximum seats in one direction) - AM Peak Period 0700 - 1000**


3.8. The diagram above shows a worrying relationship between the demand used in the ES assessments and the bold aspirations for running a high frequency, high capacity service. Of the 72,600 seats available across the whole of the Peak AM period, only 28,101 are likely to be used. Over 60% of the trains would be empty in this scenario. This shows the dichotomy facing the Government of presenting a hugely aspirational service to match the rhetoric (set out in Volume 1 and in marketing material) and the reality of the demand for HS2 (set out in appendix 5, Part 4 of the ES).

3.9. The difference between demand and capacity was so stark that officers sought clarification from HS2 Ltd. This was given by Peter Fry of HS2 Ltd via e-mail in January 2014:

*The 10,450 figure is passengers alighting (arriving) at Euston. Some passengers will get off at Old Oak Common and some will get off at Euston but both need to be accommodated on the HS2 trains. Table 6.114 shows 10,450 passengers arriving at Euston (from locations north of Old Oak Common – so a combined three hour load of 16,150.*
The service will be most heavily loaded in the peak hour and one might expect this to comprise of the order of half of the peak three hour, hence roughly 8,000 HS2 passengers in the peak hour.

As regards capacity, only trains arriving in London from Birmingham Curzon Street will be full HS2 trains for Phase 1. Of the 11 trains envisaged in Figure 11 of Volume 1 of the ES, three serve Birmingham Curzon Street. All others will, necessarily, be classic compatible. The extent to which trains will be 400m or 200m will clearly be determined closer to the date of opening, but as noted in your query, the maximum if all trains were 400m would be 12,100 in the peak hour (£6,300 in the three hours) and this would be some 9,900 if one assumed that half of the classic compatible trains were 200m. [E-mail dated 7 January 2014 – emphasis added]

3.10. The e-mail suggests that the aspirational service levels are unlikely to materialise, certainly in terms of the expected capacity available in Phase 1. It also highlights that within the three hour peak period there would be a secondary peak level. Of the 16,150 passengers coming to London between 0700 and 1000, approximately 50% would actually arrive between 0800 and 0900. The table below provides a breakdown of this data in the context of what is expected in the ES and using the details in the e-mail.

<table>
<thead>
<tr>
<th>Phase 1 on opening 11 Trains per hour</th>
<th>Period</th>
<th>Demand 2026 Phase 1</th>
<th>Capacity 200m trains</th>
<th>Empt y seats</th>
<th>% empty</th>
<th>Capacity 400m trains**</th>
<th>Empty seats</th>
<th>% empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arriving in London</td>
<td>0700-0800</td>
<td>4075</td>
<td>6050</td>
<td>1975</td>
<td>33</td>
<td>12100</td>
<td>8025</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>0800-0900*</td>
<td>8000</td>
<td>6050</td>
<td>-</td>
<td>1950</td>
<td>12100</td>
<td>4100</td>
<td>34</td>
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<tr>
<td></td>
<td>0900-1000</td>
<td>4075</td>
<td>6050</td>
<td>1975</td>
<td>33</td>
<td>12100</td>
<td>8025</td>
<td>66</td>
</tr>
<tr>
<td>Peak Period</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>16150</td>
<td>18150</td>
<td>2000</td>
<td>10</td>
<td></td>
<td>36300</td>
<td>20150</td>
<td>56</td>
</tr>
<tr>
<td>Leaving London</td>
<td>0700-0800</td>
<td>2965</td>
<td>6050</td>
<td>3085</td>
<td>50</td>
<td>12100</td>
<td>9135</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>0800-0900</td>
<td>5930</td>
<td>6050</td>
<td>120</td>
<td>2</td>
<td>12100</td>
<td>6170</td>
<td>51</td>
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<tr>
<td></td>
<td>0900-1000</td>
<td>2965</td>
<td>6050</td>
<td>3085</td>
<td>50</td>
<td>12100</td>
<td>9135</td>
<td>75</td>
</tr>
<tr>
<td>Peak Period</td>
<td>11860</td>
<td>18150</td>
<td>6290</td>
<td>35</td>
<td></td>
<td>36300</td>
<td>24440</td>
<td>67</td>
</tr>
</tbody>
</table>

* Ratio for the peak hour is based on Peter Fry e-mail that suggests approximately half of all the peak period traffic will come in this one hour

** This is the scenario ‘expected’ by HS2 Ltd as described in para 3.4 above

Data highlighted green shows spare capacity of less than 20% representing a better capacity to demand ratio
3.11. The capacity to demand ration is deeply concerning whichever scenario is considered. But importantly, the expected service that has been widely promoted by HS2 Ltd shows that 60% of the capacity will be unused.

3.12. The situation is marginally improved if a more rational service level described in Peter Fry’s email is used. It is still far from what would be expected on a £50bn transport scheme though. This scenario assumes that only the smaller unit trains (200m) are used. In this scenario the peak hour i.e. 0800-0900 would see an appropriate capacity to demand ratio, indeed, the service to London at this time would require a number of 400m units to make up the shortfall. However, even in this scenario, the hours either side of the peak hour would see trains running at over 30% empty into London and 50% empty out of London.

3.13. This data reveals that capacity to demand ration at peak time is out of balance. This can only heighten concerns over the likelihood of significantly empty off peak trains. No information on the demand to capacity ration, or service levels are provided in the ES for the off peak periods.

4. **Phase 2**

4.1. The situation for Phase 2 is equally muddled. No information is provided in the ES on the demand related to Phase 2 on opening instead it provides data for 15 years after Phase 1 has been up and running i.e. approximately 9 years into the operation of Phase 1 and 2 combined. The table below considers the available data.
4.2. The demand to capacity ration has improved slightly, with less than 20% empty trains. However, this does not relate to the expected service levels HS2 Ltd has based the project on. It relates instead to the use of only 200m trains.

4.3. There is still a huge amount of spare capacity when the ‘expected’ service patterns are considered. Only the peak hour of the peak period (0800-0900) into London would see a sensible amount of empty seats. At all other times, HS2 would still have half empty trains on them.

**Conclusion on Demand to Capacity Ratio**

4.4. HS2 Ltd’s expected service pattern would not return a sensible performance for the high speed line. The available data on capacity and demand shows:

<table>
<thead>
<tr>
<th>Phase 2 - 9 Years after Opening 18 Trains per hour</th>
<th>Period</th>
<th>Demand 2041 Phase 2</th>
<th>Capacity 200m trains</th>
<th>Empt y seats</th>
<th>% empt y</th>
<th>Capacity 400m trains**</th>
<th>Empty seats</th>
<th>% empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arriving in London</td>
<td>0700-0800</td>
<td>8538</td>
<td>9900</td>
<td>1362</td>
<td>14</td>
<td>19800</td>
<td>11262</td>
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<tr>
<td></td>
<td>0800-0900*</td>
<td>17075</td>
<td>9900</td>
<td>-</td>
<td>7175</td>
<td>19800</td>
<td>2725</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>0900-1000</td>
<td>8537</td>
<td>9900</td>
<td>1363</td>
<td>14</td>
<td>19800</td>
<td>11263</td>
<td>57</td>
</tr>
<tr>
<td>Peak Period</td>
<td></td>
<td>34150</td>
<td>29700</td>
<td>-4450</td>
<td>0</td>
<td>59400</td>
<td>25250</td>
<td>43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 2 - 9 Years after Opening 18 Trains per hour</th>
<th>Period</th>
<th>Demand 2041 Phase 2</th>
<th>Capacity 200m trains</th>
<th>Empt y seats</th>
<th>% empt y</th>
<th>Capacity 400m trains**</th>
<th>Empty seats</th>
<th>% empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaving London</td>
<td>0700-0800</td>
<td>6558</td>
<td>9900</td>
<td>3342</td>
<td>34</td>
<td>19800</td>
<td>13242</td>
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<tr>
<td></td>
<td>0800-0900*</td>
<td>13115</td>
<td>9900</td>
<td>-3215</td>
<td>0</td>
<td>19800</td>
<td>6685</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>0900-1000</td>
<td>6557</td>
<td>9900</td>
<td>3343</td>
<td>34</td>
<td>19800</td>
<td>13243</td>
<td>67</td>
</tr>
<tr>
<td>Peak Period</td>
<td></td>
<td>26230</td>
<td>29700</td>
<td>3480</td>
<td>12</td>
<td>59400</td>
<td>33180</td>
<td>56</td>
</tr>
</tbody>
</table>

* Ratio for the peak hour is based on Peter Fry e-mail that suggests approximately half of all the peak period traffic will come in this one hour.

** This is the scenario ‘expected’ by HS2 Ltd as described in para 3.4 above.

Data highlighted green shows spare capacity of less than 20% representing a better capacity to demand ratio.
London Borough of Hillingdon—Written evidence

- At no point would the expected service pattern of 400m trains with 1100 available seats ever be close to full, feasible or sensible.

- Only the peak hour into London would see a consistent need for extended trains but still not to the extent where they are needed across the whole peak hour.

- Outside of the peak hour into London, even running half the service expected by HS2 Ltd would result in excessive capacity.

- Across the whole of Phase 1, all trains heading out of London would have spare capacity, with as much 75% on the ‘expected’ service pattern.

4.5. In general, there is a distinct conflict between the capacity available from running the trains at 11 per hour in Phase 1 (18 in Phase 2) and the demand set out in the ES. This is a significant failing of the scheme that is likely to go to the heart of the entire business case.

5. North-South Divide

5.1. HS2 has recently been ‘pitched’ as being necessary to bridge the north-south divide. However, the data above shows that once again the details of HS2 do not necessarily support the theories.

5.2. 28,010 will use HS2 in the peak period of Phase 1 according to the ES. Of these, 58% are travelling into London. It is difficult to see how a scheme that attracts more people into London during the working day would help rebalance the economy.

6. Conclusion

6.1. HS2 will have a profound impact on the London Borough of Hillingdon. The impacts will be entirely negative. HS2 Ltd cannot point to one benefit for the Borough, but instead resents a situation where the national benefits are of up most importance.

6.2. With such adverse impacts in the Borough, the Council is keen to understand whether the national benefits are justified and that the case is as watertight as it should be for a £50bn transport scheme.

6.3. Unfortunately, the evidence above shows a fundamental problem with the scheme as presented. Once all the rhetoric and theories are stripped away, the bottom line is 1) ‘how many passengers can HS2 transport, and 2) how many will actually use it?’ At this stage in the project the answers should be clear, unambiguous and devoid of conflict.

6.4. To complete the ES HS2 Ltd has had to extrapolate specific passenger numbers from the complex forecasting models. Nonetheless, the purpose of the ES is not to assess the business case, so there was no need to make an appraisal of this detailed data. The data was being used for a different purpose. However, this data should be a basis for any further assessment of the economic impacts as it allows the two
pertinent questions to be answered. The Council has found the evidence shows that 1) HS2 can carry a lot of passengers, but 2) it is not expected to.

6.5. The Council is respectfully asks for the Committee to give the details used in the ES closer scrutiny and to get to heart of whether there is a clear national benefit argument, devoid of conflicts, and which justifies the considerable harm that will be experienced along the route.

September 2014
Appendix 1 - Construction impacts in Hillingdon
Appendix 2a - extract from Environmental Statement: Figure 6.117 of Volume 5: Technical Appendices, Part 4: Traffic and Transport Data showing passenger movement on HS2 in 2026 (Phase 1 on opening). 11 Trains Per hour in each direction, 22 on the network in one hour.
Appendix 2b - extract from Environmental Statement: Figure 6.136 of Volume 5: Technical Appendices, Part 4: Traffic and Transport. Data showing passenger movement on HS2 in 2041 (Phase 1 and 2). 18 Trains Per hour in each direction, 36 on the network in one hour.
Executive Summary

The London Borough of Newham (LBN) welcomes the opportunity to submit evidence on the economic case for the development of High Speed 2 (HS2).

The council fully supported the Government’s plans for a second High Speed network on the condition that the proposals included a fit for purpose, physical track link between HS2 and the existing HS1 network (Channel Tunnel) in the first phase. Linking the country’s only two high speed networks together will strategically serve dual domestic and international rail travel, linking key economic hubs in the UK and across the continent.

The initial proposal for a HS2-HS1 link, limited the potential to maximise the growth and regeneration benefits that high speed rail could bring to the UK due to its insufficient capacity. The removal of the link and safeguarding entirely from HS2, following Sir David Higgins’ review, undermines the business case for the network and limits the potential role for Stratford International station and therefore the potential for economic growth in the area.

LBN believes it is imperative that the Government looks at other physical alternative options for the HS2-HS1 link. These should include a dual track segregated link or a segregated tunnelled link with a connection to the West Coast Mainline. Such consideration is critical given existing and forecast demand projections and the longer term needs of the UK including domestic trips outside central London and the emerging aviation strategy. The Bill represents the optimum opportunity to enable an HS1/HS2 Rail Link via passive provision.

This submission outlines the economic case for a robust physical rail link to facilitate the next phase of the UK’s high speed network. It is of great concern that an opportunity to connect all regions serving the two networks and provide access to key European destinations for trade, commerce, leisure and tourism could be missed. LBN believes that a valuable opportunity to spread investment across the UK, an inherent objective of the network, and strengthen the business and economic case for the entire network through resultant economic growth is being overlooked.

Introduction to the London Borough of Newham

Situated in London’s historic East End, Newham is home to some 317,000 people and was the host borough for the 2012 Olympics and Paralympic games. Newham is also home to Stratford International station which is situated closer to the City of London and Canary Wharf than King’s Cross St. Pancras. The Stratford station hub is now used by more than 100 million passengers a year.

The economic case for a HS2-HS1 Link
1. The link originally proposed for HS1-HS2 was a shared single track link with freight and commuter lines between the existing Channel Tunnel Rail Link – allowing for a maximum of 1 train an hour at conventional speeds. This was inadequate to address the forecast travel demand and would have pitted the use of a small number of train paths for international services against further development of a wide range of domestic services and any growth in international traffic.

2. Following Sir David Higgins’ recent review, the Government confirmed it would take steps to remove proposals for a link and safeguarding from the High Speed 2, Phase 1 Bill due to its impact on freight, passengers and the surrounding locality. The complete removal of the link prevents direct rail access between the Midlands and Northern cities and east London and the wider catchment area including Kent and Essex, greatly limiting economic opportunities.

3. The failure to include even passive provision for an HS1/HS2 Rail Link within the Bill renders such a direct rail link connection highly unlikely (or even impossible), in the short and longer term, despite overwhelming evidence that there is demand to justify such a link. This omission reads as an indication that an HS1/HS2 Rail Link will never be delivered, stunting the future of Stratford International station as a key part of the UK’s high speed network and undermining the economic growth of the Borough and indeed all of east London.

4. The Government and HS2 have not strategically considered how a link could be utilised to facilitate additional international and domestic services; potentially missing an opportunity to alleviate pressure on the terminus and fundamentally disregarding the economic opportunities of wider UK connectivity and growth beyond the London Central Activity Zone. This is despite the fact that the Environmental Statement submitted with the Bill recognised that the business case for a link is strong.

5. A link with enhanced capacity such as a dedicated twin track link (a feasibility study of which was prematurely stopped) would enable a new array of inter-regional, intra-regional and international rail services from the Midlands, North West and Yorkshire to seamlessly link with east London, Kent and Essex. Javelin trains currently serving HS1 stations are capable of 300kph so can operate on the HS2 network and HS1 Ltd have indicated that capacity on the line is available to facilitate a mix of domestic and international traffic. The report “Travel market demand and the HS1 – HS2 link” by Greengauge 21 (Appendix A), found there is a substantial market for domestic high speed services over a link. It comprises travel demand between the city regions in the Midlands and the North served by HS2 and the strong growth area of east London, served by Stratford International, as well as South East London, Kent and Essex. As an indication of scale this amounts to as much as 45% of the equivalent market from the HS2 catchment to and from central London. Demand is forecast to be highest where east London and Docklands are served (from Stratford), on inter-urban, long distance services to the West Midlands and the North West, but also on regional services to north west London, Milton Keynes and Heathrow. It can also be argued that this work
London Borough of Newham—Written evidence

undervalued the growth expected in east London, so demand could be more significant. Transfers from other travel modes would also bring wider benefits not just to the link but the wider network, strengthening the overall business case for HS2. The MVA evidence suggests that there is potential demand for a seven train per hour service (in each direction).

6. It is important to note that the demand for London orbital rail travel. With more journey options, business and leisure visitors to London are increasingly making more sophisticated journey and interchange choices to avoid congested central London (Zone 1) stations. Demand for London Overground services has tripled since 2007 and is forecast to grow by a further 70% by 2021. The potential for an enhanced link between Stratford and west of London (Old Oak Common) could provide additional capacity and alleviate congestion in the Central Activity Zone and cannot be ignored. A link with robust capacity would enable Stratford International to play a supportive role in serving additional growth and dispersing the large amount of HS2 passengers, relieving some of the pressure placed on the terminus station, Euston. Given that more than 70% of all journeys using HS2 are forecast to start or end in London, constraining the use of London-wide stations to disperse passengers is short sighted.

7. Were there to be a new hub airport to the east of London or capacity maximised at airports such as Stansted, Southend, London City and Manston, the role of High Speed rail and a viable link would be even more vital in the movement of passengers to deal with increased demand. London City airport has plans to increase passenger numbers from three million to eight million per year by 2030; Manston aims to reach five million by 2033; while Southend’s newly opened terminal and rail station has potential to serve 2 million passengers per year. Stansted Airport has published ambitious plans for expansion to become “the best connected air-rail hub in the UK” and is only currently using 43% of its total capacity. With the spare capacity available and planned infrastructure improvements at south east airports, there is a strong case for a HS2-HS1 link to offer a viable and frequent connection to Stratford to country-wide passengers.

8. Departmental analysis of demand for HS2-HS1 travel, only considered the demand for international services from Birmingham that were likely to operate on a single track link. The estimated figure for international rail travel from Birmingham – 4,850 a day – was based on travel to Paris and Brussels. However Deutsche Bahn has expressed an interest in running services to Amsterdam with a Rotterdam stop and Frankfurt with a Cologne stop in the near future on the High Speed 1 line. Analysis should have taken into account additional passengers from other high speed equipped stations on HS1 including Stratford International. This work, including the September 2010 Atkins report did not look into the impact of further high speed trains from the North West and Yorkshire (2nd phase of the network). More importantly, it failed to consider the potential for high speed domestic services in both directions, linking the Thames gateway corridor of east London, Kent and Essex with the Midlands and the North. As such, no forecast of the resulting growth from these additional services has been identified to date.
9. The limited analysis that we are aware HS2 Ltd have undertaken to explore the potential for domestic demand using a HS2-HS1 link underplayed the level of demand. The HS2 station choice models inexplicably excluded Stratford and therefore presented an underestimation of boarders and alighters at the station. The modelling did not take into account the emerging growth in east London using 2007 trends. The work assumed the proposed infrastructure solution and service proposition of the earlier link proposal, therefore limiting service frequencies to a maximum of two trains per hour, to determine demand. There also was no analysis of mode shift to high speed rail, particularly from highway.

10. Despite HS1 and HS2 being designed, built and operated as dual-purpose passenger railways (international and domestic) the Government is continuing to consider a link between the networks for limited international travel only. This is fails to consider the tangible manifestation of the second phase in the development of the UKs high speed rail network and the resultant growth from additional domestic services. This is a clear omission in the evidence base for the link and misses an opportunity to contribute to the business case for the whole network. As with any project of this scale designed to encourage growth rather than simply to improve capacity and journey times, the Government will want to continue to update all aspects of the business case and ensure investment decisions are informed by the latest evidence, data and understanding of the project.

11. The additional services facilitated by a link between networks would be a strategic addition to the domestic rail network, given that conservative estimates are projecting increased demand of 35% on the national rail network by 2031. Long distance rail travel has grown faster than other modes of transport and particularly rapidly and consistently since 2004, with the West Coast Main Line having reached planned capacity even following a major upgrade programme.

12. The strategic case for HS2 reflects “the need for additional transport capacity to facilitate economic growth” (The Strategic Case for HS2 1.1.3, October 2013) but the failure to build a HS2-HS1 physical link will not maximise the growth and regeneration benefits that high speed rail could bring to the UK. It also significantly reduces the potential for east London to grow through connections with the regions (which would in turn have a negative impact on those regions) and may significantly undermine the recent investment into east London. Uplift in connectivity could unlock significant benefits for the Newham economy and act as a catalyst to sustainable and balanced growth. Without a link to HS1, this benefit of the HS2 network will be lost.

13. The Government and HS2 have not strategically addressed the issue of how the link can be fully utilised to enable additional domestic capacity between economic markets even though the case for HS2 rests on an expected step change in capacity and connectivity. There is plenty of evidence from global examples that infrastructure investment can lead to increased economic activity. As such it is posited that the substantive return on investment in transport will be derived from increased activity and the inter-connectivity of local economies rather than by the direct operation of services.
14. In fact, the Government’s White Paper on the first phase of the high speed network states in paragraph 4.44 “The HS2 – HS1 link also offers other potential connectivity benefits. The HS1 line serves a number of important growth areas and economic centres in east London and Kent ... In the future as service specifications for HS2 are being developed, the Government will be keen to explore options for HS2 trains to serve these and other stations on HS1. Clearly this type of service will greatly, enhance the connectivity of these places to the Midlands and the North, opening up new economic possibilities.”

15. The economic case underpinning the HS2 network is its opportunity to coordinate business-to-business activity across city and regional boundaries (The Economic Case for HS2 8.1.9, October 2013). Improving connectivity between the major centres of economic activity outside central London through direct services, would increase their attractiveness as business investment locations, boost productivity, reduce costs, increase efficiency and expand business and labour markets. However failure to include a physical track link between HS2 and HS1 in the network will greatly reduce the prospect of ever substantially improving the connection between east London, Kent and Essex with the regional cities served by the HS2.

16. Overlooking the opportunity to connect the high speed networks ignores the economic realities of east London and the wider region. The strategic economic value of east London sites cannot be underestimated. Stratford, now a destination in its own right, is at the heart of a growing commercial district and growth corridor anchored around retail, leisure, tourism and high tech business. The level of confidence expressed by local, continental and other global investors is a demonstration of the current level of interest in east London. This trend is likely to continue at an exponential rate over the next 20 years based on current investment patterns, public sector investment and the continued importance of London as a global hub and destination. Within just a five kilometre radius of Stratford there is around £19 Billion of investment planned, the population will grow to over 2 million and there will be around a further 90,000 new homes.

17. In post-Olympics London, the growth and opportunities of the East sub-region will continue to have substantial impact on shaping the London of the future. It is perfectly reasonable to project forward to an east London in 2026 that is of equal economic significance as central and west London. The patterns of growth in the east London sub-region in terms of job numbers, population growth and visitor numbers are also too statistically significant to ignore. The regions to the South East are amongst the fastest growing areas of the country and are currently poorly served by the proposals for HS2 Phase 1, because of the absence of an HS1/HS2 Rail Link.

18. The economic resurgence of east London and the Thames Gateway corridor to East Anglia and Kent is highlighted by recent updates in jobs growth as well as population. For example, the population of the sub-region is due to rise by 18.5% to 6.9 million in the next 20years and the London Plan cites that east London is set to accommodate
750,000 new residents by 2031. In fact Greenwich, Tower Hamlets and Newham alone will see 22% of London’s population growth.

19. The absence of a HS2-HS1 link risks undermining this growth and the growth within the wider the 20,000sq km catchment of the South East by reducing or stalling opportunities to increase trade and limiting the potential for economic interaction between the Borough and northern UK regions, Europe and east London. At worst it could stall the development of east London and the South East by maintaining too much focus on connectivity with the London Central Activity Zone.

20. Central Government is committed to closing the socio-economic gap between east London and the rest of the capital within 20 years, and ensuring an economic benefit from major infrastructure projects for east London will be key to this. Taking into consideration the significant population growth projected in Newham, it will be vital to ensure further infrastructure is secured to underpin the successful accommodation of new communities and businesses, and facilitate further regeneration. The limited analysis that we are aware HS2 Ltd have undertaken to explore the potential for domestic demand using the HS2-HS1 link underplays the level of demand, for the reasons outlined. But even with these limitations, the MVA analysis does demonstrate that additional economic benefits are substantial at greater than £1 billion (NPV) compared to the base HS2 case. The Government has given no explanation as to why the socio-economic benefit for east London is being disregarded with the removal of the link, even though the significant benefits from domestic travel using the link would appear to justify the additional investment required to improve the infrastructure design.

21. Stratford is now the 6th busiest rail hub in the UK with more passengers than Euston or Paddington stations. Utilising the existing infrastructure at Stratford would enable additional new passengers from inter-regional traffic therefore improving train viability. Stratford covers one of the widest catchment areas in Greater London including the Essex, Kent and Anglia regions which is home to a 5.8million people, a 12th of the country’s population. This includes the Thames Gateway sub-region, the largest economic regeneration area in Europe. Including the growing region of Kent increases this to 8.6m people; 16% of England’s population. It is therefore vital for the long term cost effectiveness of the HS2 investment that the option for Stratford as a London stop is kept open. The infrastructure is already in place and the handling capacity and passenger use over the past few years has exceeded all projections. Stratford’s location, enviable capacity, unrivalled connectivity and the £1bn of public money that was invested to make it fit for its purpose as a high speed stop, Stratford International Station could immediately fulfil the role of the London stop for international services originating in the regions and be utilised as a national and international transport hub for the Thames Gateway.

22. In conclusion, it is imperative the Government looks at options for the link including a dual track segregated link given existing and forecast demand projections. This investment is for a high speed railway intended to last into the next century and it is important it is built from the outset with sustainable facilities for its long term operation.
It is simply short-sighted not to include a link of sufficient, resilient capacity to accommodate the growth of additional services across the country stifling further economic possibilities.

23. There is an economic and strategic case for a HS1/HS2 Rail link. Such a link would connect the economic hubs of the North, the Midlands and east London with each other and mainland Europe, increasing economic growth and spreading investment across the UK. It is imperative that the HS2 network incorporates a link to HS1 of sufficient capacity from the outset to capitalise on the value of the investment. Without the inclusion of a robust physical link between the Channel Tunnel Rail Link and the country’s second high speed network, the door may be permanently closed, leaving Stratford Station and the UK’s current High Speed network forever ‘disconnected’; an eventuality which would undermine UK growth, the re-balancing of regional economies and the growth of east London.

24. The Bill represents the optimum opportunity to enable (via passive provision) an HS1/HS2 Rail Link. Should it be decided at a later date that an HS1/HS2 Rail Link is necessary, having no passive provision for a link in the HS2 Phase 1 infrastructure would mean 'retrofitting' existing stations or lines; a much more expensive and disruptive option. While passive provision would require some investment now, it would minimise the additional costs and disruption of ‘retrofitting’ HS2 Phase 1 at a later date to accommodate the kind of HS1/HS2 Rail Link required, which may well be a tunnelled link. It would also enable consideration of service specifications and station facilities required when developing the Phase 1 network, and indeed Phase 2.

25. The following organisations agree that there should be passive provision for an HS1/HS2 Rail Link included within the current Bill.

- Greater London Authority
- Transport for London
- London Legacy Development Corporation
- Birmingham City Council
- Centro
- Coventry City Council
- Solihull Council
- Kent County Council
- Hertfordshire County Council
- Thames Gateway South Essex Partnership (TGSEP)
- South East Local Transport Board (SELTB)
- South East Local Enterprise Partnership (SELEP)
- London Borough of Hackney

September 2014
Richard Scott, Director of Corporate Affairs, Virgin Trains, and Richard Brooks, Commercial Director, London Midland

Q203  The Chairman: Mr Scott, Mr Brooks, thank you very much indeed for joining us today. As you know, this is the eighteenth meeting of the Committee looking into the economic case for HS2, and two franchise operators would have a very good grasp, we hope, of the economic case. One of the principal points that has been made to us about the need for HS2 is about capacity. We have had an interesting exchange of letters with the Department for Transport to find out where the capacity constraints are, but it would be very helpful to hear from you at first hand about the capacity problems. Also, can you help us by identifying not only the times of day but whether they are commuter lines, relatively short-distance journeys, or longer-distance journeys? If I can also add a supplementary right at the start, how do you cope with these peaks, and what have you done to address these problems? Who would like to start?

Richard Scott: Thank you, Chairman. I think the first thing to say is that there is certainly lack of capacity on the West Coast Main Line. We at Virgin Trains, of course, are mainly responsible for long-distance services. We would say that there is a lack of capacity and that it is manifested in overcrowding on some services. We have seen the number of passenger journeys more than double since we took over the line in 1997. It was about 14 million journeys a year; it is now around 34 million journeys a year. There has been a significant growth in demand from people along the West Coast Main Line. There are significant periods where demand is above capacity. This can be during peak periods, but it can also be
during off-peak periods. For example, the first off-peak service after a peak period tends to be very busy Friday-night services, Sunday-afternoon services, services when there is a significant sporting event on, for example. All the evidence that we can see suggests that that demand is going to continue to increase. Our best estimate is that unconstrained demand would grow by more than 60% by 2026.

**Richard Brooks:** We obviously operate the shorter-distance services, although we do have services coming down from the Trent Valley and from Birmingham as well down to Euston. Certainly, yes, capacity is a challenge. I would say that it is a good challenge because it means that we have to deal with growth, which is good. Our biggest challenges are in the high-peak hour, which are the 8 to 9 o’clock arrivals into Euston.

On the information that has been published, 12 months ago we had three of the top 10 overcrowded trains on the network. We have already done something about two of those and the third one will be resolved this December. Again, we have seen excellent growth since 2007 when we became a franchise.

In terms of going forward, we introduced new trains back in 2008. We are introducing 10 new trains across our operation, seven of those with the new timetable that starts on 14 December. But growth is a good thing and it is not stopping, so I think capacity will be an ongoing challenge in the years to come.

**The Chairman:** The problem, essentially, is the London terminus or coming into London rather than the other cities that you serve?

**Richard Brooks:** We have similar capacity issues in the West Midlands, but again that is about peak travel. Probably the other area that you may link into this discussion is the Trent Valley route, and we have some capacity issues especially with leisure travel on the Trent Valley. Potentially I see this being an opportunity to look at those capacity issues as well.

**Richard Scott:** Certainly, the capacity issues are more acute at the southern end of the line, but they are not limited to the southern end by any stretch of the imagination. Services to and from Manchester can be extremely busy, for example. We run services to Manchester every 20 minutes but that is still not enough in some cases.

**Q204 The Chairman:** You have been very successful in taking measures to increase capacity without huge disruption to the line. Is there more that you can do in that regard?

**Richard Brooks:** From our perspective, we are doing more from the timetable that starts in a couple of weeks’ time. That has been about increasing the speed of our trains up to 110 miles an hour, which means that we can get additional paths in between the faster version services on the same route. That has been very successful. However, I believe that will see all the peak paths, certainly in the high-peak hour, being occupied into Euston from December. My understanding is that there are no more paths in from that point in time. Therefore, the only opportunity that we would have would be to lengthen trains: increasing our trains that are not currently 12 cars long up to eight or 12-car trains. That is really the opportunity. If you are looking at an opportunity to increase capacity, it is about longer trains as opposed to more trains.

**Richard Scott:** Similarly, with the new franchise that we are in now, which started back in June this year, one of the commitments that we made as part of that was to change one of
the first-class cars on the nine-carriage trains to standard class. That releases an extra 2,100 seats a day on a net basis, but that is not a long-term solution by any means. Clearly, we need to cater for first-class passengers just as we need to cater for standard-class passengers. We are limited in what we can do there.

Other avenues that could be taken are infrastructure changes, lengthening trains and lengthening platforms. My colleague here would not thank me for saying this, but we could steal all the fast paths off London Midland out of Euston, in theory, and use them for long-distance services. Even if you did all that, we believe that it would still only get you, at an absolute maximum, to 2035. That would be with zero resilience, which would clearly be unacceptable, and with years, if not decades, of disruption for travellers.

**Richard Brooks:** Similarly, we probably believe that with the work that we have done that by maximising capacity, which we reckon would probably take between now and 2026, something like 18 additional trains as such, that would only last until 2026.

**Q205 Baroness Blackstone:** You have confirmed what Professor Stephen Glaister told us: that capacity problems are largely a peak-time issue. You have given some solutions to this such as longer trains or removing first-class carriages, but neither of you mentioned pricing policy. Professor Glaister thought that with skilful pricing policy, at least for the foreseeable future, your capacity problems could be solved at peak time. Would you agree?

**Richard Brooks:** No. I think that pricing has a part to play. I think pricing will drive some different behaviours. However, I think there are a number of factors that are decision-makers for a person as to when they travel, so although it may certainly help and there are ways, maybe around the shoulder peak hours, in which you could do something there, personally I do not think that would solve the problem.

**Richard Scott:** I agree. It is not purely a peak-time issue. As I say, on Friday evenings, Sunday afternoons, with sporting events, we have significant capacity issues that we have to deal with. People who want to go to a football match want to be there at a certain time. People who have to be in work at a certain time cannot be moved on to other services very easily. In theory, you could take some steps to change pricing, increase the number of bands instead of peak and off-peak, increase the number of bands of pricing that you have. You could increase the prices of the very busy services, but what you will be talking about there is pricing people off the railways in some cases, which is not what we want to do. We do not want this to be a railway for the elite. It should be a railway for everyone. Of course, if you are talking about more bands of pricing, you are talking about more complicated ticketing as well.

**Baroness Blackstone:** Are there any constraints from the Department for Transport on the pricing policies that you can introduce and run? Are these a problem for you at present?

**Richard Brooks:** I would not necessarily call them constraints. There are regulations around regulated pricing, the regulated and unregulated fares, and there are rules around who is a lead operator. If you are the lead operator between two points, you have certain things you can introduce. Where we operate on the same route in different places we are either lead or secondary. If you are the secondary operator you may have a bit more freedom to do things with fares. I would not say that it is necessarily a constraint, but there are certainly rules and regulations that we have to work within with our pricing structures.
Baroness Blackstone: If those regulations were less restrictive, would that help you to spread the load a bit more across the day?

Richard Scott: I suppose in relation to what I said previously, in theory you could bring in more bands and change the pricing structure. So in theory you could do it, but what you are doing in reality is potentially choking off demand. You are not increasing supply to meet the demand, which I am not sure is necessarily where we want to go. I think all the train operators have systems where you can buy advance tickets. We certainly have a number of tiers of advance tickets similar to if you were to fly with an airline. When the tickets go on sale, the cheapest tickets are available. When that tier sells out, then the next tier is available and so on until it gets to the most expensive tickets on the day of travel. There are things that we already do to try to encourage people on to the cheapest services, such as by buying in advance, and they can see which trains are cheaper. There are some measures that we take already but they will not be enough in the long term.

Baroness Blackstone: Can I ask one more question? You obviously run West Coast Main Line trains, but are there not even bigger capacity problems on some of the other services in and out of London? Why should we put so much investment into this particular line, possibly at the expense of these other parts of the rail network?

Richard Scott: I think the other train operators would be best placed to answer that, and the DfT and Network Rail—

Baroness Blackstone: You must have a view about it, though.

Richard Scott: Certainly I would say that the West Coast Main Line is the busiest mixed-use line in Europe. It has passenger services, freight services, fast services, slow services, different frequencies and different lines coming in and joining it. It is an exceptionally complex operation, so there is a clear need for extra capacity.

Q206 Lord Lawson of Blaby: My question follows on from what Baroness Blackstone was saying. You mentioned that the Department for Transport has all sorts of regulations that affect ticket prices, to which you are subject. If tomorrow they abolished all those regulations, would you change anything—and, if so, what?

Richard Brooks: You may. I think you can suggest why fares are regulated. Regulated fares tend to be in place to ensure that at times where people have to travel, at the peak if they are travelling to work, those fares are regulated to the increase that you can make.

There are other things around price elasticity or whatever that would stop you putting fares up if you really wanted to, because, as Mr Scott said, you would drive people to other modes of transport. Personally, I do not think that we would do that much. I think that many people have learnt over the last 10 years that we need to simplify the fare structure and make it clearer as opposed to adding more to it. I would be worried that people already think it is complex, even though I would say that it is no more complex than many other travel industries. My worry would be the perception that we were making it even more complex. So personally I do not think I would make any drastic changes.

Richard Scott: I would echo that. A lot of the criticism that is often levelled at train companies is about the complexity of the ticketing system. If you work in the industry you probably do not see it as that complex, but a lot of people do. You would be talking about
making it more complex to manage the demand more effectively, but you are not solving
the problem fundamentally by adding the capacity that is needed. If we are talking about
unconstrained demand growing by more than 60% by 2026, there is a demand from people
to travel. Now, it may be a political question of whether you want to allow people to travel.
We would say that you do and that you should provide for what the public want.

Lord Lawson of Blaby: So these regulations are serving no purpose whatever?

Richard Scott: That is not what I would say. The Government and the DfT will act in what
they see as the interests of the passengers. We operate within that framework, and
questions for that framework are for the DfT.

Q207 Baroness Wheatcroft: You are open to discouraging people from travelling, but I
would like you to ponder the question: is your journey really necessary? The Government’s
forecasts for HS2 are based on growth of 2.2% a year up until 2036 in travelling on your rail
lines. Could you tell me what proportion of travel at the moment is business-related?
Obviously, if people are going to football matches they are going to want to go to football
matches, but the ability to work from home, to video conference and so on, is greater than
it has ever been. Will there come a stage when people do not need to travel as much as
they are doing now?

Richard Scott: The short answer is that I would not like to crystal ball gaze, but people
have been talking about video conferencing for a number of years. We have not seen
demand turn negative; it has been growing by more than 4% a year since we took over the
franchise. Video conferencing has been around, but people still travel. They want to make
business deals face to face. Employers still generally require people in the office. They want
to go to the football match. It is possible that if no one had ever invented video
conferencing the demand would have been even higher, but it is certainly not turning it
negative.

Richard Brooks: I would take that view.

Baroness Wheatcroft: And the proportion of journeys that are for business?

Richard Scott: I did ask the team before coming. This is one of those commercially
sensitive questions, I am afraid, so they wanted me to say “significant”.

Baroness Wheatcroft: That does not help us in amassing the argument for the economic
case.

Richard Scott: I appreciate that. My apologies.

Q208 Baroness Blackstone: We were told by the French that something like two-
thirds of travel on the TGV network is for personal reasons and only about a third of it is
for business. Would it be reasonable to assume that the proportions are similar in this
country?

Richard Scott: I would not object to that characterisation.

The Chairman: “Significant” I think you said?

Richard Scott: Significant.
The Chairman: It is more than a quarter but less than a third?

Richard Scott: More than a quarter, certainly.

Lord Skidelsky: Can I ask a supplementary to Lady Wheatcroft? We have an interesting graph in our notes that shows the increase in annual passenger journeys—thousands to and from London—and that basically it has doubled. That increase in demand for rail travel has gone on. In fact, if anything, it has accelerated over the last five years. In that period, GDP—the value of activity in the economy—dropped by 5%. It has now picked up again. Over much of the period the economy was smaller than it had been, yet the demand for rail travel rose despite that and even accelerated. Why do you think that was? Is a substitution going on? Are people abandoning cars and travelling more by train? On the face of it, it is a little puzzling: less activity but more demand for rail travel.

Richard Brooks: There are two things that we take into account. One is GDP and one is central London employment. Both of those we use as factors. Our view is that during that period there were a number of things, but I think the price of motoring is one of them. The price of motoring for younger people is one. I absolutely do think that we very much provide a value for money way of travelling; Richard mentioned advance purchase tickets. Certainly, if you book in advance, we provide excellent value for money. Maybe during that period people were looking for value for money journeys.

Lord Skidelsky: But surely the pricing policy cannot wholly explain the big increase in passenger demand or freight demand—presumably it is both—at a time when the economy was for most of that time quite considerably smaller than it had been pre-crash.

Richard Scott: There is probably another factor as well in that I think service levels have generally improved on the railways, so people are more and more satisfied with their journeys. Certainly, we monitor our customers’ feedback extremely closely and try to improve it wherever we can. We are pleased that we have continued to grow the number of journeys on the line. It might be a puzzle, but we would see it as good news.

Lord McFall of Alcluith: Given that the golden oldies travel a lot now on their senior rail cards, is that accountable for quite a number of increased journeys?

Richard Brooks: We are seeing growth across the board.

Lord McFall of Alcluith: Higher than normal growth with other age groups?

Richard Brooks: All the rail cards are showing excellent growth, whether it is the senior rail cards, families, the new two people—

Richard Scott: The couple’s rail card, yes.

Richard Brooks: I think they are all very successful, to be honest.

The Chairman: Mr Scott, did I hear you correctly? You said that you anticipated or forecast a 60% increase in travelling, presumably on your service, between now and 2026, which is obviously substantially greater than 2.2% per annum?

Richard Scott: Yes.

The Chairman: What lies behind that forecast?
Richard Scott: That is our best modelling. It is important to say that it is unconstrained demand that we believe would go up by more than 60%, assuming there are no barriers.

Lord Skidelsky: How do you define unconstrained demand? I am just trying to pinpoint—

Richard Scott: If you did not put up fares to discourage people from travelling, if there were no capacity limits, that sort of thing.

Q209 Lord May of Oxford: To what extent do you think it is going to be possible to continue to add capacity to the West Coast Main Line, both in terms of more train paths and increasing capacity on existing trains? I notice that you have sketched some of the things that maybe you can do. I was not too keen on the one about altering the signals so that you ran the trains closer together, but maybe that is a good idea. In fact, more generally, do you agree with the recent conclusion of Network Rail that it is not going to be possible to introduce the new train paths that Virgin applied for from London to Blackpool North and Shrewsbury and so on, which seems to be coming against what you would want to happen? What are your thoughts on those?

Richard Scott: Yes. There are a couple of things to note on the new services that are starting later this month to Blackpool and Shrewsbury. First of all, it has taken 24 months of negotiation to get them in place. There is one service a day in each direction to Blackpool and two services a day in each direction to Shrewsbury, so there are not a lot of services. It is not, crucially, additional paths into London. It is an extension of two existing services to the north, so that is the crucial fact. Even so, it has still taken 24 months of negotiation to get them in place. It is more a testimony to the hard work of the teams involved—Network Rail, Virgin Trains and DfT—to get these in place, rather than evidence of spare capacity.

Lord May of Oxford: Just one other follow-up question. Do you agree with the Government that the HS2 proposals as they stand are the best solution to tackle the capacity problem?

Richard Scott: There is certainly a capacity issue and the only practical solution, we believe to it, is a new line.

Q210 Lord McFall of Alcluith: The Herald today is saying that the West Coast Main Line service—and you heard my question about that—is going to be off for four days from Christmas and that passengers are going to avoid it. One of the reasons for the dismissal of improvements to the West Coast Main Line as an alternative to HS2 is the disruption that will be caused to existing services. Paul Plummer told the Committee that Network Rail had looked at improvements to it and concluded that to provide a similar level of capacity and connectivity would lead "to many, many thousands of weekends of disruption, preventing people from travelling in the country, weekend in, weekend out, over many, many years". I wonder if you could answer the question and give us a feel for that, which we did not get in the previous session.

Richard Scott: I certainly echo Network Rail’s view that the level of disruption if you tried to do a patch-and-mend approach on the West Coast Main Line would just result in an unacceptable level of disruption, which is why we believe that the only solution is a new line.
Richard Brooks: The work that is going on over Christmas and into next year, and has already been going on this year at weekends, is resignalling at Watford. I would not say that it is a minor piece of work. It is quite significant but—

Lord McFall of Alcluith: I understand that there is a need for work to go on. In fact I have been a regular passenger with Virgin and I have no problems with it at all. It is a great service and I was glad to see it getting an extension on that. But surely to goodness there are looking to be quite considerable problems with a £2 billion Euston project.

Richard Scott: I noticed that your previous witness said that there were no plans on the table at the moment. We are feeding into the plans. We are in conversations with DfT, Network Rail and HS2 and we are keen to see those plans progressed in the best possible way, but there are no definite plans to comment on at the moment. Our focus is passengers. We believe the needs of the passenger should be put first. We are involved and that is our representation to the working group.

Richard Brooks: At this moment, as a franchise operator that is potentially running through to June 2017, based on a direct award negotiation, we are heavily involved in assisting HS2 and the DfT, and so are Richard's colleagues at Virgin Trains. We sit alongside each other. We are trying to look at the best way in which issues around the rebuilding time at Euston are dealt with to ensure that we provide a reliable service during that period.

Lord McFall of Alcluith: Professor Glaister told us that, "If your issue is with crowding on the London commute, then you might use some of the £30 billion to deal with that problem, not spend it in a way that is proposed here". Do you think that the alternatives to HS2 have been properly assessed, which he does not?

Richard Scott: Our view is that you cannot, in practical terms and acceptable terms, upgrade the line and provide the capacity that you need. The only practical solution that would be acceptable to passengers would be a new line. That is the only way you can provide a long-term capacity solution.

Richard Brooks: You mentioned the gaps between trains. Currently on the west coast, on the fast line you need three minutes between each train and on the slow line you need four minutes between them—the headway between the trains. There is no more capacity once the timetable changes in December. As I said, in that high-peak hour we will be absolutely at full capacity on the fast lines. There is so much you can do but there is very little more. There is a lot of talk about the digital railway so that you can have signalling that brings trains closer together, but I am not aware of any other option that would do what is required.

The Chairman: Just staying with this, do you think that the alternatives have been properly assessed? I was rather intrigued by a comment that your chief executive, Tony Collins, made when he said there are “lot of things you can do to increase capacity. That is why we really need the franchising process to encourage that sort of investment”. Can you explain what he meant by that?

Richard Scott: Yes. Our old chief executive, I should say—

The Chairman: Your former chief executive. I am sure what he said is still cherished by his successor.
Richard Scott: Our view is that there are limits to what you can do with Victorian infrastructure, I am afraid. As Mr Brooks says, we are at the limits of peak paths unless you run trains even closer together in and out of Euston. You could lengthen platforms. You could lengthen trains. That is massive disruption for passengers for years if not decades at a time. You could try to straighten the track to make it a bit simpler and quicker. Again, there would be massive disruption and you are taking a patch-and-mend approach rather than delivering the capacity that is going to be needed long term.

The Chairman: Would you also apply that analysis to the HSUK proposals?

Richard Scott: I am not familiar with those, I am afraid.

Q211 Lord Griffiths of Fforestfach: The strategic case for HS2 stated that when it was completed, towns and cities that at present have direct access to London would either retain a service at the same level that they have at present or as a result of HS2 would be improved. Do you think that is doable?

Richard Scott: There is clearly a lot of detail still to be worked out for HS2 and the key here is the timetable, which we do not have. That timetable will be key to whether communities are well served, as well as the integration on an operational level with the classic network and the high-speed network, so that between the two as many communities and passengers are served in the best possible ways as they can be. But there is clearly detail still to be worked out.

Lord Griffiths of Fforestfach: Your former chief executive, Tony Collins, said that there would be “more winners than losers”, so he was assuming that there would be losers. Then he said that in his judgment HS2 or Virgin Trains would get something like 40% of the current revenue from the West Coast Main Line. He said that what was left may not be profitable for the others, so there was a question of viability. He was questioning whether you could have a fully integrated system providing the level of service that it provides today, because Virgin Trains would be taking more and there was not enough left for others to provide the service they are providing. Do you think he had a point?

Richard Scott: There is clearly a lot of competition on the line at present. Several operators compete for services by offering different products. HS2 would be another one of those. We believe that capacity is needed and that demand will continue to rise. If a new line is the only way practically to provide that, which we believe it will be, you could say there must by definition be more losers than winners if you do not do it.

Lord Griffiths of Fforestfach: We are told that Virgin Trains has raised this issue with the Secretary of State for Transport, have you received a satisfactory answer?

Richard Scott: I am not familiar with exactly what Mr Collins has raised, but I would be very happy to check to see whether we had a response and what it was.

Lord Griffiths of Fforestfach: If you could that would be most helpful. Thank you.

Q212 The Chairman: Can we just come to speed? HS2 can run at 230 miles per hour, maybe even faster. As train operators, is it important that you run at 230 miles rather than 175 miles an hour, for instance? Apparently the difference between the two is a not insignificant additional investment.
Richard Scott: The message that certainly we get from our passengers and communities along the line is that they are always asking us for additional stops or changes to our stopping patterns so that they can connect to our services, and they want faster services and frequent direct services. They like the services. They get them to where they are going the quickest. There is clearly a demand for faster services. It is probably not for me to judge how fast one needs to go to get to where you need to be.

The Chairman: If you get the additional capacity so that you can run more trains, the additional speed—and they have to be built in a certain way to get that additional speed—may not be essential to the success of your business plan.

Richard Brooks: I do not think we have looked at speeds at that magnitude.

Richard Scott: That BCR is one for the DfT and HS2 to work out.

The Chairman: You are quite happy with a mid-range Ford rather than a Maserati?

Richard Scott: We know that speed is important to our passengers. We go at 125 miles an hour. They like that.

Q213 Lord Rowe-Beddoe: We would welcome your views now on future franchising. In its written evidence, the Department for Transport suggested that there is a “working assumption that passenger service on HS2 could be franchised in a similar way to other national rail services”. They also went on to say that, “no commercial structures have been ruled out”. What are your comments?

Richard Scott: On integrating the franchises, it is for the DfT and the Government to decide what they want to do. We do believe that on an operational level any new services on HS2 should certainly be integrated with the classic network, whether this is ensuring that communities are served properly by either network, whether you can buy through-tickets from one destination to another that utilises both networks or whether it is the high-speed trains moving on to the classic network when they get off, let us say, north of Birmingham after phase one. There are a number of operational issues and they certainly need to be integrated effectively.

Lord Rowe-Beddoe: I like the definition "classic network". Is that yours?

Richard Scott: I am not going to take credit.

Richard Brooks: No, it is a phrase that is often used and the important thing is that this must be seen as an integrated network.

Lord Rowe-Beddoe: Good, because the West Midlands Integrated Transport Authority suggested that the HS2 should be fully integrated with the West Coast Main Line and with the East Coast Main Line run separately, no?

Richard Scott: I am not entirely sure what they mean, but certainly operationally everything should be run as one giant network for the benefit of passengers.

Richard Brooks: That is important where we are the franchised operators. It is not our place to decide on the future of franchises.

Lord Rowe-Beddoe: But you have a view perhaps as to what you would like—
Richard Brooks: My view and the view of my organisation would be that it is important that it is seen as an integrated network. That is the critical part for us, as opposed to however it may be: franchised or not franchised.

Lord Rowe-Beddoe: Integrated with the classic.

Richard Brooks: Classic, absolutely.

Q214 Lord Lawson of Blaby: If Virgin Trains were the franchise operator for HS2 and you had complete freedom of ticketing, would you want to charge a premium fare for this premium service?

Richard Scott: Clearly the fares will ultimately depend on how the franchise, assuming it is a franchise, is operated and the costs of the network of the premium that the Government requires, but there is simply not the detail at the moment to do that. We are a long, long way from that.

Lord Lawson of Blaby: Can I also raise something that is puzzling me? I do not know whether either of you can answer it, but as we have gone through this inquiry—and not just this afternoon but earlier—I have become more and more puzzled by the fact that we are told that there is a serious capacity problem and that rail capacity has to be increased substantially for its own future growth, yet the taxpayer is going to be asked to pay a massive mind-boggling subsidy in order to finance this, which probably also means, because of the burden on the public finances, that other things, whether it is the health service or education or whatever, will not have as much money spent on them as they otherwise would. Why on earth, if there is this huge unsatisfied demand, can these train services not pay their way?

Richard Scott: How to finance that is probably a question for the Government, I am afraid, and the DfT.

The Chairman: Can I just probe a bit more on local, national and long-distance services? Are the passengers who use Virgin services for commuter journeys for instance, for example from Milton Keynes to London, counted as long-distance passengers in the official statistics, or is that a short commuter line?

Richard Scott: I believe they are on the cusp. Anywhere north of Milton Keynes is long distance.

The Chairman: I see. So the commuter statistics would include that.

Richard Scott: I believe so, but I will double check and get back to the Committee.

Q215 The Chairman: Finally, we touched earlier on the question of internet connectivity and video links and this sort of thing. We travelled to Manchester last week on a Virgin train and no internet connectivity was provided by the train. Is this something that you will be providing or that you have plans to provide?

Richard Scott: We have been pretty clear, I hope, that our current wi-fi offering on board is not good enough. We currently offer free wi-fi for people in first class and we charge for people in standard class. Since we were awarded the new franchise in June we started a programme immediately of upgrading the on-board Wi-Fi, so it is under way at the moment.
This will upgrade it from 3 megabits per second to 12 megabits per second on board, and we are also installing free and superfast wi-fi at the 17 stations that we control.

There is also a longer term ambition that we are in discussions with Network Rail to provide free and superfast internet connectivity on board to all passengers, but that requires line side and trackside infrastructure to be installed by Network Rail.

**The Chairman:** When all this investment is made and there is superfast high-speed connectivity on the train, then in a sense whether the train takes an extra 10 minutes or not does not make a lot of difference, does it? I would have thought particularly that the business traveller is able to stay fully connected for the entire journey, whether it is 10 minutes longer or 10 minutes shorter.

**Richard Scott:** Certainly they would be able to work effectively. That would be the aim, absolutely, but of course that still does not address the capacity issue.

**The Chairman:** Finally, on this issue, the question of video conferencing is one thing, but once superfast broadband is introduced throughout the country, is that not going to change work patterns and therefore travel patterns? Is there any evidence from any other countries, such as Scandinavia maybe or South Korea, that informs your forward thinking about its impact on travel demand, particularly from the business passenger who is obviously a significant percentage of your travel and possibly a large majority of your revenue?

**Richard Scott:** I am certainly not aware of any evidence on that basis. Demand has been increasing consistently in the 17 years we have run the franchise. We believe that it will continue to increase. It may be dented if we have a superfast broadband network everywhere, but people will still need to get to work, will still need to do business deals face to face and will still need to go to football matches.

**The Chairman:** Okay, thank you very much indeed for your evidence.
Professor Peter Mackie—Written evidence

1. I am a Professor Emeritus at the Institute for Transport Studies, University of Leeds. I was a member of HS2 Ltd’s Analytical Challenge Panel from April 2009 to March 2012, at the time when HS2 was developing the business case to assist Government in deciding whether to take the project forward to the Hybrid Bill stage. I have had no connection with the further development of the business case since March 2012 and my remarks below are based on my reading of relevant reports which are in the public domain.

Is there an economic case for the scheme (Q1)?

2. As with any transport capacity scheme, the economic case depends fundamentally on the demand forecasts. If you believe that either the drivers of growth (income, population, fares, service quality) are overestimated in magnitude or that the responsiveness of rail traffic to those drivers is overestimated then the economic case for the scheme will be weakened. There is some risk analysis in Ch5 of the Economic Case document of October 2013 (ref 1) which convinces me that the economic case is fairly robust to external drivers such as income and population growth.

3. When over 99% of the DfT’s investment schemes yield high or very high value for money I think it does violence to the English language to describe a benefit cost ratio of 2.3 as ‘high value for money’. There is a reasonably good economic case for the Y network as a whole. However the economic case for the London-Birmingham and Lichfield section alone (Phase 1 of HS2) is weaker and really is predicated on the entire Y network being developed. This is even truer of the strategic case. Therefore it is important to focus on Phase 2 of the scheme where there are decisions to be made following the Higgins report (ref 2).

Benefits to the Regions (Q3)

4. It is very difficult to measure the aggregate national value of HS2. It is doubly difficult to predict the locational distribution of the benefits. This is because the locational composition depends upon

- The nature of competition in relevant markets between London, Birmingham, Manchester, Leeds and other places served by the line
- The effect on places not served directly such as Bradford and places in the shadow of the line such as potentially Stoke on Trent and Wakefield.

5. For many sectors of the economy, HS2 will have no direct impact of any kind. It is important to focus on that part of the regional economies for which inter-city accessibility is likely to be material in location choices. These might include Government offices, the back office functions of national/international firms, drivers of the knowledge economy such as Universities, consultants, science parks, clusters of firms in financial and legal services and so on.
6. Location choices will depend on
   - The relative cost to the employer of locating activity at X rather than Y including the relative quality and productivity of the pool of qualified labour
   - The cost of living and real wage differential and quality of life differential which might encourage qualified labour and their families to migrate
   - The accessibility measured in time and money between X and Y assuming that head office/brassplate functions remain at X.

HS2 impacts on the third of these. The project is a facilitator. What will happen depends on the first two. Complementary action will be critical to this. Some of the rhetoric about ‘transformational’ refers to the package as a whole rather than to the railway on its own. A true partnership model will be required to work out the package of measures required to convert the stated aspirations of Government into reality.

Most of this load will not fall on the DfT which is not in a position to lead on the complementary measures. HMT, CLG, BIS and the LEPs will be the key actors. This is a significant institutional challenge as is effectively recognised by the Deighton Report especially recommendations 3 and 4 (ref 3)

Station Location

7. The economic function of Phase 1 of HS2 is to transmit people rapidly across 100+ miles between London and Birmingham/Lichfield. However the economic geography of the North is different, with several cities with catchments of a million or more with 30-40 mile distances between them. So the effect of the scheme on improving connectivity between Leeds, Sheffield, the East Midlands and Birmingham is very important as is the level of connectivity between the national network and the regional networks.

8. The eastern branch of the Y network is currently expected to have stations at Toton in the East Midlands, Meadowhall in South Yorks and New Lane in Leeds. This seems to prioritise line speed at the expense of local/regional connectivity. I am not convinced that the access costs from home to these station locations involving various combinations of access mode has been fully factored into the model.

9. Just as the solution at Manchester has in the end involved developing Piccadilly station, I believe the solution at Leeds and Sheffield needs to be looked at again. Obviously the position in the East Midlands is more difficult.

10. The idea in the Higgins Report of bringing forward the link to Crewe opens a similar set of questions on the western arm. The first issue is whether the link to Crewe is itself good value for money. Assuming it is, this must then open the question of whether providing a further high speed section to Manchester by-passing the high value traffic at Wilmslow and Stockport is still justified.
11. These issues are further pointed up by the concept of HS3 and the One North report (ref 4). The generic idea of a better spine route across the Pennines is a good one. But this only makes sense with excellent collector/distributor nodes to feed traffic to it from the spokes and in my view this can only be achieved credibly at the main stations. My answer to Q9 is that the design of HS2 and HS3 need to be considered together.

Realising the benefits (Q6)

12. My view is that while HS2 Ltd and their consultants have done a creditable job under enormous pressure in assessing HS2 as a transport project, the true strategic potential of HS2 has not really been spelled out. The scheme is said, rightly, to be a capacity scheme, but the case would be more convincingly made if we were bold enough to say what we envisage the capacity being used for. For example, the supply and demand for housing in the London economic region are clearly not equilibrating at sensible prices and the plans for accommodating the population growth forecasts do not add up. The capacity freed up on the WCML provides an element of the strategic infrastructure needed to deal with what is becoming a pressing economic and social problem. Similarly, it will not be sufficient to allow Birmingham, Manchester, Sheffield and Leeds to develop at their own pace: a more positive plan for realising the opportunities is going to be needed.

13. The recent DfT paper on improving Resilience (ref 5) raises in my mind the question of whether society would be well advised to secure the option through land acquisition of providing an intermediate station on the HS2 line midway between London and Birmingham.

Fares and Franchising (QQ 7 and 8)

14. It is difficult to tell from the published outline business case just how much work has been done on alternative commercial scenarios and the robustness of the economic case to those scenarios. It is noticeable that none of the published sensitivity tests in the OBC of October 2013 refer to the commercial environment in which the operators of services on HS2 will find themselves. There are three distinct but related issues.

15. The first is the fare relativity between HS2 and conventional rail for comparable journey purposes and departure times. For modelling purposes fare parity is assumed, so the traffic is split on travel time (strictly generalised time) alone. This is a convenient modelling assumption in a world of complex yield management and overlapping markets for rail travel. Nevertheless, given the points made by the DfT about the high values of time on high speed rail, I feel nervous about not capturing some of this added value of HS2 through a modest fare premium relative to conventional rail. On simple assumptions based on the DfT’s OBC economic case, HS2 will cost every man, woman and child in the UK £25/year real in taxes for the
next sixty years. That may be a good bargain but I would like to see an assessment of the case for recovering some of that from the users.

16. The second is the issue of the absolute levels of the basket of fares on HS2 and conventional rail. The appraisal assumes that real fares continue to increase by RPI plus X. But is that what will happen? This is going to be a large increment of capacity going into a competitive environment which we are not in a position to define at this moment. This suggests that modelling the competitive interactions between HS2 operators and franchised operators on the conventional network is important. One lesson from the Channel Tunnel experience is that competition in unregulated sections of the market can take unexpected forms where spare capacity and low marginal costs of use exist.

17. This feeds in to your question about franchises. There are trade-offs here. The certainty and confidence in the business case for HS2 would be increased by a planned approach to all the affected franchises taken together. But this would imply a vastly different policy towards rail franchising---and indeed open access passenger services---from what we have operated for the last twenty years. On the other hand, to have four long distance south-north franchisees (HS2, WCML, MML, ECML) with the current basket of regulated and unregulated fares would expose the taxpayer to some significant revenue risks. There has been a lot of public discussion about the construction and delivery risks of HS2 but in my opinion the revenue line in the appraisal table is the one which it is most difficult to be confident about. The Outline Financial Case (ref 6) is silent about this.

Endnote

18. The Committee is studying the economic case for the scheme. But I think the larger need is for an overall strategic case, cohesive with the economic and financial cases, which takes a broad approach to the exploitation of a significant opportunity. As Professor Tony Ridley said five or more years ago about this scheme, ‘A railway is not a strategy.’

September 2014

References


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454 Table 2 of Ref 1 Net cost to Government 31.5 bn PV real : 500m per annum depreciation over 60 years plus 1 billion per annum interest on capital at 3.5% spread over a population of 60 million

TUESDAY 14 OCTOBER 2014

Members present
Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Griffiths of Fforestfach
Lord Lawson of Blaby
Lord McFall of Alcluith
Lord Rowe-Beddoe
Lord Shipley

Examination of Witnesses

Professor Peter Mackie, Emeritus Professor, Institute for Transport Studies, University of Leeds, Dr Matthew Niblett, Senior Visiting Research Associate, Transport Studies Unit, University of Oxford, and Professor Roger Vickerman, Professor of European Economics, University of Kent

Q1  The Chairman: Welcome to the Committee and thank you very much for joining us today. We are being televised and I would be grateful if you could speak loudly and clearly for the benefit of viewers, the stenographer and the rest of us. We have quite a lot of ground to cover, but if any of you would like to make an opening statement, now is the time. If not, then can I also say that if you agree with what the previous speaker or speakers have said about the particular matter under discussion, a nod will suffice?

Perhaps I can start off. The October 2013 report by the Department for Transport sets out a cost-benefit analysis, which suggested that the overall value for money for HS2 was 2.3 times and that phase one would be 1.7 times. Do you find that economic case persuasive? Who would like to start?

Professor Mackie: I will go first, Chairman. If you take the narrow view that this is a transport project and you are relying on estimating the transport benefits and costs only with some wider economic impacts and you do not go beyond those bounds, then the entire Y network offers reasonable value for money to society. I would hesitate to say high, as the Department for Transport says, because so much of its programme offers those sorts of benefit-cost ratios or above. In saying that, I exclude consideration of environmental
impacts, because I do not consider myself to be knowledgeable about the balance of the costs and benefits on the environmental account.

The risk analysis in the OBC economic case of October 2013 shows that the scheme is reasonably robust to a range of external market factors, so a decent amount of risk analysis has been done. The appraisal is consistent with Green Book principles, but if you were to say to me, “Should we build phase one, London to Birmingham and Lichfield on its own and leave it at that?” I would say, “No”. That does not offer good enough social value for money. The scheme really depends on doing the entire Y network.

**Dr Niblett:** I would second much of what Professor Mackie has stated. Our view has been that in order to get the benefits proposed, the whole scheme needs to be implemented; but in addition you have to provide sufficient local connectivity and have the local transport network properly connected to High Speed 2, as well as associated regeneration and spatial plans in order to achieve the kind of benefits that are being proposed.

**The Chairman:** Has any estimate been made of those additional costs?

**Dr Niblett:** No, not that I have seen.

**Professor Vickerman:** I would concur with what Peter Mackie has said on this. I would simply add that my feeling is that if you look at what the likely ongoing impact is going to be on the country, these are probably slightly on the modest side. However, we are talking about the sorts of benefits that are going to be achieved over a very long time period and over a period for which it is extremely difficult to make precise forecasts. There is sufficient in there, as it were, to suggest that one proceeds, but with caution.

I certainly second the view that one needs to think very carefully not just about the Y network but about the whole rail network that connects into it and all the other things that you might do alongside it. Of course, then you get into the problem of how much of that is part of the cost of the project and how much is the benefits, but it is, after all, a catalyst and we should recognise it as that.

**Q2 The Chairman:** In your written evidence, you say that the Department for Transport’s standard modelling may not be particularly effective for large-scale infrastructure projects. Is it therefore possible to compare this one large project with, let us say, half a dozen smaller projects that may give better value for money?

**Professor Vickerman:** No, I do not think it is. It would need a consistency of approach to be able to understand where you are with these, so using a standard appraisal package is the right way to start. However, it is then very difficult to start saying that you can get a better set of benefit-cost ratios from a larger number of small projects from that. One does have to separate these things out, so when talking about a high-speed rail network and airport development, those sorts of things, and the possibility of making such fundamental changes, it is very difficult simply to go by the standard model and say, “Right, we plug it in, we see what the answer is and then that tells us yes or no”.

**Q3 Lord Lawson of Blaby:** In the economic case, it appears that the overwhelming evidence comes from faster journeys: I think 84% is given. Are these faster journeys from
station to station or are they from door to door, because of course what matters to people is the door-to-door time, of which the station-to-station time is only a part?

Professor Vickerman: If you look back through the history of the iterating values that HS2 has produced, you will find that there has been a move from what is more station to station to more door to door. However, that depends on having an awful lot of evidence available to know whose doors are going from and to and much of the benefit is about business travel benefits. We might have a better handle on that because we have a better knowledge of where the starting points and ending points of those business journeys are. That business-to-business connectivity is one of the really important things, but it is a very tricky issue to raise there because you are dealing with a very large spread of areas over which people are being funnelled into the tube, as it were.

Lord Lawson of Blaby: I understand the difficulty, which is clearly there, but it does seem to me that the consequences of the calculation itself are pretty dodgy. Indeed, as I understand it, for the most part they are not going to be the same stations and they are going to be a little further away from the centres of population. Therefore, the station-to-station time will be less, but the rest of the time on the journey is likely to be greater. Of course, when you ask what wasted time is and what it is not, it seems to a layman like me that it is much easier for the businessman to do useful work when he is on the train, but not when he is on his way to the station or on his way from the station to his destination. In other words, you are reducing the amount of useful time and increasing the amount of wasted time. That does not seem very sensible to me, and I do not see it reflected in the calculations in the slightest. I understand it is a difficult thing to do.

Professor Vickerman: I would not disagree with your point, but I would add one further point. One of the clear things about high-speed rail on the dedicated network is the increase in reliability, and that reliability is something that people will pay a price for. I say that as a regular user of the HS1 line, which has transformed the reliability of services from Canterbury, where I live, into London. It has shortened the journey, but it is the reliability that is important there, and that counters a little your concern about stations being further away. Of course, that is not true of London; it is less true of Manchester and not really true of Birmingham. The real problem areas are what you do in places like the East Midlands and Sheffield, and that is a serious issue.

Lord Lawson of Blaby: Just to pursue this a little further, it is a pity, incidentally, that it seems to be impossible to make train services reliable if they are not high-speed. I do not quite see why, but anyway, what you have said leads to another question: how you calculate the value of the time saved, if indeed there is any time saved at all, because of the door-to-door issue. This is partly because of how much time is really saved on a door-to-door basis, which is what travellers care about and also to what extent it is wasted time. Therefore, what is the basis for the figure, which is absolutely crucial in assessing the economics of the project?

Professor Vickerman: There are standard measures of business value of time savings and those are what have been used here, which relate to the value of business time.

Lord Lawson of Blaby: When were these first promulgated?
**Professor Vickerman:** They have been used in the standard appraisal procedure for quite a long time and are revised regularly to reflect changes in wage levels.

**Lord Lawson of Blaby:** And changes in technology.

**Professor Vickerman:** The changing technology is an interesting argument that is often used. That now, with permanent connectivity through mobile phones, wi-fi and so on, people can use their time productively, and that means that there needs to be some adjustments in the values. However, I have seen some research done in the Netherlands that tends to suggest that the sort of activities that people do are very routine and low-level. People are not performing at a high level while doing this. They may well be doing some routine e-mail answering, which may be a useful activity, but on the other hand, they are not doing things that are very productive at that level, so getting them reliably to a destination to do the productive things is still a benefit.

**Lord Lawson of Blaby:** Surely that is completely irrelevant, because these humdrum, banausic things have to be done. You have to reply to e-mails. You cannot be creative 100% of your waking time. You have to do these other things, and therefore, if they are able to do those on the train, that is time saved just as much, because they are then freed up to do their creative thinking at other times. This Dutch study is surely totally irrelevant.

**Professor Mackie:** Can I make one supplementary point? I hesitate to defend the Department for Transport’s appraisal in its entirety, but there are some points that, if we are going down the route you are taking us, need to be made. In particular, in the appraisal the standard value of business travel time that is used is a single rail sectoral value. There is a book, a guidance manual, and in that book there is a number, and that is the number that is used for HS2. Now, if I ask myself whether I would expect the composition of the HS2 business travel market travelling from Manchester to London to be the same, in terms of income and other characteristics on a long-distance journey like that, as business travellers going from Wimbledon to Waterloo, my answer is no. Although I accept that the issue of businesspeople working on a train is a live issue, and the Swedes have introduced a discount to the standard value of time to allow for that, there are other offsetting reasons why the Department’s value of business travel time in the HS2 context is, in my view, quite conservative. So I think that the sensitivity tests that the department has done do cover the range of likely outcomes.

**Q4 Lord Carrington of Fulham:** One of the headline arguments to justify the line has been that we are running out of capacity on the rail network. Indeed, I think they have been a suggesting growth in passenger traffic of something like 2.2% between now and 2036. Do you find that argument convincing?

**Dr Niblett:** Yes, we do find that convincing. The work that the ITC has recently co-commissioned looking at UK travel trends has indicated that rail travel growth will probably continue to rise due to fundamental behavioural changes, including a modal shift away from car travel to rail travel. That is particularly notable among both business travellers and younger drivers and younger travellers, particularly male drivers. There seem to be fundamental attitudinal and economic shifts that are persuading younger people to travel by train rather than by car. If we assume that this will, in due course, have an effect further up the age cohorts, it suggests that the 2.2% annual growth that we have seen is
likely to continue for the foreseeable future, although there has to be a caveat that 20 years ago we would not necessarily have predicted the kind of rail growth that we have seen over the last 20 years.

**Lord Carrington of Fulham:** There has been some suggestion in the evidence we have had that the growth in passenger traffic has been fairly flat for the last five to 10 years. Is that not correct?

**Dr Niblett:** We are seeing already that passenger growth is rising again after the recession at quite a high rate.

**Lord Carrington of Fulham:** So you think it was a recessional effect rather than a trend line effect.

**Dr Niblett:** We think the slight slowdown at the time of the recession was partly caused by economic factors.

**Professor Mackie:** Could I respond to your original question?

**Lord Carrington of Fulham:** Of course.

**Professor Mackie:** Let us say we are dealing with population growth of 0.5% per annum, income per head growth of 1.7% per annum and income elasticity of one, so rail growth proportional to income and population growth. That gives you your 2.2%. Now, obviously, over a very long time period the wonders of compounding mean that you end up with a very large number, but I do not find those input assumptions completely outside the plausible ballpark. Obviously, if there is a world recession for ever, you will not get income growth of 1.7% per head per annum, but I do not think that is the business-as-usual assumption that the Government generally care to make when considering their long-term infrastructure assessments. In the corridor that we are talking about, I think the betting would be that population and income growth will probably be slightly faster than in the economy as a whole. The Core Cities' agenda says that if you join up London, Birmingham, Manchester, Leeds, Sheffield and the East Midlands, perhaps that is going to be the box of the country, plus Bristol, where growth is likely to be the quickest.

When you come to the demand cap and whether to have a demand cap at 2036 or whenever, it is a bit of an arbitrary assumption when you cut growth off. However, it is better to have a cap than not to have a cap, because there are limits to forecasting and 20 years out is probably far enough to go in projecting demand growth for ever. Otherwise you get silly results like excessive congestion and very high fares to cap the traffic off, which you do not want to be dealing with.

**Lord Carrington of Fulham:** The assumptions, though, are going to be very sensitive, are they not, to two factors? One might reduce the 2.2% growth, which is pricing policy, because presumably if the high-speed rail is priced at the same as alternative means of transport, you will get a lot of people on it; if it is priced much higher, you will get fewer on it. The other one is also how much the line is used for commuting. Are these capable of being adjusted for in the model in a realistic way out as far as 2036?

**Professor Mackie:** That is at least three questions there, so let me see. At the moment, HS2 does not have any stations between Birmingham and London, so I imagine that the commuting share of the total HS2 market itself is relatively small. The big commuting
benefits are from phase one and are on the capacity relief on the west coast main line. That has been extensively modelled and your assistants will be able to look up the proportion of the benefits that are really due to capacity relief on the west coast main line rather than the direct benefits of HS2 itself. That element of benefit is completely legitimate: if you can have 10 trains an hour from Milton Keynes to London instead of six, you get a capacity benefit out of doing that and more commuters can be located at Milton Keynes. That is the answer to one of the questions.

Another question—and a very interesting one—is how the model deals with pricing and differential pricing. Clearly, there is a very simple, convenient modelling assumption—well, let us assume that prices on HS2 are broadly the same as prices on the conventional network. It is easy to see why the models have done that, because it is a very convenient thing to represent and, as Lord Lawson has said already, there are quite a lot of difficulties in splitting the traffic between the conventional network and the high-speed network when you consider where the real origins and destinations are. However, I feel that the way in which the model deals with pricing is one of its weak points, and it would be better to be testing various premia, even though in a yield management world this is difficult to represent adequately. If you go on a train, there will be 100 different fares, if not more, being paid by the people sitting on it. This is a tremendous challenge for modelling and it is not easy to do, but I feel that a world in which high speed comes at a premium—not a large premium, because too much traffic will go away, but at some premium—should be explored further.

Q5 Lord Rowe-Beddoe: Going back to one or two of the subjects dealt with by Lord Lawson, do you think that this question of a shorter journey is attractive? When you hear that the shorter journey is of course the rail, but not necessarily from where you begin to where you end, has this really been taken into consideration with the timings that have been given?

Professor Mackie: There are a couple of points there. There is an access time model from people’s origins at Dore or Ilkley or wherever it might be to access the Meadowhall or Leeds station. The question is how accurate that model is, how much is known about how much of the traffic turning up at Leeds is from Ilkley or Bingley or any other sub-zone within the area. How good are the basic data? Also, how well is the inconvenience factor—of getting on a train at Bingley, travelling on a dark November morning to Leeds city station, walking down a road from Leeds city station to New Lane, where the high-speed train is going to be and getting on it—represented? Those are the issues with that. Suppose the model gets all that right; my answer is then that for long distance traffic journey time savings are valuable. Most of us coming from Newcastle or Leeds or Manchester to do business in London will be involved in 12-hour days, and if you halve the journey time, that will reduce it to a 10-hour day or enable you to fit in three meetings in the day instead of two. There are various ways in which those time savings can be converted into additional productivity, assuming that you think meetings like this are productive. I will stop there.

Q6 Lord Rowe-Beddoe: Professor Mackie, it is part of the case, which is why we are interested in this, that the question of distance is an important contribution in time-saving. It is part of the case that has been put forward. You are saying it—it is very difficult to predict, I understand that—but there clearly is a danger that we are only talking about
station to station and not the whole question of door to door. Therefore, it must be slightly dubious if we use station to station purely as time savings; it is not very helpful.

**Professor Mackie:** I agree. We should not use station to station. The issue is not that. The issue is the accuracy of the access model and whether the inputs are credible and believable.

**Professor Vickerman:** One of the things that is interesting here is that there are two effects working. One is the effect on the number of people travelling, and the second is the value that we ascribe to that over and above what they may be paying for that journey. Whilst it is not a very good piece of evidence to relate what happened with HS1 to HS2, it is the only bit that we have in the UK, and there clearly is evidence there that people are what is sometimes called “railheading”: they are making longer journeys to a station to be able to catch a high-speed train in order to get the benefits from, presumably, the reliability, even though they are paying a premium fare for it. You can see that particularly at Ashford, which is the major beneficiary of HS1. A significant amount of traffic goes through there now that probably would not have gone through Ashford previously, and so people are prepared, as it were, to take a penalty of having to go slightly further to the station to get what they perceive as a higher quality product. We can see evidence of that in France as well, but that British evidence does lead me to have some confidence in the belief that it will generate the levels of traffic that have been suggested and that there will be benefits associated with that.

**Lord Rowe-Beddoe:** Can I go back to Professor Mackie for a moment? Something stuck out. You were talking about the eventual importance there would be to Bristol and I wondered if you would like to explain that a little more and then say what would be the importance, if anything, to Cardiff.

**Professor Mackie:** I was conjecturing that in the context of the growth in income and population, which was the question about the plausibility of the background growth factors driving the growth curve of traffic, the assumption used by the DfT of 2.2% per annum compound growth for 20 years was reasonable. My answer was that these routes cover 80% of the core cities where you might expect growth to be, if anything, somewhat faster than in the nation as a whole. That is my conjecture and, as an afterthought, I did say that there are some core cities, like Bristol, which are not included in the corridor. I do not want to say anything more about Bristol or Cardiff or Glasgow or anywhere else.

**Lord Lawson of Blaby:** If I may just come back on one thing, one of you emphasised the importance of the reliability and I understand that. It is a great problem for businessmen—and, indeed, for other people—when train services are unreliable. However, this is a different matter from time-saving, which, as I say, seems to me to be a little dodgy. When you are judging the merits of a transport project or a rail project, you have to decide whether that cost can be used more effectively, more productively, in some other way. Is it conceivable that it might be possible, by spending a bit of money, instead of having, say, the high-speed network, to make the existing network more reliable, or is that impossible?

**Professor Vickerman:** I do not think it is impossible, but most of the studies that have been done on this suggest that it would be if not as expensive, you would spend a lot of money and not get the same sort of benefits. I think that is right.
Dr Niblett: Yes, indeed, and I would add that the studies have shown that the disruption to the national rail network of such upgrades would be such that the cost to travellers would be much higher than is commonly imagined.

Q7 Lord Griffiths of Fforestfach: I think it is true to say that in the way this case has been presented to the general public, the great merit of it has not been the saving of travel time. Somehow we are saying if we have this huge investment project it is going to raise investment, create more jobs and raise productivity and, in a way, the rate of economic growth is going to increase in the medium term because of it. Do you think that is a reasonable assumption?

Professor Vickerman: I am not sure that it is an assumption. It is something that one can clearly show. That if you reduce the cost of interaction within an economy then you will get productivity benefits and those productivity benefits will lead to growth. It is not an assumption that does that; it is something that comes out of a piece of standard economic analysis.

Lord Griffiths of Fforestfach: What exactly is the mechanism? I have to say that if one is fairly sceptical about the saving of travel time and so on, connectivity might be helpful, but the case for HS2 is really that it is a major step forward in investment and productivity in the British economy. It seems to me that simply to say that it is connectivity is a second-order effect.

Professor Vickerman: The connectivity in that is that connectivity is what is reducing the costs of the economy functioning and that is what generates the benefits. That is what you are paying for, and so the connectivity in terms of the effects of business-to-business activities, for example, is important in reducing the cost of those businesses.

Lord Griffiths of Fforestfach: Just give an example of the real benefit from connectivity.

Professor Vickerman: It is the simple fact that you can move more easily from one place to another and not just, for example, lower the cost of your activity in either the market to which you sell or the markets from which you buy inputs. It is also the fact that you can reduce the internal costs of a business that is going to have several locations around the country. Therefore, firms are able to bring the transport system as part of their own interaction and you can get benefits from putting your specialist activities in the right location where they can get the sorts of wider benefits that arise from what are usually called “agglomeration benefits”, which might happen within activities rather than more conventionally within industries. That lowers the cost to individual firms and that, therefore, makes them more able to compete not only internally but externally.

Lord Griffiths of Fforestfach: I can see benefits in the case of, say, supermarkets or the logistics business, but given that productivity is really being driven by technological change, where are you going to get the real breakthroughs in technology because of this better rail system?

Professor Vickerman: You could argue that this is part of the technological change. Therefore, it is one aspect of the technological change that drives businesses forward.
Lord Griffiths of Fforestfach: However, the argument here is that technological change will lead to an increase in productivity outside rail technology, and I am not clear exactly where this productivity is coming from.

Professor Mackie: There is a source of productivity through agglomeration. The story of the cities of the north is that they are too small relative to their international competitors and relative to London, and that this is a piece of infrastructure that can encourage some degree of rebalancing and some growth. I find that argument far more persuasive in the context of a package of measures in which the railway is just one piece of infrastructure alongside a whole lot of other counterpart measures that build science parks and co-ordinate activities of different sectors and so on in a much more comprehensive way than just putting down a railway and saying, “There you are, get on with it”, will do. So I partially agree with you, but there are other people who are going to come along in the next session and can give you a far more authoritative answer to your questions than I can.

Q8 Lord McFall of Alcluith: Last year, KPMG argued that the economic benefits of the new line could be worth £15 billion a year, I think they said by 2037. Do you find their methodology and conclusions persuasive?

Professor Mackie: Not very, and that answer is on two levels. First of all, there was a technical answer supplied by Professor Henry Overman of the LSE to the Public Accounts Committee when it went into all this, and there are technical issues relating to how those sums were done.

Lord McFall of Alcluith: He said that their forecast could be out by a factor of six to eight. Do you agree?

Professor Mackie: Yes, there are technical issues with their particular methodology, but there is a broader issue that I wanted to draw to your attention. There are issues about the macroeconomic assumptions that underlie the GVA approach. If you are willing to assume that the cost of HS2 is helicopter money that does not displace any other public investment and does not raise interest rates, then naturally you will get very large multiplier effects from investing public money in almost anything, including holes in the ground. I agree with Lord Lawson that it is more appropriate to assume that there is an opportunity cost of spending £30 billion or £40 billion on a railway, and that is spending £30 billion or £40 billion on some other piece of public infrastructure or some other alternative. Once you take those multiplier effects out of the calculation, the factor that you referred to begins to come down to something more manageable. At the moment, the Green Book is being revised and I really think it is important that the Treasury starts to provide some coherent advice on how to do these GVA or GDP-type calculations, because at the moment this is the Wild West and there need to be controls and guidance on precisely what macroeconomic assumptions are made when doing calculations of that kind.

Lord McFall of Alcluith: You mentioned earlier Bristol, Cardiff and Glasgow and that you would not go there any more. Well, I am going to ask you to go there. Is there an opportunity loss for these areas, and do we need to look at this in its wider context? We have had representations from 20 Miles More from Liverpool and we have had it from Aberdeen and Grampian Chamber of Commerce and others.
**Professor Mackie:** With any spatial project there are bound to be relative winners and losers, and in extreme cases there may be absolute losers. Before we get to anywhere north of Manchester and Leeds, we have all the routing issues about whether the network includes Stoke-on-Trent or Wakefield, and whether there will be winners and losers within the regions that are served, never mind the regions that are not served.

It is important to keep a balance in what this scheme is going to do and what other investment activities are going to be carried out on the transport network as a whole. You know as well as I do that in Britain it is really hard to get things done, and you have to start in the places where the returns look as if they are highest, and if it works you move on to HS3, 4, 5 and 6.

**Q9 Lord McFall of Alcluith:** We have been talking about productivity for 40 years and it is a conundrum really. Is this just a war of words about productivity, because there is nothing nailed down about what is going to be produced and what is going to be of benefit? From what I hear from you, it is proving to be loose talk about productivity and we have heard it all before. Alan Greenspan said in the 1990s in America that it was down to IT to deliver the productivity. There is a revision of that now, so we would like to nail down this issue about productivity and the benefits. If there are £15 billion benefits to the country, where are those benefits going to be felt? Are they going to be felt all over the country or is it just going to be sectoral or geographically confined? These are important issues before we go further.

**Professor Mackie:** I agree, and that comes back to Dr Niblett’s point about the amount of connectivity at regional level that the scheme provides. I can think of one scenario in which, as a result of HS2, we have small enclaves of glass and steel buildings in particular bits of central Manchester, central Leeds, central Birmingham and not very much else. I can think of others where, if there is proper regional connectivity, you could hope that the impacts would be spread out a little beyond the city centres to other locations in the region.

**Lord McFall of Alcluith:** What I am getting at here is how we can look at this project not just as a rail project but in the wider social and economic area. What can you provide to us that would help us to look at it in that wider way?

**Dr Niblett:** This comes down to very significant macro questions about the future of the British economy and where it is heading. There has been a lot of talk in academic circles about the growth of the knowledge economy based not just on technology but also on the transmission of ideas, of knowledge, and of services that relate to that. I would draw attention, therefore, to the kind of work that the late Sir Peter Hall and Chia-Lin Chen at University College London have done, which looks at how these kinds of economies in the knowledge sector developed in Paris and Lyon after the introduction of the high-speed rail line there. They identified that economic effects on different sectors will vary depending on how far they are away from your core megacity area of activity. Within a journey time of two hours, places like Lyon, for example, saw an expansion in their knowledge economy, and so I would suggest that we need first to identify what we want to achieve from our economic strategy and then see how that can be implemented.

**Lord McFall of Alcluith:** Have we done that sufficiently?
**Professor Mackie:** One thing that does not make it easy is that the Department for Transport is the sponsor of this scheme. For reasons that I, as a humble academic, do not fully understand, it is difficult to get cross-government buy-in; it is difficult getting CLG, BIS and the Treasury at the same table as the Department for Transport and all saying, “Right, what do we have to do in all sectors to make this thing a success?”, and not just to sit back and allow induced traffic and activity to happen if it wants to happen, but to, in an un-British way, a little more directive about making things happen. That is an important part of the story. Your colleague Lord Deighton has written a report that is partly about this, which I would commend to you, but I think it all starts from central government rather than the regions and the LEPs. In leaving it to the LEPs there is a risk you will miss an opportunity.

**The Chairman:** Professor Mackie, you have made some interesting remarks about what the Treasury should do to help this process along. I wonder if you could give us a note on your suggestions for exam questions we should set the Treasury in this regard.

**Professor Mackie:** I would be delighted to do so.

**Q10 Lord Shipley:** I want to pursue, first of all, the Y, because the Y does not get half way up the United Kingdom. I would like to know whether you have done any work on alternatives to the Y. In other words, when the Y was decided, after a great deal of thinking, were you content professionally that this was the right decision to have made? Secondly, have you done any work on the impact on the north of England? The KPMG report talks about the north and the Midlands doing better than London, and that may well be true, except of course that the north is a very big place, and coming, as I do, from Newcastle upon Tyne, obviously I might have a view about that. However, I am trying to get at what your view is about Y as a decision, but secondly, whether you think that the whole of the north and Scotland can gain, given that they will have rolling stock but will not have the high-speed lines. Have you done any research on the nature of the United Kingdom in terms of having access to high-speed rail?

**Professor Vickerman:** The Y, like any network routing, would be a compromise, not only in how far it goes but what it takes in on the way. However, the important point is not to try to think of the Y as something that stands completely separate from the rest of the UK rail network. It is important to have rolling stock, as is being designed, that runs on to the Y so that it serves the whole, whether it is Newcastle or Glasgow or Aberdeen. It is important to see it as part of that. Certainly if you look at the French experience with that, you see that they got very great benefits to cities that were off the high-speed network. Places like Grenoble, which is a great technical centre, is not on the high-speed network but has trains that run directly to it off the high-speed network. If you look at the whole rail network and what this is providing to it, it is coping with the problem of congestion on the most congested bits of the network and can then exploit benefits in the less congested parts of the network.

If I may just go back to the KPMG work, which I am not quite as hostile to as Professor Mackie, my reckoning on that is not that it is correct, but that it looks at things in a different way and asks questions that should be being asked. That is the importance of it. The question is whether that can then provide something that can be more refined in order to ask that, and it does go into great detail in trying to find out who the gainers and the
losers are, in some sense, and whether the gainers are big enough gainers to compensate the losers. Basically, the losers are those that would always, in a sense, be the losers from this, because they are the more peripheral parts of the country—places like East Anglia and the south-west—from that. However, they are not major losers compared with the level of the gains that can be made. Now, whether it is £15 billion or £8 billion or £5 billion seems to me to be a second order question to whether it is an overall gain. The answer is yes.

**Dr Niblett:** Professor Vickerman has given a very good response as to why the Y, in many ways, is probably the best compromise that exists. We know that the north part of the country above Manchester and Leeds is much less densely populated than that to the south of it, and the latter is also where we find the worst problems of congestion. Therefore, if you help to relieve that congestion between Birmingham and Manchester or Birmingham and Leeds, and as long as you ensure that that Y is properly integrated into the conventional rail network at multiple points, one would expect to find benefits transmitted to other places as well further off the Y.

**Professor Mackie:** Yes, I agree. You can construct an argument that Newcastle, Darlington, York, Preston—places that are not on the Y but are linked to it—possibly stand to do better than places like Bradford, which, as it stands, is not going to be directly connected to the network.

**Professor Vickerman:** Just to add to that, if I can go back to the French experience again, it is certainly the case that cities like Lyon and Lille benefited largely at the expense of the surrounding smaller cities at their hinterland, because they had direct connectivity into the network, so the places immediately surrounding them did not do as well from that. I think that is the Bradford effect or the Wolverhampton effect or whatever.

**Lord Shipley:** Of course, an advantage for places north of the Y is that they have city centre stations. Where you do not have city centre stations but you have ones that may take time to get to, I just wonder whether you think that the investment in the local infrastructure to connect those HS2 new stations to other places has been properly costed. There is an accusation that the benefit-cost ratio has not included those costs for the places that will have out-of-town new stations. Is that an issue? Is it a problem? Do you think it should have been done?

**Professor Vickerman:** I think it is an issue and it is an issue as to what investment you think is needed to connect those in, remembering of course that not every journey starts at a city centre by the city centre station. Therefore, it may well be that in some cases the out-of-town station could be better connected. However, I have to say that certainly the French evidence, which I am more familiar with, is that it is the places that have a city centre station or a city centre station that was used to create a new city centre, which is the case in Lyon, basically because of the congestion around the old station in Lyon Perrache. They built a new city centre around Lyon Part Dieu, which is one of the new industries—that sort of development. It is closer to it, but Lille Europe is similar, where they have tried to create something there.

The worry is the East Midlands one, Derby-Nottingham, because that is too far out and too far away from the main areas both of residence and activity. That will require significant investment, and this goes back to Lord Lawson’s point: yet again, it is about getting people
there quickly, not about it being at the end of a one-hour tram journey or something, if you extend the Nottingham tramway out to it. So that is important.

**Professor Mackie:** I agree. Sheffield-Meadowhall is also a worry. In fact, it is interesting to ponder whether the development of Sheffield and Rotherham should move to Meadowhall, which is in between the two and whether the centre of gravity of the city will change as a result of this piece of infrastructure.

**Baroness Blackstone:** Before I ask the question I want to pursue the Y for a moment. Do you think there is any risk that the base of the Y rather than the two arms of the Y might end up being the only part of this project completed, because of the huge cost of it, because of the disruption, because of the very considerable dislike of the project by people who are affected by its building? If that was the case, might there be a case for starting in Birmingham and going north and both east and west rather than starting in London and going to Birmingham? Has anybody ever thought about that?

**Professor Vickerman:** There has certainly been conjecture as to whether it is as well, and of course there are those even further north who suggest you should start it from Glasgow and build it southwards. The problem is that because the base of the Y is a very expensive and difficult part, not least because of the rebuilding of Euston and the tunnel from Old Oak Common into Euston, the danger is that you finish up with the bits at the north and you do not get the bit at the south. Potentially, that would be even more of a worry, because it is clear that the benefits to the northern cities are about connectivity between each other but are also about connectivity to London. I do not think you can cut it off and assume that all the benefits will be created up there.

**Q11 Baroness Blackstone:** Okay. My question is to you in the first instance, but I would be very pleased if Professor Mackie and Dr Niblett could also answer it. I want to quote what you said in your written evidence: “Evidence from around the world makes it clear that wider economic benefits are not automatic from high-speed rail investments”. What lessons can we learn from other countries? You referred to France just now in your reply to Lord Shipley.

**Professor Vickerman:** In Europe, we have most evidence from France because it is the most mature network, but we could look at evidence from Japan as well. The French evidence suggests two things. One is that simply building more arms to connect every region, which was the sort of political promise in France, was, to put it bluntly, a rather silly thing to do. It might have been good politics, but it was not necessarily good economics, because every bit of that network is not really an economic proposition.

The second part of that goes back to the answer I have just given not just about investing in transport in the locality but integrating it very, very seriously with the land-use planning of those cities. In many of these cases you get big concentrations of activity—and Lyon Part Dieu is probably the best example of that in France—and those sorts of benefits, but there are one or two smaller places that have done that as well.

What is also clear is that that local connectivity is important and that the places are served. There is a wonderful station called TGV Haute-Picardie, which is half way between Amiens and Saint-Quentin between Paris and Lille, which is known to the French as ‘la gare des betteraves’—the one in the beetroot fields—because, okay, there is a car park but trains do
not stop there. You have to think about this as a connection between major cities and to put the infrastructure investment into those major cities. This goes back to Professor Mackie’s point about joined-up thinking, linking regional and urban planning to the transport system and making sure that those two are in concert with one another. It is not necessarily that one drives the other; it is that they drive each other together if they have been planned in concert.

Baroness Blackstone: Do we only have evidence from France? What about other European countries?

Professor Vickerman: The Spanish one is starting to come forward, but the problem with the Spanish network is that what exists at the moment was completed more or less at the time that the Spanish economy nosedived. One does have difficulty. However, there are the same issues of where trains serve central stations and where they do not come up there and where developments are built around those. In Japan, again, you get it. You get a major benefit where it serves central stations in cities. Compare somewhere like Nagoya, which serves the central station in the city with good connectivity, with places like Osaka, where the high-speed line, for various geographical, physical reasons, cannot access the city centre and you have to change and you do not get quite the same sorts of benefits from that. Therefore, it is important to be able to integrate it well within the city and the development of the city, and also, as Professor Mackie suggests, perhaps re-cast the Sheffield-Rotherham area. These are big changes, but it means that the things fit together better.

Baroness Blackstone: Do the French think that their investment overall has been a good one? I do not mean the French Government necessarily.

Professor Vickerman: Yes, the investment on the whole is seen to be good, as far as the core lines are concerned: the north-south line, the northern line and the first bit of the south-west line, the Atlantique. It is the attempts to try to build other bits of the network slightly further that have been rather less successful.

Q12 Lord Griffiths of Fforestfach: We started out with the saving on travel time and so on, but as you have answered other questions, it seems to me, you have gone from the transport case to the economic case. As I heard it, in listening to the economic case it seems to me that you are implicitly arguing—and it came out occasionally from you, Professor Mackie—for a little more central direction. If this thing is to be effective, it requires not only local planning of land use and so on but a little more central direction from government. Is that true?

Professor Mackie: Is it true that I am implying that? Yes. I believe that something of this magnitude requires a Heseltinian-type figure to front the whole thing up, operate with the regions, operate with the sectors, and operate with the infrastructure providers, the combined authorities. We are not short of institutions here; it is putting them together and making them all face in the same direction to achieve something.

Lord Griffiths of Fforestfach: And you would see as part of that, probably, quite a lot of public investment alongside the rail, whether by local government or by central government.

Professor Mackie: My list of lessons includes where we have been successful in the past—I am thinking, for example, of the London Docklands Development Corporation—what
lessons we can learn from the possibly quite short list of land use planning successes that we can quote, and how we apply those in this context. One thing I would ask is whether there is any scope for a little flexibility in the planning of the key infrastructure. For example, we seem to be planning a rail line from Oxford to Cambridge, which is going to cross the HS2 line, which will not have a station between London and Birmingham for 100 miles. Accepting the thing about the potato fields, or was it beetroot, are we missing an opportunity if we say, “No, the distance between London and Birmingham on HS2 is greenfield and can never be built on.”?

**The Chairman:** Gentlemen, thank you very much indeed for a most productive session. You are very welcome to stay and hear the next evidence session, if you so wish. Thank you.
Manchester City Council and North West Business Leadership Team—Oral evidence (QQ 143-155)

TUESDAY 25 NOVEMBER 2014

Members present
Lord Hollick (Chairman)
Baroness Blackstone
Lord Griffiths of Fforestfach
Lord Rowe-Beddoe
Lord Shipley

Examination of Witnesses

Sir Richard Leese, Leader, Manchester City Council, Mike Blackburn, Deputy Chairman, North West Business Leadership Team, and David Thrower, Transport Consultant, North West Business Leadership Team

Q143 The Chairman: Good morning and welcome to this, the seventh meeting of the Committee’s inquiry into HS2. We are delighted to be here in Manchester. Thank you very much indeed for joining us. Perhaps I could kick off with a rather general question. In April 2014, YouGov found that 32% of people from the north were supportive of HS2, compared with 47% who were opposed. I presume, from your evidence, you do not share the opinion of those who are opposed. Why are you supportive and why is the majority of the population opposed?

Sir Richard Leese: I think the reason that not just I but the entirety of the Greater Manchester Combined Authority are supportive is that we see the development of High Speed 2 as being essential to the long-term economic future of not just Greater Manchester but the north. Perhaps a hint about some public scepticism is that they will look at now, not 20 years’ time. We are talking about a network for the future and, indeed, a network that is intended to give capacity for at least 60 years beyond that. The argument is relatively simple: it is that good transport is absolutely essential to a thriving economy, and the easiest way to demonstrate that is to look at the converse. If you had had to arrive here by stagecoach,
you would have noticed the economic impact of that. Good transport is essential. We do not have that north-south; we do not have it east-west either, but if we look at north-south, the highways network—the motorways—is increasingly congested, particularly the M6 between Manchester and Birmingham. Our railway network is increasingly congested in two ways. First, trains are increasingly full because of the growth in passenger numbers, but there is no capacity within the network for running additional trains or even longer trains. Virgin has already extended the length of its trains and cannot do any more. There is no more capacity, not just for passengers but for freight as well. Unless we address that capacity issue, not only will it prevent growth in our economy but it will start to constrain our economy. It is principally about capacity, although it is the case that speed matters. The quicker you can get goods to market, the quicker you can get business connections, the quicker you can get more skilled workers within range. It is principally a capacity argument but speed counts also.

Mike Blackburn: To go back two or three years, it is fair to say that the HS2 argument and debate in the public domain through the media tended to be about speed. It may be that we should not have called it “High Speed” in the first place. Therefore, the question that people were asking was, “How would you like to get 30 minutes off your journey? And, by the way, it will take 30 years to get there”. Therefore, most people were not engaging at all. Businesses we talked to in Manchester through the Chamber of Commerce and through the business leadership team again could not see the argument first. As Sir Richard pointed out, once you start talking about the capacity getting fuller by 2020, and ask, “We will have this number of passengers and no more extensions. Do you want to go back to the way it was in 2004-05, when we had five years of closures on the West Coast Main Line, just to upgrade the signalling system?”—I remember that my journey was taking between five and six hours from London on a daily basis—I was commuting at the time. It was taking five or six hours every day to come back. That was just nonsense—and once you start engaging in a conversation around the impact of those increasing levels of passenger numbers and the slowing down of journeys, and the effect that that would have on the economy, then you start to have a different engagement. The last two years have been a completely different engagement with businesses and people about the impact that HS2 could have. Now, I suspect, if you ran the YouGov poll again, you would get a different set of results. Now the Chamber of Commerce is completely behind it, as is the business leadership team. As you go around the north, from Liverpool across to Leeds and Sheffield, again, chambers are absolutely behind it because there is recognition that the capacity constraints will hit our ability to grow our economy and therefore get thriving businesses.

Q144 The Chairman: You are in a unique position working in BT to understand and perhaps explain to us the impact that superfast broadband will have on work and travel patterns.

Mike Blackburn: First and foremost, I am here in my capacity as a representative of the North West Business Leadership Team, so I am not here to give a BT view on HS2. However, as regards superfast broadband, it is not an “or” conversation; it is always an “and” conversation. Technology for the past 15 years has had an impact on people’s lives, both at a business level and at an individual level. We now have some 75,000 people who do not have an office base, who can meander round the country but then need to go into
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offices; and about 15,000 people are working at home. Superfast broadband for those people will be absolutely helpful, as it will be superbly helpful to businesses as they address new markets and new customers, and therefore make a more effective and economic business. But it is a not a combination: people are not going to live at home, work at home and stay at home for ever. Businesses still need to communicate and connect. You still need to get your goods and services to market, and there is nothing like a face-to-face conversation. You can do that by video conference, but more effectively you will do it by collaboration and face to face—and the combination of the two. That is how we run our business—with a combination of those two things together. It is not an “or” conversation; it is an “and” conversation.

David Thrower: Very briefly, obviously I endorse the things that have just been said. The issues of passenger capacity are paramount. The difficulty that we have had in terms of the YouGov poll has been getting across a mass of detail to the public succinctly, in a way that they would understand, with all due respect to non-technical people—and to get them to take a long-term view. It will take 15 to 20 years to deliver a new rail line. We know from Network Rail’s route utilisation strategy that it is expecting another 60% growth in inter-city traffic to Manchester between now and 2024. Now, obviously, some things could be done with the existing railway; you could squeeze in an extra train, add an extra carriage, demote coach G to standard class or whatever. However, doing those things will buy you only five, seven or 10 years. At the end of that 10 years, you find yourself with an even fuller railway, nowhere to go and facing the same problem that we are facing now, which is, what do we do for the years 2030, 2040 and 2050? Because rail infrastructure has such a long lead time, especially in this country with the planning processes and consultation periods, we need to think as soon as possible and get started as soon as possible in terms of solving the problem that will be upon us in the years 2030, 2040 and 2050. When you talk to people, you find that although they are sceptical about HS2, what they are actually most sceptical about is whether it will happen. They are not against it but just shrug their shoulders and say, “This is Britain, and I’ll believe it when it turns up”. But then, of course, you can point to Germany, Italy, Spain, France and China, and they ask, “Why can’t we have that, too?” The YouGov poll is more a reflection of their lack of faith in the processes than their lack of belief in the outcome.

Lord Rowe-Beddoe: The YouGov poll was earlier this year and your suggestion was that the basic attitude was, “It’s not going to happen, and that’s why I’ve got a problem with it”. Is that what you are saying?

David Thrower: I think the tone in the press—some of you will have seen the Sunday Telegraph last Sunday—is still one of scepticism, verging on complete disbelief. The reality is that the number of staff is in four figures, and they have been working on this scheme for four or five years. The scheme has been worked up to a great degree of detail, and a considerable amount of money has been spent. They know the alignment of the route to great precision—down to the last inch, in imperial terms. There are still some big decisions to be made about Toton and Meadowhall, but on this side of the Pennines we are very clear what we are asking for and what we are getting. I do not think that the media have caught up, with due respect to the press, in terms of the progress that has been made. An enormous amount of work has been done by High Speed Two Limited, and it deserves more credit than it is getting for it.
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Sir Richard Leese: Perhaps I may add something. One thing that we have not adequately conveyed is that HS2 is not exclusively linked to London. If you are on the east coast, the links between Leeds, Sheffield and Nottingham are vastly improved, as are the links to Birmingham on the west coast. Our link to Birmingham is even worse than our link to London—and on to Bristol and other places beyond. Secondly, and I think this is one of the reasons for public concern, there is the issue of cost. To the public in general the notion of spending £40 billion or £50 billion on anything is a tough ask. That is the task for us—to do rather more to explain that major transport infrastructure carries those sorts of bills with it. In terms of major transport infrastructure, what seems like an enormous sum of money is not actually that enormous. As a country, we underspend on transport infrastructure and have done so for a very long time.

Q145 Lord Rowe-Beddoe: Do you think there could be a danger that greater connectivity could increase the north-south productivity gap—that greater connectivity could cause a decrease rather than increase in productivity?

Sir Richard Leese: The evidence we have available would suggest that that is not true and that good connections to the primary economic generator are a benefit rather than a disbenefit. If you look at smaller towns and cities around London, such as Swindon, Reading and so on, they have done remarkably well economically, largely because of their proximity to London and their ability to feed off it. If the argument is that the north will be killed off by high-speed rail, Swindon and Reading would have been killed off a long time ago. Some evidence has been published by KMPG. It says, “Yes, London does benefit and there is no reason why it should not benefit from high-speed rail but the rest of the country benefits a lot more”. I would be very confident that, generally, the Midlands, the north and beyond would get far more benefit from High Speed 2 than London. There are things that we can do to increase that benefit even more. David Higgins has talked about east-west connectivity in terms of high-speed rail and the economic task force associated with that, and what we can do in terms of the required targeted regeneration activities to maximise benefits. Just on its own it would increase economic activity at a greater rate. We can do more to accelerate that.

Mike Blackburn: One thing that Richard did not comment on, but links to the first question, was that the economic impact of the additional capacity therefore is released and has to be taken into account. Therefore, the east-west activity that is going on now through the northern hub and other electrification that is going on—fingers crossed for HS3 and the One North proposal—mean that you release capacity by building HS2 in the local areas. That means that businesses in the Greater Manchester area can get access to skilled resources, where currently it is ineffective to get access to them. It takes over an hour to get to Leeds and over an hour to get to Birmingham, and high speed will release the capacity to be able to do that. Businesses cannot employ those people because people do not want to go to Manchester or to Leeds because it takes too long. Similarly, it reduces productivity costs by decreasing costs because the costs of journey time therefore of getting your goods and services to market is massively improved by having HS2, as well as getting access to different markets.

David Thrower: We included in our submission a couple of quotes from early Victorian times. We pointed out the fear of English cities and towns that if they were connected to
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the railway it would be their downfall. If the theory that improving our connectivity would worsen the north’s economy was true, I cannot help but feel that that suggests that worsening our connectivity would make us better off—that we should add another hour into our present schedules to London—although I do not think anyone believes that for a moment. The experience of France was very much that Paris benefited very greatly from being at the heart of the spider of TGV lines and that was not at the expense of cities such as Lille, Lyon, Bordeaux and so on.

Lord Rowe-Beddoe: This goes on, because we took evidence last week from Monsieur Emile Quinet who was heavily involved in the creation of the TGV network and is a great proponent of it. He said that he thought that Paris had probably benefited more than Lyon in France. The thrust of this question obviously is: is it going to suck people down into the south-east rather than produce the increase of capacity and, more importantly, investment and job creation in the north? That view was also held by two Spanish academics who apparently researched this. They said that the number of passengers on rail trips to Paris had increased more than those from Paris as a result of the high-speed rail.

It is something which particularly concerns us. I would appreciate if you have a comment.

Sir Richard Leese: I have seen those data, but the direction and number of rail passengers do not necessarily correlate to economic activity in any of those places. There are also data which suggest that cities such as Lyon and Lille have had faster rates of growth than the Ile de France—in GVA terms rather than in passenger number terms. Although it is relatively early, that seems to be reflected in cities such as Zaragoza in Spain as well. Those figures are almost certainly right, but economic activity, decreases in employment and increases in GVA and so on suggest that the connected cities outperform the capital in France. Another factor goes with that: there is also a body of evidence that those countries which invest more in their second-tier cities—we are a particularly bad example of that—not only does the performance of the second-tier cities improve, the overall national economy improves. I see High Speed 2 as an example of investment in our second-tier cities and not as investment in the capital.

Q146 Lord Griffiths of Fforestfach: In its evidence to us, the Greater Manchester Combined Authority said that the economic potential for HS2 could not be realised unless the local conditions were right. Following on from the last question, I can see that London is the largest city in Europe, and it is something of a magnet attracting people to itself. The time to get there from Manchester and Birmingham will be reduced considerably, making London more attractive. In terms of commuting times at present, you are making the Midlands and the north that much easier to get to. In order to get people coming back to Manchester, what sort of thing do you have to do to make it a competing magnet? One thinks of the way in which Boston or Grand Rapids in America have become huge centres in terms of medical facilities. I thought coming up on the train: the BBC has moved part of its work here, but what if it moved its headquarters here and just had an office in London to deal with news? Do you see projects like this that could transform Greater Manchester?

Sir Richard Leese: I think the idea of the BBC having their headquarters here is fantastic, and I hope that it will be one of your recommendations in your report. Starting from where we are at the moment, Manchester as a city is not struggling to attract people. Over the last
census period between 2001 and 2011, our population grew by 19%, which made us the fastest growing city in the country. Most of that growth is in young people. The very biggest element in that growth is in people aged between 25 and 29, largely high-skilled graduates. We are a net importer of graduates as a city as well, so we have a good base to build on.

You rightly asked about the comments that the combined authority made in its written evidence. They are largely about making sure that we have the local infrastructure in place to be able to support high-speed rail. That means that from Piccadilly station we have both the local commuter services and the intercity services across the north, which allows people to be able to access the network quickly and easily. We need that complementary investment to be able to support high-speed rail. Similarly, around the railway stations, we need to maximise the regeneration benefit in the way you see around Kings Cross on the back of the St Pancras development. That is certainly our very clear intention—we shall not do the same as there, because we want to do it in a Manchester context, but we will maximise the benefit in those ways. That is what we are talking about here. If we want to maximise the benefit from high-speed rail, we have to do things here, too.

Mike Blackburn: If you look at the economy in Greater Manchester and compare it to London, you find a complementary economy rather than a competitive economy. Therefore, when you upgrade any transport mechanism or transport system, you are always going to get movement of people. So if Manchester upgrades it, what happens to Burnley, Preston and other places around Manchester? Things just change. But we are very complementary to London, with 250,000 professional services workers in Greater Manchester. They deal with a professional services portfolio of areas that are very different to London’s in terms of investibility, so it is complementary not competitive. You will see some movement coming the other way, as people move their businesses to the north-west, based in Manchester, because that is where professional services are based for those people. Equally, our science and technology offer, which is world renowned, with the stuff that we are doing on graphene and materials generally as well as on nuclear, is very complementary to London. There is nothing like it in London at all. So we have to play to our strengths. We have to understand what our strengths are as well as our weaknesses and assets and play to them as an economy. That is exactly what the combined authority and the business organisations in Greater Manchester are doing—playing to those strengths in the key areas of economy that we know will grow and are attracting investment already. Therefore, we can see a projected growth in volumes of people, which is going to take those out of London not in a competitive way but in a very complementary way.

David Thrower: Part of Sir David Higgins’s concern in his report is that the whole of Britain, and England in particular, has become economically unbalanced. We are in a very good position in the north of England to offer lower rentals, a big workforce and so on, but we are starting in some ways from quite a divided country. I do not know how many of you have read the Cities Outlook 2014 report, but from the top 10 cities for business start-ups only one is in the north of England, and that is Warrington. Of the top 10 cities with the highest business stock, none is in the north of England, and of the top 10 for patents granted or the addresses of patentees, none is in the north of England. Then you get into the house price thing, where you get a 22% rise in London matched by a 4% rise in the north of England. One of our concerns is the average wage divergence. Not only are average wages much higher in the south-east but the gap is widening steadily so that between 1997 and
2011 the average wage in the north-west of England went up by 60%, while in London it went up by nearly 80%. So we very much feel part of the overall drive to move some of London’s economic activity to the north of England. We have to do that by being more competitive and observing market forces, but providing the infrastructure to be able to do that is part of the picture.

Q147 Lord Shipley: Can I pursue two different issues based on two things that you have said so far on which I am not clear? In the evidence that you gave us of 22,000 jobs in the area by the early 2040s, how much of that is actually relocation displacement from elsewhere to the north-west of England? Mr Blackburn, you said a moment ago, if I heard you correctly, that business will relocate to the north-west as a consequence of HS2, but you then said, “based in Manchester”. What studies have been undertaken to work out what the displacement effect of the HS2 coming to Manchester would be on, say, the rest of Lancashire, east and north Lancashire, and on Merseyside, as well as in the area to the south such as Stoke-on-Trent?

Mike Blackburn: I will take the last points first, if I may. Yes, some business will relocate into Greater Manchester, and some will locate into the peripheries around Greater Manchester, whether it is into Lancashire, Cheshire, Merseyside or the rest of the north-west. Businesses will locate where they decide to locate, and where the economic conditions are right for them. But I was talking specifically about areas such as science and technology and nuclear, where some will go to Cumbria and north Lancashire and some will go to Manchester, because they are complementary in their nature. With materials, we are hugely superb on the international stage, with Liverpool, Leeds, Manchester, Sheffield, Imperial, Cambridge and Oxford the seven big points for it. We have got four of those in the north, but they all do specifically different things. Some businesses that want to do advanced materials in the area that the University of Manchester is involved with will come to Greater Manchester, while those in the area of tropical medicine will go to Liverpool. So the economies of that are very different between all our northern cities. Of course, we have our own inward investment arm in Greater Manchester, MIDAS, which is out there talking to international as well as domestic businesses, trying to encourage them to come to Greater Manchester, where we think that we can offer them good economic conditions and great housing. The two main, critical things that businesses always ask about are the plans for skills for young people through to adults, retaining talent, as well as the transport links. They want to know about local transport, regional, national and international. The third reason why I think our economy is very different from the rest of the north-west and why we are a gateway is because of our international airport. Manchester has the second biggest international airport in the UK. Therefore, it is naturally a hub to connect the whole of the north of England and the Midlands—arguably the whole of the UK in some respects, but certainly the north and the Midlands. It connects all of those. So we see Greater Manchester as a natural economic hub through which it gets economic growth locally in the north-west region and in England more generally.

Sir Richard Leese: I think that it is quite complicated question in many respects. First, you have to bear in mind that railways are not the only show in town, although they are very important. For example, Liverpool SuperPort will have a very positive impact on the
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economy in Liverpool but will also have wider implications for the north-west. There are other developments that have to be taken into account when we look at this.

In terms of job growth, there will be relocations in either direction, but we can clearly say that there will be net growth; these are net jobs, taking account of flows that go in either direction. Certainly, a fundamental part of our argument is to reject the traditional Treasury view that economic growth is a zero-sum game, such that if someone gets over the expected average in one place, it has to be because there is a reduction elsewhere. Our clear argument is that by doing the right things—and high-speed rail is part of doing the right things—you get accelerated growth that will lead to overperformance against whatever target has been set. That is certainly what the north of England says.

We have talked about the risk of the concentration of business in Manchester rather than in the wider region generally. We have a number of bits of evidence that suggest that that is not likely to be the case. First, it is about who works in the major centres, whether that is Liverpool, Manchester or Leeds. Currently, more people who work in Manchester do not live here than do, and they take income out to wherever they do live. Secondly, in terms of business start-ups, there is a lot of evidence that businesses start and grow in the core of a city—in this case that would include Trafford and Salford as well as Manchester—but there is then a tendency to move out. So there is a displacement that goes the other way. Thirdly, not all businesses can be located in city centres or urban areas. Quite a lot of businesses are completely unsuited to being located in the core of a city and they are in some of the industries, such as automotive and aerospace, that this region is particularly strong at.

Q148 Lord Shipley: Thank you for that. May I pursue the second issue, on which I would like greater clarification? Lord Griffiths asked about local conditions being right, and mention has been made of complementary transport infrastructure policies to make HS2 work most effectively. However, I am not clear who is funding those complementary infrastructure projects. To give a specific example, Manchester Airport will have an HS2 station, but it will not be met as part of the HS2 project. It will be funded partly by Manchester Airports Group, partly by Greater Manchester Combined Authority and partly by Transport for Greater Manchester. What is not clear to me is who is going to be paying the biggest percentage of that. Some of the money that we are talking about here is, I think, actually government or public money. I wonder what thought has been given to how all these additional complementary projects are going to be funded.

Sir Richard Leese: The most direct answer to that is we have not yet resolved how the Manchester Airport station is going to be funded. The economic case for the Manchester Airport extension—which is not simply about the airport itself but about the ability to serve a broader area including the southern half of the conurbation and north Cheshire—was made on the basis that it would generate sufficient economic activity, which would eventually come in tax returns to the Treasury, justifying the station being there. That could leave us looking at the classic Nine Elms power station sort of solution to funding the station, which would appear to be viable. But there is still a piece of work to be done there.

Q149 Baroness Blackstone: When we received evidence from Professor Overman at the LSE, he told us that he thought that local investment in your transport infrastructure would lead to greater economic growth in Greater Manchester than HS2. I wonder whether
you agree with that and also whether you think that the speed of such investment could be rather greater than HS2 in terms of producing some returns for you. You, Mr Thrower, said at the beginning that it would take us to 2040 or 2050 before we really saw the true benefits of HS2. Many of us in this room will be dead by then, as will quite a large part of your population, so their scepticism about this investment might be understood on those terms. How do you respond to what Professor Overman told us?

Sir Richard Leese: I have a lot of respect for Professor Overman. He was part of the team that oversaw the Manchester Independent Economic Review and the subsequent strategy. Part of the benefit of that was that he was sceptical that there would be any growth anywhere outside of London ever—that was a useful addition to the debate but not something that we would necessarily agree with. There is other evidence. In particular, the Northern Way, in its day, made a direct comparison between investment in local transport infrastructure and intercity links, and came to the opposite conclusion: you got more benefit out of investment in intercity links than you did from investment in local transport infrastructure. I think that the reality is actually in between those two and that if you are serious about maximising benefit, you have to have investment in each of local, intercity and long-distance transport infrastructure. It all needs to be linked together and properly integrated. That is what we have got an opportunity to do now, not just with High Speed 2 but with the developing plans for One North and, as you go further south, the Midland link and with being able to integrate local transport plans with those. That is the right place to be. These are not “either/or”s, they are “and, and, and”.

Baroness Blackstone: You are not prepared to attach greater priority to one or the other?

Sir Richard Leese: I think it would be very short-sighted to do that. We could have a wonderfully connected Greater Manchester, but if we are not connected effectively—not just to the rest of the UK economy but to the global economy—that will not help our economic growth. Similarly, on east-west links, we can have a superconnected north, but if the superconnected north is not connected to the rest of the world, that is going to undermine our long-term economic prospects. We need all of those things. I would also say, from a northern perspective, that we have been too willing to expect bits and bobs here and there. Here is an opportunity to start a major stage of developing a proper transport network for the country, looking to the next century. We should not miss this opportunity, but it requires all those elements to be able to do that.

Q150 Baroness Blackstone: You have put a lot of emphasis on intercity connections and their importance. In that what view do you take of the trans-Pennine investment, HS3, and the Chancellor’s announcement not very long ago that the Government may have missed a trick or two in not coming up with a proposal for this earlier? The evidence that we received last week from the Mayor of Liverpool and the two chambers of commerce in Yorkshire was that this should be given greater priority over HS2. I would like you, if you can, to answer that question. It is very easy to say, “We would like to do everything”, but this is a matter of making difficult choices sometimes because there is not always the money to do everything. Do you agree or disagree with that proposal from Liverpool and Yorkshire?
Sir Richard Leese: I disagree, quite clearly. There is not an evidence base to support that contention anyway. The work that has been done suggests that within the context of the likely transport budgets over the next 15 years the proposals that have been put forward are affordable within that context. I should say that I also chair One North, so I have been overseeing the work to develop that northern investment framework, including what is mistakenly called “High Speed Three”, a 125 mph railway line. I think David Higgins was absolutely right when he said in January that if we want to maximise the benefits of the north-south links, we need to improve trans-Pennine links, east-west links, which need improvement anyway. The fastest train between Manchester and Leeds, and there is only one an hour, takes 48 minutes, which for a distance of less than 40 miles is ludicrous. They need improving but to improve those in isolation from other transport links will not give us enormous benefits. From the perspective of Liverpool, a big issue for it, given the ports at the other end such as Hull, is freight. Ultimately, its freight needs to get on to the East Coast Main Line or the West Coast Main Line. If there is not the capacity there, it will just get stuck in a siding somewhere between Liverpool and Hull. Those links on their own will not provide the benefit. I would say, from a One North perspective, having chaired it since its inception in January, all the work that has been done by it, particularly on the new railway line, is predicated on high-speed rail being built. We will not be able to get effective links between Leeds, Sheffield and Manchester in an economically sustainable way without that high-speed line, in particular between Sheffield and Leeds. That is a prerequisite in order to be able to get that effective east-west link.

Q151 Baroness Blackstone: May I ask you about the timing? Would you have to wait to do the east-west link until HS2 has been started, or would you begin that immediately to try to get the benefits from it? Which would you start first?

Sir Richard Leese: It is a good question. First of all, the One North plan indicates that we can make a number of improvements to east-west links, including completing work already underway—the northern hub, electrification of a range of lines and so on. There some improvements going on, particularly north of Leeds—going off to Newcastle and the north-east—that can be done on an incremental basis en route to this. Our estimate is that the new east-west line needs to be in place by 2030. We also have an argument that once all the necessary approvals are in place, high-speed rail does not need to be built in a straightforward linear way by starting at the south and just keep building north. Part of our argument would be that as soon as the powers are in place the Leeds-Sheffield section should be brought forward in the Bill, because that would facilitate those improved east-west links. Our study at the moment shows that 2030 is when the line will be needed. However, that could be accelerated simply by the order in which high-speed rail is built.

Mike Blackburn: I should like to make a couple of points. We in the North West Business Leadership Team wrote a booklet on transport. It fully endorses from business perspective exactly both your line of questioning and the way in which Sir Richard has answered. We talked about short, medium and long-term priorities for transport and said that you cannot disassociate the medium from the short and the short from the long. You have to have a continuum. We also said, “Be careful of the unintended consequences if you do not follow through on your actions”. For example, upgrading the A556, which is a bit of a bottleneck in the north-west, without thinking about the impact on the next piece of motorway is short
term and short-sighted. We argued for a truly integrated set of planning around transport, including road, rail, air, metro, walking and looking from a business perspective—saying that you cannot stop the short term just because HS2 is coming, because HS2 will not resolve all the problems we have around capacity and interconnections. Equally, to reinforce Sir Richard’s point, if you have a fantastic metro in Greater Manchester, which is growing now and getting better, but which is not connected to anything else, it merely supports the people within Greater Manchester. As Sir Richard was saying before, the economy is based on the vast majority of people coming from outside Manchester into it, as well as on people going into Leeds and Liverpool. So the whole thing is completely connected and you cannot do HS2 without thinking about how you take the northern hub, look at its interconnections and local links, then grow that into HS3, and then grow that into the airport, with its international links. It is absolutely all interconnected. By doing that, you get the most leverage—a sort of compound leverage—on the impact of spending on all those parts. It is only when you have done them all do you start getting that compound effect. Up to that point, you do not get as much.

Baroness Blackstone: I just comment that these are very expensive projects, so I assume that you think about the opportunity costs of investing so much money in rail transport, as against other things that might generate economic growth.

Sir Richard Leese: One North’s work makes those comparisons with other modes of transport. One North is a multimodal proposal, which covers roads and rail, including freight and passengers. In that sense, it is quite unusual. We are now doing more detailed work to cost that and build the business case, including the economic benefit case. That is why I say that I am surprised by the comments Mayor Anderson from Liverpool made, because we have not done the economic case yet, so the evidence base is not in place. The estimated total cost of the package between now and 2030 for the entire pan-northern scheme for the north of England, which includes all the incremental bits and so on, is less than the cost of Crossrail. That does not seem to me to be an enormous investment for the north of England. In terms of the totality of high-speed rail itself, it is a large investment in terms of the total sum, but if you take it as a proportion of even just the transport spend over the 15 to 16-year period of investment, it becomes not that enormous in proportional terms.

David Thrower: Just looking at the size of the investment in London, which obviously we are very supportive of, Thameslink is costing £6.5 billion and Crossrail £15 billion. London did not have to choose between Thameslink and Crossrail; it rightly has both and is rightly looking at having Crossrail 2. There is a historic underinvestment in the north-west, not just in the rail network but in much infrastructure, including transport infrastructure. We are trying to catch up with the two-thirds remnants of the Victorian railway system and turning it into a 21st-century transit system that connects all the cities of the north. If you look at the north-west of England, it has a population of 6.9 million. If you cross the Pennines, you can double that straight away. The population of the north of England is every bit as large as “greater Greater London”, if I can put it in those terms. The amount of money that has been spent on upgrading the infrastructure in this region is paltry. I think that you would be quite shocked. We have 30-year old trains running at an average speed between here and Stalybridge at 29 mph, which even George Stephenson would find was slow. In terms of Manchester to Leeds and Manchester to Liverpool, there is also a problem with trying to
disaggregate the stopping trains from the fast trains. One problem that we have in the north of England with the polycentric cities is that people want to get from city to city quickly but there are lots of places in between that need train services also. There are lots of small stations in between which are quite well used but you only have two tracks. You really need to segregate your fast trains from your slow trains. We struggle to do that in the north of England as there are very few places with four tracks. I was co-author of the paper that led to HS3, with Sir Peter Hall and Professor Ian Wray. We saw the very first phase of HS3 as something going on right outside now, this minute—electrification from Liverpool to Manchester. It will be opening in February or March next year. That was our first phase, and our second phase would be Manchester to Leeds. The third phase would be extending with extra tracks, and a new tunnel through the Pennines would be the fourth or fifth phase. That gets us to Sir Richard’s 2030 date. So it is important to recognise that we are coming from a bad place to start with. We have a lot to do to catch up. Our infrastructure in terms of city-to-city connectivity is remarkably poor. If you look at the sorts of speeds that places such as Peterborough and Swindon have, or even places like Basingstoke, when compared with the north of England, we are really down in the bottom league. The average speed from Marseilles to Paris is 154 mph. That makes our trans-Pennine links look extremely unattractive. Yet our motorways are very congested and we very much want, and all the policy documents point trying to get, more people off the roads and on to electrified railways, for reasons of business efficiency, reducing congestion and, of course, the environment.

**Q152 The Chairman:** Sir Richard, from your position as chair of the Northern Hub, do you see primary responsibility for co-ordinating this as resting in the region or in central government? We have had conflicting evidence on that issue.

**Sir Richard Leese:** It has to be shared. We are talking about a national transport infrastructure, and that needs to have an element of leadership nationally. However, a lot of the planning needs to be informed by local knowledge, which is not necessarily available in the Department for Transport or in Whitehall. What we are currently putting in place for One North work are steering arrangements that would have that mixture of involvement from local bodies, both private and public sector, but also from the Department for Transport, Network Rail, High Speed 2 and the Highways Agency. So this needs to be a shared activity, which is what we are putting in place.

**The Chairman:** And do you have the resources available to Northern Hub, if we can use that as the umbrella organisation for the region, to play a significant part in this?

**Sir Richard Leese:** In terms of developing the plans, it probably is sufficient, although that is largely down to the role of the North of England, particularly in the metropolitan areas, having organised itself into combined authorities, so it is not individual authorities all doing their own thing, which has given the capacity to be able to take a more active part in developing major programmes. I think that at some point in the cost of this, clearly Network Rail will be able to apply some financial underpinning of development. That is the case because that is where the lines are at the moment.

**Q153 Lord Rowe-Beddoe:** Can we deal with capacity, constraints and overcrowding? I will put those together. I will ask the obvious question: are there currently capacity
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constraints on the rail network in Greater Manchester, and if so, where would HS2 help them? The second part is: on the Virgin train service between Manchester and London, are there currently overcrowding issues that you think should be dealt with now?

**Sir Richard Leese:** If we run through things in that order, recent figures—I think from the Department for Transport—show that two of the 10 most overcrowded trains in the country are trains from Manchester to the north-east; so yes, we have very real overcrowding problems. I say from experience that you can get a train from Newcastle to Manchester, and people stand from Durham all the way, so there are very real overcrowding problems there. Our commuter train services are operating to up to 90% over capacity and people have to stand for longer than 20 minutes—that is normal. So there is a lot of overcrowding on commuter train services. On Virgin services to London, there are times in the week—I suppose the biggest peak is probably on Friday afternoon—when there is severe overcrowding on the services, and there are periods of time when if you have not booked, you are not allowed on. There are times in the week when that is not the case, but there are periods in the week when there is overcrowding on those services. When you talk about longer-distance services, such as Virgin and CrossCountry services to Birmingham, Bristol and so on often suffer severe overcrowding. How does high-speed rail help those issues? Basically, it releases capacity in the existing network; again, not on its own—other work is under way, not least the Northern Hub work, which should be completed by 2018. However, taking those very long-distance services off the classic network gives us the capacity to run more services on that network, to deal with more localised inter-town services and commuter services.

**Lord Rowe-Beddoe:** To what extent do you think longer trains and reconfiguration of first class and standard class could alleviate some of these issues? I speak as a Welshman; I have taken many a train from Birmingham to Wales, and it is a horrible journey. It is horrible because there are only two or three carriages. That is one of our CrossCountry trains.

**Sir Richard Leese:** Mr Thrower referred to this earlier. Part of the One North plans are about first of all having more modern trains, but also longer trains with more capacity. We are now planning, or attempting to plan—in a way that is probably quite unusual for this country—for something that is more than a decade away. Longer trains, which require investment and longer platforms—we have quite a lot of stations that cannot take longer trains—will buy us a few years. They are not a long-term solution to the issues we face.

We tend to concentrate on passengers here as well; it is worth bearing freight in mind. Something like 43% of rail-haul freight will use the West Coast Main Line. With the sort of developments we are seeing both in Hull, where there is major port expansion, and in Liverpool and Teesport, we want a lot of that freight to be on rail, because our road capacity is also full, and we also need to free up capacity within the classic network to be able to carry that freight as well. Freight tends to get ignored but it is very important.

**Q154 Lord Griffiths of Fforestfach:** I wonder whether I might clarify my understanding of where you are. I think, Sir Richard, that in your opening statement you said something like, if we are to have continuing economic growth, an effective rail system is important, so the two are complementary. However, when one reads the case for HS2 from government
Ministers and so on, it is that HS2 itself, at a huge cost of £40 billion to 50 billion—against whoever is in the next Government and considerable austerity—will drive growth. I can see the argument you first made when you said that, in a way, obviously one needs to improve infrastructure as well as growth. But are you saying that spending this vast amount of money will drive growth itself and productivity?

**Sir Richard Leese**: Yes, in a number of respects. That investment in infrastructure, and the fact that it is over a long period of time, has the potential to develop and grow a whole range of industries in this country, ranging from the building of the railways themselves through to the provision of trains—something that we are now beginning to build with all the new plant in the north-east coming on stream. There is sufficient throughput to justify that sort of investment, and that will help to build the economy. Once we start building trains for ourselves and start developing the skills that go with that, we might even start building them for other people, as we once did. How does transport drive economic growth? The way that government normally assesses this is simply through passenger journey wait times. The DfT’s evaluations of the economic benefits of any transport project are nearly always gross underestimates because of the way the DfT does them. We have been attempting to develop slightly more sophisticated mechanisms that look at the impact that they have on productivity and on the business-to-business connectivity that Mr Blackburn was talking about, putting figures on the real potential that comes out of that. That demonstrates, with examples from elsewhere, that transport investment will get growth over and above those estimates. An example that I am certainly very fond of in this country and which demonstrates that in spades is a London example—the Jubilee line. The Jubilee line had a benefit/cost analysis ratio of less than one. Under the current rules, it would not have been built; it would not even have got past the starting point. The impact that it has had on the economy of east London is absolutely enormous. That is because no account is taken of the wider benefits. Some attempt is made to evaluate them but they are not part of the evaluation or the assessment, although they ought to be.

**Q155 The Chairman**: I have one final question. Do you support the fact that Stockport will not be served by HS2? It is a very high-value traffic sector which would be beneficial to HS2. Will the passengers who currently use Stockport come to Manchester Piccadilly?

**Sir Richard Leese**: Equally importantly, Stockport supports the proposition as currently configured. It is a member of the combined authority and this is a unanimous decision from the combined authority. First, a commitment was given by the Secretary of State that no place would be worse off as a result of high-speed rail, so Stockport will get at least the same level of service. In fact, it will get a better service. In terms of the north-south routing, people from that area will be able to access trains at Manchester from the airport station. Stockport is currently building a very significant road that improves the east-west run to the airport. Of course, Stockport will get good links to the hub at Crewe as well. So Stockport will probably end up with not fewer choices but more choices. In terms of the planning for One North, the good linkages into Manchester Airport from Leeds and Sheffield ought to be able to benefit Stockport and give improved east-west linkages.

**David Thrower**: Perhaps I may add to that briefly. You will be aware of the recent debate on whether the north-west hub would be based at Crewe or at Stoke. Obviously Stoke is not going to be cut adrift from the intercity network at all. The Greengauge 21 group has
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put forward the suggestion, which seems very obvious when you think about it, that there should be a railway service from London, via HS2, coming off HS2 to serve Stoke, and that would then serve Macclesfield, Stockport and Manchester. So Stockport would still have an intercity service to London. It highlights the point that there is some confusion in the minds of the public between being on HS2 the route and being on HS2 the service. HS2 services will serve far more places than just London, Birmingham and Manchester. HS2 services will obviously serve Liverpool, Preston, Manchester, Carlisle and so on. So, as Sir Richard has just said, I do not think that Stockport will be any worse off and hopefully it will be better off, as obviously there will be a faster through-journey once it is on the fast route south of Stoke. It will go on to the fast route and there will be a quicker journey to London.

The Chairman: Thank you very much. That draws this session to an end. Sir Richard, Mr Blackburn and Mr Thrower, thank you very much indeed for your most helpful contributions.
Stan Mason—Written evidence

Summary
The most recent and sixth business case produced by HS2 Ltd claims to provide a rigorous and accurate assessment of the benefits and costs of HS2. These claims are inaccurate and contain unsupported assumptions, the results of which render the business case unfit for purpose.

1. Growth forecast
HS2 Ltd growth forecast assumes about 2.5% compound growth, amounting to about 79% in 2036, against a forecast population growth of 15%, despite the fact that throughout 2013 the number of long distance train journeys, and passenger kilometres dropped in each quarter. (ORR. Graph. Page 47 Modern Railways August 2014)

In the same magazine on Page 28 reports that Mark Carne, Chief Executive of Network Rail noted that this sector was ‘flat lining’ the sector having been ‘at or slightly below that of 2010/2011’

In their response to questioning at the Public Accounts select committee HS2 representatives claimed that fare on HS2 would be competitive with standard rail fares so as to make HS2 attractive to passengers. This concept was described as ‘bonkers’ by the Chair of the Public Accounts Committee. The Committee noted that HS2 Ltd had made an ‘out of date assumption on passenger numbers’.

Experience on HS1 shows that cheaper fare on stand trains are preferred to premium fares on HS1, which has resulted in massive under-utilization of HS1.

The KPMG Report
The current strategic case includes KPMG’s work on WEI. This report has been widely criticised by academic experts and its results are incorrectly calculated and contested. It was not peer reviewed by the Analytical Challenge Panel and experts in spatial economics agree that the KPMG work lacks statistical rigour and even contains methodological errors which could cause the wider economic benefits to be overestimated by 6 to 8 times. (Daniel Graham, Prof. of Statistical Modelling; Research Dir. of Railway & Transport Strategy Centre, Imperial; Henry Overman, Prof. of Economic Geography, LSE; John Tomaney, Prof. of Urban & Regional Planning, UCL)

Value of Journey Time Savings
Savings time on business journeys is strategic to the business case for HS2 and accounts for two thirds of the total benefit.

HS2 Ltd business case assumptions disregard the fact that time saved by travelling on HS2 is already productive time for businesses, as business travellers work on trains and will continue to do so. HS2 Ltd assumes that the new value of time savings figures apply equally to reductions in productive time as unproductive time. But why would businesses be willing to pay as much to reduce already productive time as unproductive time? No survey
Stan Mason—Written evidence

evidence is presented to justify this assumption that then allows the BCR to be maintained at its 2012 levels.

While HS2 Ltd has reduced the unrealistic average salary of business travellers from £47 to £32 per house, thus reducing the business travel benefit, the number of business travellers has been increased without explanation, from 28% to 38% even before HS2 comes into operation.

Change in specification of HS2.
The original public consultation document on HS2 Phase 1 noted that two key features of the projects forecast success were
- A direct link to HS1 to facilitate seamless travel to mainland Europe
- A direct link to London Heathrow Airport – to enable reduction in domestic services

Both these key requirements have been abandoned as being too expensive, and yet the ‘value’ of expenditure reduction has not been forthcoming. In fact the cost of HS2 has in fact increased, by 33% (excluding trains financing, which would appear to suggest that the remaining HS2 project has in fact increased further than that to which HS2 admit in the latest business case.

Effect to of future developments.
HS2 Ltd completely disregards the likely future developments in technology, business systems and travel habits.

The use and expansion of the World Wide Web, internet communication, video conferencing and the cost effective alternative transport modes are not included in any of the HS2 documents as being likely to have a negative effect on the business case for HS2.

September 2014
Neil Mathers FIMechE—Written evidence

“Bearing in mind there is no justification for statements in the recent Consultation I had to look elsewhere for corroboration. Alas I found no good news, but discovered details which fall woefully short of reality. The HS2 proposals do not reflect current experience from high-speed lines elsewhere in the world.” There is no independent verification regarding train paths, proposed speeds or frequency of departures.

The report attached to the Annex (a Review of HS2 High Speed Rail from Euston to Birmingham) covers various topics which are part of my 3 year study. Most of this work is original and at-odds with the promoters.

I have picked out interesting points in red, either a box or arrow.

You would see on page 5, proposed HS2 traffic out of Euston = 18 trains per hour; whilst Europe plus Shinkansen = 12.1+6.9. Hence Euston would be exceedingly busy! The sped on 250km/hr to Birmingham interchange is seen to be 25% faster than similar lines in Europe. So what speeds and frequencies are realistic and what should we expect?

More recently on the Phase Two Route Consultation (page 8) I analysed the proposed HS2 speeds north from Euston, with working details of the spreadsheets.

On page 14 I see the time and distance to Birmingham Curzon Street (Route 3 at 360kph) + 49:02 mins and 175.202km. This gives an overall trip speed of 214.5km/hr, significantly lower than HS2, Network Rail and MPs have claimed. Pages 15-18 give full detail.

On page 19 I compare services in Europe (the Europe Benchmark) against HS2 Phase 1. HS2 would have 13 times more traffic than the total Europe Benchmark. Similarly HS2 Phase 2 would have 4 times more traffic than the Japanese Shinkansen. That is also most unlikely. Page 20 clearly indicates the major dilemma.

World Speed Survey on page 21 shows how Top trip speeds by country have increased since 1991. Note there is less growth in recent years. See fastest trains in Japan hovering around 260km/hr from years 1997 to 2011 (red triangles). Detail from Colin Taylor’s Survey 2009 is enclosed for interest.

Page 23 is a selection of comments picked out of the report, used by me as a memory jogger. Page 25 is of interest, as it gives the journey time and distance, together with maximum Linespeed. I find the average speed is 220km/hour, and operating margin (effectiveness) is only 55%.

On page 26 I prepared a chart:
OPERATIN MARGIN, High Speed Trains.
a) Worldwide
The figures are indexed by country, and by effectiveness – and blocked together by country.
So we have China 74%, Japan = 72.0%, France, Spain and Italy. The overall average effectiveness is 67.7% and
Average trip speed = 218 hm/hr

b) Comparing HS2 Phase 1

Another large selection of services in Europe (and the Shinkansen, Japan)
Overall average effectiveness is 64.3% and average trip speed = 209.6 km/hr
HS2 Euston to Birmingham sits in the middle, with speed = 215 km/hr

Pages 27-34
These pages refer to detail analysis of figures and charts prepared by ARUP for HS2
I don’t have particular details, especially a time-distance chart for trains out of Euston. I was trying to understand how applying different margins might impact the arrival time at Birmingham.

Page 35 This part of the line diagram for the Shinkansen from Nagoya to Tokyo, which forms part of another study on trains-per-hour.

Page 39 This is part of Network Rail: New Lines Programme, Strategic Business Case.
3.28 The impact of alternative line speeds has been assessed... and how the performance of the scheme in terms of the BCR improves as speed increases.
3.29 These assumptions have been run through the New Lines modelling suite to estimate the impact on the value of the scheme under differing speeds of operation.

This seems quite wrong, since speed of operation is different to Linespeed. (Trains move, but Linespeed is stationary). I referred earlier to “operating margins” which are not mentioned. See my comment: No, world record trip speed = 272 km/hr or 169 mph.

I hope you find my comments interesting. Clearly if HS2 trains do not travel quite so fast, then the project economics would be in peril, involving more trains running at increased costs, and less beneficial to potential passengers.

September 2014

NOTE: Please contact Stephanie Johnson for a copy of the annexed report.
I have been following the Economic Affairs Committee’s sittings regarding HS2 with interest. Yesterday Lord Adonis put forward the reason why he wanted a "21st century" railway that was designed for 400kph. His argument was that when they looked at it in 2009/10 that it cost only 10% more to build a high speed railway than a conventional railway. I take the latter to mean one capable of no more than 125mph (200kph). The comparison was flawed because it assumed that a conventional railway would be built on the same alignment as the high speed one. This ignores the massive savings that could be achieved by redesigning the route to a lower speed. Presumably this was done to assist the case for building a high speed line where time savings were, and still are, its main justification. It is now apparent that the works needed to even partially mitigate the noise and environmental impact of the current scheme will be much greater than envisaged. Tunnels are a good example. There are more of them and they have been lengthened, they require two bores rather than one, and theny need "porous portals" to reduce the pressure / noise shocks. In the session with Alison Monro, she was asked about the difference in cost and she too referred back to 2009. It seems that DfT/HS2 either do not want to revisit this or they have looked at it and don't like the answer. The extra cost of designing for 400kph must be looked at properly along with the extra costs of running the trains, which need three times the power, and maintaining the track and trains.

It appears from yesterday's session that the promoters have already assumed that the "optimism bias" is needed and of course all costs are at 2009 prices. If it is accepted that the only solution is a new railway, which I do not, then the way to get the cost down and reduce the environmental impact and growing opposition to this project, is to reduce the speed.

Designing the line for 200kph or 250kph (which meets the European definition of High Speed) offers many benefits as you would not only save money on construction, maintenance and trains but you would also get more capacity and greater opportunities for integration with the existing railway system. As a final point, they cannot include benefits that require additional expenditure by local authorities. Please follow this up in your questioning.

I have a civil engineering and transport planning background. I do not live near the line. My desire is to ensure that taxpayer's money is not wasted. In closing I would draw a parallel with Concorde, where the desire for high speed at any cost triumphed over common sense. History is set to be repeated.

November 2014
1. **Introduction**

1.1 London’s number one challenge is accommodating its forecast population growth. The city’s population is expected to exceed its 1939 peak of 8.6 million in early 2015 and reach 10 million in the early 2030s.

1.2 The Mayor supports the principle of HS2 and the need for a national high speed rail network to ease capacity and improve connections constraints on the transport network.

1.3 He believes that if HS2 is delivered properly, it will generate major productivity benefits both for the London economy and also for the city regions of the Midlands and North, benefitting the whole UK.

1.4 These benefits should not be seen as a ‘zero sum game’, improving connections between the UK’s regions will help create several clusters of economic activity that are more internationally competitive.

1.5 However, the Mayor and TfL believe improvements must be made to the scheme to improve the economic, social and environmental case for HS2.

1.6 In order to fully capture the wider economic impacts of HS2, the scheme needs to be better integrated with local regeneration priorities including better links to local transport options.

1.7 The development of London’s rail services remain vital to ensure the benefits of HS2 are realised in London and the regions.

2. **Is there an economic case for HS2?**

2.1 London’s rapidly growing population will continue to increase the pressure on the city’s transport networks in particular underground and rail. The Mayor believes that if HS2 is delivered properly it can help to ease congestion and improve transport connections which will deliver major economic growth to London and across the UK.

2.2 Despite the recent advances in telecommunications, and the effects of the recession, demand for long distance rail travel has continued to rise, to the extent that most long distance routes into London are forecast to be at capacity by the mid-2020s.
2.3 Jobs in urban areas in the UK are more productive than other parts of the UK with jobs in central London 70 per cent more productive than the UK average. HS2 would allow more jobs to be concentrated in urban areas. This would be delivered through freeing up capacity on existing main lines north of London or routes into Birmingham, Manchester and Leeds that could be used to further expand commuter services.

2.4 London’s transport system is under great pressure at all levels. Big ticket schemes such as HS2, must not divert funding from other essential transport investment – it should be treated as a core element of a much broader programme of investment to maximise the UK’s overall economic potential.

2.5 These benefits can only be fully realised if the scheme works as part of the wider transport system. Nearly every trip taken on HS2 will require a local or regional connection. Therefore it is essential that the local and regional elements of the journey are able to cope with the increased passenger numbers HS2 will bring.

2.6 When looking at the economic benefits of HS2 the onward travel requirements of the large numbers of HS2 passengers arriving at Euston and Old Oak must be considered. If there are inadequate connections or capacity, people will not easily be able to reach their final destinations. Rather than unlocking growth, the scheme could result in overcrowding and congestion in central London.

2.7 Related to this is the need to ensure the scheme goes hand in hand with local regeneration schemes. HS2 Ltd must work with local authorities to develop economic case studies along the route, as recommended by the Growth Task Force. The Mayor is working with local authorities to develop regeneration policies, which can take advantage of the significantly improved connectivity provided by HS2, most importantly through the creation of the proposed Mayoral Development Corporation (MDC) at Old Oak.

2.8 If the scheme is integrated properly into the existing local transport network, HS2 stands to substantially benefit the London and UK economy, and therefore increase the UK’s competitiveness. Crucially, these benefits should not be seen as a ‘zero sum game’. The real competition is not between the UK’s city regions but with cities across the world. By helping to integrate the UK’s city regions the scheme will help create stronger clusters of economic activity that are able to join London in competing internationally.

3. Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?
3.1 There are ways in which the approach within the traditional parameters could be improved. The quantified benefits in the Strategic Case for HS2 are based on outputs from a fairly coarse UK wide transport model. Whilst this model may be the most appropriate tool for calculating inter-city journey time savings, it is less suitable for capturing the overall transport and economic impacts in London and elsewhere. For most strategic rail scheme appraisals, this would not be a major concern, but due to the scale of the HS2 project and its impacts, it is considered a significant matter.

3.2 HS2 will add an additional 30,000 morning peak passengers at Euston (more than doubling today's demand). Without other improvements to the transport network, this will add substantially to crowding on London Underground services from Euston, generating delays which were not assessed in the economic appraisal of the scheme. This problem is not just confined to London, but also Birmingham, Manchester, Leeds and Sheffield, where similar impacts have not been assessed in the economic appraisal.

3.3 The Mayor therefore feels that the economic case presented in October 2013 does not fully capture all transport impacts and a more comprehensive method to capture transport effects in urban areas is required.

3.4 More fundamentally, there is a basic question about how far the cost benefit approach can capture the impacts of a scheme such as HS2 which is fundamentally about changing economic outcomes in the economy. Traditional appraisal methods extrapolate past trends. This is reasonable for most projects, which are more modest in their scale and ambition, but where a scheme is intended to bring about a radically different economic future, this approach is not likely to capture the full range and extent of the benefits.

3.5 In such circumstances a more 'objectives based' approach, supported by high quality risk analysis, offers a more effective approach. An important element of this will be to assess where the future could be different from the past, and how much needs to change to allow such an investment as HS2 to be paid back. A sense of the scale of change, and whether such change has any historical precedent, is enormously valuable in assessing both feasibility and risk.

3.6 The case for Crossrail is instructive in this regard. The extra peak capacity created by the scheme is around 80,000 additional people delivered into the central London area. Could the additional output pay for the railway (for example increased employment and thereby increased taxes), and if so, on what assumptions?
3.7 One approach would look at investments such as HS2 from a rather different perspective. There is a highly visible and powerful risk that London and the South East will become still more unbalanced with respect to the rest of the country if HS2 does not go ahead. Agglomeration forces are powerful and combining a number of city regions can generate the benefits that London currently enjoy. HS2 can connect these cities together both to form one dynamic region but also to the international gateway of London.

3.8 Another area in need of further attention is the wider economic benefits (WEBs). Firstly, there are some problems with the way they are presented in the HS2 October 2013 report. Whilst the October 2013 document attempts to capture WEBs, it is not at all clear how the figures have been derived. Secondly, there is a more fundamental question about the role of WEBs in the case for the scheme. In particular, it is questionable whether the WEBs approach is likely to capture the total impact. A project like HS2 is more than about averages but also about the impacts of transformational change for which WEBs do not adequately capture.

3.10 A possible consequence of a more holistic approach could be to enhance the way that accessibility to particular areas with investment and development potential is valued relative to pure time savings. For example, Canary Wharf has yielded significant benefits beyond those that can be explained by simple economic analysis. Transport improvements played an important role and considering a wider set of objectives would be beneficial to assessing HS2.

3.11 It is suggested that HS2 Ltd should start by working more closely with regional authorities to consider the localised uplift in economic activity that might result from HS2. For example, at Old Oak, analysis by TfL has suggested that the addition of a new station in west London could boost the London economy by at least £3bn. TfL can assist with this for both Old Oak and Euston, where Opportunity Areas (as defined by the London Plan) have been developed.

3.12 TfL is able to draw on a number of examples where a broader set of economic impacts have been successfully captured. The Northern Line Extension, Crossrail 1, transforming the London Overground and the DLR are all examples of projects that have been successful in demonstrating a strong link between transport infrastructure and economic growth. Without tangible examples, the derivation of the HS2 WEBs is likely to be criticised, as a 'black box' calculation.

4. **What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?**
4.1 In order for the economic benefits of HS2 to be fully felt by regions in the North and Midlands, complementary transport measures should be considered to ensure that every high speed station is accessible to as wide a catchment as possible. The acceleration of the delivery of Phase 2 of the project will also assist with this objective.

4.2 In 2013, the late Sir Peter Hall identified a range of spatial effects of High Speed Rail (HSR) that would change over the whole life of the development process. Sir Peter stressed that HS2 must be combined with regional regeneration. If not done correctly, HS2 will fail to connect with regional networks preventing the full potential of HS2 to be realised.

4.3 The government should support local regeneration projects around HS2 stations, and work closely with local authorities to ensure that opportunities are not missed – as suggested in the Growth Task Force report by Lord Deighton. The message should not be 'build HS2 and they will come' – a more active approach to capturing the localised economic benefits is required. Otherwise, the benefits from the regeneration of Old Oak through the creation of the MDC will likely be less.

4.4 Ultimately, the economic success of the project, to the UK as a whole, is dependent on a number of factors, including the quality of local connections, responses to land use and other associated links to social infrastructure.

5. Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?

5.1 Indications from across the world suggest that economic growth in the future is likely to be focused on city regions. HS2 offers the scope for the UK’s city regions to perform more effectively in this international competition. If planned properly as part of a comprehensive economic strategy, the scheme should therefore unlock productivity benefits in all the major city regions that it serves. This will include London but not exclusively so.

5.2 London’s population is forecast to continue to grow, from around 8.5 million today to over 10m people by 2050. While this growth could in theory be wholly accommodated within London, it is likely that some will need to be housed outside its boundaries. HS2 will provide vital additional rail capacity to support this, in particular by freeing some capacity on existing main line rail routes for additional commuter services.


456 At locations served by the West Coast, Midland and East Coat Main Lines in particular
5.3 This growth should not be seen as at the expense of other regions. Cities in particular are expected to grow, and this may reduce population growth in smaller settlements across the country. However, if this growth is not facilitated, the equivalent economic activity will not simply be displaced to other locations in the UK, but elsewhere outside the UK or lost altogether.

5.4 In any case, HS2 will help to redress the differences between the connectivity levels enjoyed by London and those of other UK city regions. As noted in research by KPMG, London already benefits from significant levels of rail connectivity, so the relative changes brought about by investment in HS2 are smaller than for the other cities served. Many cities will therefore gain disproportionately from improved connections and interchange opportunities onto the HS2 network. In this sense, the main beneficiary of HS2 should be the regions.

5.5 In particular, HS2 will also help to boost economic competitiveness across the UK by providing better connections between regional cities and key locations that are already well connected to London. For example, it will allow regional cities better access to the Eurostar high speed rail services on HS1, as well as improving access to the wider South East, including Heathrow, Gatwick and Stansted airports.

5.6 In conjunction with other planned investment, it will also improve links to important knowledge clusters such as Oxford and Cambridge, which currently have excellent links to London but relatively poorer links to many regional cities. HS2 could facilitate better links between them and locations such as Manchester by allowing new services to be operated on capacity freed by HS2 on the West Coast Main Line.

6. How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?

6.1 The Mayor has no particular view on the structure of the operation for HS2. However, the operator of the service should work with TfL, particularly where there are interfaces at Old Oak and Euston, on achieving the best possible service for passengers. This should include coordination of station operation, passenger information and service provision.

6.2 When determining the operational structure of HS2, onward passenger journeys need to be considered. Passenger journeys will not start or end on HS2 services; passengers should benefit from a seamless transfer between these and other transport services.

7. Should travellers pay higher fares on HS2 than other lines?

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7.1 The Mayor believes HS2 fares should be integrated with the national fares structure. A major uplift in capacity and the additional competition that HS2 will introduce should have a downward effect on fares overall in the corridors served as competing operators seek to attract passengers. It remains to be seen what premium passengers will be willing to place on the time savings and improved connectivity as well as greater comfort levels associated with travelling on HS2.

8. Does the prospect of HS3 affect the economic case for HS2?

8.1 HS3 has different but highly complementary objectives to HS2. HS3 would enable the city regions of Liverpool, Manchester, Leeds and Sheffield to be within easy commuting distance of one another and this could fundamentally change the economic geography of the UK, allowing a ‘cluster of clusters’ to be established in the north of England, of comparable size to London.

8.2 HS2 would complement this and may in fact be a necessary condition for success. Many of the improvements required to create a ‘cluster of clusters’ relate to north–south travel. Consideration should also be given to a dedicated high speed link to Liverpool which could have a combined HS2 and HS3 role.

8.3 Links to London and continued investment in London’s rail network will remain vital. The northern city regions are not competing with London, but with increasingly competitive city regions across the world. London and the UK’s other city regions could compete more effectively if they worked together as part of an integrated economic system that bring mutual benefits to one another. Through its unique global brand, London can act as a ‘gateway’ to the rest of the UK for inbound tourists and investors, who are more likely to undertake multiple leg journeys beyond the south east if comprehensive high speed rail connections are available, across the UK as a whole.

8.4 For the reasons listed above, the Mayor is supportive of the HS3 proposals subject to business case and affordability.


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This depends on crucial complementary investment in local and regional transport

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October 2014
Rt Hon Patrick McLoughlin MP, Lord Deighton and HMG Department for Transport—Oral evidence (QQ 216-235)

Rt Hon Patrick McLoughlin MP, Lord Deighton and HMG Department for Transport—Oral evidence (QQ 216-235)

Transcript to be found under Lord Deighton, HMG Department for Transport and Rt Hon Patrick McLoughlin MP
Mid Yorkshire Chamber of Commerce Limited—Written evidence

Mid Yorkshire Chamber of Commerce and Industry Limited is a membership organisation representing the interests of businesses across Calderdale, Kirklees and Wakefield. Our associate Company the West Yorkshire Enterprise Agency Limited (WYEA) operates throughout West Yorkshire. Our responses to the questions in this Call for Evidence are conditioned by our obligations due to our members, as well as those which devolve on us as a Chamber of Commerce to champion the best interests of the wider business community in our Region. Our responses are informed by our members’, stakeholders, academics, Railway-Expert Advisers and others. Our replies use material which we have gathered through consultation with such stakeholders and advisers, and we acknowledge and thank all for their contributions and guidance – which is greatly appreciated.

The Economic Affairs Committee invites evidence on any aspect of The Economic Case for HS2, and particularly on the following questions:

1. **Is there an economic case for HS2?**

   There is no economic case for HS2 that can be argued in a logical manner against alternative railway designs which are greatly superior and which would out-perform HS2 in every aspect.

   The design of the HS2 railway does not take into account any economic case for HS2. At a recent railway conference in Huddersfield, the designer of HS2 professor Andrew McNaughton, made a presentation and he said that he’d “been asked to design a high-speed railway between London and Birmingham” and that he’d not been asked, nor did he take into account “any economic, social or environmental aspects in the design of HS2”. Therein lies the problem. If there had been such a proper evaluation of the economic, social and economic effects of HS2 then it would surely have been abandoned at an early stage. The HS2 design does not link with HS1, it does not properly connect with the UK’s existing railway network, it is capacity restrained before it is built, it makes no Carbon savings, building HS2 would have a profoundly detrimental effect on the Chilterns Area of Natural Beauty, and for the most part is not designed to provide city-centre to city-centre services. HS2 follows the wrong route to such an extent that the basic infrastructure cannot form the basis of East-West high-speed trans-Pennine connectivity in the North of England; most particularly, its proposed terminus stations in Manchester and Leeds are completely incompatible with the need for high speed trans-Pennine links (belatedly-acknowledged by Government in the form of HS3) which demand through-operation at both Manchester and Leeds.

2. **Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?**
The benefit/cost ratio of HS2 is not persuasive whatsoever – in fact, whatever cost/benefits are being claimed by HS2 are completely unacceptable, and frankly preposterous when compared with alternative designs. The strategic case for HS2 should have considered and encompassed all the factors which are itemised in our answer to Question 1 above. It is unforgiveable that every factor in making an economic case for the HS2 design should not have been taken into account. A greatly superior solution is possible which can clearly evidence a vastly superior benefit/cost ratio than HS2.

The Superior design is called High Speed UK (HSUK) – http://www.highspeeduk.co.uk/aboutsusuk.html

The advantages of High Speed UK have been repeatedly presented to Government, both at face-to-face meetings and in the form of responses to consultations, yet the Government has never presented any counter-rationale to High Speed UK (or its High Speed North predecessor) as it presses ahead with HS2.

3. What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

Please see our answers to Questions 1 and 2 above. The fact is that HS2 is a completely flawed and discredited railway design, and it should not be allowed to go ahead, in the National Interest. We are strong supporters of high-speed rail – but the design of any new high-speed railway must be cleverly and optimally scoped so that the Nation will benefit to the absolute maximum. Whatever design of high speed railway is ultimately chosen, constructed and brought into operation will of course depend on complementary action being taken by such agencies and bodies as governments, local authorities and Local Enterprise Partnerships in defining appropriate measures to attract investment and skilled workers. But we believe strongly that it is the job of Government to ensure that high speed rail is developed to be fully integrated with the existing railway. The current situation, whereby HS2 is planned to serve disconnected terminals (eg Toton for the East Midlands, and the New Lane terminus in Leeds) and local authorities are expected to reshape local networks to conform, is totally unacceptable.

4. Might some parts of the UK suffer economic disadvantage from HS2?

Yes. Many parts of the UK will suffer economic damage if HS2 is ever brought into operation. We are particularly concerned that many ‘secondary’ cities – such as Wakefield and Doncaster, in our locality – which currently enjoy high-quality intercity services, will see major service reductions as primary intercity flows are drawn onto HS2. This represents a loss in connectivity that will inevitably cause economic blight. These negative issues can be avoided if high speed rail is planned with the necessary integration to the existing network.

5. Is London likely to be a main economic beneficiary of HS2?
Yes. Unfortunately it would be if HS2 is ever brought into operation. Hence HS2 would seem likely to reinforce, rather than redress the North-South divide.

6. How might the expected benefits of HS2 to the national economy be realised?

Please see our answers to Questions 1-4 above. There are much greater benefits to the National economy which can be realised by superior railway designs than the highly-flawed HS2 proposition.

7. How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

HS2 should not be operated. Question 7 is interesting in that the very fact that it is being asked is an indication and admission that HS2 would be a disconnected railway. Such a question could not be applicable to the HSUK design, because it would be fully connected to the UK’s existing rail network, and it would therefore be impossible to differentiate its mode of operation as implied in the question.

8. Should travellers expect to pay higher fares on HS2 than on other lines?

Please see the answer to Q7 above.

9. Does the prospect of HS3 affect the economic case for HS2?

Yes, ‘HS3’ as it is being called is already fully encompassed in the alternative HSUK railway design, whose routeing provides the East-West Trans-Pennine connectivity in the North which would come at a huge extra cost if HS2 were ever to be brought into operation. The cost difference is many billions of Pounds, so much in fact that it renders the HS2 project completely untenable.

The alternative railway-design, HSUK, integrates into HS1, provides a connection to Heathrow Airport (as well as possible ‘airside’ connections between Heathrow and Gatwick Airports, thus offering the tremendous possibility of what could be considered to be a single London International Airport). Furthermore, whilst HS2 only connects four major cities to London, in a disjointed fashion, the HSUK alternative provides an integrated high-speed network for the whole country. Finally, all this can be done by HSUK for a price which is estimated to be around 60% of the current costs of HS2/HS3, presently equating to a saving of around £20bn to the taxpayer.

September 2014
Mid-Yorkshire Chamber of Commerce, North East Chamber of Commerce, Hull and Humber Chamber of Commerce and Mayor of Liverpool—Oral evidence (QQ 133-142)

Mid-Yorkshire Chamber of Commerce, North East Chamber of Commerce, Hull and Humber Chamber of Commerce and Mayor of Liverpool—Oral evidence (QQ 133-142)

Transcript to be found under Hull and Humber Chamber of Commerce, Mayor of Liverpool, Mid-Yorkshire Chamber of Commerce and North East Chamber of Commerce
Professor Chris Nash, Network Rail and Rail Delivery Group—Oral evidence (QQ 100-111)

Professor Chris Nash, Network Rail and Rail Delivery Group—Oral evidence (QQ 100-111)

Evidence Session No. 9  Heard in Public  Questions 100 - 111

TUESDAY 11 NOVEMBER 2014

Members present

Lord Hollick (Chairman)
Lord Carrington of Fulham
Lord Griffiths of Fforestfach
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Shipley
Lord Skidelsky

Examination of Witnesses

Paul Plummer, Group Strategy Director, Rail Delivery Group and Network Rail, Rupert Walker, Head of High Speed Rail Development, Network Rail, and Professor Chris Nash, Institute for Transport Studies, University of Leeds

The Chairman: Welcome to the Economic Affairs Committee. The session today, which is the fifth of our inquiry into the economic case for HS2, is being televised, so if you can speak up and speak clearly, that would be most helpful. Mr Plummer, Mr Walker, and Professor Nash, welcome to the Committee. I would be grateful if you could introduce yourselves and perhaps provide some opening remarks.

Paul Plummer: My name is Paul Plummer. I am group strategy director of Network Rail, but I also come here today with another hat on, as a member of Rail Delivery Group and as chairman of the Rail Delivery Group’s Planning Oversight Group, which oversees the industry side of the railway industry planning processes, for which Network Rail does a lot of co-ordination. If I may, I will make three general points about how we, both Network Rail and with my other hat on, consider these issues. As we see it, HS2 is fundamental in addressing the capacity needs on the London-Birmingham-Manchester corridor as we originally conceived it a few years ago. Beyond that, it creates a massive opportunity for radically improving connectivity across the network as a whole. I think those two things are distinct but related.
We strongly believe that it is important, in order to get the full benefits from that investment, to look at it in a truly integrated way—as a network, as a whole. It is not about Network Rail or HS2 but about the whole network and planning the development of the network as a whole. Indeed, the way in which changes would be delivered because of the impact on today’s services during delivery and how it is operated need to be considered from an overall network perspective.

Network Rail’s role in this started some time ago with the New Lines study that we commissioned, which is an example of how we look at our responsibilities for planning the rail network to inform decisions that ultimately need to be made by Government about how they want to invest in the network, but also at the franchise process with train operators. In that study, we concluded that it was necessary to look at the creation of a new line rather than incrementally build on existing capacity, and that that was the right thing to do. I think that was at a time when that consensus was emerging and then shortly turned into HS2.

We also co-ordinate the industry planning process, as I said, which leads to a series of route studies. We look at the demand and how that is developing, the capacity as it is and the gaps, and what interventions are necessary in order to best meet that demand or make best use of capacity on the network as a whole. Again, that is ultimately to inform the best way of developing the network and seeing that investment.

More recently, with the development of HS2 as a company, the Government have asked us to work very closely with HS2 Ltd and with DfT in developing the detailed plans to make sure it is integrated with the network as a whole, and as part of that we are for example part of a trilateral board, with the Department for Transport and HS2 Ltd, which seeks to deal with any issues relating to the interface between the networks in particular. A good example of that is Euston, which obviously has one of the biggest sets of interface issues in terms of what is needed for the existing network and for the development of HS2 itself.

On the RDG side of things, the RDG is a group of owning groups—the train operators, the main freight operators and indeed Network Rail—and I am a member of that. The thinking of that group is consistent with what I have said, but what that group considers particularly important is that the industry as a whole, not just Network Rail but the other members, have a contribution to make: in helping Government to make some of the decisions around HS2; in integrating the physical network with the existing network; in planning changes to existing train services so that we optimise the value of the new services when they are able to come on stream and do so in a joined-up way; in the specification and procurement processes for the new system and how that impacts on current service specifications—it is important not to constrain that but to consider it in an integrated way; and, likewise, in ticketing and pricing. Again, the key choice is for Government in that, but ultimately our perspective would be that you have to look at it as a holistic whole. At a very high level, that is how we approach those issues.

The Chairman: Do you have anything to add to that, Mr Walker?

Rupert Walker: Only to introduce myself. My name is Rupert Walker. I am head of high speed rail development for Network Rail. I have led Network Rail’s involvement in HS2 over the last three and a half years, working closely with HS2 Ltd and the Department for
Transport. More recently, I have been appointed development director for Euston, leading the joint team’s work looking at the redevelopment of Euston Station.

The Chairman: Professor Nash, do you have some brief remarks you want to make?

Professor Nash: I am a research professor in the Institute for Transport Studies at the University of Leeds. I have been involved with rail economics issues for 40 years now. Specifically on high speed rail, we were subcontractors to Atkins in the first major study, which was done for the Strategic Rail Authority in 2002. I was an adviser to Network Rail for the New Lines study, although I think I am with them today purely because of scheduling reasons rather than anything else. I have reviewed worldwide experience for the International Transport Forum, and I am a member of the advisory panel for HS2. That position does not constrain my ability to express my personal views.

Q100 The Chairman: Could I start by asking you to address the issue of capacity? We have been given slightly different pictures by different witnesses. Some say that there is unused capacity, others that in fact it is full to bursting, and quite a few in between. We have asked the Department for Transport to give some rather more detailed information than is currently in the public domain, and hopefully that will be forthcoming shortly, but in anticipation of that I wonder whether you could just explain your perspective on capacity and whether the capacity problems relate solely to commuter trains, as opposed to long-distance trains, which is one of the points that have been put to us by a number of witnesses.

Paul Plummer: In answer to your last point, the first thing I would say to that is it is largely inseparable. At the moment, we have a mixed-use railway, and certainly the West Coast Main Line, which is where we see the biggest capacity constraints that are relevant to phase 1, is a mixed-use railway with inner-suburban services, longer outer-suburban commuting, long-distance services and freight. All those different uses are competing for scarce capacity. On that mixed route, as we have said to you, the outer-suburban commuter services in particular, services that I use every day and have used for many years, are very, very crowded in the peak and will become progressively more so over the next few years as we expect the growth that we have seen to continue. We see the congestion of trains at the moment as particularly severe on those longer-distance commuting services. It is severe also on shorter commuting, but in a shorter period standing is somewhat less of an issue, although it is still an issue.

The Chairman: What is the difference between a long-distance commuter and a short-distance commuter?

Paul Plummer: On that route, for example, there are services that stop first at Leighton Buzzard, where I get on, and then at Milton Keynes or Watford. There will be other services that stop at lots of intermediate stations along the way. The longer-distance services, provided mainly by Virgin, do not stop until Milton Keynes, in many cases, or indeed further.

The Chairman: Are the long-distance Virgin services also full to capacity?

Paul Plummer: They would use more paths if we could provide them, but it is not the case that, at all times of day and for the full length of that journey, the trains are full.
Q101 Lord Lawson of Blaby: Can I pursue a little further this question of capacity, which, as you say, is the most important determinant in the whole HS2 project? If one is looking at a parallel—and I know it is not a precise parallel—with the airline business, particularly the low-cost airlines, it has a very sophisticated pricing model by which it ensures that its planes are nearly always pretty full, so it maximises the amount of capacity that it can take advantage of. On the rail, it is very different. There are a number of services where there is plenty of spare capacity, and there are one or two services where there is severe overcrowding. To what extent do you think that a more sophisticated, intelligent pricing policy could effectively create more useable capacity on the West Coast Main Line, say, or on the services that you are considering generally?

Paul Plummer: I am not a train operator, but train operators would passionately argue that they make very sophisticated use of yield management just as airlines do. If you look at the particular capacity constraints that we are talking about here, the peak into Euston has become increasingly broad. The evening peak, for example, really starts around half past four and goes on well past 8 o’clock, where you have very congested commuting services out of Euston, and similarly in the morning. In order to address that issue, you would be looking at shifting really quite a long way, and given the scale of growth quite a long way down. I would certainly support the principle that there is opportunity from improved use of pricing to send price signals, but the scale of shift that you would be looking to achieve, I suggest, would be beyond what is possible in order to change the business case for the interventions that we are talking about.

Lord Lawson of Blaby: Have any of you really looked thoroughly at this? As I say, the airlines manage it.

Paul Plummer: As I said, there have been a lot of studies by the industry. Pricing policy and what the franchise operators are allowed are primarily a matter for Government, but in terms of what would need to happen in order to achieve a big shift, I think those would be very large price differentials.

Lord Lawson of Blaby: You say “what is allowed to the franchise operators”. Are there, then, government restrictions on what the franchise operators can do in this area?

Paul Plummer: There are, but I am not best placed to comment on that in detail.

Lord Lawson of Blaby: Are either of the other witnesses able to comment on this?

Professor Nash: If I could make a couple of comments, there are regulatory constraints for intercity services. There is an off-peak walk-on fare, which is subject to control in the degree to which it can be raised, and there are requirements about the times of day at which that is available, which I think contribute, for instance, to the Friday evening peak. If franchisees had complete freedom, they would not make that fare available as early on a Friday evening as it currently is.

If I could add one other comment, certainly in all the work that I have been involved in in this area, we have been concerned with what is likely to be the situation 10, 20 or 30 years ahead rather than with the problems now. Our best estimate is that the sort of growth that we have had in the last 20 years will continue. Of course it is uncertain, but rail demand has doubled in the last 20 years, and that is what we expect to happen in the next 20.
**Lord Lawson of Blaby:** I absolutely understand that you expect there to be a growth in demand for rail transport, although I notice that the Government have recently announced that they are planning a huge extension of road-building, so there is a question of whether the extra traffic is going to go on the road or the rail. There is also the question of alternative ways of increasing rail capacity, which we will need to consider and are considering. On the question of pricing, is there any sense in these government controls that restrict what the franchisees are able to charge? Can you see a good reason for that?

**Professor Nash:** There is an argument for saying that there should be a walk-on fare at a reasonable level that people can afford to pay. The current franchising arrangements would otherwise encourage even heavier reliance on advance-purchase tickets, which makes it difficult for people who have an urgent need to travel. The exact arrangements certainly need revision—I refer to the Friday evening peak—so that problem could be eased to a degree by a more sensible approach to fares regulation, but I still believe that in the long term unless we are going to have very big increases in peak rail fares to price the growth off, there will be a serious problem in the longer term.

**Q102 The Chairman:** In your work, what consideration have you given to the impact of superfast broadband rolled out nationally on rail travel?

**Professor Nash:** In all the work that we have looked at to date on the impact of improved information technology, the conclusion has tended to be that it encourages travel rather than replaces it: that people are able to develop far more connections and they do.

**The Chairman:** Even though people can now work from home and be pretty connected to their office?

**Professor Nash:** Exactly, and yet, as we have seen, demand has continued to soar. There are certainly changes. Some long-distance commuters now only commute two or three days a week, but then they still travel a lot to meetings and so on. To date, I think, there is no evidence of improved communications reducing demand for travel. It may change. There are many uncertainties.

**Lord Lawson of Blaby:** Can I just ask one follow-up question? You mention a move to commuters now commuting two or three days a week. I do not know how long this has been going on, but have you factored in the possibility that more commuters might be doing this and cutting down on the amount of commuting in this way?

**Professor Nash:** Currently, it is a very small minority.

**Lord Lawson of Blaby:** Right, but have you considered whether more might do this?

**Professor Nash:** It certainly may grow, but, as I say, that small minority tends to locate further from their workplace and to be very mobile in terms of other journeys. It may ease the peak problems a bit, but overall again it has tended to be associated with a growth in the demand for travel.

**Lord Skidelsky:** I wanted to pursue this line, because you are extrapolating from the increase in volumes over the last 20 years to the next 20 years. In fact, surely it is reasonable to expect big changes in work practice—for example, work becoming more staggered, with more flexible hours, working from home and video conferencing. Are you
saying that those things that are predicted and that to some extent have already taken place are too negligible to factor into your estimates of traffic demand over the next 20 years?

**Professor Nash:** We have done more than extrapolate; we have built models based on experience of what seems to be causing the demand for rail travel to rise.

**Lord May of Oxford:** Does that model incorporate the changes?

**Professor Nash:** No it does not, because, as I said, we have found no evidence yet that these changes are actually suppressing demand. If anything, demand is growing faster, not slower.

**Paul Plummer:** I would reinforce the point that we are not simply extrapolating here. Yes, we have a whole series of models that we have developed over a period of years that are based on existing relationships, but we do not stop there. We are increasingly using much more scenario-based analysis to look at what potential range of scenarios might arise. In that sense, one of the key drivers in a lot of our forecasts has been that growth has been driven hugely by central London employment for a lot of the flows that we see, but outside London we have seen a massive shift and increase in the amount of commuting by rail into other cities. We also see—and I think the improvement in communication reinforces this—people wanting business interaction and to physically be together. The importance of that for the economy we have seen increasing as a result of the communications revolution, rather than decreasing. So we are not simply extrapolating; we do seek to understand those things and the impact of those sorts of changes.

**Q103 Lord Carrington of Fulham:** I am trying to get my head around what we are actually trying to address with HS2. We are being told that there is a capacity problem, which there clearly is somewhere, although I was interested to see that we have been given figures that Euston’s peak-time loading is only about 90%, whereas Vauxhall for Waterloo, for instance, is 130% peak-time loading. Therefore, I do wonder a bit whether Euston is critical. From what you are saying, as I understand it, the loading that is coming is coming from the short-distance commuter traffic coming in from the Greater London area, not in a political sense but where people come from in the work reach of London. In other words, it is not the long-distance routes going to Birmingham that we are talking about. Am I right in assuming, then, that the effect of HS2 is to transfer the trains that currently go on the West Coast Main Line to HS2 so that more commuter traffic can be sent into Euston to cope with the commuter growth? It is not actually to do with an increased traffic to Birmingham itself.

**Paul Plummer:** There are a lot of points in there. I will try to address them, but if I miss something please ask me to come back. As I said to Lord Lawson, we start from the point of view that the initial requirement is about capacity and it is referred back as the most important thing. I certainly think it is the most urgent thing. I do not think it is the only point; the issues around connectivity go beyond that.

In terms of Euston, yes of course there are a lot of other stations in London with trains coming in that are very congested, and we are looking to tackle those issues as well. In terms of Waterloo, we have plans for what we need to do to address those issues over a period of years. In terms of many of the other stations, we obviously have Crossrail, which
will address the issues at Paddington, which has some of the most congested trains coming into it. In terms of the issues around Blackfriars, for example, the Thameslink programme aims to address those things.

We continue to do more of those things, but you cannot sensibly keep incrementalising your way forward with regard to the corridor from London to Birmingham to Manchester and beyond into the east as well. Therefore, we needed to build a new line. That is what we concluded.

The answer to your last point about whether it is about new capacity or transferring capacity is that it is both. This is where you get almost a double-whammy, because not only do you create additional capacity with the new line, you can put your faster services on that line, but by taking those trains off the West Coast Main Line, you get an extra benefit, because the trains are then running at more consistent speeds. You get the extra capacity on the new line and more efficient use of capacity on the existing line, so that is a double benefit. Then you can use that to do a number of things. You can use it to provide additional services, to Milton Keynes and Northampton for example, along the West Coast Main Line. You can use it to provide additional longer distance services on the new line as well. There is a great scarcity of additional paths there. The trains are not always full all the time for the whole journey, but they are very valuable train paths that we are constantly under pressure to provide more of, so there is that demand as well. It is not quite a fully segmented system, as you get in some countries, but by segmenting traffic a bit more we will get more out of the capacity of the whole system.

Q104 Lord Carrington of Fulham: One of the underlying assumptions in that, if I understand it, is that passengers are willing to move from the existing trains on the West Coast Main Line to the high speed line, which is presumably going to be a function of pricing. I know that the assumption is that high speed is going to be the same price as the current services on the West Coast Main Line, but that is probably wrong, given the experience with HS1, where the pricing is significantly higher for the high speed train coming into St Pancras. How will you get people to move their journeys to Birmingham from the cheaper existing service to the more expensive HS2 service?

Paul Plummer: Our position on pricing is that it is not for us to determine that. The only thing we would say is that when the Government are making decisions on fares regulation and control, it is important to look at it as a system and not simply to price the high speed service in isolation without thinking about the rest, precisely for the reasons that you have given. All the work that we have done looking at it as a service proposition shows that there is a proposition there that, priced on that consistent basis, can be value for money, would be attractive to people who want to use it and would unlock that other capacity as well. If the pricing system is different from that, that must deliver further benefit. That is the way we would look at that.

Lord Carrington of Fulham: If the pricing is the same—

Paul Plummer: Consistent.
Lord Carrington of Fulham: You are saying that if the pricing is consistent, you are going to shift, but if the pricing is differential, you are not going to shift at anything like the capacity. Have you modelled that?

Paul Plummer: Not in any detail, and I am certainly not saying that it needs to be same or that “consistent” means the same. Clearly, if all the benefit of the additional service is reflected in the price, then people are going to be indifferent between the two and you are not going to achieve the effect. That is the nature of a market.

Lord Carrington of Fulham: You have not modelled this, though.

Paul Plummer: No.

Lord Carrington of Fulham: Why not?

Paul Plummer: In terms of the business case position of it, I do not think it affects that business case.

Lord Carrington of Fulham: Right. Why not?

Paul Plummer: The business case works in terms of the economic benefit of providing that capacity and the benefit to the people who are going to use it. You make an assumption about charging based on that consistent approach.

The Chairman: If it is too expensive and people do not move across to HS2, that reduces the amount of income that HS2 gets from tickets, which surely goes to the absolute viability of the business plan or otherwise.

Paul Plummer: It certainly affects the commercial position, yes.

Lord Shipley: In that whole debate about fares and who is travelling, there is a lot of discussion about business travellers, but much less about leisure travellers, who actually are a significant proportion of the total and for whom likely fare levels are very sensitive matters. In all the estimates on capacity and the transfer of people from a slower train, which is often quite fast but nevertheless slower than high speed, what allowance has been made for the fact that a lot of people will determine their mode of travel by price, not speed?

Professor Nash: There are two things. First, I have little doubt that the only sensible approach to pricing HS2 is yield management, which we referred to earlier. This is going to have massive capacity. The way to achieve the maximum revenue in a way that does not depress demand is through yield management, so high prices when capacity is scarce but low prices when there are plenty of seats available. Talk of a premium is a bit misleading in that sense. I am not responsible for it, but I believe HS2 has done some modelling of the effects of different fares levels. The increased competition from open-access operators on the existing routes would depress the fares that were charged in this yield management system; it would reduce the revenues of HS2, but according to their modelling it would not significantly affect the net benefits to the country as a whole.

I have one other comment. All the modelling work of course includes estimates of what people are willing to pay to save time. Those values are certainly much higher for business than for leisure travel, but they are substantial, and even with a reasonable difference in the
average level of fare those estimates suggest that a lot of leisure travellers would switch to HS2.

**Q105 Lord Griffiths of Fforestfach:** I am afraid this question is still on capacity. We seem to have conflicting views in some definitive sense as to whether there is or is not capacity, for example, on the West Coast Main Line. Despite the upgrade, the Department for Transport says that it is now confident that the line has reached capacity. Then we have Professor Glaister saying that it is possible to create a lot more capacity. I must say, as I listen to the discussion, that I just wonder to what extent the initial research is really done through the mind-set of engineers who are thinking in an engineering framework, compared, for example, to questions asked by my colleagues on my left here when they talk about pricing on the airlines and so on, which would be more of an economist’s approach. To what extent is that rather sensitive? Rail fares are a sensitive issue politically. If, for example, I was now a Minister in your Department, I am not sure how much I would like to see you exploring pricing in a more liberal way, because if it gets out and you have the headlines in the *Daily Mail*, you suddenly find that as a Minister one has to answer for something like that. I just wonder if you can tell us definitively whether there is really a restriction on capacity.

**Paul Plummer:** My view is absolutely yes there is and will increasingly be so. We will always be able to do more things to eke out additional capacity in relieving constraints somewhere on the network, so I do not deny that possibility. There are things that we are doing today to get more capacity out of the West Coast Main Line and we will continue to do so. Our assertion is that that is just putting off the inevitable and that we will need to do something much more fundamental at some stage, so I say absolutely yes.

The question of fares is of course sensitive, and I do not pretend that it is for us to make a decision about fares. What I do believe is that, in terms of informing that decision, the scale of their change would need to be very, very large in order to change what I just said, and implausibly large for it to change the fact that we need to do something fundamental about capacity on that corridor.

**Lord Griffiths of Fforestfach:** Can I just explore two examples? You say that future improvements are being made all the time. The evidence from the 1989 central London rail study on the London Underground was that it would be incapable of further upgrades. However, 20 years later, it turns out that the engineers have been adding 20% more capacity. That is one example. The second example is that David Prout, on behalf of the Department, told us that there was no space on the West Coast Main Line for routes that Virgin Trains wanted to add from Blackpool and Shrewsbury to London. However, we discover in the press release on 22 September of this year that they had received the green light from the Office of Rail Regulation to run direct services from Blackpool and Shrewsbury to London. When we are talking about capacity, we are told one thing and then 20 years later there is something else. We are told something here. Now we find that Virgin Trains has been given the go-ahead. Therefore, it is a confusing picture. There is a sort of mist through which we are trying to drive.

**Paul Plummer:** It is very fair to say that it is confusing. In relation to the example that you mentioned at the end, my understanding is that those additional paths were found effectively
Professor Chris Nash, Network Rail and Rail Delivery Group—Oral evidence (QQ 100-111)

by extending existing services, rather than new services on the southern end of the west coast, which is where we observed it to be very heavily constrained. That was not what they ideally wanted. They ideally wanted new paths the full length of the corridor, but we found a compromise, and we will continue to find ways of making a compromise on some of that.

That, at the moment, has another effect. It means first of all that there is a big reliability issue on the west coast, because that timetable has a number of compromises in it that are not ideal, and the punctuality is not where we would want it to be. I am not saying that it is entirely because of that, but it is partly because of that sort of factor.

In terms of 20 years forward, then yes, of course, we are challenging ourselves to look at fundamentally different ways of re-signalling capacity on the network as a whole and the capacity that that could unlock, but again we believe that that does not fundamentally change the business case for the need to invest in additional capacity. It is not that we have not looked at those things; it is not that we are not challenging ourselves to modernise the way we control the network and get much better use of scarce capacity. We are doing those things as well.

Q106 Lord Skidelsky: We are back on capacity. Alternative scenarios have been suggested, for example, by the 51m alliance of local authorities. Network Rail carried out a high-level analytical review of the strategic alternatives, and the review concluded that “Selective enhancements may generate short-term capacity, but will come at a high cost and increased performance risk during construction and operation, and may not be sustainable in the long run”. There have been a number of comments of that kind. Can you explain your reasons for concluding that these alternatives were not the best long-term strategy?

Paul Plummer: I will ask Mr Walker to answer that.

Rupert Walker: We have looked at alternatives to the new high speed line a number of times. The report you have mentioned was published at the end of 2011. We looked again last year, in 2013, and again this year, and considered different ways of trying to provide the capacity and connectivity that a new line would provide. There are things that can be done. Generally, they are localised improvements, localised interventions, new infrastructure or modest changes to the operation of the railway that provide incremental benefits, either in a localised area or more broadly across the route. They are minor benefits that, in the longer run, do not provide the level or the scale of intervention that will be needed. Our forecasts are showing that demand for travel on the West Coast Main Line will grow by 20% to 25% in the next 10 years. These interventions provide small-number-percentage increases in passenger seats or capacity.

The other point is that some of the proposals that were suggested in the 51m report have been, are being or will be implemented anyway, as Mr Plummer said, to try to provide additional capacity on the railway as it is today.

In summary, we believe that we have demonstrated that there is a capacity case for an intervention at the southern end of the country to provide the huge amount of capacity that is needed to accommodate the growth forecasts that we see, and that incremental upgrades give benefits, but not enough to provide what we need.
Lord Skidelsky: I just want to go back to the more general point about capacity that is worrying me and runs through a lot of the discussion. You cannot separate capacity from price, yet you have said nothing really about pricing, because you are saying that it is someone else’s brief to comment on. Yet they obviously both play a part in adjusting supply to demand and they are connected. I do not know whether these forecasts of capacity take different pricing systems into account, because without that they are not very reliable, are they? I know I am making a more general point, but it is important to get some clarity on it.

Rupert Walker: I will hand over to Mr Plummer. The only thing I would like to add is that the work that we did five years ago—and Mr Plummer mentioned our New Lines study published in 2009—was based on forecasts. We have seen growth in demand at twice what we thought it was going to be back then, so generally our forecasts have erred on the side of caution or have been shown to be more conservative than perhaps they might have been.

Paul Plummer: I shall not repeat my point a minute ago about the scale of differential that you would need to have, and emphasise again that it is a decision for Government rather than for us, but rather than focusing on price—I am an economist as well, so I think very much in the way you described—we focus on value and what value can be created from the additional capacity that we need to provide in terms of the impact on the economy and user benefit. It is not a market price, but it is a value-based approach that we are considering it from, rather than a caricature of the engineering approaches that you mentioned.

Q107 Lord Shipley: Can I go back to the 51m proposal? As I understand it, Network Rail’s 2011 report concluded that one of the key considerations in rejecting the 51m proposal was the impact of disruption during the construction phase of the work. Obviously HS2, when built, will last for many years, so could you first just explain why construction disruption is a factor in the consideration, and secondly say how you think it should be considered as a factor?

Rupert Walker: That is a good question, because people think of improvements to the railway as bringing a benefit, and they do. But to change the railway takes time and effort. Changing the infrastructure does happen overnight but only in a very short space of time. We cannot prevent people from travelling during the day very easily. Stopping the railway prevents commuters from getting to work, prevents leisure travellers’ journeys, ends up being expensive and disrupts people’s lives. When we change the railway, we try, wherever possible, to make those changes out of the normal hours during which people will travel.

Therefore, if one wants to deliver a large improvement to a particular route with potentially many smaller interventions along the line of the route, there is a lot of disruption because there are a lot of changes that need to be made. That disruption can be costed in a number of different ways. It can be costed in terms of what other way people will travel, how much that costs to them, what it means to people, and perhaps what it costs to the railway to provide buses if that is how people will be moved around. We can price up the cost or the impact of closing the railway for short or longer periods, and that gives us an understanding of the impact of changing the existing railway versus constructing a new line, which would have less disruptive impact.

In fact, our report subsequent to the one published in 2011 looked at what would be needed to provide a similar level of capacity and connectivity to HS2 but improving the
existing railway. It led to many, many thousands of weekends of disruption, preventing people from travelling in the country, weekend in, weekend out, over many, many years. That was what led us to take the position that improving the existing railway gives benefit but is incremental and will not deliver the amount of capacity that we need in the longer term.

**Lord Shipley:** Professor Overman has given us evidence, and he has said that he would have liked to see “disruption costs monetised so that we could get a feeling for quite how disruptive this was going to be, to compare that to the disruption that was going to come with HS2, which will involve a fairly substantial amount of disruption, and we could have presented this to policymakers”. Do I draw the conclusion correctly from that that we have not been given a proper evidence base on disruption costs of both options?

**Rupert Walker:** I am not sure what you have been provided with, and I would be happy to check with the clerk. The cost estimates that we prepared when we were analysing the differences and the benefits and costs of the alternatives included monetising the disruption. We can do that very easily.

**Lord Shipley:** What Professor Overman said was, “We could have presented this to policymakers”, so that, I guess, is the Government. Are you saying that this has actually been done?

**Rupert Walker:** Both in our October 2013 report and more recently in our report on the alternatives.

**Q108 The Chairman:** The Rail Freight Group has complained that too little work has been done on their interests, and it cited in particular the potential doubling of capacity coming through ‘Liverpool2’, which is not on HS2 but presumably will connect into HS2. Would you agree with its concern?

**Paul Plummer:** I can absolutely understand its concern. As the infrastructure manager, part of the reason why we have the role in respect of planning how the network should develop and how we should use capacity on the network is precisely to engage with it, to understand what is happening to freight demand and how we best accommodate that, and to look at the business case for investments to grow capacity of the network. The opportunity from HS2 is to release capacity from the existing line to be able to make greater capacity available for freight as a result of it. That is absolutely the conversation that we are having with freight operators in the planning group that I chair, in the freight-specific group that we are very much involved with, as well as with Rail Freight Group and other freight representative bodies. It is understandable that it is expressing that concern, because the outcome of these conversations is not certain, but it is important to us that freight, just as much as passenger, and the value of that to the UK economy, is reflected in these decisions.

**Lord Lawson of Blaby:** I would like to go back briefly to what Lord Shipley was saying. I think you promised, but I would like your confirmation, to provide us with the answers to Professor Overman’s questions about precisely how you work out the cost of disruption on the 51m alternative compared with the cost of disruption to some on the HS2 project. We would like to see these figures, particularly since we have been told that the Department for
Transport has said that the benefit-cost ratio of the 51m proposal is more than double the benefit-cost ratio for HS2. You will do that for us, will you?

Paul Plummer: We will do that. I think Professor Nash wanted to comment on your last point.

Professor Nash: Just to comment on benefit-cost ratios, the evidence is that the 51m proposals would have a very high benefit-cost ratio, much higher than HS2, but the standard textbook approach of comparing different, mutually exclusive alternatives is to ask, “If the cheaper one is worth doing, what are the extra benefits and the extra costs of doing the more expensive one?”. Of course, HS2 is enormously more expensive than 51m, but it does appear that the extra benefits are something like twice the extra costs, so in fact the economic case suggests that HS2 is the better alternative.

Lord Lawson of Blaby: Sorry, I do not quite understand that. If the benefit-cost ratio is much better for 51m than for HS2, how do you get to the conclusion you just enunciated?

Professor Nash: It is the difference between a very high rate of return on a relatively small investment and a good rate of return on a much bigger one. Overall, the economic case suggests that it is worth the extra investment in order to get the very much higher benefits that HS2 provides.

Lord Lawson of Blaby: What is the benefit-cost ratio for the additional benefits that you get from HS2, not the benefit-cost ratio for HS2 as a whole?

Professor Nash: It is still roughly two, in fact, because the 51m proposals are so small relative to the cost of HS2 that the incremental benefit-cost ratio for HS2 is not very much lower than compared with doing nothing.

Q109 Lord Carrington of Fulham: On a slightly different topic, we have heard quite a lot of evidence about the experience of high speed rail, in France particularly but in other countries as well. Have you made comparisons with the benefits that accrued from the high speed rail in France, and have you drawn conclusions as to why it has worked in some cities in France and been less successful in others?

Professor Nash: I have reviewed this as part of some work I did for the International Transport Forum. France has a system where by law every major investment has an ex-post evaluation, so I have been able to look at the ex-post evaluations of certainly the first four lines, all of which have given acceptable social returns. Essentially, the success comes from having large volumes of traffic, and France has achieved that certainly partly by linking large cities but also by the policy of running its TGVs on to the ordinary network to serve a much bigger range of cities. That strategy has enabled much better use of the high speed lines than if they were just seen as self-contained lines.

There is a lesson in that for Britain. The existing proposals certainly make use of the high speed line to serve a much wider range of cities than are directly on it, but the important point coming out of that is the need for an integrated plan, looking at the conventional network and the high speed line, to get the best use of both.

Lord Carrington of Fulham: It has been suggested to us that Lille benefited quite strongly but Avignon, for instance, did not, and that one reason for that was because of the
placing of the station at Avignon being well outside the city. We are planning to do the same thing, as I understand it, between Leeds and Sheffield.

**Professor Nash**: The French evidence does suggest that a city-centre location has big benefits. Obviously, in any particular application it is a case of trading off the costs of getting into the centre with the benefits. The proposed station at Leeds would be pretty central, in fact, but the proposed station at Sheffield would be at Meadowhall, some way from the centre but within a fairly developed area.

**Lord Carrington of Fulham**: Do you think that is an acceptable trade-off, rather than one that is going to mean that Sheffield will not benefit from the high speed link in the way it should?

**Professor Nash**: I have not been involved in any in-depth study of the two alternatives, but I can believe that Meadowhall is the best trade-off for Sheffield, given the costs of getting into the centre and given that Meadowhall has its own attractions in terms of a pretty good level of connectivity with the area as a whole.

**Rupert Walker**:Whilst it is quite right that a station not in a city centre perhaps provides slightly less benefit to the city itself, it provides a broader regional benefit to people who live around the city who will, particularly on whichever side it is on, find it much easier to get to than travelling to the centre of the city, so again there is a trade-off between getting right into the centre and providing something that is a little more outside but enables more people to access it much more easily.

**Lord Carrington of Fulham**: Is there a difference between that and what happened at Avignon? We are being told at any rate that Avignon has not benefited greatly from the TGV, because of the location of the station. That is hugely simplistic, I am sure.

**Paul Plummer**: I have heard that assertion too, but I have not looked at it in detail.

**Lord Carrington of Fulham**: It seems to be fairly important in terms of planning locations for stations. If it is true, it does rather raise a question mark over what you have just said about Meadowhall.

**Paul Plummer**: The assertion is that Avignon the city has not benefited. I do not know whether the region in the south of France has benefited from having the station there.

**Q110 The Chairman**: Let us look at a comparison closer to home. We have been told that HS1 has substantially underperformed against its passenger targets and that the local economy around Ashford has in fact underperformed much of Kent, whereas the reverse was expected. What lessons do you draw from that?

**Paul Plummer**: I am simply not sighted on those facts.

**Professor Nash**: The lesson I would draw is that it tends to be the bigger cities that benefit anyway. Ashford has a very limited high speed service certainly in terms of international trains. Similarly, on the French side Lille is perfectly located to benefit from high speed rail, Avignon a lot less so, in terms of connections with other cities and so forth. As I say, it tends to be the bigger cities that benefit most, and penetrating the heart of them is an important part of that.
Lord Griffiths of Fforestfach: Say you were asked to advise on the conditions you would attach to the franchise. Should there be a separate franchise for example for HS2? Should it be integrated with the west line and the east line? Should the operators have the freedom to charge premium fares? What would your advice be?

Paul Plummer: My advice would be to consider those things in an integrated way. I do not say that there needs to be an integrated franchise or that there should not be, but I do say that the two franchises, or a single integrated franchise, should be considered from the point of view of the overall network and how to get the best value from the overall network. Likewise, I do not say that pricing should be at a particular level or should be higher or lower, merely that it is considered as part of optimising the whole network, the whole system, rather than one part of it in isolation of the rest.

The Chairman: That brings the first evidence session to an end. Thank you very much for your helpful answers. You are very welcome to stay and listen to the next witness.
Netley Primary School Governing Body—Written evidence

Netley Primary School Governing Body—Written evidence

1. The business case is based on passenger projections which are flawed: passengers are double counted as travelling on HS2, and still as travelling on the classic services. Then counted again as stopping at Paddington or Old Oak Common and continuing on crossrail. There is no need to double the platforms at Euston, the 12 we have would be enough if lengthened to take the new trains.

2. Therefore, no need for the proposed land grab and demolition of 130 homes around Euston. It is only the developers who want this land, we already have a community and local economy. While this goes on the house values of pensioners are blighted, just as their old age will be by decades of disruption.

3. The cost to the community has not been reckoned and included in the business case. Not only is there no compensation for bearing 10 years of construction for HS2 (unless your home is demolished, but you would not get enough to buy another home in the area), this will be followed by 10 more years of "development" on the decking over the station and tracks, and 10 more years beyond that for crossrail 2. There is no thought for proper protection for the community, just for the profits of the developers.

4. The impact on health and life expectancy of people has not been costed - pollution, noise, dirt, disrupted sleep due to night engineering - for asthma sufferers, young, elderly and vulnerable. There is a cost passed to other areas of the economy as well as thrust onto individuals. Already pollution in our area is above the EU limits and reduces life expectancy by 8 months. Most of the children's playgrounds will be commandeered for construction compounds - with obesity and stress following for generations. The children of the children at our primary school will be paying the cost 30 years from now.

5. Because decking over is so expensive (£7B?) they will ruin the character and appearance of our neighbouring with expensive high rise enclaves in the middle of four story Nash and Victorian homes along the Camden cutting.

6. There has been no serious evaluation given to same footprint alternatives such as double deck down, which would put the 11 new platforms under the existing 12, above the underground tunnels. Spurious reasons such as saying this would prevent an undefined “world class” station are given, as if only a multi-million pound generating above station scheme could deliver this.

7. These issues concerning the Economic Case for HS2 are submitted by the Governing Body of Netley Primary School. The school is located on the Regents Park Estate in the London Borough of Camden. The GB has responded to HS2 consultations, the Euston Area Plan and the Hybrid Bill Select Committee, involving the children and our community in our responses. The school has existed on this site since 1883, and
is attended by 440 children aged from 3-11 yrs including 20 children with multiple disabilities in specialist ASD resource base. This is an area of high deprivation, and we have a higher than national average number of children with English as an additional language, free school meals, pupil mobility and statements of special needs amongst other indices. We are a joyous community, where our multilingual children are happy and achieving well in our fast improving school. We are just nearing the completion of a major capital rebuild, and our children were looking forward to a period of stability for their younger siblings. We share our campus with Robson House, a primary learning support unit, whose pupils are also affected by HS2 like the pupils of our school.

September 2014
Network Rail—Written evidence

Introduction

1. As the owner and operator of Britain’s railway, Network Rail is responsible for planning the railway’s future and establishing how it should develop to help meet key national objectives: economic growth, reduced carbon emissions and improved quality of life for people and communities.

2. Network Rail leads the industry’s Long Term Planning Process which seeks to understand where there is a gap between what the railway should achieve to meet the above objectives and its existing capability. Where gaps exist, we work with governments and industry stakeholders to consider whether new infrastructure is required and in turn, if that investment would represent value for money.

3. Our support for the construction of the new high speed line is based on our New Lines Study, published in 2009. The first phase of High Speed 2 between London and Birmingham will relieve an acute capacity problem on the West Coast Main Line (WCML) for which there is otherwise no viable long-term solution. The second phase, running north from Birmingham, will support economic growth by improving rail connectivity between the major cities of the north of England.

4. HS2 will transform existing services by providing a step-change in capacity on the WCML. By enabling long distance passengers to make their journeys much faster on the new line, space will be freed up on the existing network for faster, more frequent trains and new direct journeys. There will be more space for freight and huge opportunities for improved connectivity and future growth. Network Rail’s initial study into how these train paths might be used showed that fast-growing places like Milton Keynes and Northampton could get more trains an hour at peak times and a much better chance of a seat. Other places could see quicker journeys and new direct services.

5. HS2 is not a bolt-on piece of infrastructure. It will form the heart of a reshaped rail network and effective integration of the whole network is key to success – not just in terms of improved transport and passenger experience, but also in terms of realising the wider economic and social effects including growth and regeneration. For these reasons, Network Rail welcomes the Committee’s inquiry into the economic benefits of high speed rail.

The capacity challenge

6. Today more people travel by rail than at any point since the 1920s, when the rail network was around twice its current size. We have seen unprecedented growth over the last decade (2004-14) and the number of passenger journeys has grown by almost 57% to 1.59

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459 Future priorities for the West Coast Mainline, Network Rail, January 2012
Network Rail—Written evidence

billion in 2013/14. By 2020 a further 300 million passenger journeys per year are forecast to be made.

7. Critical parts of the network now run at close to 100% capacity. As more and more people have chosen to travel by rail, trains have become more crowded and we have built longer platforms to accommodate longer trains. Once these longer trains are full, we will have squeezed more trains onto an already crowded network – we carry one million more trains now than ten years ago. There will come a point when there is simply no space to run more trains and we are rapidly approaching that point on the busiest parts of the network.

Network Rail is prioritising the creation of a Digital Railway function. Although this will enable us to increase the number of trains we can run on some parts of the network and better integrate the HS2 line (for instance, through easier transition of train control), it will not resolve the capacity crisis on mixed traffic routes such as the WCML, on which the key capacity constraint is the sharing of tracks by trains running at different speeds, and by stopping and non-stopping trains.

**The West Coast Main Line (WCML)**

8. The WCML connects Britain’s biggest cities, carries a quarter of all rail freight and is the busiest mixed-traffic railway in Europe.

9. There are 12 different operators along the line. Fast and stopping passenger trains mix with each other, and with heavy freight trains. Different trains stop at different stations, at different frequencies and other lines join it at regular intervals.

10. The rail industry continues to invest in capacity to meet actual, and forecast, growth. Network Rail has delivered a major upgrade at Bletchley to allow 12-car trains to operate, train operators have lengthened many services, and work at Stafford will untangle bottlenecks and separate passenger from freight trains. But in the longer term, demand will still outstrip supply.

11. Shorter-distance commuters already experience overcrowding. Most trains between Northampton and London Euston are carrying more passengers than there are seats when they arrive in the capital, and a third of the most overcrowded trains in the country depart from Euston in the evening. Euston’s passenger numbers are also growing faster than those for any other London terminal (4.9% increase from 2011/12 to 2012/13).

12. By the mid-2020s, both the trains and the line will be full. The effects will be felt by people at the southern end first, with many commuters unable to board their trains at the busiest times, before similar problems then start to affect longer-distance passengers.

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460 Submission to the APPG for High Speed Rail’s inquiry into rail capacity, Network Rail, 2012
461 Department for Transport news release on overcrowding, December 2012
13. Whilst the lack of capacity is most acute at the southern end, demand for long-distance services is also growing. Looking forward, Network Rail’s 2013 Long Distance Market Study anticipates growth over the next ten years of between 12 and 29% on London to Birmingham journeys, 22 to 57% on London to Manchester and 17 to 43% for Birmingham to Manchester.\footnote{Long Distance Market Study, Network Rail, October 2013}

The contribution of rail to the UK economy

14. The railways don’t just move people and freight, they also generate and spread prosperity. They can create jobs, connect economic centres and open up new markets to support low-carbon growth.

15. Living and working in different places is becoming the norm. Rail transports hundreds of thousands of people to work in Britain’s cities every day. These cities are economic centres, and around 60% of jobs in Britain are located in cities and 75% of the private sector workforce live in and around cities.

16. Good rail links make Britain’s towns and cities better locations for businesses to invest with confidence. Entrepreneurship is crucial to economic recovery and long-term future growth of the British economy.

17. Transport is one of the most important factors for deciding where businesses locate. Rail competes with road for providing businesses with the quickest and most efficient journeys between city centres. Not only are rail journeys often faster than by road but rail allows business travellers to maximise constructive ‘work’ travel time. More frequent services and shorter journey times play an important part in improving business efficiency.

18. For medium and larger businesses, transport is crucial. Attracting the best people is vital to remaining competitive and employees have to be able to get to work quickly and easily. Flexible workforces are also more important than ever. Businesses need to be able to react quickly to changes in demand and good transport links are an important weapon for fighting unemployment.

19. Quality transport links also benefit small businesses by allowing them to grow their customer bases in cities and towns across the country. Face-to-face meetings with clients, business partners and consultants remain key to the way people do business – long, complicated or delayed journeys are costly.

20. Rail freight directly contributes £870 million to the economy and supports an output of £5.9 billion, six times its direct turnover. In 2013/14 alone rail freight transported over 115 million tonnes of goods worth over £30 billion. The ability to rely on goods and materials being delivered on time is critical to business and increasingly there is a dependence on freight trains.
HS2 – the economic benefits

21. Network Rail research estimates that a new high speed line will generate more than two and a half times the benefits for the economy than costs. Our New Lines Study, which looked at the key transport markets on the WCML (London, Birmingham, Manchester and Scotland) indicated that the extension of any line to Scotland would increase the economic benefits in the business case\textsuperscript{463}. The London-Scotland route is a substantial market which is currently dominated by aviation.

22. Improving business-to-business connectivity is critical in supporting economic growth. When cities and urban centres are well connected, people are more willing to travel for business purposes. Improved connectivity between economic centres helps to increase economic efficiency, increases competition, reduces costs in the supply chain through agglomeration and encourages trade and investment\textsuperscript{464}.

23. The first effect of the additional capacity created by HS2, at least in the short term, would be to reduce crowding. This has important knock-on effects because a higher-quality journey experience will encourage more people to travel. This will generate economic benefits and (if the people transfer from other modes of transport such as air or road travel) environmental benefits as well. Additional infrastructure capacity can also improve train performance, although if the extra capacity is fully used by additional train services then (other things remaining equal) performance would be expected to remain the same.

24. Investment in rail capacity has significant environmental benefits by encouraging a shift from road and air to rail travel. Passengers and freight companies switching from cars and lorries will both reduce carbon emissions and ease congestion on Britain’s road network. The Eddington Study estimated that time lost to road congestion costs the economy £7-8 billion every year, a figure that is set to rise to £22 billion by 2025\textsuperscript{465}.

25. However, perhaps the most significant impacts of additional rail capacity arise in the area of connectivity. Increasing the ability of passengers to travel between urban centres has been demonstrated to stimulate economic growth\textsuperscript{466}. Rail is enormously important to the business community: already, of the 1.59 billion passenger journeys made on the railways every year, 1 billion are made by people commuting or travelling for business\textsuperscript{467}.

26. Additional capacity is also vital to the continued growth of the rail freight industry. The rail network transports over 100 million tonnes of goods per year. It is of strategic importance – rail freight delivers over a quarter of the containerised food, clothes and white goods, and delivers nearly all the coal for the nation’s electricity generation. Rail freight has expanded by 60 per cent over the last 20 years, and further growth is expected in future, particularly

\textsuperscript{463} New Lines Study, Network Rail, 2009
\textsuperscript{464} Long Distance Market Study, Network Rail, October 2013
\textsuperscript{465} Eddington Transport Study, Department for Transport, December 2006
\textsuperscript{466} Long Distance Market Study, Network Rail, October 2013
\textsuperscript{467} London, Britain and the world: Transport links for economic growth, London First, 2012
in intermodal (container) traffic which is expected to grow by a further 25 per cent up to 2019 alone, and for which the WCML is a key corridor. HS2 would significantly increase the capacity for extra freight trains on the existing network; enabling them to take advantage of the slots freed by inter-city passenger trains moving to the new high speed line. Therefore the transport of people and goods will be greatly improved as capacity on the existing network will be able to carry more freight and local passenger trains.

27. Freeing up capacity on the existing rail network for long distance rail freight services could also increase the environmental benefits of HS2 by over 50%. According to Freight on Rail\textsuperscript{468}, this would stimulate the green economy by reducing road congestion and pollution along the WCML.

28. It is for these reasons that expanding the capacity and improving the performance of our rail network plays a vital part in supporting sustainable economic growth. If additional capacity is provided alongside a reduction in journey times, for example through high speed rail, then the benefits described above are amplified.

29. HS2 will also encourage economic growth nationally, particularly in the cities served by new high speed services by effectively bringing them closer together. HS2 would dramatically decrease journey times between the country’s key cities. Journey time reductions of this scale are unachievable by any other means than a high speed rail network.

30. However, the positive impact of the new network capacity delivered by HS2 on economic growth would not be restricted to the cities it serves. A new high speed line will provide vital support for regional growth through agglomeration effects. By improving the connections between the major cities of the Midlands and the North, a high speed line will help businesses by improving access to wider markets, bigger pools of labour and greater numbers of suppliers.

\textbf{About Network Rail}

31. Network Rail owns, manages and develops Britain’s railway – the 20,000 miles of track, 40,000 bridges and viaducts, and the thousands of signals, level crossings and 2,500 stations (the largest of which we also run). Network Rail also owns a further 8,200 commercial properties all of which fund the rail network infrastructure. In partnership with train operators we help people take more than 1.5 billion journeys by rail every year; an increase of 50% in a decade. We’re investing £38 billion in the railway by 2019 to deliver more frequent, more reliable, safer services and brighter and better stations.

\textit{September 2014}

\textsuperscript{468} Freight on Rail is a partnership between the rail trade unions, the rail freight industry and Campaign for Better Transport
Network Rail, Rail Delivery Group and Professor Chris Nash—Oral evidence (QQ 100-111)

Transcript to be found under Professor Chris Nash, Network Rail and Rail Delivery Group
Dr Matthew Niblett, Professor Roger Vickerman and Professor Peter Mackie—Oral evidence (QQ 1-12)

Dr Matthew Niblett, Professor Roger Vickerman and Professor Peter Mackie—Oral evidence (QQ 1-12)

Transcript to be found under Professor Peter Mackie, Dr Matthew Niblett and Professor Roger Vickerman
North West Business Leadership Team—Written evidence

Executive Summary

1. This submission is presented by the North West Business Leadership Team (NWBLT) which brings together senior executives with major business responsibilities in North West England, in order to promote and support the sustainable economic development of the North West.

2. A list of our current members is attached as an appendix to this submission. We have previously given evidence, both written and oral, to the House of Commons Transport Committee in respect of its High Speed Rail inquiry 2010-12 and have studied and debated the issues involved in relation to this major project regularly since Lord Adonis published his original report on behalf of the last Labour government.

3. We believe that there is a good economic case for HS2. We consider that the work undertaken by HS2 Limited and published in October 2013 has taken a ‘middle’ view of likely traffic results and therefore that a relatively cautious approach has been taken towards HS2’s justification. It is also worth noting that a sixty year planning horizon has been adopted for HS2’s case, whereas the asset should have an infinite life span, therefore benefiting many generations to come.

4. We further believe that the provisional work undertaken in recent months by Sir David Higgins as Chairman of HS2 has clarified a number of key points, in particular:

- HS2 would be a catalyst for wider change
- The costs and impacts of HS2 are recognised, but there are costs associated with doing nothing
- Although the immediate need is for additional capacity in the South, HS2 needs to go further North sooner
- HS2 is not the sole answer to the North’s connectivity, and west-east links between Liverpool and the East Coast also need radical improvement, (through what has since become termed the HS3 project). Specifically, Manchester-Leeds needs a new line
- There needs to be a coherent transport plan for the North as a whole, involving civic and business leaders in the North who are integral to the debate. We therefore strongly support the One North proposition as put forward in July 2014 by the leaders of Leeds, Liverpool, Manchester, Newcastle and Sheffield city councils.

5. We do not expect that the North of England and the Midlands will be the only beneficiaries of HS2. Indeed we consider it is inevitable that London will, and should be, a major beneficiary of HS2. Although our mandate is to speak for the North West, we wish to see as many regions as possible benefit from HS2, for the economic benefit of the UK as a whole.
Is There An Economic Case for HS2?

1. The backdrop to the economic argument in favour of HS2 is the strong case that has been developed for a rebalancing of the national economy in the interests of the UK’s productivity. There has been a long history in the UK of under-investment in infrastructure, including transport infrastructure, which has perpetuated the current imbalance in output across the regions. According to OECD data published in 2012, UK public investment in infrastructure as a proportion of GDP, 2006-11, was one of the lowest in the developed world, on a par with the Slovak Republic and Chile. It was well below that in France, Japan, Sweden, the USA, Canada, Australia and Spain, and only half that of Poland and Korea.

2. The basic case for HS2 could be summarized under ten headings:
   - Long distance passenger capacity enhancement, in the face of population growth
   - Commuter capacity enhancement, into major affected cities, to assist economic growth
   - Greatly improved connectional opportunities for smaller centres on existing network
   - Major released capacity to aid freight growth
   - Serving Crossrail, Heathrow, and the regional economic growth centres of Birmingham and Manchester airports
   - Drastic slashing of inter-regional travel times, eg Leeds-Birmingham
   - Massively-improved city-pairs connectivity
   - No more occasions when North West is cut off by WCML engineering works/problems
   - Facing up to the long term future needs of north-south travel, to head off economic damage from congestion
   - Ultimately (after greening of energy generation) a carbon reduction

3. Collectively these benefits offer an uplift in connectivity that will establish enhanced conditions for business investment in the North, and so we believe that there is a good economic case for HS2. We believe that the work undertaken by HS2 Ltd and published in October 2013 has taken a “middle” view of likely traffic results, and therefore that a relatively cautious approach has been taken towards HS2’s justification.

4. We would also note the importance of ensuring that the economic potential of HS2 is fully capitalized upon, and that to achieve this will require a holistic wider investment programme that ensures effective business-to-business and agglomeration benefits across the entire Northern region. We would therefore commend the emerging One North investment proposals, which will help to ensure that the long-term impact of HS2 is further magnified and sustained over a greater period than the 60-year time horizon that has been adopted for HS2’s case.
5. A number of studies point to the economic benefits of high speed rail, although it is acknowledged that some other studies are cautious (or even sceptical) and have stated that benefits could only be convincingly measured after many years, or if other co-factors could be disaggregated (which is obviously not straightforward to do). As an example of a study that found clear benefits, the main benefits cited in a 2008 study by Camel and Matthewman\(^{469}\) were:

- Increases in accessibility of the connected cities and regions
- Enhanced attractiveness of an area for development
- Enlarged labour markets
- Increased value of houses and offices and lower office vacancy rates
- Catalytic effect on additional investment

6. As another example, a 2008 study by the Bay Area Council Economic Institute\(^{470}\) claimed (for the California high speed rail proposal):

- HSR would produce a sustained additional 1.1% increase in employment, 48,000 new jobs in the Bay Area
- There would be increased business productivity, by bringing workers into closer reach
- This would assist cost-sensitive businesses and encourage their retention
- HSR would stimulate tourism and support growth in hotel/visitor sectors
- There would be congestion relief on major highways and at airports
- HSR stations would be catalysts for growth and urban infill, promoting more compact and transit-orientated development in the immediate surrounding areas
- Travel by HSR will use one-third of the energy of comparable air trips, and one-fifth of that of car trips

7. On specifically economic impacts, we refer to a study by Pol, published in 2003 by the European Regional Science Association\(^{471}\):

- As individuals can travel further or reach destinations earlier their “relevant regions” become larger, increasing their potential welfare
- Cities served by HSR can gain enhanced international-grade facilities and status
- HSR can have a catalyzing effect upon the regional economies
- Weaker European regions can obtain a higher position in the competitive league

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\(^{469}\) The Non-Economic Impacts of High Speed Trains on Regional Economic Development: A Review of the Literature, Karima Kamel and Richard Matthewman, Locate In Kent, November 2008

\(^{470}\) California High Speed Rail, Economic Benefits and Impacts in the San Francisco Bay Area, Bay Area Economic Institute Report, October 2008

\(^{471}\) The Economic Impact of the High Speed Train on Urban Regions, Peter M. J. Pol, ERSA Papers, published by the European Regional Science Association, Austria, 2003
North West Business Leadership Team—Written evidence

- Weaker regions no longer protected by transport barriers are likely to be stimulated into improving economic attractiveness

8. Evidence submitted by Eurostar to the House of Commons Transport Committee Inquiry on High Speed Rail in 2011 has stated that:

- Lille has been transformed by its high speed rail links
- New businesses locate in Lille because of its superb accessibility
- Unemployment, once very severe, is now only a couple of per cent above the national average
- Overall, the volume of two-way tourism between London and Paris has increased massively
- High Speed 1 has been at least partly responsible for major investment at/around St. Pancras, and to a smaller extent Stratford and Ebbsfleet

9. A 2013 study of the West Midlands by Centro found that HS2 (plus local connectivity enhancements) would result in:

- A £1.5bn increase in economic output
- 22,000 additional jobs in the West Midlands metropolitan area
- An average wage increase of £300 per worker per annum

10. The Department for Transport’s paper, High Speed Rail, Investing in Britain’s Future, Phase Two, The Route to Leeds, Manchester and Beyond, published by the Government in July 2013, has affirmed that:

- HS2 could play an important role in helping enhance the potential of the Midlands and North to act as a counterweight to London and the South East
- Phase Two of HS2 would help support the creation of some 60,000 jobs in the cities of the Midlands and North, again assisting economic rebalancing
- Up to 10,000 jobs are anticipated in construction of HS2 and 1,400 in operation and maintenance

11. The Government paper acknowledges (pp25-26) that “the actual number of jobs generated will reflect wider economic factors, but that the potential exists for thousands of jobs at each (served) site and many additional jobs in the wider city and region. This will require local authorities, delivery partners and businesses to work in partnership to...

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472 House of Commons Transport Committee, Tenth Report, Inquiry into High Speed Rail, written evidence from Eurostar, HSR 128, November 2011
473 How the HS2 Y Network Will Transform the West Midlands, Centro, September 2013
474 High Speed Rail, Investing In Britain’s Future, Phase Two, The Route to Leeds, Manchester and Beyond, Department for Transport, July 2013
create a planning, infrastructure and investment environment for growth which harnesses the connectivity delivered by HS2”.

12. The Consultation Summary on the Phase 2 route of HS2, published in July 2013, has estimated that:

- Eight of Britain’s largest cities will be better-connected
- In broad terms, for every £1 invested in HS2, there will be a £2 payback. We believe this to be a cautious estimate of the benefits and a realistic estimate of the costs.
- When fully open (both phases), HS2 will at a broad definition help to underpin 400,000 jobs

13. In their evidence to the House of Commons Transport Committee, June 2011, Chia-Lin Chen and the late Professor Sir Peter Hall categorised city to city travel into three influential time-bands, one hour (or less), two hours and over two hours (where rail is not very competitive with air). HS2 will move Manchester, Manchester Airport and Crewe from the (approximate) two-hour band to one hour, a dramatic game-changing impact. Other cities such as Liverpool and Preston will also see major reductions in travel times and sharply-improved connectivity, thus assisting economic growth.

14. We agree that regional economic benefits are likely to flow from HS2 through enhanced productivity and through business locational effects. According to research by KPMG for HS2, HS2 Regional Economic Impacts, September 2013, these comprise:

- Enabling business to serve markets further afield, and be more competitive in existing markets
- Enabling businesses to more easily connect with potential suppliers, allowing access to inputs of higher quality/lower cost
- Providing consumers with improved access to a wider range of suppliers
- Improving the functioning of the labour market
- Stimulating competition, driving further improvements in productivity and aiding economic rebalancing

15. Enhanced productivity and business locational effects identified by KPMG include:

- Specialisation of labour and within supply chains
- Matching of skills to jobs, and suppliers to customers

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475 High Speed Rail, Investing In Britain's Future: Consultation on the Route from the West Midlands to Manchester, Leeds and Beyond, Consultation Summary, Department for Transport, July 2013, p4
476 Evidence by Chia-Lin Chen and Professor Sir Peter Hall, Bartlett School of Planning, University College London, to the House of Commons Transport Committee, Tenth Report of Session, Vol II
477 High Speed Two (HS2) Ltd: HS2 Regional Economic Impacts, A Report Prepared for High Speed Two (HS2) Limited by KPMG, Department for Transport (ref HS2/074), September 2013
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- Sharing of inputs with a minimum efficient scale
- Learning through knowledge spillovers from denser economic agglomerations
- Changes in production costs
- Changes in the cost of transport that influence the costs of trade between areas

16. One of the strongest strategic reasons to construct HS2 is the unreliability of our road system due to congestion and random events such as accidents. In its evidence to the House of Commons Public Transport Committee’s Inquiry into High Speed Rail, the Institution of Civil Engineers stated that:

“The nation already has some of the most crowded roads in the world. Traffic congestion in the UK is worse than in any other of the 15 members of the EU before enlargement. In Germany, 7% of road users experience congestion, while that figure is only 4% in France. In the UK, 20% of road users experience congestion, making UK roads much less reliable.”

Should the Strategic Case for HS2 published in October 2013 by DfT/HS2Ltd take account of any other factors?

17. We suggest that the strategic case published in October 2013 could usefully be updated at a future stage to take account of the One North investment proposals that respond to Sir David Higgins’ observations, which have been supported by the Chancellor of the Exchequer, on the opportunity to position HS2 at the heart of a pan-Northern economic “powerhouse” from Liverpool and Manchester to Leeds and York/the North East, as details of that proposal become more clear (see later). We believe in particular that new high-speed connections to Liverpool will strengthen the ability of HS2 to serve Liverpool City Region and help provide the additional rail capacity to meet the anticipated overall increase in passenger and freight movements once Liverpool’s “Superport” development is completed. Similarly, we believe that a new high-speed pan-Northern rail link will increase the benefit of HS2 services serving the North East of England north of York.

18. HS2’s arrival in the North West could also act as a catalyst for the introduction of Javelin-type high speed regional services (like those linking St. Pancras with Kent towns), connecting Manchester and Manchester Airport with places such as Chester, Preston, Blackpool and Barrow, and potentially using HS2’s route in Manchester. We would like to see proposals on this principle worked up into greater detail, and their contribution to HS2’s costs, particularly the Manchester Airport-Manchester Piccadilly section and the two high speed stations, taken into consideration as part of the overall HS2 case.

19. Finally, we would also stress the critical role that intra-urban connections will play in maximizing the impact of HS2 and the proposed pan-Northern rail enhancements. As the

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478 Evidence to the House of Commons Transport Committee Inquiry into the Strategic Case for High Speed Rail, Vol III, Additional Written Evidence, Institution of Civil Engineers
HS2 Growth Taskforce has emphasised, our principal cities will require access to ever-greater skills pools in order to achieve sustained growth. A particular strength of the North of England is the depth of skills that are potentially available. However, we must ensure that the breadth and depth of local transport capacity can be provided to links employers with skills to drive the agglomeration benefits at the heart of this economic strategy.

Is the expected range of the benefit cost ratio persuasive?

20. In the UK, we already have the experience of High Speed 1 (HS1), to inform debate about HS2. Eurostar high speed services are now being used by 10m passengers per year, and this is estimated to increase to over 14m by 2020. Work undertaken by London and Continental Railways in association with Volterra and published in January 2009\textsuperscript{479} found the following summary of costs and benefits for HS1 (in £m, 60-year PV):

- HS1 journey time savings £3,700
- Congestion relief £100
- HS1 total transport benefits £3,800
- Move to more productive jobs £1,700
- Agglomeration £1,800
- Labour force participation £50
- Imperfect competition £250
- HS1 total wider benefits £3,800
- Capital cost £6,100
- Operating costs £1,600
- Revenue (-£3,400)
- HS1 total cost £4,300
- Net present value £3,300
- HS1 benefit-cost ratio (BCR) 1.76 including wider benefits

21. For HS2, we believe that the benefit cost ratio is persuasive, based (as noted earlier) on relatively cautious estimates of use by HS2 Ltd.

22. The HS2 Demand Model Analysis set out by HS2 in 2010\textsuperscript{480} estimated the increase in rail passengers per weekday (by HS2 and the classic network combined) as being:

- Between London and Scotland 7,200
- Between London and the North West of England 15,900
- Between London and the West Midlands 12,200

\textsuperscript{479} Economic Impact of High Speed 1, Final Report, London & Continental Railways in association with Volterra, January 2009, p25
\textsuperscript{480} High Speed Rail, London to the West Midlands and Beyond, HS2 Demand Model Analysis, HMSO February 2010
23. In the case of North West England, 6% of the additional trips were attracted from cars, 17% from air and 76% were newly-generated trips. We have no reason to question these estimates.

24. The Government’s consultation on the route from the West Midlands to Manchester, Leeds and Beyond\(^{481}\), sets out the Government’s views on costs and benefits. For benefits, HS2 will:

- Improve journey opportunities and reduce journey times
- Increase travel reliability
- Reduce overcrowding
- Create new jobs through local regeneration

25. For costs, the consultation stated:

- The Government has set a funding envelope of £21.2bn for Phase 2 (2011 prices, excluding VAT)
- This includes a very significant level of contingency
- The funding envelope reflects an increase in scope, particularly the inclusion of Manchester Airport station, which depends on external third-party funding
- Cost estimates are early-stage and subject to evolution as design work develops

26. The document The Strategic Case for High Speed 2, published by the Department for Transport in October 2013\(^{482}\), and often referred to as the “updated Business Plan”, states:

“Over the course of the last year, HS2 Ltd has made significant improvements to their analytical tools and there has been an extensive review of the evidence supporting key assumptions. We therefore have a much improved understanding of the costs and benefits......(the) analysis shows that the standard benefit-cost ratio for HS2 is ‘high’ value for money, at 2.3 including Wider Economic Benefits. Based on projections about longer term growth in demand, the ‘long term’ benefit-cost ratio would be ‘very high’ value for money, ranging from 2.8 to 4.5 if demand grows at 2.2% a year to 2040 or 2049 respectively. Even for Phase 1 alone the benefit-cost ratio is 1.7.”

27. We are confident that a very detailed analysis by HS2 and its advisers has been undertaken, and that any significant risk of over-optimism has been avoided. Again, we would draw attention to the fact that, although track and rolling stock on HS2 will have a

\(^{481}\) High Speed Rail: Investing in Britain’s Future. Consultation on the Route from the West Midlands to Manchester, Leeds and Beyond, Department for Transport, July 2013

\(^{482}\) The Strategic Case for HS2, Department for Transport, October 2013
finite life and eventually require replacement, the physical infrastructure of the route such as bridges, tunnels, cuttings, embankments and stations can reasonably be expected (with some maintenance) to have a near-infinite life, producing an additional payback for future generations that has not been taken account of by HS2 in its 60-year lifespan calculations.

28. The full “Y” network costs/benefits as updated in the October 2013 Strategic Case document are (£m, NPV 2011 prices):

- Transport benefits (business) £40,529
- Transport benefits (other) £19,323
- Other quantifiable benefits £788
- Indirect taxes loss to Government (-£2,912)
- Net transport benefits £57,727
- Wider economic impacts £13,293
- Total costs £62,606
- Revenues £31,111
- Net cost to Government £31,495
- Benefit/cost ratio including Wider Economic Impacts 2.3

29. The HS2 Cost Review undertaken by Sir David Higgins and published in March 2014 confirmed the existing HS2 budget overall, including some enhanced cost allowances and some savings. The risks of costs being exceeded was seen as being 1 in 20, in other words confidence was very high. The Review confirmed:

- HS2 Phase 1 infrastructure £21.4bn
- HS2 Phase 2 infrastructure £21.2bn
- Phase 1 trains £3.0bn
- Phase 2 trains £4.5bn
- Total costs Phase 1 £24.4bn
- Total costs Phase 2 £25.7bn
- Total funding envelope £50.1bn

30. The Higgins Review also found that:

- A critical decision about a Crossrail connection to the WCML was needed (a study has since been commissioned).
- A decision on an HS2-HS1 link was needed. Since then, the existing proposal has been dropped (we would urge that progress is made with a replacement proposal).
- Guidance on the early delivery of Lichfield-Crewe is needed.

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483 HS2 Plus: A Report by David Higgins, Department for Transport (ref CS056), 2014
North West Business Leadership Team—Written evidence

- There is a welcome opportunity to deliver Phase 2 by 2030 instead of 2033
- An integrated HS2/Network Rail plan for the North is needed, including west-east connections (the Chancellor has since endorsed the ambition for HS3).

**What are the likely economic benefits of HS2 to the North West of England?**

31. We introduce this part of our response with a very brief pen-portrait of the North West:

- Total population 6.9m, set to increase (especially Blackburn/Darwen, Blackpool, Lancashire, Warrington, Cheshire, Greater Manchester
- Relatively low levels of entrepreneurial activity
- Average earnings significantly below UK average (except in Cheshire), gross disposable household income only 90% of UK average in 2013
- Unemployment above national average, again pointing to the need for economic regeneration
- Base to 255,000 businesses, many very small
- “Routine” occupations above national average
- Higher managerial/professional employment below national average
- Strong knowledge economy. 9 out of 100 largest universities are in the NW (Manchester/Salford campuses 90,000 students, Liverpool campuses 50,000 students)
- Strong sectors include digital, software, advertising, environmental technology, financial and professional services, automotive, biotechnologies, pharmaceuticals, airports and ports, tourism

32. To focus more closely upon one example, tourism, and one sub-region, the Liverpool City Region (2011/12 data):

- 55m visitors
- Visitor economy worth £3.1bn
- 43,000 jobs supported by visitor spend
- Liverpool in top ten UK cities/towns visited by overseas tourists
- Average hotel room occupancy of 72%
- Over 1.2m hotel rooms let in Liverpool city centre in 2012

33. We believe that sectors of the economy such as the above will significantly benefit from HS2. But more widely there is a clear need to try to rebalance the overall UK economy, not to hold the South East back but to enable the North to at least partially catch up. The rise in productivity per capita by region over the years 1997-2011 showed the following:

- North West England up from £11,100 to £17,754 (a rise of 60%)
- “Greater South East” including London up from £15,050 to £26,877, up 79%
34. In other words, the gap between the North West of England and the South East is not only wide, but widening further over time (source: ONS).

35. In terms of the economic and social problems that have faced the North West, we believe that the region continues to suffer what the former North West Regional Development Agency once described as “persistent challenges”:

- Above-average ill health, including mental health
- Poor quality housing
- Entrenched and intergenerational deprivation
- Poor external perceptions of the region, and low aspirations
- Difficulties attracting/retaining sufficient skilled/talented people
- Low education/skills attainment, including leadership skills
- Low employment rates
- Low levels of enterprise and business starts
- A congested transport network and poor connectivity

36. In helping to tackle these problems, we believe that the benefits of HS2 to North West England are several-fold.

37. Firstly, we believe that only HS2 can deliver a significant uplift in passenger (and directly, freight) capacity and reliability for traffic flows to/from the North West. Trying to adapt an existing railway (the WCML) or widening the motorways will not, in our view, deliver anywhere as near a great benefit, and will be highly disruptive to users over an extended period. Even in 2014-15, the partially-delivered WCML upgrading is still ongoing, despite commencing two decades ago, and continues to suffer problems. A new railway as far more effective, and brings the side-benefit of much higher speeds.

38. Secondly, we believe that the North West needs to be much more accessible to London and the South East (and vice versa). The North West is in competition for economic growth with South of England centres such as Bristol, Swindon, Reading, Peterborough and Cambridge, all of which are much closer to London in time terms. The North West needs HS2, and good onward connections from it within London, to offset geographical peripherality.

39. Thirdly, we specifically believe that Crewe, Manchester Airport/Stockport, Manchester/Salford, Warrington, Runcorn, Liverpool, Wigan, Preston and Carlisle will all benefit from significantly-improved rail links to London/South East from 2026 (when Phase One opens), and even more so from 2030 (when Phase Two opens). Some of these centres will also benefit from major improvements in connectivity with Birmingham. These improvements in connectivity can reasonably be expected to
improve the competitiveness of the locations of these cities, with consequent employment increases.

40. Fourthly, because the North West has a strong industrial manufacturing and professional services base, including the construction sector, we believe that the Region is particularly well placed to directly gain employment from the planning and construction of HS2, and hopefully also of HS3 too.

41. We would cite evidence given to the House of Commons Transport Committee Inquiry into High Speed Rail\textsuperscript{484} by the Liverpool and North West Chamber of Commerce, in response to that Committee’s questions:

(Do you expect HS2 to encourage more new businesses to start-up in your area?) “Yes, particularly as the cost of living in London rises in the wake of rising property prices and congestion. A number of Government departments and high profile organisations such as the BBC are already relocating to the North in view of favourable property rents, reduced overheads and the quality of life offered to employers by regional cities.”

(Do you expect HS2 to create more jobs in your area?) “Yes, early estimates from the DfT suggest that over 40,000 jobs will be created during Phase 1 alone, around 9,000 would be created on the route’s construction and a further 1,500 jobs in its operation. Regeneration around the stations would create 30,000 jobs. As construction progresses north, there would be significant supply-chain opportunities for Liverpool City Region companies.”

(Do you expect HS2 to draw jobs away from your area?) “No, on the contrary, we expect that HS2 will be essential in supporting the predicted growth of Liverpool City Region based upon developments currently in the pipeline (Liverpool & Wirral waters, Superport, Mersey Tidal Barrage Scheme, Irish Sea Offshore Wind Programme, Port of Liverpool Deep Water Container Terminal and the Enterprise Zone.”

(In what sectors will the biggest influence be felt?) “Built environment, knowledge economy, advanced manufacturing, financial services, low carbon energy development, and culture and visitor economy.”

42. We would also particularly welcome the benefits from HS2 in relation to freight. These might take one of the following three forms:

\textsuperscript{484} Evidence to the House of Commons Transport Committee Inquiry into the Strategic Case for High Speed Rail, Vol III, Additional Written Evidence, Liverpool and North West Chamber of Commerce
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• High-value time-sensitive light palletized cargo such as mails and parcels, which could be rapidly moved between London Euston, Birmingham Curzon Street, both Birmingham and Manchester Airports, Manchester, Liverpool and Scotland
• Released capacity on the existing network for additional heavy freight, particularly between the Haven Ports, the Thames container terminals, the Channel Tunnel, Southampton and the North West of England and Scotland. This would include increased traffic to/from the expanded Mersey port facilities, which are currently expected to open by the end of 2015 and are so vital to the North West economy.
• Thirdly, and tentatively at this stage, the potential feasibility of moving a limited number of European-gauge freight trains between mainland Europe, the Channel Tunnel and the North of England, particularly during late evenings (after service wind-down but before the night maintenance period). At present, these trains cannot run north of Barking, for gauge-clearance reasons. We are aware that freight on HS2 itself does not form part of HS2 plans at present.

43. Finally, we very much welcome the additional capacity that HS2 will provide within the North West, insofar as it will enable released capacity on the existing network to be used for improved regional-express and local services. These would be likely to benefit the following corridors:

- Rugby-Lichfield-Stafford-Crewe-Hartford-Warrington-Wigan-Preston
- Rugby-Lichfield-Stoke-Congleton-Macclesfield-Stockport-Manchester
- Crewe-Wilmslow-Stockport-Manchester

**Do these depend on complementary action by Governments, local authorities, and Local Enterprise Partnerships?**

44. Yes, in part. We are very aware that planning by local authorities and LEPs in the North West for HS2’s arrival is already under way. This is extremely welcome. We are also very grateful for the firm support that has been shown by the last and the present Governments for HS2, and the strong cross-party political consensus that underpins the scheme. We look forward to continuing to work with the Government, local authorities and LEPs in securing the maximum benefit and value to the Region from HS2.

45. In its report, High Speed 2, Get Ready, A Report to the Government by the HS2 Growth Taskforce, published in 2014\(^\text{485}\), the Growth Taskforce found that:

- HS2 should be at the heart of an effective transport network which spreads the economic benefits of the project as widely as possible
- Some strategic benefits would only be achieved if city regions collaborated

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\(^{485}\) High Speed 2: Get Ready - A Report to the Government by the HS2 Growth Taskforce, Department for Transport 2014
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- It is important that we have the best possible understanding of the economic impacts of major projects such as HS2
- Station location is critical to maximizing the benefits.

46. The Taskforce also found:

- We need to grow the skills necessary to build, maintain and operate HS2
- Many people do not understand that HS2 will open-up opportunities for well-paid careers
- There are huge opportunities for UK businesses to win contracts for the design/construction of HS2
- Regeneration and development around HS2 stations needs to be accelerated and delivered well before HS2 arrives, and planned to minimise disruption/delay
- A single dedicated partnership arrangement is needed for each HS2 station site

Might some parts of the UK suffer economic disadvantage from HS2?

47. It is inevitable that some parts of the UK will gain more than others from HS2, and arguably that some very peripheral (to HS2) locations may lose out in the shorter term. This is because the balance of attractiveness between HS2-served and non-HS2-served areas will alter as services commence.

48. However, we are more focussed upon the balance of attractiveness between the UK and other countries that we are in direct competition with. For instance, Paris, Madrid and Frankfurt enjoy high speed rail services, and London is now (since 2007) well-linked by HSR to Paris, Lille and Bruxelles. We therefore must accept that it is the overall gain to UKplc that matters most.

49. For locations in the North West that are very peripheral to HS2-served stations - Barrow and Burnley might be examples - we recognise that there is a slight risk that “footloose” businesses might relocate to near (or nearer) an HS2 rail terminal within the North West. Although this would not be a loss to the regional economy, it would obviously be detrimental to the more peripheral location. Moreover, we would envisage that any such economic impact would be temporary with the opportunity for all parts of the North to achieve a net gain in economic output over time if the right transport, skills and regeneration conditions are put in place. We would therefore urge that improved regional links to HS2 railheads, as set out in the One North proposals in July 2014, are further complemented, for example by regional Javelin-type services (similar to those operating between Kent and St. Pancras), to improve links within the region by helping to overcome peripherality disadvantages.

Is London likely to be a main economic beneficiary of HS2?
50. The fear of new railways damaging the economics of cities outside London has a very long history:

“Railroads will......do incalculable mischief. If they succeed, they will give an unnatural impulse to society......overturn the metropolitan markets, drain the provinces of their resources......and create all sorts of confusion and distress.” (John Bull, 1835)

And

“The unfortunate towns subscribed money to get railways, and it proves to be for cutting their own throats. Their business has gone elsewhere......That is their sad case.” (Thomas Carlyle, 1858)

We do not share this viewpoint, which of course was subsequently disproved by history. We also do not believe that this has been the overall experience with high speed rail in mainland Europe, although of course there have been instances where a degree of centralization has occurred in specific industries.

51. It is inevitable that London will, and should be, a major beneficiary of HS2. We are entirely comfortable with this. The construction of the new route will partly be funded by tax revenues from businesses and residents of London, and it is therefore entirely appropriate that London and Londoners should benefit. We wish to see as many regions as possible benefit from HS2.

52. Work undertaken for HS2 Ltd by KPMG, referenced in *The Strategic Case for HS2*, published by HS2 Ltd in October 2013, has stated that:

- Greater Manchester will experience a 1.4% improvement in labour connectivity but as much as an 18.8% improvement in business connectivity
- West Yorkshire will experience a 9.1% increase in labour connectivity and a 19.7% increase in business connectivity
- South Yorkshire will experience a 31.8% improvement in labour connectivity and a 22.5% improvement in business connectivity
- The West Midlands will experience a 15.7% improvement in labour connectivity and a 21.1% improvement in business connectivity
- Derby-Nottingham will experience a 14.7% improvement in labour connectivity and a 23.2% improvement in business connectivity
- London will experience a 6.9% increase in labour connectivity and an 8.8% increase in business connectivity (source: KPMG/HS2 Ltd)

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486 The Strategic Case for HS2, Department for Transport, October 2013
53. We are sceptical that the Greater Manchester labour market connectivity figure is so low, and so out of line with West and South Yorkshire and the West Midlands, and assume that this will eventually prove to be an under-estimate. However, it is clear from these KPMG figures that the Midlands and North of England will be the major qualitative beneficiaries of HS2, thus assisting economic rebalancing.

54. The KPMG work also found that, of an additional £15bn additional output per year for the GB economy, between £5.5bn and £7.8bn per year could be generated in the “Phase 2 city regions” outside London. This suggests that an appropriate degree of productivity gain will accrue to the North West of England.

55. We are concerned that at least some of the counties through which HS2 passes, but which do not have a station for local users, should gain from HS2-related improvements. We suggest that this should be offset by significantly-improved local services on the existing network, as is proposed by HS2 Ltd. We particularly would support the linking-in of local commuter services at the southern end of the WCML into Crossrail, via a new connecting line. We also would point out that attracting more north-south freight to rail could be expected to benefit these counties by reducing freight (and associated emissions) on major roads.

56. In short, we do not accept the argument, sometimes put forward by HS2 opponents, that building HS2 will result in the abstraction of economic activity from the North West in favour of the South East. In contrast, we suggest that radically improving connectivity between London and centres such as Crewe, Liverpool and Manchester, with their lower land and property prices and available workforce, will enable at least some businesses to move from London to the North West. As already noted, we also believe that HS2 will enable the North West to better-compete with out-of-London centres such as Southampton, Bristol, Swindon and Peterborough that already (in 2014) enjoy fast links with London. We are confident that North West businesses, Local Enterprise Partnerships and local authorities will rise to the challenge of exploiting HS2’s opportunities to the full.

57. The need to complement HS2 with equal-quality investment in the North of England was also dealt with by Sir David Higgins⁴⁸⁷:

- HS2 would be a catalyst for wider change
- The costs and impacts of HS2 were recognised, but there were costs associated with doing nothing

⁴⁸⁷ HS2 Plus: A Report by David Higgins, Department for Transport (ref CS056), 2014
• Although the immediate need was for additional capacity in the South, HS2 needed to go further North sooner
• HS2 was not the sole answer to the North’s connectivity, and west-east links between Liverpool and the East Coast also needed radical improvement, too, through what has since become termed the HS3 project (again, as set out in One North in July 2014). Specifically, Manchester-Leeds needed a new line
• There needed to be a coherent transport plan for the North as a whole. This was subsequently responded to, and made very explicit in, the One North proposals, with pan-North improvements in connectivity
• Civic and business leaders in the North were integral to the debate

How might the expected benefits of HS2 to the national economy be realised?

58. Firstly, we would state that we believe that HS2’s benefits are very long term indeed. Just as the present WCML’s infrastructure is approaching its bicentennial in the 2030s, we believe that HS2 will generate benefits for the UK for many decades, and indeed centuries, to come.

59. The main means by which HS2 will benefit the overall UK economy will be by:

• Assisting agglomeration, enabling similar economic activities to interact better
• Rebalancing the national economy by closing the productivity gap between the North and South to provide a significant net gain to overall UK output, whilst allowing London to continue to flourish as a global centre with enhanced connections to the North
• Reducing lost time. Although it is accepted that travel time on the present WCML can be used for working, it is not where businesspeople would ideally be. Travel time (even if used productively on trains) still needs to be minimised, to assist business efficiency
• Attracting additional trips from motorway to rail. This has the double benefit of freeing-up lost business time (spent driving) for more productive use, on board trains, and assisting in reducing congestion by making rail the mode of first choice for more people
• Improving passenger connectivity for smaller centres, by using freed-up capacity on routes such as the WCML for better/more frequent commuter, semi-fast and stopping trains. This, for example, will enable commuter improvements into London, Birmingham, Manchester and Leeds, and improve services at smaller centres such as Milton Keynes, Nuneaton, Congleton and Hartford
• Releasing capacity on the existing rail network for additional railfreight, particularly logistics to/from distribution centres, ports and other major terminals. This will assist distributional efficiency, and reduce lost productive time due to motorway congestion, thus reducing costs
Projecting an image to inward international investors of an efficient transport network. In contrast, at present, we have amongst the most congested road and rail networks in Europe, which could act as a deterrent and undermine our other advantages.

How should HS2 be operated? (eg as a franchise in competition with West Coast Main Line)

60. At first sight, there are two obvious possibilities. The first would be as a freestanding franchise, in parallel to the present WCML intercity franchise (currently operated by Virgin). This could result in strong competition in terms of fares. There would thus be a major benefit on an issue that has been of concern to HS2’s critics, that of fare levels, as an HS2 franchisee would be under great pressure to offer bargain-type fares (to rival low fares on the WCML franchise).

61. The alternative would be to offer the present WCML intercity services and HS2 services as a combined franchise. This might weaken the imperative to offer bargain fares on HS2, though we strongly suggest that these would still be offered anyway to fill-up the new (high) capacity, particularly at quieter times. It might also discourage wasteful overprovision on both rival routes.

62. However, the complication may be that of open access. Insofar as we understand it, European directives potentially require that rail routes are made available not only to franchise operators but to open-access bidders. So it may be that placing the entire capacity of the new route, or the combined new and existing routes, in the hands of a single franchisee might not be practical. We would obviously expect the appropriate authorities to be consulted for a definitive ruling on these issues.

Should travellers expect to pay higher fares on HS2?

63. We would expect that market mechanisms would set fares. The main drivers would be (a) the provision of a clearly superior product (compared with alternatives), driving market fares upwards, but (b) the provision of greatly-increased capacity compared with the present WCML, driving market fares downwards. Clearly, fares would vary greatly, by class of accommodation, time of day/day of week, and other factors. The imperative for HS2’s operator(s) would be to strike a balance between filling capacity (by offering low fares) and extracting maximum profitability by charging higher fares where the market would bear this.

64. More widely, we would be concerned to see that the greatest possible use of the new line/services was made, to maximize the wider benefits to the community in terms of justifying the capital costs of the infrastructure, reducing highway and airport congestion and reducing emissions. We assume that the Department for Transport, the Office for
Rail Regulation and the Rail Delivery Group will work together in the best overall interests of UKplc.

**Does the prospect of HS3 affect the economic case for HS2?**

65. We believe that the recent “One North” proposal for HS3, insofar as the precise route details are known (the HS3 network scheme is still conceptual) will benefit the case for HS2. In no way do we see HS3, which we very strongly welcome, as an alternative to HS2. The two schemes are complementary.

66. At a general level, by encouraging very much greater use of rail between Liverpool/Chester/Preston, Manchester/Salford, Huddersfield, Leeds/Bradford, York, Teeside/Wearsdie/Tyneside, Sheffield and Hull, HS3 and its associated proposals as set out in One North will help to encourage use of rail generally, leading to significantly less dependence upon the private car for west-east travel across the North of England. Also, by boosting the economic prospects of these cities and towns, this in turn will be likely to generate greater demand for HS2 on the north-south axis.

67. In addition, there are also specific locations where (subject to detailed planning) HS3 proposals will actively help the case for HS2 investment and service operations. For an example in the North West, the case for creating a fully high speed route into Liverpool city centre, which does not currently form part of HS2’s plans (though services will serve Liverpool) probably depends on the case for HS3 between Liverpool and the point where an HS3 route would intersect with HS2 in the area between Warrington and Wigan. Maximum synergy between the two schemes should be exploited.

68. Similarly, HS2’s planned route between the area east of Wakefield and Leeds could be used by HS3 services between Liverpool, Manchester, Huddersfield and Leeds. There may be other locations, such as in the Sheffield area, where this potential synergy between HS2 and HS3 may exist, to the benefit of both schemes.

69. The creation of an HS3 route between Leeds and York would also be likely to assist in the justification for extending HS2 north from the York area to Teesside and Newcastle-upon-Tyne. This would then create a Liverpool-Newcastle high speed route, as envisaged in the One North strategy.

*September 2014*
North West Business Leadership Team and Manchester City Council—Oral evidence (QQ 143-155)

Transcript to be found under Manchester City Council and North West Business Leadership Team
Councillor Jon Collins, Leader, Nottingham City Council (representing High Speed Rail Eastern Network Partnership), Peter Kennan, Vice-Chair, Sheffield Chamber of Commerce, and Simon Green, Sheffield City Council

Q170 The Chairman: Councillor Collins, Mr Kennan and Mr Green, I welcome you to this meeting of the Economic Affairs Committee inquiry into HS2. It was very good of you to come and join us today. Perhaps I could start off with a fairly general question. It would be helpful to hear from you why you are supportive of the HS2 concept in general. It would also be helpful to understand what your reservations are, in summary, and then we can get to some of the more detailed questions.

Clir Jon Collins: Thank you. I suppose the answer falls into three areas really. I think the most important aspect of it is very much around what we see as the economic benefit. Certainly, the work that HS2 has done directly indicates that the economic benefit of HS2 for the east Midlands is likely to be among the greatest of any of the benefits related to any single station up and down the Y route. But, more fundamentally, it is that sense of being able to have greater connectivity between northern and Midlands cities, which I rather suspect we see as fundamentally about helping to rebalance the UK’s economy, so faster connectivity, the ability of businesses and business people to connect more quickly, the
additional capacity and the opportunities that that brings will, we believe, have a significant impact in helping to promote economic development in the Midlands northwards.

On our reservations, HS2 genuinely has to be in addition to continued investment in the classic network. We need to make sure that the connectivity between HS2 and local communities is right. We also need to make sure that the benefits and opportunities that HS2 brings are closely connected to local communities. Taking all that into account, our commitment is to make sure that locally we get right the issues of connectivity and linking local people to those opportunities, but overall we see this as a huge benefit and as having huge potential.

The other thing I would say is that looking at it the other way, what happens if we do not get HS2, if the investment is not made, or if indeed it is made in a partial way so that the HS2 western link continues but the eastern link does not? Our perspective on that would be that it would not just be a huge disappointment but would, we think, fundamentally undermine the economy of our part of the Midlands and the eastern side of the country. The connectivity up towards Sheffield, Leeds, York, Newcastle, and then potentially up to Edinburgh, has huge economic benefit. Miss that out of the network, though, and have it simply running up the west side of the UK and a huge amount of economic potential is lost. Significantly, I do not think that such an outcome would have the same overall benefit or make the same contribution to helping to rebalance the UK economy, which I know has been a significant part of the case that is being made by HS2, but also, fundamentally, by the core cities and big cities in this country.

**Peter Kennan:** Thank you. I have been in Sheffield all my professional career. My day job is a chartered accountant. I have worked in the city for 35 years. The research that has been done by the local authority, the passenger transport executive and Sheffield city region points to significant economic benefits from HS2, particularly in job creation, which will lead to more stable finances in local rates revenue. We think there are significant benefits during the build phase. Sheffield is a major engineering and manufacturing centre, which offers opportunities to benefit from the development. That will very much ripple out to Doncaster, which is a big railway town.

We know that the rail network in our area and in other parts of the region is close to capacity at this point, and we need serious investment in capacity to enable us to further regenerate the city and the region. Sheffield is the fourth largest city in England, but people tend to forget it. It tends to be the forgotten city, perched as it is up against the Peak District National Park, and is completely divorced from Manchester because of the national park. The whole essence of HS2 should be to generate significant benefits for us along the way.

In terms of our reservations, we are very concerned that the Y route may be abandoned. That is a serious concern. We are very worried about the cost and the existing design—you may wish to hear later about the Meadowhall versus Sheffield city centre discussion. Alternative proposals have been tabled for high-speed lines at less cost and we know that the Committee has had written representations on those as well. So I guess we have serious concerns because of those sorts of issues.
Simon Green: I should like to add to that briefly. I think the crux of the issue with regard to HS2 is that although we fully accept that it is needed and fully support it, we should not see it in isolation. We see it as a bigger concept than just running a railway line between London and the eastern or western leg via Birmingham. I think it was the OECD that said that transport connectivity is the second most important economic stimulus after skills. It is important to bear in mind that this is not just about transport but about skills, regeneration uplift et cetera. I think that was proven last week with the ITC report that was published with regard to the regeneration uplift. It has to be viewed as a catalyst but not as one catalyst on its own. Others have to be forthcoming and built around it, or it has to be built to complement existing packages of investment in the Midlands, the north and then further north and into Scotland in later years. Notwithstanding specific reservations about geography, I think the big reservation is that some people’s perception at present is that this is just a transport project. That perception has to shift more towards economics and regeneration.

Q171 Lord Rowe-Beddoe: You touched on Meadowhall. I would very much welcome your views. We know that the Leader of Sheffield Council is very critical of the fact that Meadowhall seems to have been chosen as the HS2 station. Could you also say, if the decision to put the station in Meadowhall was finally confirmed, whether you would continue to support the project?

Peter Kennan: The decision at the present time of HS2 Limited to site the station in Meadowhall seems to be based on the journey time extension to Leeds and further north, which has been quoted by Sir David Higgins at six minutes. He says that he will disadvantage the north-east compared to the north-west by routing the route through the centre of Sheffield. We think that things are moving on. There has been a lot of discussion of late of economic benefit and the Treasury models used to reach decisions about the route through Meadowhall. The key point, as you have already heard, is that city centre stations are vital to maximise the economic potential of HS2. I do not labour that; I think that you have had evidence on that subject. That means that knowledge-intensive industries will cluster around city centres and be aided by HS2. We are concerned by the Meadowhall location because it is well out of the centre of the city. Manchester and Leeds will be put at a competitive advantage by having city centre stations on HS2. We have seen reports about the advantages for growth and jobs of a city centre station. The latest study undertaken on behalf of Sheffield City Council pointed to at least 6,000 extra jobs being created by location of the station at Sheffield Victoria. Those jobs are well paid, particularly as it encourages financial, professional and business service jobs and creative and digital industry jobs. It is viewed that those jobs would create £5 billion of additional GVA over a 25-year period, with significant extra business rates revenue of £530 million over that period. The thing that is moving is all the discussion about Northern Powerhouse, One North and rebalancing the economy. If we are going to have a strategy to close together Manchester, Leeds and Sheffield as a northern powerhouse, we need a railway station in the centre of Sheffield that will provide a high-speed service to those cities, not one that is situated well away from the main business area. It must be in the area capable of generating the most additional economic activity. Therefore, it seems strange that we may end up with a situation whereby we have a high-speed railway that does not start in the actual city, which travels to Manchester and Leeds. It would make economic sense to me and all those in the city to
have a railway that starts in the centre and goes to those places, connecting directly into HS2.

Lord Rowe-Beddoe: I would you like to answer the second part of my question. Would you still support HS2 if the decision was to put the station at Meadowhall?

Simon Green: The short answer to that is yes, but there are caveats in that. We have always recognised and welcomed HS2. As I said earlier, it needs to be expanded, but the concept is fine. We welcome HS2 Limited using Sheffield for a station location and, if that is Meadowhall, ultimately we will work with Meadowhall. However, that would be a missed opportunity, and that is the crux of it. The economic pie can be made so much bigger and better and linked into so much more by having the city centre chosen as the station location, with an increase in job numbers and regeneration uplift, as well as an increase in the city’s regional connectivity. It is important to stress here that it is not just a south Yorkshire old concept—it is about Sheffield city region. That goes to Chesterfield and the Derbyshire dales as much as it goes to Doncaster or Barnsley. People have to get their head around that concept, rather than thinking of it just as a south Yorkshire asset. More importantly, as Peter alluded to, accelerating up the line—if I can use that analogy—has been the arrival of HS3 or One North or east-west connectivity, whichever title you want to use. It is very much that point about those core three cities, Manchester, Leeds and Sheffield, and how best you connect them—then, ultimately, to Liverpool, Hull, Newcastle and down to Nottingham on the HS2 route. It is about having that critical mass. Within that, with regard to connectivity, if a station is within the city centre we already have the connectivity built into Manchester, Leeds, Nottingham and the other towns. Other public transport routes and the car-borne journeys are already in there in terms of infrastructure, thus serving a central node rather than having to reinvent a transport node, which we feel would be a lost opportunity at Meadowhall, a physically constrained site at present.

Cllr Jon Collins: This is very much an issue for Sheffield and the Sheffield city region. All I would say is that from our perspective the east Midlands hub is a parkway location between Derby and Nottingham. In our particular case, that maximises the regional economic benefit, and it is certainly supported by Nottingham and Nottinghamshire, Derbyshire and most of the local authorities in the east Midlands. Our interest is very much from that point, in ensuring that we get the connectivity right back into Derby and Nottingham but also local connectivity up and down the line. I make the point again that this cannot be at the expense of the existing classic network. From our perspective, we are interested in exploring ways in which the high-speed line can be integrated effectively with the classic network as well, so you get those additional benefits. That brings in a number of communities that are on the classic network but would not be served by HS2. The only final point that I would make is on onward connectivity northwards and southwards. As far as the north is concerned, adding minutes to the journey time would, from our perspective, be seen as a negative. However, the connectivity benefits direct into the centre of Sheffield would be a positive.

Q172 Lord Griffiths of Fforestfach: One problem in coming to any assessment on the subject is that we hear conflicting evidence. We listen to yourselves and we hear your excitement—as we did this morning with other people from the west side and the Midlands—about what could happen as regards jobs and skills; that it is not just about transport; and that it is go-go and terrific. Then we take evidence from other people. For
example, last week we had a French man who was very knowledgeable about TGV and so on and its impact in France. Frankly, he was sceptical and said that he could not really say what impact it had really had. We also had an academic man, Professor Venables, who said that this was really a punt. He said that it is an informed act of faith. I can see that if I was in your position I would want to put a very strong case but what is the real evidence that this will lead to a rebalancing?

Simon Green: There are two aspects to that. The first is with regard to how you measure the rate of return on investment in any large-scale strategic infrastructure. If you put two business nodes together to make it quicker, and connectivity better between the two, with all the other things that we have just mentioned, nine out of 10 economists would say that that would increase economic interaction, agglomeration—especially from a pan-northern perspective—competitiveness, value-added, productivity and so on.

If you could look back in history and ask where we would be now without Victorian railways, it would be interesting to see the return on investment criteria for city centre to city centre that was used at the time—perhaps Mr Brunel or The Great Western could answer that. In addition, it would be interesting to look at the 1950s and 1960s in terms of the motorway network that was put in place. I think that there was a different mindset, which said, “It is a public good and the public will fund it”. There was less adherence to return on investment and payback.

That brings us to the second point in answering the question: what is the period of time that we are measuring success through and by? We have taken a look at what has happened in France and Belgium and in Holland. The ITC in particular has led the way on that. They have all said that it is beginning to work, and it is beginning to work better in some cities than others. Antwerp perhaps over Liège are two examples that I know of, and there are different reasons for that. It is the gestation period of the impact that comes.

Bearing in mind that it is 130 years since we have had any major physical rail investment north of Watford, if you will pardon the expression, if we were to take a 130-year payback vision, it would be enough said in terms of the enormous uplift that you would have. It is crucial to bear in mind that you will not see the economic benefits overnight or in two or three years. The more you can preload it in terms of station preparedness and infrastructure preparedness, the faster the catalyst will work. It is important that you look at this as a major once-in-a-100-years opportunity for infrastructure investment. It is not a payback of two, three, five or 10 years.

Peter Kennan: You said that you heard evidence from the French man, Emile Quinet, last week. One of the key messages that came out of that evidence was that it is difficult to judge the economic return on a project. One can set models but it is very difficult to judge. The evidence mentioned that the best chance of a return was to use city centre locations because the chances of an economic payback declined without the city centre locations. We all know that it is very difficult, with a blizzard of statistics produced by different reports, to know the answer. We know that it is a project that is needed to improve capacity because capacity on the rail network is limited. We know that there is a significant cost to it but we must take the opportunity of trying to maximise the return.
Q173 Lord Griffiths of Fforestfach: Let us assume that you would do better at convincing people if, instead of Meadowhall, there had to be something in the city centre of Sheffield as well. If that was successful, to what extent do you think that you would then simply be attracting people into Sheffield from outside Sheffield rather than adding a net effect?

Peter Kennan: I understand the question. One has to be careful in the analysis of data, but the studies show that all councils within the city region of Sheffield will get a net job increase from this. Because there is a ripple effect, you create a powerhouse city and people access that city and need their local services in their own location. So there is a net increase in all areas, according to the study.

Cllr Jon Collins: If you look at the models that government approve to make comparisons of the economic benefit for transport projects, the facts and figures are there. It shows that across the whole network a 2.6:1 return on capital investment for the whole HS2. For the eastern leg it shows a rate of return of 5.6:1. That is much greater than the average and certainly greater than on the western route. Perhaps I should put the question back to you: the Government have a record of investing in infrastructure projects. They have in the past made decisions on Crossrail 1 and on Thameslink. They are now trying to make a decision on future airport capacity. You could make the same case there: how could you prove that it is going to be of economic benefit? In addition, the promoters of those projects, some of which have already been completed, would have to resort to the same model with the same justifications and the same arguments. Those projects are happening and there is a consensus, but there is not the same level of challenge.

It is interesting that this is a major project about connectivity outside London to the Midlands and the north, and, quite rightly, it is receiving a huge amount of scrutiny because it is a significant amount of money. In fact, similar amounts of money have been spent on infrastructure projects in and around London. But they do not get the same amount of scrutiny. You do not get people saying, “Do you know what? I'm not really sure we really need Crossrail 1. Are we going to need Crossrail 2, the additional airport that we could build in the middle of the Thames or a couple of extra runways at Gatwick and Heathrow? Are they really necessary?” I just think that it is really interesting that the level of scrutiny appears to be very different when it is about projects outside London and the south-east.

In terms of potential economic benefit, the figures are significant up the eastern route. They are even more significant if you look to the prospect of driving HS2—probably it would be the most cost-effective way as well—through York to Newcastle and, if there is a commitment to go to Scotland, the shortest route is up the eastern leg to Edinburgh. That will touch centres of population and city regions will be linked. You are talking about the agglomeration effect for a huge part of the UK economy.

I know that the Government have kind of moved away from saying that this is about journey times. Then it became about capacity and now there is very much an emphasis on the economic benefit to the Midlands and, particularly, the north, as a counterbalance to London and the south-east. Just from Nottingham’s perspective, the journey time benefits are huge. It has taken me two hours to get here on a two-carriage train. We do not get Pendolinos and things like that between the main cities. At the moment, Birmingham is one hour and 20 minutes from Nottingham: it would be 19 minutes on HS2. Sheffield is an hour
Nottingham City Council, Sheffield Chamber of Commerce and Sheffield City Council—Oral evidence (QQ 170-181)

away; that would be around 20 minutes away by HS2 as well. It would be 36 minutes to York and Leeds would be 30 minutes. At the moment, it takes two hours and 30 minutes to Leeds on the train.

People get used to the idea that we have an intercity rail network, which is already fast and efficient. It is only fast if you are going to London from any city pretty much. Between cities outside London, it is appalling. I am not saying that HS2 is the answer, but the potential benefits for business people to get to and from meetings, and to be able to do that with a degree of comfort and certainty, are significant. Most of the time, if I go to one of the big cities in the Midlands and the north, it is quicker if I go by car. It is just because I cannot do any work that I do not go by car. It is absolutely a day out of your schedule whereas, realistically, in HS2 times you will be able to do far more. From our perspective in the east Midlands, the connectivity is a major part of the case for HS2.

**Q174 Baroness Blackstone:** When we took evidence from Emile Quinet, a French expert who had been involved in high-speed rail there, we heard that only a third of the passengers on the TGV are business travellers and slightly over two-thirds are travelling for personal reasons. So I just wondered whether you might be exaggerating the benefits of this investment from a business point of view if those sorts of figures are replicated.

**Cllr Jon Collins:** Well, travel generally potentially generates income both for destinations and between destinations. From a business person’s perspective, the benefits of travelling quickly and reasonably comfortably cannot be underestimated. You cannot do that from Nottingham on the rail network unless you are going to London. It is as simple as that: you cannot do it. You would drive and then you would have the vagaries of whether you were going to get there on time with the challenges of the road network. It is about certainty. I think that a combination of speed and certainty would drive up business patronage. Comparing rail networks that are already of a better standard in France and in other European countries with the kind of network that we have to work with in this country outside London is probably a false comparison.

**Q175 Lord Shipley:** Can I go back for a moment to the question of the location of stations in Sheffield and the east Midlands? I heard Councillor Collins say that there was broad agreement in the east Midlands about the location of the parkway station. However, I do not really want to pursue that. I want to pursue the issue of Meadowhall versus Sheffield city centre. I thought I heard Sheffield arguing that there was a city-region view that the centre of Sheffield was the correct place. However, I had understood that Barnsley, Rotherham and Doncaster had all been strongly arguing in favour of Meadowhall. Could you clarify that?

**Simon Green:** For clarification, at present both the Sheffield city region LEP and the Sheffield city region combined authority, which has been in existence since April this year, are waiting for the evidence for each location to be assessed, the evidence being of an equal standard and merit, before they come to a conclusive decision on where the station should be. That is because it is felt that when the original—very laudable and acceptable—work was undertaken by HS2, it was clearly looking at a certain location using certain tools and measurements. HS2’s work demonstrated that more wealth and jobs would be created in the city centre of Sheffield for the whole of the city region and not just for Sheffield city
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centre. However, it felt that on balance, because of cost, it should recommend a baseline proposition at Meadowhall. Clearly, that went against what we felt—as we touched on earlier—was the concept of high-speed rail with its economic, regeneration and social benefits. Since then, a plethora of studies and reports have been jointly commissioned through the HS2 Programme Board for the city region so that we can have apples versus apples and pears versus pears when we sit down and look at the evidence base. That is the current position taken by both the combined authority and the LEP.

Q176 Lord Shipley: I am grateful for that clarification. Could I now move us on to travel times to London? We have had evidence from France that one of the consequences of the TGV was to increase rail trips to Paris more than from Paris. Given the reduction in journey times from both the east Midlands and Sheffield to London, which is in line with the journey times from many places which are now within commuting distance of London—the south coast, Essex and the Thames Valley—is there a danger that HS2 will encourage more people to travel to work in London but live in the east Midlands and south Yorkshire than is currently the case? Might you lose part of your labour force as a consequence of HS2 being introduced?

Peter Kennan: There is a risk that that could occur without careful management. We have seen the financial services sector regionalised over time, with major employers leaving Sheffield and going to Leeds or Manchester, and we could see the same organisations going to London and leaving the regions. Conversely, the shorter journey times would present an opportunity for the Government and the public sector, who have struggled to move people out of London, to get people into the regions. But the key fact is that, with the northern powerhouse and by bringing together these three cities—Manchester, Sheffield and Leeds—to provide that economic muscle, we think that we can compete and actually take jobs away from London in the private sector. At the very least, we would be able to generate jobs organically through the population that we already have. We must remember that we have very strong universities in the cities, with students who enjoy the very high quality of life in our area. We have the Peak District National Park, for example. We will have the ability to retain those jobs if we are able to create these clusters of economic activity.

Cllr Jon Collins: I think that it is a risk as a transport project, but we cannot look at this as just a transport project, it has to be part of a broader strategy for encouraging a greater economic balance between the north, the Midlands and London. Part of the challenge is that London is massively overheating. The cost of doing business in London increases exponentially. The cost of living in London is huge. Increasingly, people in a lot of jobs and professions cannot afford to live in London. The opportunity to live away and do business will undoubtedly be a positive. You can end up either with businesses being established away from London as a result of that, or with people moving away from London and commuting in. If you have more of the workforce moving out of London and then commuting in, at some point businesses will say, “Actually, the cost of us doing business away from London is so much less that it is worth looking to as an alternative”.

Across the rest of Europe, the disparity in economic productivity and potential between the capital and other major cities is much less than it is in the UK. Our case as Core Cities is that part of the reason is that cities outside of London cannot act, promote growth and retain a level of the wealth that they generate in the same way as cities elsewhere in Europe.
If you combine better connectivity between those cities with greater autonomy over decision-making for them, so that they can act together, promote economic growth, attract business and create business clusters and specialisms in ways that businesses will find attractive, if they can take advantage of the expertise that we have in our universities, you then get the potential for a positive economic spiral away from London. That is what we hope to achieve and, in that context, high-speed rail becomes very important. If I look at the connectivity benefits for Nottingham, it will take 51 minutes to get to London from the east Midlands hub, but the travel time benefit is significantly less, proportionately, than it is to the other major cities of the Midlands and the north. When you add the potential travel time from the centre of Nottingham, getting on a classic network train from the centre of Nottingham into London, the benefit from travelling on HS2 will probably be about 10 to 15 minutes. In that context, the differential becomes huge if you are trying to get to Leeds, Newcastle, Sheffield or Birmingham, but relatively small if you are going to London. I recognise that that is probably a unique position of Nottingham and the east Midlands, but that is why our emphasis is that the benefits we get from this are predominantly about connectivity northwards rather than the risks that we face from connectivity southwards.

**Q177 Baroness Blackstone:** Can you say a bit more, for both Sheffield and Nottingham, about what your complementary policies would be? You have all implied that they are necessary to maximise the benefits from HS2, but you have not been terribly precise about them. Could you be a bit more precise as to what you would do and whether you have both the funds and sufficient autonomy to do that?

**Simon Green:** The last point about autonomy is interesting and very topical at the moment. As I mentioned earlier, HS2 is excellent but has to be seen not as a catalyst in its own right but as one of many catalysts over a period of time to regenerate the Midlands, the north, Scotland and further afield. The devolution of power to enable us as large core cities and city regions has to come. The devil is in the detail, and the speed will vary from city to city, but the trajectory is well and truly under way and has to be delivered. Within that is the context of skills, growth hubs and making our own decisions. Also relevant to HS2, as was touched on earlier, is how you accelerate the growth that it will bring. Then there is HS3, HS4 and whatever concept there is of the pan-north or northern midland rail, road and airport connectivity.

For me, to accelerate the growth, we need to say, in the case of Sheffield, if we have a city centre location, the economic pie is larger, so how do we ensure that connectivity to all the towns around us is enhanced speedily, so that they can access that employment opportunity, rather than be disconnected? I cite as an example some of the towns in eastern Lancashire, which are geographically closer to Manchester but in terms of rail connectivity, further away than Sheffield from Manchester at present. It took me 55 minutes to come over this lunchtime. Because of that poor connectivity, they have lost out on Manchester’s growth for the past 20 or 30 years. That needs to be addressed as a matter of urgency. To accelerate that, we are already talking to London and Continental and HS2 about an urban development company—I use that term; clearly it differs from the old concept of UDCs but it gets the point across. We are looking at a single land development organisation to accelerate development in and around the station location. So a whole package of economic and social factors is already in play.
Baroness Blackstone: What would your response be if a future Government were to say: “We have invested £50 billion in HS2 and all the cities in the north said they want it. It was meant to generate a lot more economic activity. We haven’t got any more money now to give you to fund these other things that you want to do”? You said that you were worried about cost, so I just want to push you a bit on this.

Simon Green: I will be brief to allow colleagues to answer on that as well. It has been very clear so far that the HS2 budget of £42 billion, at 2011 prices, is there to put in the core spine, the core infrastructure. As yet, it does not include the connectivity and urban development necessary around station locations. We as a city council have been working with HS2 and LCR, and they are well aware that we are prepared financially to commit to enable the acceleration of station development and infrastructure around the station location. That is one way that we are doing that, and that is based on working with things such as tax-incremental finance models, earn-back models, which I know both we and Nottingham have already with regard to the TIF.

Cllr Jon Collins: I totally endorse what Simon was saying about economic freedoms and the importance of allowing cities the autonomy to raise finance and invest. In particular, we would argue strongly that we should be allowed to retain for further investment some of the business finance benefits of the growth that we believe that HS2 will bring. What specifically are we looking to do to take advantage of the east Midlands hub? First, we are looking at the potential regeneration benefits of the immediate location. What kind of regeneration will we want there? How can we make sure that there is appropriate accommodation and opportunities for business that would significantly benefit from being located close to high-speed connectivity? We need to make sure that we get the connections right to east Midlands Airport, which is not too far away and, obviously, the motorway.

Fundamentally, we need to get connectivity right back into Derby and Nottingham, because Toton is right on the edge of both cities. We need to make sure that there is rapid connectivity to the centre. That is important, but there is a degree to which we always assume when looking at journey times that everybody starts at the city centre. Actually, for large numbers of people and for significant parts of business in and around Nottingham, they do not. Travelling into the city centre to start a journey is potentially as onerous as travelling to a parkway station in Toton, for example, to start a journey. We also need to be clear about complementary connectivity to some of our smaller communities in and around Toton, Derby and Nottingham: northwards up to Chesterfield, for example, but also the Erewash and Amber Valley communities. We also want to get a consensus view about where we want housing growth in those areas as a complement to the economic growth that we think that the station itself will bring.

Finally, as part of the east Midlands element of this, there is the potential for a maintenance depot at Staveley. That is another important development linked to HS2 from our perspective. There, we want to make sure that we capture those jobs for local people. Having the ability effectively to direct funding for skills, to ensure that the appropriate skills are developed and that the appropriate employment opportunities are available locally is a significant part of what we see as the complementary work that we want to undertake to ensure that HS2 is a success. Do we have the money? No, we do not have the money at the
moment. Do we think that we should benefit from the growth potential and some of the financial benefits that the Government will inevitably get through HS2? We think that we should be able to retain a portion of that for investment. Although I fully accept that £50 billion—or £42 billion, which is the actual price tag for HS2 at the moment—is a large amount of money, it is the equivalent, from now until the point at which it is supposed to be running, of about £2 billion a year, which compares with £9 billion a year’s worth of infrastructure funding spent across the country.

You might take the view that it is a reasonable ask for us to say, “Thanks very much for that, but we also need a little bit of extra investment to make sure that we get the connectivity right. We also need to make sure that the complementary classic network improvements are in place”. That would be reasonable, because at the moment 60% of all infrastructure funding for the country is spent in London and the south-east at the moment. We feel that, as that has been the picture for a long period of time now, actually, this is a little bit of funding that is rightly being targeted on and spent outside London for the benefit of cities outside London.

Q179 Lord Griffiths of Fforestfach: This is a very expensive project. It is £40 billion to £50 billion just for high-speed rail. In addition to that, there is extra funding, as Mr Green mentioned, for connectivity. You, Councillor Collins, mentioned complementary connectivity. There is also the issue of urban regeneration. You have all mentioned that you have good universities in all these cities. However—I was 20 years in the university world—the universities need funding as well. So the add-ons just carry on. If you look at the economic outlook from the Treasury’s point of view, it is not exactly that we are having growth. On the other hand, in terms of the deficit, the debt and so on, there are problems. If the Government say, “Why do we not think of a scheme which is longer trains, longer platforms, pricing to spread out the load on the trains, greater funding for universities to help them create the small businesses?”, would that not be a realistic, viable alternative to what is absolutely the first-best solution?

Peter Kennan: I do not think that that is a solution. We need a high-speed line to improve capacity. Our classic network in our part of the country is saturated. It does not particularly matter whether you run a 10-coach train or a two-coach train; there is no station capacity. Let us take Leeds as an example: it is full; you cannot get a train path through Leeds. Making the trains bigger does not improve the situation. The freight operators cannot get a daytime path across the Pennines to run freight, and we all know that two key points are Liverpool and Hull—Immingham—as docks. It is very difficult to get a path across the Pennines. So I do not think that the solution can be just to enhance the classic network.

The Chairman: If the benefits are so obvious, would you be prepared to increase the precept in your cities to help fund this?

Cllr Jon Collins: Yes, is the straightforward answer. I think that we could make a case that business and the public would be prepared to accept. In Nottingham, we are not afraid of making these kinds of decisions. We are the only city in the country that has introduced a workplace parking levy as a way of funding two extensions to our tram network. Through three elections on the trot, it was in our manifesto. After the last election, we implemented it and, albeit likely to be a few months late, we now have the two tram extensions that we
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want. It is possible to make that case. However, I am not entirely sure that that would be fair given the balance of infrastructure funding that historically there has been.

The Chairman: You have made that point very well.

Cllr Jon Collins: I know, and I am not going to make it again in quite the same way, but there are projects elsewhere in the country that are as expensive, which, judged on the same basis—that is, using the Government’s methodology for judging the economic capital investment—will not generate anything like the same return, but they will almost inevitably happen: Crossrail 2; there will be extra runways somewhere; and no doubt additional capacity in terminals off the back of that. I love listening to Boris Johnson—I think he is great—but when he suggests that £20 billion or £30 billion on a new airport for the south-east is quite a modest sum of money, it gets me thinking that maybe £28 billion, which is the actual cost of delivering HS2, the balance being contingencies, is a similarly reasonable amount of money to be spending on a project that will affect not just the great city of London, great though it is, but six of the other great cities of this country that are, to be honest, in need of the kind of investment that is being talked about here for infrastructure.

Q180 The Chairman: Mr Green, can you imagine recommending to Sheffield City Council that it increase local taxes to seize and pay for some of the benefits that HS2 will bring and perhaps for ensuring that the station was in the city centre rather than at Meadowhall?

Simon Green: I like the word “recommending”, being a non-elected member here; I would like employment when I get back to the office. Yes is the answer to that, and I can say that with no caveat. As I mentioned earlier in response to a previous question, we are already discussing financial contributions to a city centre station and the infrastructure in and around that. To respond to the point made by Lord Griffiths, if you are the Treasury and running UK plc, and you had many options and one of them was to do a little bit more than we have already been doing for the past 30 or 40 years, you will not make any seismic shift in the economic performance of UK plc. The time now is to be bold and say, “Sorry, but we are going to have to make some major investments, not costs, to the make the economy of this country not only as a whole more productive but to redress the current imbalance in economic productivity, never mind wealth generation.

Q181 Lord Rowe-Beddoe: I shall put two questions into one, just to cheat. First, so we can include the northern cities in general, to what extent do you think central government co-ordination is required to help deliver the purported economic benefits to the great northern cities?

Cllr Jon Collins: I think that government has a significant role in major infrastructure projects, both in terms of funding and in terms of planning. In terms of promoting the economic development of the major Midlands and northern cities, I think that government would be better taking a step back and accepting that the circumstances in each city or each city region are very different and then trusting local people, local politicians and local business people to make the best of their own individual advantages, unique selling points and economic heritage in many respects, but basically allowing local businesses to get on and boost local economies in ways they feel they are best able to do. It less about government
giving us money; it is more about government letting us keep the money that otherwise is collected locally and we just hand back to government. This is not the northern and Midlands cities saying, “Actually, we want charity; we want to be considered something of a special case”. If you look at the economy of the UK, the level of imbalance is hampering the growth of UK plc as a whole. The fact that it is so expensive to do business in London and the cost of living is so high there and that it is therefore difficult to attract people to do business in the UK if they have to operate in and around London is cramping the economic style of the country. Let us compare that with the situation in pretty much every other European city, where growth regionally is far more balanced and more even, because their capitals are not the sole centres of economic growth in the way that London is. What you see elsewhere is that the totality is that much greater that the sum of the parts in a way that you do not see in this country. Our message for the Government is a pretty simple one: yes, government’s contribution in terms of major infrastructure projects is important, but just as important is the ability of government to recognise probably now is the time to ease back, trust people more, get away from the idea that they need to micromanage what we do locally and give us a chance to shine, because we will shine.

Lord Rowe-Beddoe: I am assuming that Sheffield agrees with you. How would HS2 help you resolve the capacity issue at Sheffield which I am pretty sure you are going to tell me you have?

Peter Kennan: We have serious capacity constraints. We are a victim partly of our topography, which is that the access to the existing station is through difficult terrain—it is a very hilly city built on seven hills. We have the ability, by having a new station which serves HS2 and hopefully the One North northern powerhouse as well, to route certain other train services into that station to improve connectivity. If the station is big enough, we will have services which enter the city from the east and the north-east which can use the new Sheffield Victoria location as a terminating place and therefore relieve capacity on the existing lines. I do not know whether you were given a copy of the rail map of Sheffield which I sent the committee yesterday, but if you get chance to see it, that would be great, because you will see that the Don Valley, where Meadowhall is, has a two-track main line into Sheffield. All services leaving Sheffield to the north have to travel through that two-track main line, and it is at saturation point and there is no easy way of overcoming that problem.

The Chairman: Thank you very much indeed for your answers. It was an illuminating insight into rebalancing both the economy and what central government should do or not do.
The Chairman: Professor Overman, I welcome you to this meeting of the Economic Affairs Committee. This is the third session of our inquiry into the economic case for High Speed 2. We are being broadcast, so it would be most helpful if you could speak loudly and clearly. Perhaps I could start by asking you a general question: if you take the wider economic impacts out of the calculation, which have been added in for the benefit-cost ratio, would this still represent medium value for money? As a subsidiary question, do you think it is appropriate that those wider benefits should be added? If so, are all the costs that would be incurred to provide those wider benefits also included?

Professor Overman: Let me try to unpick that for you. The analysis that we have that does the cost-benefit analysis gives us two main numbers: one is the cost-benefit ratio that excludes the wider economic impacts that come from improving accessibility and the other is the cost-benefit ratio including those. The strategic case reported the cost-benefit ratio for the Y network with the wider economic benefits in of 2.3 and without about 1.7, 1.8.

Last time I was in front of the Treasury Select Committee I was asked how this related to DfT guidance on whether you say something is medium/high value for money. My understanding at the time was that if you looked at the guidance on this you should be talking about value for money without the wider economic benefits in, and that gave some cut-off points. If you did that, something at 1.8 would give you medium value for money; something at 2.3 with WEBs, wider economic benefits, if you added them in, would give you
2.3. The current DfT guidance on this is a little bit confusing about whether or not you should present them with or without these things in. The best way of thinking about it is that it is somewhere on the medium to high boundary.

The interesting thing is that the sense in which this is informative is hard to understand because 1.8 being classed as medium is not a high cost-benefit ratio relative to other transport projects that DfT has on the books. The way I like to think about it is that if you take the 1.8, 2.3, and use the DfT terminology, it is somewhere on the medium/high boundary. It is just that I find it surprising that we refer to projects as medium value for money when they are probably in the bottom 10%, say, of transport projects that we have on the books as doable. For the purposes of understanding the debate on this, thinking about it in those terms is much more meaningful.

You asked a question on the cost side about whether or not this includes all of the costs that we might need to meet. My view, along with other experts, is that to a first-order approximation it does, so that the 1.8 without and the 2.3 with wider economic benefits are reasonably good central estimates of the benefit-cost ratio of the project.

**The Chairman:** In a sense, what you are saying is that the labelling is slightly misleading because this would be in the bottom decile of returns for transport projects. We are going to come on to those other transport projects later, but if you took it over the last 10 or 20 years, would that be its positioning in the league table?

**Professor Overman:** My basis for that comment is the Eddington report, where I was one of the advisers, in 2006 I believe, where they calculated the cost-benefit ratios with wider economic benefits of a range of projects—interurban, intraurban and something to do with connectivity to ports or something like this. If you looked at the interurban schemes that they had on the books at the time, a number of 2.3 would be somewhere in something like the bottom 20%. If you took all the schemes, the intraurban and the interurban, it would look like it was somewhere in the bottom 10%.

**The Chairman:** In written evidence Professor Mackie said that, “Over 99% of the Department for Transport’s investment schemes yield high or very high value for money”.

**Professor Overman:** My understanding would be consistent with Professor Mackie’s written evidence.

**Q50 Lord Lawson of Blaby:** I would like to pursue the issue of wider economic benefits, which are spoken about a great deal by Ministers. They are spoken about usually in terms of creating an economic powerhouse in the north of England. We have now had the Government saying that they are enthusiastically in favour of HS3, which is a rather expensive way of connecting the major cities of the north-west and the north-east, to do exactly the same thing.

Do you think that there is a risk of double-counting? It might appear to the untutored listener that these are, to some extent, alternative ways of securing this economic benefit, and to say that you are going to get it both ways looks rather like double-counting. What is your view about that? If there is an element of that, which in your judgment is the better way to get this wider economic benefit of a northern powerhouse? Is it the HS2 or is it the trans-Pennine link, whether that is HS3 or some other form of trans-Pennine link?
**Professor Overman:** There are a lot of things bundled up in there. It would be fair to say that when we think about the impacts of HS3—if that is the way we want to refer to the thing that would link across the Pennines—we will need to be careful to separate out any benefits of that into those that are additional to HS2, those that are enhanced by HS2 and those that we could have had without HS2. Of course, the tricky thing is that by the time we come to rigorously start doing the analysis of that we might have started on HS2 and that then fundamentally changes the question. It depends whether you are thinking about the sequential: we have committed to HS2, now what does HS3 give us in addition to HS2? I do not know that we yet have the analysis that would spell that out. If instead you were saying, should we do HS3 or HS2, you would approach that in a different way. The answer to it would depend crucially on what your strategic objective was for the link.

If you wanted to do something that was about rebalancing the UK, there would be a case to be made to do the HS3 link first because that delivers more of the benefits directly to Leeds and Manchester and that would then cause the rebalancing. But if you were interested in the economic performance of the UK as a whole, you might come to a completely different answer on the prioritisation of those schemes. It depends on the sequencing in which you do the assessment but also, quite importantly, the strategic objective that you are hoping that this investment is likely to achieve.

**Lord Lawson of Blaby:** You have told us that HS2 ranks in the bottom 10% of potential transport projects in terms of value for money or benefit-cost ratio or whatever you like to call it. Have you had time to form a view on where HS3 would rate, if you were going to do what you said a moment ago and do HS3 first before HS2? Would it be better than the bottom 10% or would it also be in the bottom 10%?

**Professor Overman:** I would not like to speculate on a cost-benefit basis because I am unclear about what the costs would look like for properly achieving that. My view on the benefit side—and I have said this publicly—is that I tend to think that within-city schemes in Manchester or Leeds would do the most to boost the economic activity in those two cities; let us take them as a concrete example. The between-scheme would probably be second in terms of the extent to which the benefits were concentrated on Manchester and Leeds, and then the High Speed 2 would be third in terms of how they are concentrated. But as I have consistently tried to point out in public, you want to be very careful about just looking at the benefits without looking at the costs, and the cost side of those other options has not been properly assessed.

**Lord Lawson of Blaby:** But should they not be properly assessed?

**Professor Overman:** Absolutely. One of the things that we might come to later is that I do not think the alternative options for how we would spend the money that we are going to spend on HS2 have been properly assessed.

**Q51 Lord Shipley:** We have had a lot of written evidence as a Committee, and a number of people have drawn our attention to your criticisms of the work that KPMG carried out on the economic benefits of HS2. Could you explain for us your objections to the report?

**Professor Overman:** I would like to separate out my comments here, distinguishing between the cost-benefit analysis that has been undertaken by HS2 with the wider economic benefits included, which gives us a number of 2.3 and captures some of these.
wider benefits. I believe that central estimate is something that has been carefully constructed.

The issue with the KPMG report is, first, they were trying to do something difficult. Secondly, they went about it in a way that involved a degree of double counting when they looked at the impact that HS2 would have. Then they proposed a solution to this double counting that was completely non-standard in the way that the literature would usually go about the problem of trying to separate out the effects of different accessibility measures on GDP.

On the issue of double counting and the non-standard separation, the headline number that has been reported, £15 billion GDP, deals with it in one way. If they deal with it in a more standard way, that halves the estimate. You have a non-standard way of dealing with the double-counting issue that gives you £15 billion. You then have a more standard way of dealing with the double-counting issue that gives you £8 billion. I find that worrying. Of course, the headline number has been picked up as the one that is now out there in most people’s heads.

The second issue is that in addition to that double counting, when you look at the relationship between output per person and accessibility, you want to worry that some of this relationship is going to be driven by the fact that the highest skilled people tend to be in the places that are most accessible. Some of the impact of accessibility has nothing to do with accessibility; it is to do with the fact that we get large concentrations of high-skilled people in the places that have better accessibility measures.

For reasons that I do not understand, I think to do with the quality of the data, when KPMG corrected for that—the fact that high-skilled people tend to be in the most accessible places and so some of the relationship between accessibility and output would be driven by that concentration of high-skilled workers—it made no difference to the estimates. In comparison, work that we had done for the Northern Way, trying to answer a different question about the impact of accessibility on wages, suggested that when you controlled for the fact that the most skilled people tended to be in the places with the largest amount of accessibility, your estimate of the impact of accessibility moved a lot. It would move anywhere between 4 and 6 in terms of magnitude—reduced by a factor of 4 to 6. Again, I find that worrying.

We have a double-counting issue that gives us a £15 billion number and if we do a more standard approach we get an £8 billion number, which is half. In addition to that, other attempts to get at this relationship between accessibility and output—and not just my work, I should say—when they control for skills, see that relationship reduce a lot further. If you want a concrete example of this, London has very many skilled workers; it also has very good accessibility. If you want to understand the effect of accessibility, you have to do something to get rid of the fact that it also has a large number of skilled workers. For some reason, when KPMG do that, their estimates do not move at all, and I find that deeply puzzling.

**Q52 Lord Shipley:** Can I pursue the KPMG analysis? Last week Lewis Atter from KPMG told us that they have run their analysis again, substituting their way of measuring connectivity and productivity for the way advocated by the Spatial Economics Research
Centre. He said that this rerun analysis arrived at the same £15 billion figure. Does this sound plausible?

**Professor Overman**: Let me unbundle it. One of the things in the KPMG report that I did agree with was that you could not directly compare their estimate to our estimate. There is a variety of reasons for that. The first is that we were looking at wages not output, and those two things differ; the second is that they were measuring accessibility in a different way to us, for reasons that are too technical to go into; and the third is that we were estimating them off different data. When KPMG and HS2 were looking at this, they had our measure of the impact on wages available to them and they did not think that it was the number that they needed to give the effect that they were interested in, which was the effect on GDP.

There are a number of questions about the subsequent analysis that Lewis has done and which was made available to me on Friday, the first of which is that I can only repeat that I do not see how our estimate of the effect on wages gives you an indication of what the effect on output should be. These two numbers could just clearly differ. The second problem is that it is fine to say that you have adjusted the accessibility formula to look more like the one that we did, but if you are calculating this on different data with different generalised transport costs and a different spread of activity across places, then when you calculate the changes in accessibility that feed into your estimate of what the wage impact would be, you do not know whether you are getting estimates of accessibility that are comparable to the estimates of accessibility that we were using.

To give you a concrete example of where this gets puzzling, when we were using these accessibility measures to look at the impact of a 20-minute reduction in transport times between Manchester and Leeds, our highest percentage change in accessibility was 10% for Manchester, and it went down from there. We only looked at the 20-odd local authorities involved, but a 20-minute travel reduction between Manchester and Leeds involved an accessibility reduction of 10% maximum and about 5% on average. If you look at the analysis that has been done for HS2, for reasons that I just do not understand, KPMG are telling us that the average impact across Britain as a whole is 10%.

Without really understanding where those differences in the magnitudes of the estimated effect of accessibility have come from, I find it hard to compare these two numbers and the estimate that would come out from them. Using wage as the proxy for output, I do not understand how that works. It worries me a lot that the average accessibility effect across the whole of the UK for HS2 is modelled in a way that looks as large as the specific impact on Manchester local authority that we used for a 20-minute reduction time between these two things. It is deeply puzzling to me. Fine, if they give the same number they give the same number, but I do not understand in what sense they were doing this.

The final thing I will say on this is that in some ways it is a moot point, because for the analysis that we were doing for the Northern Way we were set the exam question that said, “If you did not care about the rest of the UK, if you were not going for additionality, if you just wanted to understand the impact on Manchester and Leeds, would the GDP impact on Manchester and Leeds look larger than the estimate you would get if you were looking at the net impact on the whole of the UK?” Of course, the answer to that is yes. If you do a scheme like reducing the travel time between Manchester and Leeds and you then go and
say, “That attracts staff from across the UK, we get investment, some of it comes from other places; what does the impact of that look like?” you get an answer that is larger than if you are saying: how much of that is additional for the UK as a whole? KPMG have taken that conceptual approach and applied it to the UK as a whole.

Whether this number is £15 billion or £8 billion or £3 billion, it is not an additional number. Presenting that as the additional impact for the UK in any way that is meaningful seems really odd to me, whereas in contrast when we were working for the Northern Way you had an objective to try to drive the growth of the north. The exam question, “If we were not too worried about the benefit to the UK economy as a whole, what would the GDP uplift look like in Leeds and Manchester?” seems to me to be a perfectly acceptable question to ask and to try to get that through this route.

So there is a puzzle about why these numbers come out the same, although my initial criticism with the double counting and the inability to control for skill still applies to the KPMG number. It is also just stepping back from it and saying, “What are we learning from this?” I am not sure in what way this approach is meaningful in terms of figuring out the extra benefit that this project gives. We have an estimate of that in the wider economic benefits; it is about £0.5 billion a year.

Q53 Lord Carrington of Fulham: My question carries on from that to some extent. It brings it back down to what the politicians keep talking about, which is the shortening of the time spent getting from London to Birmingham for HS2. They talk about that as being a major benefit and I am not quite clear in my own mind as to how shortening the travel time between London and Birmingham produces economic benefits. Do you have a simplistic view of that?

Professor Overman: I do. There are reasons to think that it would deliver some economic benefits, and I would probably identify three. It helps business if they are able to employ workers across a wide, large labour market. The fact that business in London is able to recruit people from a large labour market because it has good transport links clearly benefits London currently. It will help firms in Birmingham or Manchester or Leeds if they are able to pull from a larger labour market than they have perhaps done hitherto. That is one way in which it will help.

The second way is that in the production of business services, broadly defined, there are lots of inputs that maybe require you to get together and meet with people, for example lawyers going to meet with clients or an advertising agency going to meet with people who want to understand the impact of their advertising or anything like this. Again, if you have specialised services, say in London, then allowing a firm in Manchester to more easily access those specialised legal services or financial services or accounting services will be beneficial to business. Flipping that round on the other side, if you are a legal firm, for example, you care about how hard it is to get to your customers and being able to travel more quickly to get to your customers benefits you in terms of the markets that you can serve.

So there are good reasons to think that being able to travel quickly between places will to some extent improve the functioning of the labour market, will to some extent help firms—particularly the service sector here, given that we are talking about High Speed 2—produce their outputs and also sell their outputs to the market.
Lord Carrington of Fulham: I can understand about reducing the travel time in the way you have described it, but it is not the travel time on HS2, is it? It is the door-to-door travel time that is important. If the HS2 station is in a green-field site somewhere outside the city centre and you are a company based in the city centre, extra time to get to the HS2 site might negate the benefits of the extra speed on HS2.

Professor Overman: That is a fair point. People have very strong views on this. I have not looked too much at the discussion around the exact placement of the stations, city centre versus edge. My view on this is that ideally to maximise the benefits of this—the effects that I have just talked about, labour markets, inputs, selling to markets—you would want the stations in the middle of the city. Of course, that increases the cost. There is a tricky trade-off there.

Probably, on balance, one should not go too far on this and in a little way this comes back to the thing we were saying about the WEBs earlier. You asked me whether I thought that WEBs were a reasonable estimate of the wider benefits that came from this, and I do. They are calculated on the basis of a reduction in journey time. The exact placing of the stations within a local authority or a city will impact that somewhat, but I do not think that it is majorly leading us astray. When you come to specific stations, there is a very difficult trade-off. My view is that wherever possible you would want to think about putting them in the city centre to maximise the benefits of them, but I realise there is a cost implication.

Lord Carrington of Fulham: There is some evidence from the French example that where the stations have been in the city centre on the TGV it has had a positive economic benefit but where the station has been outside, it has had very little or possibly even a negative benefit. I am thinking particularly of Lille and Avignon, two classic examples that have been quoted to us.

Professor Overman: The trouble is that it is difficult with international comparatives. Probably the way to look at it is that we should try to have them in the city centres to maximise benefits. If we decided that the cost implications of that are too large so that in some places we are going to go on the edge, then I think that the way around is to ask ourselves: how are we going to go about maximising the benefits of the stations on the edge? Where we would clearly get ourselves in trouble is if we put stuff on the edge of towns and then it is in the green belt or there are constraints on development and so on, so we do not do anything around it. That would seem to me to be something that would downplay the benefits.

I am uncomfortable with using international comparisons to say that inner city always works and edge of city always fails. I would rather do it this way, saying let us get into the centre if we can. If we really think that the cost implications of this or the route deviation effect or whatever is too large, let us think about the edge, but if we are going to go for the edge we have to think about how we maximise the benefits around it.

Q54 Lord Rowe-Beddoe: Professor Overman, to have a chance of achieving a 2.3 cost-benefit ratio, it appears that city regeneration programmes will have to be a major objective. Could you tell us what supplementary policies you think are required to realise that objective?
**Professor Overman:** I would be careful in reaching the conclusion that to achieve a 2.3 requires additional activity around the station. In some ways I made that clear when I said I did not think that we needed to do additional investments and so on to get that 2.3 wider economic benefit. The way to think about this is that the infrastructure itself is supposed to deliver the wider economic benefit, plus the travel cost savings and so on. We think that 2.3 is our best estimate of what that will do, and then we will do other things around this in an attempt to increase the return that we are getting on the investment that we have already made. I would separate out the need to do things around the stations that necessarily deliver the 2.3 benefits. This goes back a little back to my earlier answer. If we wanted to maximise the benefit of the investment once we have done this and try to think about ways that we might get more return on this, we will need to co-ordinate carefully around the stations that we see.

It is difficult to know exactly how that co-ordination should occur. People seem to have very strong views on this and I find myself not sure which way to go. There are some people who think that we need some very top-down efforts to co-ordinate this, so we need a task force. There are others who argue very strongly and equally vociferously the exact opposite, which is, “No, Manchester is best placed to achieve the benefits of this”. Personally I do not take a strong view on it. Generally I lean towards the idea that we possibly want to be a little bit less centralist in the way the country runs. Certainly Manchester, Leeds, Birmingham having a large input into how we deliver this would be an important part of the process.

Then exactly what we need to do is far trickier. One of the things that will be very difficult is that a lot of what will happen around these stations will be displacement from elsewhere within the wider city area or within the wider region, and managing that displacement will be difficult. When we come in and regenerate around the new station at Birmingham or around Manchester, a lot of the firms that are going to locate there and the things we are going to do there would be activities that would have gone elsewhere within the Manchester urban area. Managing that is always difficult.

The classic thing that will happen is that we will start using this as a focus for investment, but then people will be worrying terribly about the places that are not getting investment or losing investment as a result of this and this would be a very difficult thing to manage. The most concrete example of this that I have seen so far is the discussion around Old Oak Common. Lots of people have been talking about what would happen at Old Oak Common if we stopped HS2 there and the fact that it would allow for new commercial development and so on. If I were, say, Croydon, an area that offers lots of commercial space that might be a rival for the commercial space at Old Oak Common, I would be worrying a lot about this. So there will be lots of tensions to manage. How exactly we go about making sure that we maximise the benefits of this is a much harder question to answer.

**Lord Rowe-Beddoe:** I am sure it is. Many people have suggested that the addition of the economic regeneration proposal is part and parcel of the whole case for getting somewhere faster and the proposal for spending all this money in getting networks. You rather surprised me because I would have thought that the key thing is the growth of GDP in that part of the United Kingdom that is severely behind the eight ball at the moment. Is that not where you are coming from?
Professor Henry Overman—Oral evidence (QQ 49-62)

Professor Overman: There are two things to separate out. When we talk about regeneration around the stations, we have to face up to the fact that lots of that will be displacement from other places in the city area. It has always caused confusion for people when you look at the impact of these things. When we get lots of shiny buildings in one part of cities, it is often because we have chosen to do a lot of spatially concentrated investments. This might be a good strategy, it might be a poor strategy, but we have to realise that lots of that regeneration comes from other parts of the urban area and think about how we are going to manage that.

Your follow-up question was subtly different: if we achieve that development around the stations, what do I think that is going to do to the relative balance of economic activity in the United Kingdom? There I think we simply do not know.

Here is what I think we can say about what the likely impact of HS2 will be in terms of the economic geography of the UK. We can be fairly confident that it is going to benefit places on the line relative to places that are off the line, and then we have no idea which stops on the line will benefit more. I do not know whether it will be the southern end, the northern end or the middle. One of those is going to benefit the most out of this. We have some modelling on it from KPMG. Work on that is in its infancy. For what it is worth, it says that, “The absolute increase in London is larger, the percentage increase is smaller”. It is hard to say whether that is really where we would be. I think we genuinely do not know what it will do in terms of balance along the line.

Lord Rowe-Beddoe: At the moment you do have industrial and technology centres throughout the United Kingdom, so one can build on that, surely. The automotive industry is an example.

Professor Overman: The extent to which HS2 rebalances the UK is a moot point and we just do not know.

Q55 Lord May of Oxford: First, I apologise for being late and, secondly, I would like to go a little bit off-piste on this. In all this machinery of calculating costs and benefits—it is not something that is in front of me, I am afraid—I am not aware of us ever taking on the issue of, given that somewhere between 500,000 and 1 million people are annually being added to the UK population by immigration, to what extent this is likely to distribute people more widely. What is the interplay between these? Could you say very briefly? Possibly the answer is that no one is looking at it.

Professor Overman: It is one of those questions that get us into the discussion about what is the project for. So far we have been talking a little bit about this as an economic project. What does it do for the GDP of the country as a whole? Which of the possible schemes out there might deliver more or less for different parts of the country? How much of this is additional? How large do we think the effects are? What would the rebalancing effect be? Those are all questions about this as an economic project.

Lord May of Oxford: As I say, it is a very narrow analysis that enables people to turn the handle on the machinery that they have, but it seems to me peculiar that it is not complemented by asking: what are the possible unintended consequences that we do not have a machine to turn the handle on? I do not even trust the machine as it has the peculiar property that you say the cost-benefit ratio, which in most mathematical contexts would
mean you wanted a small one, is turned upside down. That is an irrelevant comment but it leads to a kind of mistrust.

**Professor Overman:** What I was going to go on to say is that if we start to think about managing any increase in population that we might be going to see then it starts to become a question about its role as a transport project. That gets us into another separate branch of modelling efforts that have basically been saying, “We want to think about this as we have a growing population, we have a growing number of journeys being made, we are going to have congestion on the network, so how does this play out as a transport investment?” That is the general way the question is being approached.

**Lord May of Oxford:** Two very quick things. We have heard a strongly argued case, at least by the people who argue it, that Stoke would be a better candidate than Crewe to take advantage. We discussed that last time. Do you have a view on that?

**Professor Overman:** I do not have any view on Stoke versus Crewe.

**Lord May of Oxford:** Finally, the question I think I was meant to ask: to what extent do you believe the strategic case has been convincingly articulated as a narrative of why we need it?

**Professor Overman:** Ironically, my answer to your first question was sort of getting at that.

**Lord May of Oxford:** Yes, you could see where I was going.

**Professor Overman:** It is difficult. These are highly political debates that are being had. The difficulty we have with this is that it is still not completely clear what is the strategic case for the investment. It seems to me that we have ended up with the railway before the strategic case, which is something that I know Peter Mackie, for example, is keen on saying about this.

I do not know whether it is really intended as a growth investment, where we are worried about what the impact of this is on UK GDP as a whole. I do not know if it is not a growth investment but it is a rebalancing investment. Is this something that we really think is going to narrow the north-south divide and deal with rebalancing? Or is it a transport project, clear and simple, to deal with the congestion issues that we are going to face on the north-south lines as a result of growth in population, GDP growth and rising passenger numbers? I have to say at the moment it is presented as all things to all men and the answer given is, “Actually it helps with all three of these”.

I think the point is that, depending on which of those you are asking about, there are other options that would possibly deliver better effects. If you think about it as £50 billion, it would be reasonable to ask whether there are other investments of that £50 billion that would have been better for UK plc if we are thinking about it as growth. If we are thinking about it as rebalancing, we could have asked different questions about how we would spend that £50 billion to achieve rebalancing. This comes back to Lord Lawson’s question, for example, about whether you would do HS3 before you did HS2. If instead we were saying, “We have major congestion, particularly on the southern end of the line; what should we do about that and how might we do this?” we might again come up with a different set of answers.
At the moment one rather feels that we have the project and we are searching around for the narrative that justifies the project. Depending on which of these three crucial things you were interested in, for each of those three you might point to other alternatives. It might well be that this is the lowest common denominator type solution that gets you a little bit of all three of those things. I am perfectly open to that, but if we knew what the strategic objective was and had it clearly articulated we would be in a better position to answer questions about the opportunity cost of the £50 billion investment.

Q56  Lord Monks: Can I probe a little more on the alternatives to HS2 and your view on those? The strategic case for HS2 did compare HS2 and the phase 1 alternative with some issues like lengthening the trains, lengthening the platforms and so on. You were very critical before the Treasury Committee of not sufficient attention being paid to these things. You just started, in reply to the previous question, to talk about those things. Do you have any particular view on what would be a good alternative to this new railway? Do you have a favourite that you would like to share with us?

Professor Overman: No. It has always been my position on this that at the end of the day it is not my role to make the final decision about which of these options is better. Throughout the debate on this, I have always tried to inform decision-makers on what the evidence tells us about the different costs and benefits of these. In answer to your question, it depends a little bit on what strategic objective you are trying to achieve.

In a narrow sense, my criticism was that I felt we had not looked at the alternative uses of that £50 billion in either the broad or the narrow sense. I hinted at the broad sense just now, so let me talk about the narrow sense. The broad sense was the things I was saying, “If you wanted to achieve the growth objective how would you do it? If you wanted to achieve the rebalancing objective how would you do it?” The narrow version of this says, “If I wanted to achieve the transport objectives in terms of dealing with congestion, what would I do?”

What I felt was disappointing was that at the point where Members of Parliament were being asked to vote on it, they had basically been presented with something that said, “These other options for dealing with congestion have a wider benefit-cost ratio of 3.1, which is substantially more than 2.3 for HS2, but we are ruling them out because the disruption would be too severe”. It was a red flag on a traffic light system at the back of one of the reports. I felt that if I was a Member of Parliament being asked to think about alternatives, having someone say to me, “We have these two alternatives for dealing with congestion, one of them has a benefit-cost ratio of 2.3 for every pound you spend. Here is this other one that has a benefit-cost ratio of 3.1 but we feel this one would be far too disruptive and here is my back-of-the-envelope calculation that gives you some feeling for why that is”, is not a satisfactory position to put decision-makers in when they are asking about things.

My criticism was that what I would have liked to have seen was those disruption costs monetised so that we could get a feeling for quite how disruptive this was going to be, to compare that to the disruption that was going to come with HS2, which will involve a fairly substantial amount of disruption, and we could have presented this to policymakers. What I do not like is us basically saying, “You have two options for investment here but this one really honestly I would not do it”: I do not like that approach to doing it.
My criticism there was I felt that on occasions Ministers, MPs and decision-makers more broadly were being asked to make decisions in a situation where they were being presented with evidence about the options that was incomplete—and that was a particular example. I have never taken a view on whether the claims put forward by the other four, five, six, 10 alternative schemes about the huge benefits that we would get from those are valid. I do not have a strong view on the huge number of options that have been put out there. I have fairly strong views that the process by which decision-makers have been informed about the options has not necessarily been satisfactory.

Q57 The Chairman: You have been calling for a rigorous analysis of alternatives for about five years. Why have your words not been heeded? Secondly, is it the case that for large infrastructure projects the Department for Transport does not consider alternatives properly?

Professor Overman: I honestly do not know. I do not think that this is a problem that is unique to HS2. One of the criticisms of Eddington in 2006 was that DfT struggled with strategic option generation in a way that would allow comparison of alternative projects. Progress just does not seem to have been made on it. For the reason why that is you would probably need to ask someone who has the levers necessary to make progress on it. A number of us have made it clear that we would like to see better strategic option generation at work in DfT. This was something that Eddington said very clearly in 2006 and eight years on arguably we are not there. Could you repeat the second part of your question?

The Chairman: Is it the case that the Department for Transport does not consider alternatives when it is looking at major infrastructure projects like this?

Professor Overman: You would have to say that if HS2 is a case study of where we have got to with strategic option generation, we still have problems with that.

Baroness Blackstone: Can I just follow up? Why do you transport economists not get together and ask the ESRC to fund a big project on this? I am not sure that one should leave this sort of investigation entirely to government departments. It does seem a bit strange that here is a very interesting applied economics question and no one has sat down and addressed it and come up with some alternative answers. I am struggling, as a Member of this Committee, to understand what it is that might be better. There clearly are plenty of possibilities that might be better, but so far nobody has been able to tell us: nobody has been willing to put their head above the parapet and say, “There is this project or that project and they all require very careful political and policy consideration”.

Professor Overman: I am not a transport economist. I should make that clear.

Baroness Blackstone: No.

Professor Overman: The criticism is a very valid one and it is something that I have said, which is that some of this stems from the fact that transport economists and transport appraisals traditionally have worried a lot about getting to the welfare impacts of projects—doing ex-ante cost-benefit appraisals of the benefit-cost ratio—and have not displayed anywhere near as much interest in the wider impact of this. Their response to that would be, “Yes, but these effects are not additional”. They have put all of their effort into trying to
get an accurate measure of the welfare impact of transport projects. Of course, it is a frustrating discussion to have sometimes when you are saying, “Yes, but decision-makers care about other things, like what we could say about the employment impact, what we could say about the GDP impact”.

In fact, to bring you back to the example I gave earlier, when we were asked by Northern Way, “Tell us what faster journeys between Manchester and Leeds would do”, the original discussion we had with them said, “You have the wider economic impact assessment of that scheme that gives you the net additional figures”. The chief executive for the Northern Way said, “Yes, but actually, given that we care about employment and GDP, we want to know what the impact on those things would be, even if we accept that that is not additional, and not the stuff that you would put in a narrow cost-benefit analysis”. To some extent we were trying to get at those wider impacts and start to fill the gap, although the discussion that we have just had on KPMG says you have to be very careful about how far you go down that route.

One thing is that traditionally there has been lots of cost-benefit appraisal that has worried about this upstream, worried about the welfare effects, and has not thought about this. The second thing is that moving downstream and thinking about the actual impact that projects have has been something that historically has not been high on DfT’s agenda. DfT has invested a large amount of money on ex-ante appraisal but not on ex-post evaluations: figuring out whether or not the thing really did achieve what it was meant to. The third thing is it is just very difficult.

There is lots of analysis going on. I know it is disappointing to decision-makers, but my answer is that broadly speaking we know that it will probably pull stuff on to the line and one end of the line or the other or the middle will benefit. The benefits will be distributed along the line but in ways that I cannot tell you. I hate to say it but that is an evidence-based position that comes from a large body of work. These are just very difficult questions.

Q58 Lord Smith of Clifton: You have already discounted, to a great extent, international comparisons, but can I just take you back to that? The analysis of high-speed rail projects in other countries by Albalate and Bel from the University of Barcelona concluded that political objectives for regional equality and development lead to the economic failure of high speed rail projects. How instructive do you think these comparisons with other countries are? It is also true, as Baroness Blackstone said, we do not know much about in-country comparisons.

Professor Overman: One should be careful with international comparisons; I have made that clear. Having the policy objective to re-balance across places driving your high-speed train investment can get you into a terrible mess. In defence of what we are trying to do with High Speed 2, we are not pushing the kind of projects that could get us into a terrible mess. The point about High Speed 2 is that the returns on it are not great but they are not awful. It is a sort of mediocre, medium-return type of project.

Where those kinds of things can get you into real trouble is if you are basically saying, “I have to put this out to some poor Spanish region because getting high-speed rail out to this poor Spanish region is going to do something to rebalance the economy”. Then someone comes along, looks at the economic case for that and says, “My goodness, the benefit-cost
Professor Henry Overman—Oral evidence (QQ 49-62)

ratio of this is 0.2. For every pound we spend on this, we are only going to get 20 pence back”. Then you say, “I am going to do this anyhow because I am so keen on doing rebalancing”. It is that kind of situation that this would really apply to.

If you do these projects driven only by the desire to rebalance where the economic case looks awful, that can get you into terrible difficulties. We should be clear that High Speed 2 does not sit in that camp. The return on it, the benefit-cost ratio, is above 1.0. It is not a project that you are doing because you are hoping that it will bring stuff to some peripheral place. Much more useful questions are the ones that I have been trying to steer us towards: what will it do for the north-south—let us just try concretely to understand that as our objective—and also are there other better ways of spending the money? I would draw the distinction between the kind of projects where you are only doing these bridges to nowhere type things and High Speed 2. I do not think that is the situation we are in.

The benefit-cost ratio is around 1.8-2.3. You are getting benefits that are safely above the pound. All the questions are just about alternative uses of the money.

Q59 Lord Smith of Clifton: Thank you for that. Lord Monks reminded us in private session of the Doncaster paradox. It has very good communications east-west and north-south but remains relatively economically deprived. We were told by witnesses last week that once you get the high-speed thing going it is up to local authorities to take advantage of this: implication, Doncaster has not. Is there a case for looking at Doncaster and finding out why superb communications, relatively speaking, have led to very little economic improvement?

Professor Overman: I would turn it the other way round as a warning that says that accessibility is only one part of the story about success. This has almost brought us full circle to why I worry so much about the need to control for the distribution of, say, skilled workers when we are trying to figure out the impact of accessibility. We will always be able to find places that have good accessibility. It is just a reminder that the things that drive success are not accessibility alone. They are accessibility, the decisions of skilled workers and the decisions of companies about where to locate. That is precisely why, when I think about estimating the impact of these things, I want those things carefully separated out, but they are also why I keep warning that just pointing to the fact that this will improve accessibility does not necessarily mean it will help us achieve our broader strategic objectives.

Q60 Lord Lawson of Blaby: You have spoken with great confidence about the cost-benefit or benefit-cost ratio. You have said that it is mediocre and you have also stated very confidently that there is a cost of £50 billion, which is the Government’s figure. Many people have felt that the cost is likely to be very much more than that, which of course alters everything. I must say that if I was still involved with the Treasury I would be particularly concerned about the cost of this project, although it is true that because it is so far ahead you might leave it to the next generation. How robust is this cost estimate, which is the foundation for everything that you have been saying to us this afternoon?

Professor Overman: I am going to give you an answer that I suspect will not satisfy you. I have always taken the costing of the scheme as given in trying to think about the benefit-
cost ratios, for the simple reason that it occupies enough of my time thinking about what the benefits might be to offset against those costs.

On a purely personal basis, I think I share your scepticism about our ability to avoid cost overruns on major projects, but I take the costs as given and I focus on the benefits side of it. While I share your scepticism on costs, I think that that is a more appropriate question for other people who will be in charge of managing them.

**Lord Lawson of Blaby:** It is a crucial question.

**Professor Overman:** I think it is absolutely crucial. I have absolutely no disagreement with you on that.

**Lord Lawson of Blaby:** It is a question of who we ask.

**Q61 Baroness Blackstone:** What is your view, as an economic geographer, about the priority you would give to creating better links between regional cities rather than improving links to London? The City Growth Commission report came out last week; they want to create more of what they call economic powerhouses in the north and the Midlands, partly through greater connectivity. Do you agree with them and what is your view about the options here?

**Professor Overman:** My view on this is that if the objective is that we want somewhere to rival London, it will require a big northern city, not a collection of well connected northern cities spread out across the whole of the north. It is one place—if that is the objective. The evidence that we have says that what is driving London's success is the concentration of very many high-skilled workers in a dense urban core where they commute and produce every day. You can, to some extent, replicate that by joining up these conurbations, but the evidence is very clear that the really large things come from the huge economic density that we have sitting at the heart of the conurbation.

It helps that we can get a commuter shed around this that allows people to commute in and so on, but right at the heart of it is the huge density that we have over here in terms of employment that is driving it. If you want to rival that, you need somewhere that is going to have similar economic mass. My view is that if that is the objective, concentrating resources within one of those places, in terms of transport investment and what we do in infrastructure and housing and so on, will be far more important than linking those places together and will be far more important than linking those places to London.

Interestingly, this comes a little bit back to the question about strategic decision-making. It is always interesting to ask political leaders in these places, “If we gave you the option of £7.5 billion each, what would you do with it? Would you pool it together to do Manchester-Leeds?” You are Manchester: Howard Bernstein and Richard Leese. “Here is £7.5 billion. What would you do with it?” My gut instinct is that their analysis would suggest that you do stuff within the city of Manchester. They might, at a push, be willing to pool with Leeds to speed up connections between Manchester and Leeds. I suspect that HS2 would then be next on their priority list of what they would do with the money, and then you would get this sprawling project connecting in Newcastle and Hull and Liverpool. These things would be far down their strategic prioritisation list in terms of things that they think would drive the performance, and I think that is telling. The interesting thing is if you ever asked them,
“Why do you not talk about it in those terms?” they would suggest that this is not really what is on offer to them. They feel it is HS2 or nothing. Of course, if you are Manchester or Leeds, you take HS2 over nothing, because you are not going to pay for the vast bulk of the cost. It is going to come from the national taxpayer.

Looking at the evidence, I think that if you want counterbalance London, somewhere big in the north is a priority over connecting up. I think that the connecting up will help. Next after that would be connecting to London and next after that would be some sprawling network of terribly costly trains across the whole northern area. If you asked local leaders what they would do when offered the option of the money, I have a feeling their priority ranking might look rather similar to mine.

Baroness Blackstone: Do I take it from what you said that Manchester would be your option for this development of a major northern city that might begin to compete with London, at least in certain respects?

Professor Overman: I think on the basis of where we currently are, it is the one that stands the best chance.

Q62 Lord Smith of Clifton: One question we have not discussed this week, which we discussed last week, is the question of freight. We have been concentrating on passengers. Have you any comments on freight, bearing in mind that east-west, west-east freight is rather important in terms of the railway?

Professor Overman: The freight aspect of the project is something that I have not looked at in depth.

The Chairman: Professor Overman, thank you very much indeed. That was a most helpful session. You are very welcome to stay and listen to the next witnesses, who will no doubt be asked some of the questions that you have just answered. Thank you.
INTRODUCTION

1. The Pan-Camden HS2 Action Alliance is a grouping of local associations and residents in the London Borough of Camden that has been studying the HS2 project since publication of the first detailed proposals in March 2010. Membership is also open to people who commute into the Borough.

2. It has submitted evidence and taken part in consultations since then, organised public meetings and met many times with Camden Council, members of the Greater London Authority (GLA) Transport for London (TfL) and others including academics, primarily at University College London. It has carried out studies in relation to Old Oak Common, Euston Station, and services on the southern section of the West Coast Main Line (WCML). It is assisting in a study of community impacts, in respect of which others are making a submission. It is a Community Representative on the Euston Station Working Group set up under the chairmanship of Sir Edward Lister, the Mayor’s Chief of Staff and Deputy Mayor, Policy and Planning in the GLA.

3. The group is not in principle opposed to high-speed railways, and has made constructive proposals for the improvement of public transport infrastructure and widening its market share. However it is opposed to the way in which HS2 has been designed and developed in Phase One: seemingly in single-minded worship of a God of Speed without regard to the primacy of wider economic, environmental, social or equitable considerations and heedless of the contradictions within such an approach. Arguably Camden’s residents and businesses will suffer by far the most important and serious adverse impacts of HS2.

IS THERE AN ECONOMIC CASE FOR HS2?

4. The economic justification for HS2 has been changed on several occasions and that the component parts of the project have been aggregated so as to make an outsider’s evaluation very difficult. In our opinion (shared by the London Borough of Camden and others) important pieces of work undertaken by HS2 Limited (or its consultants) in support of its case are less detailed than work done for other infrastructure projects, more superficial, often inaccurate, and generally not fit for purpose. By extension, there are likely to be deficiencies in the economic analysis too.

5. It would be usual to compare a transport project of any significant size with alternative schemes, including non-rail schemes. The Economic Case includes what purports to be such an analysis, but in such an aggregated, partial and inappropriate form that it is difficult to arrive at a reasoned opinion.
6. This is not to say that the whole of the HS2 project should be damned. Undoubtedly large parts of the proposal are worthy of study and possibly implementation: but it would be remarkable if all elements of the wider project were of equal benefit. We note how the step changes in connectivity take place within Midlands and North and only to a lesser extent with London.

7. HS2 is in fact a “mega project”. We do not therefore accept the premise that the wider project cannot be divided into component parts that could be implemented in isolation or on different timescales depending on how circumstances change. Most elements of the wider project are not dependent on HS2 but are complementary projects that may be viable on a standalone basis without the intervention of HS2. Successful mega projects tend to evolve through consultation, engagement and discussion (reference: Professor Harry Dimitriou, OMEGA Project, University College London). It concerns us that these elements are missing from HS2.

8. We are struck by the dependence on “soft” justifications, by the lack of disaggregated information available, the near total absence of any data on demand as opposed to capacity, by the heavy reliance on percentages in the presentations: these are warning signs.

9. We have always urged that a project of this size and claimed importance should be subject to scrutiny and testing in a properly independent and public inquiry. We are increasingly dismayed by the extent of potential patronage that could be exercised by HS2, the Department for Transport and by other bodies. We believe this is damaging and corrosive to our democracy.

SHOULD THE STRATEGIC CASE FOR HS2 PUBLISHED IN OCTOBER 2013 HAVE TAKEN ACCOUNT OF ANY OTHER FACTORS?

10. The Strategic Case is silent on the community impacts: in the main these are adverse impacts of the construction and operation of the railway on the host communities. A study carried out on behalf of Camden Council highlighted costs in excess of £1bn to the Borough and its businesses. One of the local Euston communities is conducting its own quantitative exercise, with assistance from professionals, to try and establish the scale of the impacts, and we understand that evidence will be submitted by it to the House of Lords Economic Affairs Committee’s inquiry.

11. We consider that the strategic case should take more account of the time effects on benefits and costs. In our view, this is a serious deficiency that could lead to the omission or misstatement of risks and costs inherent in the project and its component parts. For example, a claim is made that on completion of HS2, 16 freight train paths a day will become available on the WCML taking a large number of lorries off the roads. By contrast to build HS2 around three times that number of lorries is likely to be required in the construction of the Level Deck scheme at Euston for at least ten years. There are long-established protocols that can be used
to inform such an analysis.

12. We find no analysis of the effects on road users from construction traffic and closures. We accept that the Environmental Statement presents a “worst case” situation but that does not preclude an assessment of the road network effects under different scenarios.

13. We are concerned that Section 47 of the Hybrid Bill provides for extraordinarily wide ranging powers of land acquisition in connection with development opportunities. We consider these to be excessive and unjust. Exercise of these powers could inflate the apparent economic benefits of HS2, as its costs would be depressed by expropriation without adequate compensation.

14. Similarly, realisation of the economic benefits claimed will impose health and other costs on some of the poorest sections of society (particularly around Euston) and these costs should be accounted for properly.

15. Nowhere in the Strategic Case do we get a sense of the value added by any part of the proposals. For example, the regeneration / redevelopment proposals ought to be capable of being backed up by a study establishing a range of the value added to properties during and following the development of a major transport hub, or a major station refurbishment or reconstruction.

16. We note that there are parts of the “Strategic Case for HS2” which are now out of date, following the Higgins Report of March 2013.

WHAT ARE THE LIKELY ECONOMIC BENEFITS OF HS2...DO THEY ALSO DEPEND ON COMPLEMENTARY ACTION BY GOVERNMENTS...?

17. Our review of a substantial amount of European academic literature on this subject leads us to the conclusion that success, or otherwise, is by no means given and is dependent on a number of non-railway factors, but that the outcomes are often unclear and certainly not easy to measure. Success is therefore likely to require a wide range of stimuli.

18. It has long been known that there is an extremely important link between the demand for passenger transportation and migration (whether that be internal or external). Indeed the Call for Evidence for this Inquiry implies that this topic is of interest when it asks about measures to attract investment and skilled workers. It is also evident that the official forecasts for population growth, on which HS2’s forecasts depend, imply a continuing high level of migration. The case for HS2 should therefore reflect current government commitments and forecasts with regard to migration.

19. The lead-time for upgrading the skills and widening the aspirations of the indigenous population in a large tract of the country is likely to be long, and the intervening
shortfall can only be met by migration. Issues that would need to be addressed might include how younger people who have moved from the North to London to study, qualify or work, might be induced to return to the North, and how the North can be made to attract and retain the cosmopolitan young whose contribution to the economy of London has been so significant in recent years.

**MIGHT SOME PARTS OF THE UK SUFFER ECONOMIC DISADVANTAGE FROM HS2?**

**IS LONDON LIKELY TO BE A MAIN ECONOMIC BENEFICIARY OF HS2?**

20. London’s status as a long-established world city gives it a unique pull that increases the chances that the completed HS2 will become a London-centric project. The rate of employment growth in London is forecast to be higher than in the rest of the country, similarly the rate of increase in earnings (and thus disposable income). London’s lower dependence on car usage compared with the rest of the country makes it likely that Londoners will be more inclined to use HS2 - and thus receive the journey time benefits.

21. The construction of HS2 will require some investment in transport infrastructure within London: a new interchange at Euston, the diversion of most London Midland outer-suburban services onto Crossrail One, and possibly the Crossrail Two project.

22. The case for Crossrail Two is likely to be enhanced by second-order effects of HS2, such as the modest increase in commuter capacity into St Pancras and Kings Cross, and by the development needed to make the Level Deck station work financially – because Level Deck will not be populated by rail commuters into Euston.

23. The spend within the Greater London area could be of the order of half the total project cost, and we suggest this may be a reasonable proxy for the spread of benefits.

24. During the past two decades, some of the highest levels of social deprivation in the country have been found in Inner London. There is evidence of emerging problems in the outer suburbs and their town centres. The HS2 project does not appear to offer anything that might help residents in London’s problem areas - indeed, diverting resources to fund the infrastructure required to make HS2 work, will probably have the opposite effect. It does nothing for South London, for example, though with imagination it could.

25. For example, in recent years there have been studies of two options for making use of the unallocated capacity at the western end of Crossrail One. The first, Option K1, proposes the diversion of Hemel Hempstead/Tring - Euston services to Crossrail. The second, Option K2, proposes the remodelling of the Bakerloo and Euston-Watford services and the diversion of the services on the outer section to Crossrail.
26. K1 gives a greater degree of flexibility during the reconstruction of Euston, which is, presumably, why it is being developed in preference to K2. Both options are likely to have significant non-railway effects; both are attractive schemes in different ways. We fear that the choice between K1 and K2 is being influenced by short-term railway operating expediency rather than the broader planning and economic issues (which should determine the choice).

27. The emphasis on freeing up capacity for longer-distance commuters risks contributing to a hollowing-out of London as London workers move out to, or are replaced by, long-distance commuters. However the nature of the journey-to-work in London is also changing, as we discuss later. Depending on how the proposed major developments at Old Oak and Euston evolve, it is possible that the economic benefits will be greater in the southeast of England rather than within London.

28. The worst of the disruption will be experienced in Camden. Camden is not simply an Inner London borough. As the centre of the legal profession, a vital medical, academic and creative hub and a significant part of London’s Central Activities Zone (CAZ) it is of exceptional economic importance to the country. Camden accounts for about 1% of UK GDP (including a significant part attributable to creativity research and innovation). The number of employment opportunities within its boundaries is put at 361,000 in 2013, not far short of the City of London at 435,000. Capturing benefits for Camden (and thus the Nation) has not featured in the HS2 case.

OTHER ASPECTS OF THE ECONOMIC CASE - VALUE ENGINEERING ON THE EUSTON - OLD OAK COMMON SECTION

29. The very short (9.1 km) Euston-Old Oak section of HS2 represents around one quarter of the projected cost of the project. It is largely in tunnel (7.5km) and will be the lightest-loaded section in Phase One (TfL forecast only 60% of passengers will stay on trains into Euston). It will be the most intensive in terms of power consumption by reason of the acceleration demands in a tunnelled section. It is therefore a prime candidate for value engineering.

30. The design speeds initially adopted for HS2 are unusually high for a densely populated country with comparatively short distances between major centres of population. The fixation with speed may explain the rejection of the M1 and M40 corridors for Phase One, but within the chosen corridor the proposed alignment makes quite extensive use of legacy railway infrastructure and where this is the case, the choice of design speed generally has little effect on the choice of alignment.

31. However over the new section of route between Euston and Old Oak Common, speed has dictated the alignment to an extent unjustified by the business case. Indeed because of the short distances the chosen speed parameter is actually irrelevant and almost certainly damaging: HS2 has designed its railway to such a standard that trains leaving the tunnel portal (about 1½ km north of Euston) could theoretically travel at
180kph. It takes about 3km to bring a high-speed train to a stop from that speed which could make the gardens of Grays Inn a candidate for a terminus!

32. It also raises the issue of the viability of the Euston-Old Oak section: at broadly one quarter of the project’s financial cost and quite possibly the greater part of the economic, social and community costs, clearly this section of the overall route cannot generate anything like a similar proportion of benefit. Similarly the distribution of passengers within Greater London has not been properly addressed.

33. Alternative means of accessing Euston have been proposed (notably by Lord Berkeley). We urge that an independent body should carefully and dispassionately examine such alternative options along with the case for not building a link into Euston (but rather having the main London hub at Old Oak Common).

OTHER ASPECTS OF THE ECONOMIC CASE - CAPACITY AT EUSTON AND ON THE WEST COAST MAIN LINE SOUTH OF MILTON KEYNES

34. We have studied the claims of Network Rail (NR) regarding the number of trains that could be operated on the fast lines at peak times. This was because we wished to understand NR’s claims about the scale of the disruption that would be caused during the reconstruction of Euston, particularly in relation to alternative station schemes.

35. We established that reconfiguration of the timetable on the southern part of the WCML could mean that fewer platforms would be required, and reliability could be improved by reducing conflicts within the station throat during the reconstruction period.

36. We also found that by making all main line services (Pendolino and Super Voyager) operate to the same timings it should be possible to provide a better spacing of the peak period fast services to Milton Keynes and indeed there was room for an additional fast service. As many of these services already operate de facto at these slightly slower timings, the effect is small and largely offset as the retiming removes the need for most “pathing” allowances. There is therefore some scope for longer-distance commuter service improvements within existing peak period constraints.

OTHER ASPECTS OF THE ECONOMIC CASE - EUSTON STATION COMMUTER DEMAND

37. The Strategic Case for HS2 devotes several pages to the capacity for commuter trains (that is to say peak period services) but offers no data relating to demand. Nevertheless we have been able to produce a fairly coarse analysis of passenger usage based on other information provided elsewhere. There are however fluctuations between years that concern us, as they are both material and out of line with fluctuations for London as a whole. We recommend that if the House of Lords Economic Affairs Committee wishes to explore the commuting issues further then it
should seek better data analysed by service group and covering a reasonably long time series. It could also seek more authoritative data in respect of the outer zone beyond Tring, for this is where the growth has occurred.

38. Our impression is that the Euston - Tring - Northampton corridor has yielded significantly fewer commuters in the past 40 years than might have been expected given the growth in employment in the London CAZ and the growth in the corridor’s population, particularly the outer end. We concentrate on the CAZ because that is where the great bulk of rail commuters work. This table of the changes in London CAZ jobs over time is relevant:

<table>
<thead>
<tr>
<th>London CAZ job type</th>
<th>1982 (actual)</th>
<th>2011 (forecast)</th>
<th>2031 (forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office (thousand)</td>
<td>550</td>
<td>881</td>
<td>1031</td>
</tr>
<tr>
<td>Percent increase over 1982</td>
<td>60</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Percent increase over 2011</td>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Other (thousand)</td>
<td>509</td>
<td>610</td>
<td>738</td>
</tr>
<tr>
<td>Percent increase over 1982</td>
<td>19</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Percent increase over 2011</td>
<td></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Industrial (thousand)</td>
<td>212</td>
<td>81</td>
<td>73</td>
</tr>
<tr>
<td>Percent decrease over 1982</td>
<td>62</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Percent decrease over 2011</td>
<td></td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Total (thousand)</td>
<td>1271</td>
<td>1572</td>
<td>1842</td>
</tr>
<tr>
<td>Percent increase over 1982</td>
<td>26</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Percent increase over 2011</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Source – GLA London Employment Time Series 2010

39. The table demonstrates that the Euston - Tring - Northampton corridor is not, and is most unlikely ever to become, a significant supplier of labour to fill the 1.8 million CAZ jobs. Even on our upper-bound figures, it meets around 13,000, or less than 1%, of the need. On a more restricted view, the corridor is of minor importance to the economy of Camden, with probably 3,000 to 4,000 commuters working in a borough with 360,000 jobs.

40. There is some evidence, particularly since the 2008 crash, that suggests the old model of << living “in the country” and commuting to the centre >> is breaking down as it no longer meets the needs of a younger, more international, central London labour force. This better educated and more innovative London labour force is engaged in a more diverse range of occupations than in the past. It works longer hours, is less concerned about having a large living space, commutes at less predictable and convenient hours, is not oriented to car use and often wants to live
in edgy areas.

41. Areas like Bermondsey are no longer places in which polluting industries are concentrated, younger people can, and want to, live there, on the edge of the centre, rather than the more staid suburbs and the exurbs.

42. The proposition of Option K1 to divert most of the Euston - to - Tring services onto Crossrail 1 is likely to make a significant difference within the corridor. There will be a step improvement in the journey times to an enormous swathe of London’s CAZ. It is estimated that around 75% of users will receive a significant benefit, and our own work supports this. In consequence of this step change, we suggest it is entirely possible that there will be an increase of up to 50% in ridership on these trains, which would be consistent with the trip generation experienced when the St Pancras services were diverted to provide a through service to the City. The lesson here may be that if the Euston - Northampton corridor is to play a rôle in supplying London’s labour market then it needs to link into a Thameslink-type service. Current investment in Thameslink and Crossrail One (and possible investment in Crossrail Two) is likely to further marginalise Euston’s main line commuter services.

HOW MIGHT THE EXPECTED BENEFITS OF HS2 TO THE NATIONAL ECONOMY BE REALISED?
No comment.

HOW SHOULD HS2 BE OPERATED…?
No comment.

SHOULD TRAVELLERS EXPECT TO PAY HIGHER FARES ON HS2 THAN ON OTHER LINES?
No comment.

DOES THE PROSPECT OF HS3 AFFECT THE ECONOMIC CASE FOR HS2?
No comment.

September 2014
Helen Peach—Written evidence

Helen Peach—Written evidence

• Is there an economic case for HS2?

There is not an economic case for HS2. The projections are based on out of date information and assumptions that don’t stack up.

• Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project?

Yes – the main component is compensation. The current proposed compensation is not realistic or fair for blighted property owners – whether impacted by the line route or by the construction.

• Is the expected range of the benefit cost ratio persuasive?

No. As stated above the assumptions used are not properly tested and therefore do not give a realistic answer.

• What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

I do not believe that there will be any economic benefits. The line will draw more benefit to London as has been seen in other countries with similar high speed routes to the capital.

• Might some parts of the UK suffer economic disadvantage from HS2?

Yes, most other areas will suffer to the benefit of London.

• Is London likely to be a main economic beneficiary of HS2?

Yes

• How might the expected benefits of HS2 to the national economy be realised?

There won’t be any with the cost proposals. High Speed UK’s option would benefit more towns and cities than the HS2 proposal, as this mainly uses existing lines rather than virgin countryside.
• How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

I don’t think that HS2 should be operated in its present format. I also don’t agree that it should be franchised and it certainly shouldn’t be in competition with West and East Coast Main lines. This is because HS2 has limited station stops.

• Should travellers expect to pay higher fares on HS2 than on other lines?

No.

• Does the prospect of HS3 affect the economic case for HS2?

No - they are planning to upgrade an existing line for HS3.

August 2014
1. Introduction

1.1 It is very good news that the Economic Affairs Committee of the House of Lords is going to look at the economic case for HS2. HS2 is a very bad scheme, but it has the support of all three major parties, and the second reading of the Hybrid Bill was passed by the House of Commons with a thumping majority. It may be that only the House of Lords can now stop it.

1.2 If HS2 is not stopped, there will be massive, unnecessary environmental and social damage and waste of resources. There will be other, equally serious, consequences. The faults in the promoters’ arguments have been carefully pointed out many times. The Government’s replies to the critics have been unsatisfactory and disingenuous. This is true even of replies to recommendations made by House of Commons committees. If such behaviour is allowed to stand, people will draw the conclusion that there is no point in opposing official plans by rational argument through constitutional channels or in discussions with governments, civil servants or governmental agencies. Respect for politics and politicians, already at a low ebb, will be seriously damaged. It is up to the House of Lords to restore some faith in our political system.

1.3 It is slightly unfortunate that I live in Camden, since I may be accused of self-interested bias. In fact, I would still be opposing HS2 vigorously, although without spending so much time on it, if HS2 did no damage in Camden or anywhere else in London. The reason I changed my occupation to transport planning fifty years ago was concern for the damage that transport was doing to the physical environment. In the late 1990s I spent considerable time on a pro bono basis helping people in Kent who were opposing HS1, although the part of Kent affected was one with which I have no connection. This involvement led me to provide evidence to the NAO about HS1 (or the Channel Tunnel Rail Link as HS1 was then called). The NAO report published in March 2001 slammed the project in what I was told at the time was some of the strongest language the NAO had ever used. Its adverse judgment has been borne out by HS1’s subsequent history. One of the more Orwellian features of HS2 is the way its advocates often claim to be building on the success of HS1.

1.4 Section 2 of this reply contains my answers, mostly very short, to the Committee’s nine questions. Section 3 introduces the documents annexed to the reply. It explains briefly what the scope of each Annex is, and in a few cases it adds something to the argument in the Annex.

1.5 Although I believe that the arguments in this reply are quite sufficient to show that HS2 should not go ahead, there are other important points that I have not attempted to cover. Among them are matters concerning railway operations (as distinct from points concerning demand, modal choice etc), on which I have no competence. As will be seen, my submission refers several times to Chris Stokes, who is the leading technical expert opposed to HS2. No doubt, the Committee will have seen his writings.
1.6 I am submitting this reply as an individual. Although I believe that the arguments would be approved by several groups with which I am associated, there has not been time for me to request their endorsement or for them to consider such a request in the formal way required by their rules.

2. The Committee’s questions

2.1 Is there an economic case for HS2?

There is no economic case for HS1, as explained in Annex 1 Summary of case against and Annex 2 Environment Consult Reply.

2.2 Should The Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making economic case for the project? Is the expected range of the benefit cost ratio persuasive?

For each of the problems which HS2 is intended to address, the Government should have identified various ways of tackling them without any preconceived idea that the answer must lie in transport improvements, still less in further long-distance rail lines out of London. Some very important consequences of HS2 are excluded from the analysis and the benefit cost ratio is much too high even when HS2 is compared only with a “do minimum” alternative. These points are developed in detail in Annexes 1 and 2.

2.3 What are the likely benefits of HS2 to the Midlands to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

HS2 is not a good way of helping these regions and may even harm them. Even the advocates of HS2 have always stressed that the benefits they claim will not come about unless HS2 is accompanied by vigorous local action. The actions required have not been specified or costed, which is one reason why the benefit cost ratios for the scheme including WEIs are too high. Please see Annex 1 and, for more detail, Annex 3 Letter to Karen Buck on Regeneration. (This also raises the question, not considered in either of these documents, of what could be achieved by local action around the existing stations, rather than the HS2 stations proposed, if HS2 were not built.)

2.4 Might some parts of the UK suffer economic disadvantage from HS2?

Yes, including some parts of the regions which HS2 is intended to benefit. Please see the same references as in paragraph 2.3.

2.5 Is London likely to be a main economic beneficiary of HS2?

Most new economic activity resulting from building HS2 is likely to be in London, including activity that London is likely to suck out of other regions or that in the absence of HS2 would go to those regions (please see the same references as in paragraph 2.3).
Stephen Plowden—Written evidence

the belief that all economic activity is good (the belief which underlies the view that GDP is a measure not just of activity but of welfare, the foremost heresy of our times), that is not necessarily to the advantage of London. As a Londoner, I have long believed that the predominance of London and the south-east is bad for London as well as for the rest of the country. Central London is already much too crowded, and Crossrail, which is predicted to bring another 50 million trips a year to the Oxford Street area, is going to make the overcrowding worse. HS2 would make it worse again.

2.6 How might the expected benefits of HS2 to the national economy be recognised?

This expectation lacks any rational foundation – see above.

2.7 How should HS2 be operated. As a franchise in competition with West and East Coast Main Lines?

HS2 should not be operated.

2.8 Should travellers expect to pay higher fares on HS2 and other lines?

2.8.1 InterCity trains have always been expected to operate free of subsidy, and the same should apply to HS2. Even if there were no environmental objections to HS2, it should be built only if the cost of providing it can be recovered in full from fares.

2.8.2 There are two classic justifications for subsidies to rail. One is social. If you believe that everyone is entitled to a certain minimum level of mobility, and that it is the responsibility of the State to ensure that that happens, there may be some areas where the best way to achieve it is by subsidising rail, but these are likely to be relatively sparsely populated rural areas. The second justification is to attract custom from modes which cause fewer external costs than rail does. This justification does not work for HS2 for the reasons set out in Annex 2.

2.8.3 In my view, the fact that HS2 hardly competes at all with (allegedly) less environmentally damaging road travel also means that the benefits in the form of time savings to HS2 passengers should not have been included in the cost benefit analysis. Because roads are not paid for at the point of use, travel time savings have to be included in the appraisal of road schemes. They must therefore also be included in the appraisal of schemes where public transport competes significantly with road, notably in urban areas, but that is not true of HS2. If time savings to HS2 passengers are excluded from the analysis, then obviously the case for HS2 collapses straight away. (Even if they continue to be included, allowance must be made for the fact that even now, and presumably more in future, it is possible to work very productively on trains. This important point is not discussed in the documents attached to my reply, but I have no doubt that it will be discussed in other replies.)

2.8.4 Advances in computing and office equipment in recent decades have made it possible for firms to make huge time savings. Firms who want to take advantage of these
opportunities are expected to buy the equipment themselves. Business or other travellers who valued the time they would save by switching from conventional rail to HS2 should also pay for it themselves.

2.8.5 At a different, practical, level, I don’t think there can be any doubt that fares on HS2 will in fact be higher than on the competition. Obviously the competition will be using fares policy as a marketing tool. I don’t think any government would be prepared to subsidise HS2 to the extent that would be required to level the fares in the face of such action, even though HS2 Ltd’s demand forecasts depend on the assumption that fares will be the same for HS2 as for the competition. (It seems that HS2’s promoters have always realised that this assumption was extremely implausible, but they were determined to stick to it – see paragraph 16 of Annex 1.)

2.9 Does the prospect of HS3 affect the economic case for HS2?

As discussed above, HS2 is not a good way of helping the regions. Even if it were, if an even better way of helping them could be found, that must affect the case. HS3 is a more promising proposition than HS2; even so, some demonstration is needed both that it would be the best way of investing in transport as a way of regenerating the regions, and that investment in transport would be more effective than investment in other things, such as training (please see Professor Tomaney’s evidence to the HSR Committee of the HOC referred to in Annex 3).

3. The attached supporting documents

3.1 Annex 1 Summary of Case Against

3.1.1 As the title indicates, this document is a summary. The discussion about the environment and benefit cost ratios is amplified in Annex 2 Environment Consult Reply. The discussion of the claimed regenerating effects of HS2 is amplified in Annex 3 Letter to Karen Buck on Regeneration. Annex 4 Discounting shows how reasonable changes in the discounting procedure would seriously depress the benefit cost ratio.

3.1.2 The following phrase in a sentence in paragraph 12 of Annex 1 needs some further explanation: “the figures to be included in a cost benefit analysis to represent compensation for loss are far higher than the amounts legally required”. The rules of cost benefit analysis are that gains are evaluated by reference to what the beneficiaries would be willing to pay for them, whereas losses are evaluated by reference to what the losers would have to be paid in order to feel that would be as well off with the loss and the compensation if the scheme goes ahead, as they would be if it does not. (For example, “my house would become noisier, but the compensation would enable me to build the extra room I’ve always wanted, so my state of satisfaction would remain the same”.) There is some dispute whether compensation should actually be paid for all losses or only for some of them, but whether payments are made or not, it is on that basis that losses should be included in a cost benefit appraisal.
3.1.3 At present, it is intended to pay compensation for the damage that HS2 would do only to the extent that the law requires it, perhaps with a small ex gratia addition. If this procedure is followed, it would result in people whose property is adversely affected being compensated at market values or something a little above them. (I understand that negotiations about compensation are still going on; I don’t know what the present state of play is.) Few property owners would be satisfied with the market value, since if they were satisfied, they would already have sold, and I would have thought it unlikely that many would be satisfied by adding 10% or so to the market value, so the rules of cost benefit analysis require much higher figures for the effect of HS2 on property values to be included in the evaluation. In addition, there are many adverse effects of HS2 for which under present law no compensation has to be paid. People who value the countryside through which HS2 would go but who do not live or own property in the area deemed to be affected will not be compensated. People living in Camden who would experience noise, dust, other environmental nuisance and disruption to their travel patterns over many years will not be compensated. All such losses should be included in the cost benefit evaluation, but at present none are. It is clear that the proper treatment of the loss and damage that HS2 would do would significantly depress the benefit cost ratio as now calculated.

3.2 Annex 2 Environment Consult Reply
3.2.1 I hope this document is self-explanatory. I drafted it in February in the belief that the independent assessor would be evaluating the comments received in reply to the consultation. As I now understand it, the assessor’s task was only to register the comments and enumerate them by category, not to evaluate them.

3.2.2 Paragraph 27 refers to the reasons given for the exclusion of the scheme prepared by Chris Stokes for 51M from Atkins’ list of strategic alternatives. These reasons seem to me to be cynically dishonest.

3.3 Annex 3 Letter to Karen Buck on Regeneration 13 January 2014
The argument that HS2 is required to regenerate the North is second in importance only to the alleged need for extra capacity; it seems that some politicians put even more emphasis on it. This letter to Karen Buck explains why this argument is not sound.

3.4 Annex 4 Discounting
The discount rate adopted for a project has a very profound effect on its benefit cost ratio. There are reasons for thinking that the benefit cost ratio adopted for HS2 is too low. Professor Peter Mackie has advocated returning to the higher discount rate that applied until relatively recently. This Annex shows that adopting this suggestion would seriously depress the benefit cost ratio now officially calculated. The Annex also raises more fundamental questions about the relationship between discounting and our obligations to future generations and argues that major environmental impacts should not be discounted.

3.5 Documents to do with Old Oak Common as the London terminus
3.5.1 Annex 5A Attempts to reason with the Government about Old Oak Common
The present official plan is for there to be an HS2 stop at Old Oak Common, where there would be a connection with Crossrail, and for the terminus to be at Euston. Changing the terminus from Euston to Old Oak Common would avoid the considerable cost of building the line between Old Oak Common and Euston and reconstructing Euston itself. It would also avoid the very serious environmental and social damage that this line would do, especially in Camden. Some HS2 passengers would experience an increase in travel time, but there would be few such passengers and the penalty imposed on each one of them would be small. This Annex outlines our attempts to get the authorities to take the case for having the permanent London terminus at Old Oak Common seriously. It also introduces the next three Annexes.

3.5.2 Annex 5B Terminus at Euston or Old Oak Common?
In my view, the case for having the terminus at Old Oak Common rather than at Euston is so strong that a formal comparison between these alternatives is not needed. But if it is thought to be needed, Tim Stockton and I, on behalf of the pan Camden HS2 Alliance prepared this document setting out how a study making the comparison should proceed. The choice of terminus is a very important issue in itself, and the way HS2 Ltd set about it raises another question as well. The comparison is straightforward conceptually and not very demanding in its data requirements. If HS2 Ltd cannot or will not undertake this relatively simple task, what credence can be placed on the rest of its much more complicated study? (Since Terminus at Euston or OOC is a PDF document, it cannot be reproduced here but Annex 5B provides the link.)

3.5.3 Annex 5C OOC Minister Burns July 2013
This is the letter that accompanied the document Terminus at Euston or OOC when we sent it to the Minister responsible, then Simon Burns.

3.5.4 Annex 5D Old Oak Common Civil servant reply annotated August 2013
This is the official reply to our approach to Mr Burns. I believe it shows that the civil servant concerned had no intention of seriously engaging with the arguments. His email is simply stonewalling.

3.6 Annex 6 A note on the Government’s reply to the House of Commons Environmental Audit Committee’s recommendation on reducing the speed of HS2
This document is self-explanatory. It is worrying that when the Government replies to a report of a House of Commons Select Committee, that seems to be the end of the matter, whether the reply is satisfactory or not.

3.7 Annex 7 Statements by Ministers and other prominent people
I believe that these statements show that the people who made them were poorly informed, and/or that they were determined to defend the positions they had taken up at all costs and had no intention of considering objections seriously.

3.8 Annex 8 CV summary
Since I do not hold an academic post and am no longer in a position to speak for a citizens’ environmental group, I thought the Committee might like to see this short CV. Perhaps I
should add that I regard myself as a friend of the railways, and BR seemed to think so too, to judge from the way that it always supported my research in transport when I was at PSI. (BR was in fact the sole sponsor of one of those studies, Transport Reform Changing the Rules.) I am a moderate believer in cost benefit analysis and in 1969/70, in the context of the Inquiry into the Third London Airport, was responsible for one of the earliest studies of how to evaluate noise nuisance in cost benefit terms. This study was well received at the time and its method still has some advantages over the methods used in some more recent studies. But cost benefit analysis cannot be used as a way of making a trade-off between travel time and an irreplaceable national asset such as the countryside.

ANNEX I SUMMARY OF THE CASE AGAINST HS2

1. HS2 would cost some £50 billion and would do huge environmental damage both in the countryside and in London. The Government claims that this cost and damage would be outweighed by the benefits. That is not correct.

Capacity
2. The government’s main argument is that we need the extra capacity that HS2 would provide. If more capacity on this route is required at all, it is not a priority. There is more spare capacity on the trains leaving Euston on the existing West Coast Main line (WCML) than on any other main lines out of London except HS1. The rate at which long-distance rail travel is predicted to grow on this route is implausibly high. Recent rapid increases resulting from the major investment which has taken place, in particular the upgrading of the WCML, have been wrongly interpreted as representing long-term demand factors. No allowance has been made for the impact that developments in telecommunications are likely to have on long-distance travel, especially business travel, over the 60-year period, starting in 2026, for which the case for HS2 has been assessed.

3. Even more important is that in the unlikely event that travel on this route did grow as predicted, HS2 would still not be needed. All the capacity needed to accommodate the demands officially forecast can be provided by the scheme that Chris Stokes has prepared for 51M, the association of local authorities opposed to HS2. This scheme involves removing three bottlenecks on the existing mainline, lengthening trains and platforms, and on each train substituting one second-class for one first-class carriage. The costs, which have been checked by Atkins, HS2 Ltd’s principal consultants, would be of the order of £2 billion. The work could be completed long before HS2 could be. There would be little or no environmental damage.

Regenerating the North of England and closing the north-south divide
4. This has become the second most important reason given for building HS2. It has been severely criticised by academics and others. One of the sceptics is John Tomaney, Professor of Urban and Regional Planning at UCL, who is himself a Northerner. In July 2013, Professor Tomaney told the Parliamentary High Speed Rail Committee that measures such as improving skills were probably more important than transport; that improving regional transport links would be of more help than HS2; that there was a risk that cities not connected with HS2 would suffer if HS2 were built; that in cities that would have HS2
stations and would develop them and the immediately surrounding areas, those areas would gain, but it was likely that the gain would be achieved in part by firms relocating from places a little further away, so there might be no net gain; and that London and the south-east would benefit more than Northern cities. Professor Tomaney’s evidence can be found by googling Tomaney HS2.

**Reducing carbon emissions**

5. Back in 2010, the government made great play of this claim. In a letter of 3 November 2010, an official in the Direct Communications Unit at 10 Downing Street wrote:

> The Government’s objective is to establish a high speed rail network as part of a programme to fulfil its ambitions for a low-carbon economy. The Government’s vision is of a truly national high speed rail network for the whole of Britain. Given financial constraints, this will have to be achieved in phases.

It is now claimed that HS2 will be carbon neutral. A project which costs £50 billion and does nothing to reduce carbon cannot be a key part of a rational carbon-reduction strategy. It is questionable whether it is even consistent with a rational carbon-reduction strategy. But the true situation is worse, since in fact HS2 would increase carbon emissions from transport.

6. One reason is that HS2 would lengthen journeys. HS2 Ltd’s forecasting methods, which though very elaborate are also very crude, allow for the new journeys that HS2 would induce, but not for the ways it would lengthen journeys. Some people who now work in London and live in London or nearby will move to Birmingham, to take advantage of lower house prices there, and commute back to their present jobs. Some people who now both live and work in Birmingham will move to a job in London, attracted by the higher salaries and prospects there. There would be some increases in the length of travel for other journey purposes as well. Similar, though milder effects can be expected in the northern cities. The longer the journey, the greater the energy consumption and the carbon emissions, and this effect will be exacerbated by the substitution of HS2, with its relatively high emissions per passenger kilometre, for classic rail. In addition, HS2 is designed to improve access to airports. Ease of access to an airport increases propensity to fly, so there will be more flying, much of which will be long-distance international flights which cause much more damage to the atmosphere than short-haul flights.

7. Allowance has been made for the reduction in CO2 emissions from high speed trains can be expected over the planning period, but the allowance made for improvements in the alternative modes is quite inadequate. The great opportunities for reducing greenhouse gases from aircraft over the 60-year planning period have not been allowed for. It is assumed that the rolling stock will become lighter on high-speed trains but not on conventional trains, and no improvements in the diesel units are allowed for. The allowance made for improvements in diesel and petrol cars is probably insufficient even under “business as usual” assumptions, and is certainly less than could be achieved given more political drive.
Reducing the need to build new runways or airports
8. The main reason why the Lib Dem and Conservative parties originally supported HS2 seems to have been their belief that by transferring some domestic air travel to rail, HS2 would free up slots at Heathrow for use by international flights, so avoiding the need for unpopular more airport provision. The latest official prediction is that only 1% of the trips that will be made by HS2 would be diverted from air. The difference that HS2 would make at Heathrow is much too small to have any impact on the case, such as it is, for new airport capacity. In its report published in December 2013, the Airports Commission completely dismissed this argument.

Providing direct train services from Midlands and the North to Paris and Brussels
9. This argument, which also figured heavily in the arguments for HS1, has been important in attracting support for HS2 from regions outside London. In fact, there is no possibility that through train services to the Continent from regions other than London and the south-east would ever be economically viable. The longer the journey, the harder it is for rail to compete with air either on time or cost. In addition, even on “optimistic” assumptions about the growth of this sector of the travel market, it would not be large enough to support an acceptably frequent train service. The number of passengers per plane required for short-haul aircraft to operate profitably is a fraction of what a train would require. The proposal for a link between HS2 and HS1 has now been withdrawn, but there will undoubtedly be people pressing for its restoration, so it is still important to stress these points.

Value for money
10. The claim that HS2 would provide good value for money rests on a comparison between HS2 and a “do minimum” option which allows for the improvements that Network Rail would undertake whether HS2 goes ahead or not but not for any other action. To pass such a test can only be a necessary, not a sufficient, condition for adopting a scheme. It would also have to be shown that HS2 would be better than alternative approaches to the problems that HS2 is supposed to address. That has not been shown or even attempted. In addition, it is very unlikely that HS2 would pass a soundly designed test against the “do minimum” option.

11. According to the latest official calculation, published in October 2013 the benefit/cost ratio (BCR) for HS2 would be 2.3 for the whole scheme and 1.7 for the first phase, London to Birmingham. In a commercial appraisal, such ratios would be highly favourable, but the methods used for calculating the benefits from an investment such as HS2 scheme are quite different from, and give results systematically much higher than, the methods used in a commercial context. The claimed BCRs are not high compared to some other large transport schemes, and are much lower than those that can be achieved by smaller schemes such as bus priorities or small-scale road safety schemes. Moreover, they have not been correctly calculated, and even if they had been that would not be proof of value for money.

12. Many of the most important effects of HS2 have not been given money values and therefore do not figure in the calculation of BCR. With the partial exception of noise from
high speed trains, none of HS2’s major environmental impacts in the countryside and in London are included. Nor are the social impacts, except perhaps, and then only to a very limited extent, in those very few cases where some compensation will be paid. (The word “perhaps” is needed, because it is not clear where, if at all, the compensation that will be paid figures in the calculation. The phrase “to a very limited extent” is needed because it is not clear that the legal requirements for paying compensation have been met, and even if they have been, the figures to be included in a cost benefit analysis to represent compensation for loss are far higher than the amounts legally required.) But the social effects are huge, especially in Camden, where communities will be broken up and some businesses will be forced to close.

13. It is obvious that BCRs, even if at first sight favourable, that take no account of major impacts such as these cannot be taken as indicating value for money. This point was emphasised by Atkins in its January 2012 report Strategic Alternatives Study, which said, in notes to its tables showing benefit-cost ratios: “There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.” Unfortunately, no such warning appears in the Atkins study HS2 Strategic Alternatives published on 28 October 2013, or in HS2 Ltd’s report Economic Case for HS2 published in the same month. Both those documents seem to treat the benefit-cost ratios they presented as representing value for money.

14. Other major costs have been left out of account. HS2 Ltd has always stressed that the wider economic impacts (WEIs) claimed for HS2 in the form of development round the stations (which as noted above, might not always be a net benefit to the wider region) would not come about automatically but would depend on major inputs from the local authorities concerned. But this input has not been specified or costed. So the costs have been underestimated and the BCRs correspondingly overestimated. The normal practice, followed in previous HS2 reports, is to show BCRs with and without WEIs. Assuming all other figures in the cost benefit calculation to be correct, the BCRs without WEIs are 1.8 for the full network and 1.4 for Phase One (see Figure 5.7 of The Strategic Case for HS2, DfT, October 2013). Some major effects for which techniques do exist to ascribe monetary values have been left out. They include the disruption to road traffic, including pedestrians and cyclists, especially in Camden, during the ten-year construction period, caused by a massive increase in HGV movements; disruption to commuter services at Euston not only during construction, but because of the loss of some platforms, even when construction is complete.

15. The revenue that HS2 would bring should be counted as a benefit but has in fact been counted as a reduction in cost. Correcting this error is sufficient by itself to reduce the claimed BCR for the whole scheme from 2.3 to 1.6 with WEIs and 1.4 without them, and for Phase One from 1.7 to 1.4 with WEIs and 1.2 without them.

16. There are major doubts about the travel predictions fed into the cost benefit analysis. Not only, as has been mentioned, are the predictions of the future rail travel for which HS2 could compete implausibly high, but so is the extent to which HS2 would attract traffic from
the classic rail services. Among other things, it has been assumed that fares would be the same on both services. That assumption is not credible. When interviewed by *The Engineer* in May 2012, Andrew McNaughton, the technical director of HS2, was asked why no premium on HS2 fares had been allowed for. He replied “That would have been counterproductive, and make it a very expensive way to move fresh air around”.

**Conclusion**

17. This account of the faults in the official appraisal of HS2 is far from complete, but enough has been said to show that even apart from local environmental damage the case for HS2 does not stand up.
ANNEX 2 ENVIRONMENT CONSULT REPLY

This reply to Parliament’s consultation on the environmental consequences of phase 1 of HS2 was sent by email on 27 February 2014

STEPHEN PLOWDEN BA MCILT

This reply to the consultation document on the environmental consequences of phase 1 of HS2 represents my opinion as an individual. Although I believe the views expressed would be widely shared, I am not authorised to speak for anyone else.

INTRODUCTION

1. I have not read the full London-West Midlands Environmental Statement. These remarks are based on the non-technical summary, which mostly consists of a detailed list of the local environmental impacts of HS2. I understand that the Woodland Trust and others have identified a number of errors and omissions in the list. If that is so, it is serious, but this submission is not concerned with that, nor is it concerned to identify possible means of mitigation. It is concerned with a much more fundamental question, what part environmental considerations should play not just in decisions about mitigation or routing or compensation, but in deciding whether HS2 should be built at all. My contention is that the environment should have been given a much more prominent place in that decision, and if due weight were given to the environmental impacts of HS2, global as well as local, or even to either separately, that would be sufficient to rule it out.

2. That does not mean that, environmental considerations apart, HS2 would be a good project. It fails on every other test as well. It is not required to supply the extra capacity alleged to be necessary. It is not a good way of regenerating the north, and so far from helping to close the north-south divide would in fact increase it. It would not enable economically viable train services to run direct between British regions other than the south-east and the Continent. Its effect on reducing domestic flights to and from Heathrow is far too small to have any impact on the question of what, if any, new runways or airports are required to serve international flights. It would not provide good value for money. It is not possible or necessary to develop these points in this reply; I mention them only in case it should be thought that environmental objections are the only ones.

CARBON

3. We were originally told that HS2 was an integral part of the government’s low-carbon transport strategy. In a letter to me of 3 November 2010, an official in the Direct Communications Unit at 10 Downing Street made the point especially strongly:

The Government’s objective is to establish a high speed rail network as part of a programme to fulfil its ambitions for a low-carbon economy. The Government’s vision is of a truly national high speed rail network for the whole of Britain. Given financial constraints, this will have to be achieved in phases.
4. I was under the impression that the government had dropped this claim after finding that its own studies suggested that HS2 would be more or less carbon neutral. According to Table 5.1.1 of HS2 Ltd’s report *The Economic Case for HS2*, published in October 2013, there would be a tiny saving in carbon, but so small that it contributes only a small fraction of one percent of the estimated benefits. (Even this conclusion is contradicted by Temple-ERM in a report for HS2 Ltd published as Appendix F of the *Sustainability Statement*, also published in October 2013. According to these calculations, over the first 60 years of its operation, HS2 would lead to a small net increase in carbon emissions, although it is claimed (page 4) that over HS2’s 120-year life, net reductions could result.)

5. To my surprise, however, the short section in the non-technical summary which deals with climate (section 9.4) although apparently aware of this research, repeats the original claim. The first sentence in this section reads, “The project will play a key part in the U.K.’s future low-carbon transport system and will support the Government’s overall carbon objectives”. A project which costs £40 billion or £50 billion and has no impact on this problem, the most important problem we face, can obviously not be a key part of a rational carbon-reduction strategy. It is questionable whether it is even consistent with a rational carbon-reduction strategy.

6. Section 9.4 contains several inaccurate and misleading remarks. The statement that “in comparison with most other transport modes, high speed rail offers some of the lowest carbon emissions per passenger kilometre, and significantly less than cars and planes” is both implausible, except perhaps with regard to planes, and irrelevant. The only modes which are relevant to a comparison with HS2 are the modes with which it would compete. As the table below, taken from *The Economic Case for HS2*, shows, the most important of these is conventional rail, and because of its higher speed HS2 consumes much more fuel and emits more carbon per passenger kilometre than conventional rail. A comparison in terms of carbon per passenger or per passenger kilometre also ignores the important fact that high-speed rail would increase not only the number of journeys, a fact which, as the table shows, is recognised in the official forecasts, but also their length, which is not.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>From classic rail</td>
<td>69%</td>
</tr>
<tr>
<td>New travel</td>
<td>26%</td>
</tr>
<tr>
<td>From air</td>
<td>1%</td>
</tr>
<tr>
<td>From car</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Note: The base of these percentages is passengers, not passenger kilometres.*

7. The fact that higher speeds lead to longer journeys is well-established over all modes and countries. It can happen without any change in the location of activities. For example, if HS2 were built, some Londoners who would otherwise have taken a weekend trip to the Cotswolds might be tempted to go to the Peak District instead. HS2 is designed to facilitate access to airports. It has been known since the 1970s that ease of access to airports is a significant factor in the propensity to fly, so HS2 would lead to an increase in air travel, which, of course, is especially carbon intensive.
8. Locational changes are likely to be even more important. If HS2 is built, some people who now work in London and live in London or nearby will move to Birmingham, to take advantage of lower house prices, and commute back to their present jobs. Some people who now both live and work in Birmingham will move to a job in London, attracted by the higher salaries and prospects there. There would be some increases in the length of travel for other journey purposes as well. Similar, though milder effects can be expected in the northern cities. The longer the journey, the greater the energy consumption and the carbon emissions, and this effect will be exacerbated by the substitution of HS2, with its relatively high emissions per passenger kilometre, for classic rail (most commuting journeys into London are now made by rail).

9. The (fallacious) claim that HS2 would be an integral part of the nation’s low-carbon transport strategy raises the question of what the other features of that strategy would be. Road transport is the major contributor to transport carbon emissions. There are many components in a strategy to reduce carbon emissions from road transport, and most of the measures would be desirable even if CO2 and climate change were not a problem. It would take too long to describe all the measures here, but the most important, both in the short term and in the long term, are lower and better enforced speed limits on roads of all classes. As well as reducing fuel consumption and emissions per vehicle mile, lower speeds would check and then reverse the tendency for journey lengths to increase. They would also encourage the substitution of less polluting modes of transport for cars and lorries. As part of that, they would encourage some transfer from road to rail, without any need to make rail faster. HS2 would look even more out of place in a determined low-carbon transport strategy than it would without it.

10. The Temple-ERM report is based on many assumptions both about what the effect of HS2 would be on travel patterns and on the possibilities of improved efficiency with respect to CO2 in each of the competing modes over the next 60 years or longer. It is beyond my competence to comment on some of these technicalities, even if, which does not seem to be the case, the report gives the necessary detail. The independent assessor will need to examine this report in detail, but here are some provisional comments on Section 4.4, which deals with the change in CO2 emissions predicted to arise from the changes in the pattern of travel by mode that, it is said, HS2 will bring, and on Annex B which gives some information about the methods of carbon estimation used.

11. According to Table 4 in Section 4.4, the greatest saving in carbon comes from the substitution of high speed rail for domestic aviation. In Scenario A, which is based on cautious assumptions about how the carbon efficiency of various modes will develop, this substitution is predicted to produce a saving of 7.8 MTCO2e, out of a total saving due to modal effects of 10.49 MTCO2e. In Scenario B, which is based on more ambitious assumptions, it is predicted to produce a saving of 7.8 MTCO2e out of a total of 8.21 MTCO2e.

(i) I suspect that the calculations are based on very optimistic assumptions about the extent to which HS2 will in fact attract passengers from domestic air.
(ii) According to footnote 38, the figures “take account of emissions of carbon dioxide, methane, and nitrous oxides from aviation at altitude, and of the additional climatic change factors that arise from factors such as water vapour and contrails”. My understanding, which of course the independent assessor will need to check, is that the effects referred to only occur at altitudes higher than those reached by planes on short flights, such as domestic flights in Britain.

(iii) It is noteworthy that the reduction due to switching from domestic flights is the same in both scenarios. That presumably means that no reductions in carbon emissions due to improved aircraft efficiency are considered possible over the next 60 years. This assumption would certainly be disputed by the aviation industry, and not only by them. On 13 February 2014 I attended a conference on air-rail links at which one of the speakers was Katrien Prins, who is a policy officer in the aviation sector of the European Commission. I questioned her about how the growth of aviation could be reconciled with the need to deal with climate change. One of her answers, given in the context of international aviation, but probably relevant to domestic flights as well, at least on the assumption that domestic flying is expected to grow, was the growth in the capacity of planes. She also said that new biofuels were being developed, not of the kind that damage agriculture, that would be suitable for planes. That, of course, would make a huge difference. This conversation took place during one of the breaks in the conference so will not be recorded in the proceedings, but the subject is one that the assessor should pursue.

(iv) Even in the short term, there is a great deal that can be done, and which policy can encourage both by regulation and by taxes, to reduce fuel consumption and hence emissions from domestic flights. For example, both the types of aircraft used and speeds at which they fly can be influenced by policy. Taxation can help to ensure high occupancies, thus reducing emissions per passenger kilometre.

12. In both scenarios there is predicted to be a saving arising from “classic rail modal shift”. The direct effect of transferring passengers from classic rail to HS2 must be to increase CO2 emissions. The claim is sometimes made that HS2 will relieve congestion on the rest of the rail network and so improve operations there; is that what accounts for the predicted reductions? If so, a great deal more explanation is required. In particular, the direct effect of switching from classic rail to HS2 should be calculated separately from any indirect beneficial effects claimed.

13. According to paragraph 4.3.2 of the report, scenario B allows for the improved dynamic design of HS2 rolling stock and also for this rolling stock to become lighter. Presumably, similar improvements would be possible for classic rolling stock, but it does not seem that they have been allowed for. What is clear from Table 1 in section B4 .1 .6 is that the proportion of diesel and electric units in the classic rail fleet is assumed to be the same in scenario B as in scenario A, and that no reduction in the emission factors of diesel units has been allowed for in either scenario. Both assumptions understate the potential for improvements in classic rail operations and in that way unduly favour the case for HS2.
14. A shift from long-distance road transport is predicted to give rise to a saving of 2.63 MTCO$_2$e in scenario A and of 0.38 MTCO$_2$e in scenario B. The official forecasts on the modal split between cars and HS2 have always been suspect. HS2 would be a city-centre to city-centre service. If people are now making such journeys by car, when in most ways rail is already so much more convenient, it is probably for reasons which are not captured in conventional modal split models, based as they are on time and cost. Car occupancies may be unusually high, which would make the cost advantage of cars much greater than if average occupancies are assumed. It may be that travellers require the car for local travel at the end of the long-distance journey. It may be that they are carrying luggage or other goods which it would be inconvenient to take on the train. It may be that some of the people in the car would have difficulty in using trains or in travelling to and from stations. It may be that the traveller wants to smoke.

15. Even if the prediction of the car travel that would switch to HS2 were correct, the amount of CO2 predicted to be saved is surprising. Once again, it is possible that car occupancy has been underestimated, and also the emissions involved in getting to and from HS2 stations. By the time that HS2 is planned to be operational, there will be many more electric or hybrid cars on the roads and, which may be even more important, petrol and diesel cars will be much more efficient and cleaner than at present. According to Table 1 in section B4.1.6, under scenario A the carbon efficiency of petrol and diesel cars is expected to improve by 10% and 5% respectively between 2010 and 2020 and thereafter to remain the same. Those assumptions are almost certainly too conservative even assuming that present policies are not tightened up. The potential for efficiency improvement is far greater than these figures may suggest, and if the authorities are serious about tackling climate change, and about increasing security of fuel supplies, they will use vehicle regulation and taxation to ensure that the potential is exploited. As was pointed out in paragraph 9 above, reducing and enforcing speed limits would have a powerful effect on reducing carbon emissions even without any improvements in car design. But lower speeds could also help to bring about changes in car design. If the maximum speed limit were reduced to 60 mph, or even to 55 mph, which was the limit in the United States for 13 years, then the top speed for which cars are designed could be reduced, bringing further savings in fuel consumption and emissions. It is possible and even probable that in 25 years time there will be no point, with respect to carbon emissions, in encouraging transfers from cars to rail, certainly not from cars to high speed rail.

LOCAL ENVIRONMENTAL EFFECTS

16. The quality of the physical environment is one of Britain’s most precious assets. It will become even more precious if, as officially predicted, we are to experience a large increase in population. Clearly the damage that any scheme would do to such a precious asset must be a factor in deciding whether or not to go ahead with the scheme. But the huge environmental damage that HS2 would do both in the countryside and in London (and probably in other towns too but I have not studied that) does not figure in this, fundamental, decision. That is clear right from the start of the consultation document. For example, the first paragraph in Section 1.2, The approach to the environment, reads as follows.
EIA has been integral to the development of the project. Environmental assessment has been the foundation of route selection, design development, arrangements for construction and operation of the railway, and measures to mitigate the project’s environmental impacts. In developing the project, HS2 Ltd’s aim has been twofold: to enable the nation to take full advantage of the opportunities and benefits offered by the project and to mitigate the adverse environmental effects of the project as effectively as it reasonably can (emphasis added).

17. The point is repeated later in the same section. Adverse environmental effects are to be avoided “where reasonably practicable”. There is no suggestion that if they can’t be avoided, reduced or mitigated, the project should not go ahead.

The law requires the ES to include a description of the measures envisaged in order to avoid, reduce and, if possible, remedy the significant adverse effects of the project. HS2 Ltd’s approach to mitigating adverse effects on the environment of the Phase One project is shown in Figure 3. HS2 Ltd’s aim has been to avoid adverse environmental effects, where reasonably practicable, through the design of the project. Where this is not achievable, HS2 Ltd has considered measures to reduce or abate such effects. Where, despite efforts to avoid and reduce them, significant adverse environmental effects are predicted to occur, HS2 Ltd has proposed repair and compensation measures.

18. The wording of this section also suggests that the government sees damage to the environment as only affecting people who live close by. That at least is what is suggested by the following sentence “The Government recognises that the project will have significant effects on those who live close to the route and upon the local environment through which it will pass”. But the environment is a national asset and its quality matters to many people do not live close by and who may not even intend to visit the area. The designation of the Chilterns as an AONB is a recognition of its national importance, but many areas that have not received such a designation should also be regarded as a national asset.

19. This environmental damage is not allowed for in the cost benefit analysis. There is a good reason for that, since such impacts cannot be monetised. But that means that the benefit-cost ratio now calculated, even if it were sound in other respects, which is far from being the case, is not a good guide to value for money. This point was emphasised by Atkins in its January 2012 report Strategic Alternatives Study, which said, in notes to its tables showing benefit-cost ratios: “There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.” Unfortunately, no such warning appears in the Atkins study HS2 Strategic Alternatives published on 28 October 2013, or in HS2 Ltd’s report Economic Case for HS2 published in the same month. Both those documents seem to treat the benefit-cost ratios they present as representing value for money.

20. If environmental damage of the nature and scale that HS2 would do cannot be monetised, how then should it be taken into account in deciding whether or not to go
Stephen Plowden—Written evidence

ahead with the project? When Philip Hammond, then Secretary of State for Transport gave evidence to the Transport Select Committee of the House of Commons, he spoke in a way that suggested that although the environment could not be monetised, it was as important as the considerations that could be, which implies that it should indeed be something that affects the decision on whether or not to go ahead at all. The questions and answers were as follows:

Q551 Chair: The business case does not include the environmental assessments. Does that mean that the environment is seen as less important?
Mr Hammond: No. It means that the business case includes the things that can sensibly be monetised. The things that can be monetised have been monetised.
Q552 Chair: Do you monetise loss of beauty?
Mr Hammond: No, you do not, and that is why the environmental impacts-the landscape impacts, for example-have not been monetised as part of the economic case. The economic case is only part of the case for high speed rail, as you know. The Department has an approach which considers five separate cases, of which the economic case is one and the environmental case is another.

21. As has just been shown, the government no longer holds the view that the environmental damage that HS2 would do is a consideration that could affect the decision whether or not to go ahead. It would be interesting to know when and by whom the principle advocated by Mr Hammond of separate but equally important tests was dropped. Was this a Cabinet decision, a ministerial decision, or a decision taken by civil servants in the DfT and HS2 Ltd? Or perhaps there was no actual decision, because the people now in charge did not even know what the Secretary of State had told the Transport Select Committee. Both explanations are very disquieting.

22. Enlightened though it was, there is a difficulty about Mr Hammond’s view. It is very difficult to know what exactly the environmental test would be and what would count as passing or failing it. What is the alternative?

23. When opposing a road scheme, the Campaign for Better Transport once described the countryside as “infinitely precious”. (CBT takes the environmental damage done by rail schemes much less seriously.) But this term implies that there are no circumstances whatever which would justify damage to the countryside, which cannot be correct. Similarly, although there is no way that the benefits that HS2 would bring would justify the huge environmental and social damage that HS2 would do in Camden and elsewhere in London, it cannot be said that there could never be any circumstances in which damage of this scale would be justified in the national interest.

24. My view is that the environment should be treated as a constraint, not indeed an absolute constraint, but a provisional one which could be set aside only if it could be shown that some other national objective of even greater importance could not otherwise be satisfied. For example, if it were true that HS2 was crucial to reducing carbon, or to closing the north-south divide, or perhaps to housing the population decently, those would be the kind of considerations that would justify setting aside this constraint. But nothing like this
applies to HS2. HS2 should never have been put forward in the first place, still less should it have reached the stage of detailed evaluation.

25. The belief that meeting the demand for rail transport is a requirement of this overriding kind seems to be very widespread. That would be to adopt the “predict and provide” philosophy that has been criticised for more than 40 years in connection with road schemes: all travel demands must be met, and considerations of expense or environmental damage are relevant only to the question of how best to meet them. This is a bad philosophical and economic principle; it cannot be the case that meeting travel demands trumps all other considerations. In any case, HS2 cannot be justified even under this principle. In his study for 51M, Chris Stokes showed that HS2 Ltd’s demand forecasts, implausibly high though they are, could be met at a fraction of the cost and with little or no environmental damage.

26. The 51M scheme involves removing three bottlenecks on the existing WCML, lengthening trains and platforms, and on each train replacing one first-class carriage by a second-class one. In its report High Speed Rail Strategic Alternatives Study published in January 2012, Atkins estimated the (undiscounted) capital cost of this scheme at £2.6 billion, and the benefit-cost ratio as 5.17, the highest of the alternatives studied. Since then Network Rail has included the removal of one of the three bottlenecks, the Stafford Area Bypass, which was costed by Atkins at £1.285 billion, in its own programme of works, which means that it now forms part of the “do minimum” comparator and does not have to be included in the costs of the 51M scheme. This vastly increases its benefit-cost ratio.

27. Despite all these advantages, the 51M scheme does not figure in Atkins’ more recent study of alternatives published in October 2013. The reason for excluding it seems to be that, it is claimed, it would not provide sufficient connectivity. So a scheme can be excluded on grounds of insufficient connectivity, even though no predictions have been made of how travellers would use the connectivity if it were provided, or what it would be worth to them, but it cannot be excluded on grounds of extreme environmental damage. This is much worse than “predict and provide”. What makes it more absurd still is that a huge number of rail improvements could be financed by the £40 billion or £50 billion that would be saved by substituting the 51M scheme for HS2, not that, in my view, rail improvements would have the first claim on this money.

ANNEX 3 LETTER TO KAREN BUCK ON REGENERATION
Email sent to Karen Buck MP on 13 January 2014
Dear Karen Buck

Thank you for your email of fifth December, and apologies for this very late reply. In addition to seasonal activities, other things to do with HS2 have been keeping me very busy.

For the moment, I am replying to only one point in your email, the claimed regenerating effect of HS2, which, I understand, is the argument for it that you find most impressive. I will write again about the other arguments, but I want to get this email off quickly, in case it may be of some use to you in the debate which I’m told is to be held tomorrow, and if I try to cover everything, I won’t be able to send it in time.
May I say first that I take the north-south divide very seriously. It is my long-held belief that the predominance of London and the south-east is bad for Britain and bad for London too. However, I do not believe that HS2 will help; in fact, I think it is at least as likely to make the problem worse. I don’t think too much attention to be paid to the opinions of the prominent people in the north to whom you refer. The relationship between accessibility and economic prosperity is a difficult topic that requires careful study, and academic opinion does not support their views, or those expressed by Mr Cameron and other prominent politicians. (I understand that Nick Clegg has gone so far as to say that HS2 would heal the north-south divide. David Cameron’s pronouncements are less extreme but are still highly implausible.)

The following extract comes from Mr Andrew Bodman’s reply to the Transport Select Committee’s most recent enquiry into HS2. As you will see, Mr Bodman gives the link to some written evidence which John Tomaney, the Professor of Urban and Regional Planning at UCL, submitted to the Committee in 2011. Professor Tomaney’s very careful and thorough consideration of the evidence leads to a sceptical conclusion.

27. Several independent people or organisations have studied the regional effects of high speed rail in other countries. Professor Tomaney provided comprehensive oral and written evidence to this committee in 2011 on the subject of high speed rail. His views were that the amount of regional regeneration being created would be small, and if it did exist then the regional beneficiary would be the capital, in this case London. Other independent studies of actual evidence have reached similar conclusions.

http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/11071201.htm
http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/writev/rail/m14.htm

I have also just been looking at the video of Professor Tomaney’s evidence to the HSR Committee of the HoC on 9 July 2013, which I found by googling Tomaney, in which he maintained his scepticism. Not only did he say that if one wanted to use transport as a means of regional development, there were much better ways of doing so than HS2, but that investment in other areas, such as education and skills, might be more important than investment in transport.

Another academic sceptic is Professor Henry Overman of the LSE. This is what he said when he appeared before the Treasury Select Committee on 5 November.

Q143 Jesse Norman: Professor Overman, in the Economist this week it says, “The notion that HS2 would transform the Midlands and the north is nonsense. High-speed railways in other countries have mostly benefited central cities by alleviating the need for regional offices.” What is your view on that?

Professor Overman: I think that its likely impact on the north-south divide has certainly been overstated. I am not sure we know. There are reasons to think it might narrow
the north-south divide. There are reasons to think it might widen the north-south divide.

The extract from the *Economist* quoted by Jesse Norman gives one reason why improving connections between an economically strong region and a weaker one may suck activity out of the weaker region rather than regenerating it. If HS2 were to enable a firm in the City of London to see customers in the Midlands and the North by means of a day trip from London, then those firms contemplating opening regional offices would be less likely to do so, and those firms which already had them would be tempted to close them and save the overheads.

The effect of HS2 that we can be most certain about is that it will change commuting patterns. If journey times from Birmingham to London are reduced to 49 minutes, then some people now working in London and living in London or the suburbs will be tempted to move to Birmingham to take advantage of the lower house prices there and commute back to their present jobs. Some people now living and working in Birmingham will be tempted to get a more lucrative job in London. There are likely to be some similar, though milder, consequences for northern cities too.

I cannot see that such a development would be an advantage to Birmingham or the other cities. It would also have highly adverse consequences for CO2 emissions. The longer the journey, obviously the more energy is consumed and the greater the emissions, and this effect is exacerbated by substituting high speed rail for conventional rail, since the emission rates per passenger mile are much higher for high speed rail. Astonishingly, HS2 Ltd’s demand models cannot represent this obvious effect. Large and elaborate though they are, these models are very crude. They allow for generated trips, but not for locational changes leading to longer trips, even though there is overwhelming evidence from all countries and over all modes that the effect of speeding up transport is to lengthen trips. I attach a recent article by the property correspondent of the Guardian who is well aware of a consequence which seems to have escaped HS2 modellers.

People who think that HS2 will encourage regeneration acknowledge that it will do so only if accompanied by supporting action by local authorities or other agencies. However, in those of HS2 Ltd’s economic analyses in which the claimed Wider Economic Impacts are included (as you know, the case is presented with and without these impacts), this further action has not been specified or costed. The consequence is that costs have been understated and the BCR correspondingly overstated.

There could be several reasons why people in the north hold the views to which you refer. They may be persuaded by the propaganda from leading politicians and others. Or, even if they suspect some exaggeration, they may think that HS2 will bring some benefit to their areas, even if not as much as claimed, and as it is a benefit they don’t have to pay for, they had better go for it. If they were offered some of this money to spend on other ways to achieve regeneration, their support might vanish. (Similar things can happen with motorway schemes too. Even local authorities that are generally cool about roadbuilding find it very hard to reject an injection of money into their areas which would otherwise go elsewhere.)
know of only one local authority, Oxfordshire, that ever rejected a road proposal that would have been entirely financed by the central government.) It is true, too, that HS2 might indeed benefit the cities where its stations are, but only by attracting business from elsewhere in the region. Professor Tomaney makes this point.

Finally, it may be worth pointing out that not everyone in the north shares the view of the supporters whom you mention. John Whitelegg, a professor at the University of Lancaster and one of Britain’s most eminent transport planners, is one of the foremost critics of HS2. As you would expect, he is very conscious of the difference between benefits to Manchester and benefits to the region, although his objections to HS2 go far beyond things to do with regeneration. Public opinion studies show a decline in popularity for HS2 everywhere. A YouGov poll in September showed that in the north, as well as in every other region except London, more people now oppose HS2 than support it.

Ed Balls has said that Labour would oppose HS2 if costs rise again, but the scheme made no sense even before the rise. In any case, the government and HS2 Ltd are not going to confess to another under-estimate until construction is underway, and is not credible that after, say, £10 billion had been spent, Ed Balls, or whoever his Labour successor might be, would then pull out.

I can understand that there might be some embarrassment for Labour now to oppose a scheme which a Labour Minister launched, but it would be much more embarrassing to hang on as the faults become more and more apparent. I would like therefore to repeat the suggestion that I made before both you and to my MP Frank Dobson, that Ed Miliband, should invite Chris Stokes, the very senior and dedicated railwayman who is helping the opposition, to give him and his colleagues a presentation. Chris could not only point to some faults in HS2 that I, as a non-railwayman, would not know about, but, more important, he could describe his own effective, cheap and environmentally friendly scheme for providing the extra capacity alleged to be necessary.

I will write again about the other arguments as soon as I can. I am copying this email to Frank Dobson and am also sending him a copy of my original letter to you.

Kind regards
Yours sincerely

Stephen Plowden

ANNEX 4 DISCOUNTING

1. The discount rate adopted for a project has a very profound effect on its benefit cost ratio. In accordance with Treasury guidance, the discount rate for HS2 is 3.5% for the first 30 years and 3% for the following 30 years. This discount rate is much lower, and the planning period much longer, than they were quite recently. For many years, road schemes were evaluated with a 7% discount rate over only a 30-year period. At some point, I don’t know when, a change was made to a 6% discount rate and a 40-year planning period. As I understand it, discount rates are related to the prevailing level of interest rates determined,
or heavily influenced, by the Bank of England. The prevailing level is now very low in order to stimulate the economy. It is paradoxical that measures adopted to get the economy moving in bad times should have the effect of giving much more attention to the long term than it receives in more prosperous times. In a talk in June 2010, reported in the issue of Local Transport Today of 25 June 2010, Peter Mackie, research professor at the Institute for Transport Studies at the University of Leeds suggested reverting to the previous arrangement of a 6% discount rate and a 40-year planning period.

2. To illustrate the importance of this issue. If, as Professor Mackie suggests, we reverted to the previous arrangement, the discounted value of this benefit would be some 39% less than under the present rules. In reality, the reduction would be higher than 39% because the undiscounted benefits are expected to increase over time, not to remain constant as in this example. Of course, the discounted value of costs would also be reduced, but probably not by so much, so the reduction in the benefit-cost ratio would probably be more than 39%. (If the Committee would like to see them, I can supply the calculations which support this reasoning.)

3. What is needed now is a comparison, based on HS2 Ltd’s estimates of the annual undiscounted costs and benefits, of the benefit-cost ratio as now calculated and as calculated in the way suggested by Professor Mackie. I hope the Committee will ask HS2 Ltd and/or the government to provide this. It is quite possible that this change would be sufficient by itself to destroy the economic case for HS2, even if the rest of the calculations were sound.

4. In my view, there is an even more fundamental objection to the present discounting procedure. Discounting raises the question of what our responsibilities to future generations are. I think most people would say that we have an obligation to leave them a world in which they can live and which would be worth living in. But if they are going to be richer than we are (that assumption no longer seems self-evident, and perhaps not even very plausible, but it seems to be the assumption made by people who set discount rates), then it is hard to see why we should be concerned about other aspects of their prosperity. Therefore, since environmental protection is at the heart of our obligations to posterity, it would seem appropriate to have a different, much lower, discount rate for the environment, if indeed it is discounted at all, than for matters such as the travel time of future travellers.

3.5.4 The need to distinguish between discounting the environment and discounting other things was a point made in 1973 during the discussions of the Independent Commission on Transport, whose report Changing Directions was published in the following year, by a professional philosopher, David Wiggins. At that time, although the quality of life was recognised as a very important issue, ecological sustainability was not, so Professor Wiggins’ point is even stronger now. The whole question of when and how to discount the future should not be left to economists but cries out for a philosophical and moral discussion with which all citizens should be concerned.

**ANNEX 5A  ATTEMPTS TO REASON WITH THE GOVERNMENT ABOUT OLD OAK COMMON**
1. The Government’s arguments against having the London terminus at Old Oak Common are incorrect. It is possible that the Government did not realise this to start with, but it stuck to its position even when, long before the second reading, the faults in its reasoning had been pointed out.

2. The sequence of events was as follows.
   (i) In December 2009 HS2 Ltd, HS2 Ltd published a report in which it discussed the possibility of having OOC as the London terminus. The report acknowledged that a Crossrail connection at OOC “would allow some passengers a quicker journey time to the East or West of London,” but continued “but the bulk of demand for HS2 would come from the central, north and south of London which would be best served by a central London station”.

   (ii) In its report on HS2 of November 2011, the Transport Select Committee of the HoC recommended that the government should look again at having the terminus at OOC. The Government dismissed this recommendation in its reply, saying that “the majority of passengers using HS2 would want to travel into central London. If Old Oak Common was the terminating London station, passengers would have to change onto another train or mode of transport to continue into central London, creating a time penalty that would reduce the benefits of HS2 and cause inconvenience to the majority of passengers.”

   (iii) The claim that HS2 passengers coming to or going from central London would suffer significantly if HS2 did not go into Euston is incorrect; most would not suffer at all. The next five Crossrail stations east of OOC are Paddington, Bond Street, Tottenham Court Road, Farringdon, and Liverpool Street, all of which are well connected to other rail lines. Because of this, under the present plan for HS2, with a stop at OOC on the way to a terminus at Euston, almost all HS2 passengers with origins or destinations in central London would save time by changing at OOC rather than at Euston. I had a lengthy correspondence with HS2 Ltd about all this in the summer and autumn of 2012. They introduced some new arguments, which can be answered, against OOC as the London terminus, but their main argument for refusing to reopen this issue was the claim that as a result of the Secretary of State’s decision in January 2012, the decision for Euston as the terminus had been made. Finally, HS2 Ltd said, “The issues you mention are best raised with your local MP or the Department for Transport”.

   (iv) During 2012 and 2013, Tim Stockton and I wrote a paper on behalf of the pan Camden HS2 Alliance outlining how a study comparing Euston and Old Oak Common as termini should proceed. On 30 July 2013, I sent this paper to Simon Burns, then the Minister responsible, with an accompanying letter. On 28 August, a civil servant in the DfT’s High Speed Rail Team replied. His reply retreated from the claim that the terminus at Euston would be better for the majority of HS2 passengers, but did not retreat as far as it should have done. It also gave a number of incorrect arguments for the HS2 project as a whole – of course, if HS2 is not needed, the comparison between Euston and OOC becomes irrelevant. The most important such argument is the claim that improvements to the existing mainline could not increase capacity as much as a new line would. Although that statement is true, it is highly misleading, since improvements can provide all the capacity...
needed to meet HS2 Ltd’s traffic forecasts, implausibly high though they are (see Annex 1, paragraphs 2 and 3, and Annex 2, paragraph 25).

**ANNEX 5B TERMINUS AT EUSTON OR AT OLD OAK COMMON?**
The following hyperlink gives access to the document that Tim Stockton and I prepared on behalf of the pan Camden HS2 Alliance. (Although the review is in my name, all the calculations comparing travel times were done by Mr Stockton.) There have been some technical problems with the website to which this hyperlink gives access. I think the problems are now solved, but if the Committee experiences any difficulty, I can send a copy of this document separately.


**ANNEX 5C OLD OAK COMMON MINISTER BURNS JULY 2013**

Dear Mr Burns

My colleague Martin Sheppard has shown me the letter that your Private Secretary, Tom Elworthy, wrote to him on 20 June in reply to Mr Sheppard’s letter to you of 6 June. I have been closely involved with some of the issues raised and am writing to comment.

Last week I was one of the speakers at a conference in the House of Commons organised by the Green Economics Institute and hosted by Louise Ellman. In my talk, I took HS2 as the most important current example of the faults in the methods of transport planning in Britain. The talk is attached herewith; as you will see, it refutes the main claim in Mr Elworthy’s letter, that HS2 is the best way of providing the massive increase in capacity that the Government believes, incorrectly in my opinion, is required on this route.

In my talk, I raised the question of how we got into this mess, and suggested that it was because that instead of starting with the problems, this Government and its predecessor had started with the “solution”. This point is well illustrated by the following paragraph from a letter sent to me by Mr M Davies of the Direct Communications Unit at 10 Downing Street on 3 November 2010.

> The Government’s objective is to establish a high speed rail network as part of a programme to fulfil its ambitions for a low carbon economy. The Government’s vision is of a truly national high speed rail network for the whole of Britain. Given financial constraints this will have to be achieved in phases.

This is a truly astonishing statement. A high-speed rail network for the whole of Britain would be immensely expensive and immensely damaging environmentally. There is absolutely no reason to suppose that it would help to achieve a low carbon economy. On the contrary, since it is likely that most of the custom of these high speed trains would consist of passengers drawn from conventional trains, which are much lower in carbon, and of generated travel, it would almost certainly increase carbon emissions from transport.
This paragraph illustrates another point as well. The Government has now had to drop its claim that HS2 would help to reduce carbon, since its own studies suggest (optimistically in my opinion, but never mind that) that the net impact would be neutral. But although this justification for the project, on which so much emphasis was originally placed, has been shown to be invalid, the project is not dropped. Instead, HS2 Ltd is casting around for other justifications. I was told by Clinton Leeks recently that HS2 Ltd is now trying to find further arguments in support of the regeneration claims made for HS2, which, as mentioned in my talk, are highly doubtful at best.

Mr Elworthy asked Mr Sheppard to let you know about the difficulties we (the pan-Camden HS2 Alliance) have been having in our correspondence with HS2 Ltd. As you know, one of our principal concerns is the choice between Euston and Old Oak Common as the London terminus if HS2 goes ahead (which, of course, we think it should not). Mr Elworthy asked Mr Sheppard to accept your assurance that the issues had been carefully considered, but unfortunately, our experience is not consistent with that.

Since under the Government’s plan there would be a station at OOC as well as the terminus at Euston, it must be the case that some HS2 passengers would be better off under this plan than if the terminus were at OOC. But this advantage has to be offset against the very large savings in resource, environmental and social costs that would accrue from deleting the line between OOC and Euston. No attempt has been made to define and quantify these savings. In addition, the advantages to HS2 passengers of the terminus at Euston have been exaggerated, to the point that one of the claims made is simply incorrect. This is the claim that passengers with origin or destination in central London would be better off by changing at Euston than at OOC. After leaving OOC, the next stations that eastbound Crossrail trains call at are Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street. HS2 passengers going to or coming from any of these stations, all of which have good connections with other Underground services, would experience significant time savings by changing at OOC rather than at Euston.

Our correspondence with HS2 Ltd on this topic went on for many months. It is summarised in the notes to a research proposal (see document attached) that Tim Stockton and I prepared for the pan-Camden HS2 Action Alliance. The correspondence ended last October, when HS2 Ltd said that if we wanted to pursue these issues, we should approach Ministers and our MP. However, the correspondence was revived recently, when I suggested to Clinton Leeks that HS2 Ltd should itself undertake the study outlined in our proposal. The thread of the correspondence with Mr Leeks is attached. It is clear from Mr Leeks’s last email that HS2 Ltd will not take up this suggestion unless ordered to by Ministers. I hope that, if the Government insists on going on with HS2, you will now give that order.

In parallel with the correspondence with HS2 Ltd about Euston and Old Oak Common, I have been corresponding with the company about other topics in their reports: the treatment of the environment and the calculations on how HS2 would affect travellers’ choice of mode. I have not had an answer on the environment, and the answers I have had
recently, much later than they should have been, on modal split are quite inadequate. The thread of this correspondence is attached.

There is much more to be said about HS2 Ltd’s modal split calculations, but I do not want to lengthen or delay this email by saying it now. I would, however, like to register a formal complaint about the long delay that took place before I received this unsatisfactory reply, and also about the fact that I have still not had a reply to my questions about the environment. Could you please treat this email as my formal complaint?

Both these topics raise more general points about HS2 Ltd’s reports. They are extremely hard to follow, partly because of multiple revisions. They fail to give the detail that the reader is entitled to expect, and at some points they are impenetrably obscure. I worked for a firm of consultants for 15 years. We would have been ashamed to have given clients reports which gave such poor descriptions of our work. I doubt if our clients would have stood for it either.

The best course now would be for Ministers to admit a mistake, scrap HS2, adopt Mr Stokes’s scheme for improvements on the WCML, and consider from scratch how best to reduce carbon emissions from transport and how to regenerate the North of England. It is true that in our excessively adversarial political system, admitting a mistake is not easy, but you will have to do it sooner or later, because the opposition is not going away, but is indeed increasing, and more and more faults with HS2 are going to appear as the hybrid Bill gets underway. All three main parties have been equally mistaken about HS2, which may make admitting a mistake easier. If the Government does need an excuse, and it is sad to think that it might not be able to admit a mistake without one, the recent huge hike in the cost estimate provides it. I don’t know anyone who thinks that that hike will be the last – please see the attached article by Stephen Ashcroft, a specialist in procurement.

I am copying this email to my colleagues in the pan-Camden HS2 Alliance and to Frank Dobson and Sarah Hayward. I shall also be forwarding it to other people fighting HS2. If you would like to discuss any of the points in this letter, my colleagues and I would be delighted to do so.

ANNEX 5D  OLD OAK COMMON CIVIL SERVANT REPLY AUGUST 2013

Dear Mr Plowden,

The HS2 project
Stephen Plowden—Written evidence

Thank you for your email to Simon Burns of 30 July. I have been asked to reply on his behalf. In your email you raise the question of why the Government seeks to build HS2. The case for HS2 starts with the overwhelming need to improve the transport infrastructure in this country. Without HS2, key rail routes connecting London, the Midlands and the North will soon be overwhelmed. This sentence is not even a correct statement of the point that Mr Seebohm is trying to make. He should not have said, “without HS2” but should instead have used the phrase he used in his next paragraph and said “without significant new capacity”. Demand for long distance rail travel has doubled in the past 15 years to 125 million journeys a year. By the mid 2020s the West Coast Main Line will be full. This will increase congestion on our road networks and stifle economic growth. These outcomes are wildly implausible, and as far as I know go far beyond anything claimed in HS2 Ltd’s reports. Have they been argued somewhere, and if so where? If the DfT genuinely believes in them, it must offer some support for its view.

If you accept that this is an unacceptable outcome, then we need significant new capacity. HS2 will more than double the number of seats between London and Birmingham on our busiest rail corridor, running up to 18 trains per hour with each carrying as many as 1,100 passengers. This capacity increase cannot be delivered by incremental increases to existing lines. It is perfectly true that incremental improvements to existing lines cannot deliver the same increase in capacity that a new line would. However, 51M’s optimised alternative would comfortably provide all the capacity needed to accommodate HS2 Ltd’s demand forecasts, implausibly high though they are. It would do so at a fraction of the cost of HS2 and with little or no environmental damage. There is no point in providing surplus capacity, especially when it comes at a huge cost in resources and environmental impact. And the new inter-city capacity that HS2 provides frees up train paths on the existing lines, providing for new and enhances commuter, and regional services. HS2 creates problems on a number of lines and will cause massive disruption to commuter and other services at Euston. It will also mean a sharp increase in freight movements by rail. Even apart from the fact that HS2 will not be available until 2026 it does nothing for freight and on some sections actually reduces freight capacity. Chris Stokes has shown that there are much cheaper, more effective and more quickly available ways of increasing capacity for freight. Moreover, of course increasing capacity does not automatically lead to more freight movements by rail (although that is what Mr Seebohm seems to be suggesting) – other policies which have not been specified or costed would also be necessary to bring about a significant transfer of fewer cars. Even on the official forecasts, the reduction in car traffic brought about by HS2 would be very small. If a small relief did come about for a time, then, assuming that the roads will still be congested, it would soon be eaten away by the traffic generated by the eased conditions. In any case, the official forecasts are not credible: if people are now travelling between city centres by car, this is likely to be for the reasons which the conventional models cannot represent, such as the need to use a car for future local journeys after the long-distance journey is completed; the car is carrying awkward luggage or goods; the number of passengers in the party makes the car much cheaper than rail travel would be; some of the car’s occupants have physical difficulties in using public transport; the travellers want to smoke; and lorries on our roads, cutting congestion and carbon emissions. Even the official forecasts show only a tiny net reduction in carbon. A sufficient condemnation of this project is that it costs £40 billion or £50 billion, possibly much more, and has, at best, virtually no impact on the most important problem we face. In any case, the official forecasts are optimistic. As mentioned above, they exaggerate the extent of transfer from cars. (In addition, I do not think they take sufficient account of the possibility that cars in future could be
much more frugal in energy consumption and emissions than is now officially envisaged.) Studies of regional airports in the 1970s established that the propensity to fly is significantly affected by ease of access to airports. By making access to several airports easier, HS2 will therefore increase CO2 emissions from aviation.

Your email makes reference to the regeneration benefits of HS2. We expect HS2 to act as a catalyst to city centre regeneration and major development schemes – just look at what has happened around some high speed stations in France or at Kings Cross. It is indeed quite possible that HS2 would lead to major development near the stations, although that point cannot be established just by looking at some stations in France or at Kings Cross. (The St Pancras/King’s Cross area was the best connected area in Britain before HS1 was built. The only thing that prevented it being developed many years earlier was uncertainty and planning blight.) However, if HS2 led to development near the stations, that does not mean that HS2 would regenerate a town as a whole, still less its surrounding region. The development near the station might simply be development that would otherwise have been located elsewhere. The railway will not deliver this outcome in isolation and it will take time for the local economic benefits to play out. The right blend of spatial planning and investment will be critical to delivery and to support much-needed jobs around station sites. If the claimed result would not happen without further investment, then the cost of this further investment has to be included in the cost benefit analysis. It has not been. Even if HS2 were to bring some net benefit to the towns it serves and their hinterlands, this is a far cry from the claim that continues to be made, and indeed is being emphasised more and more as other arguments fail, that it would regenerate the North or significantly reduce the north-south divide.

You raise concerns over the decision to terminate HS2 trains at Euston rather than at Old Oak Common. This was considered at length by the Government during 2011 in response to the major consultation exercise on HS2. 27 sites were considered as possibilities for a London terminus with a specific review carried out of the viability of Stratford and Old Oak Common as terminus options. Obviously, we looked very carefully at this review and concluded that it had not proved its point before setting out our own proposal of how the comparison between Euston and OOC should be made and before writing to the Minister. It is insulting to refer us to this review again at this stage. A primary reason for discounting Old Oak Common is the lack of network capacity for onward journeys from the station. Most passengers travelling to London will have destinations in Central London. While it is true that passengers alighting at Old Oak Common will be able to interchange on to Crossrail to access Central London, many a few, not many, and the advantage of Euston over OOC to those few is very small will be headed for destinations more readily reached by interchange onto tube and bus at Euston. Stations at both Euston and Old Oak Common will also split the dispersal of passengers so that neither station nor their connecting lines are too heavily loaded. In this way we both provide passengers with choice and sensibly manage the interchange of a large number of passengers. The possibility that OOC would experience capacity problems if it became the terminus should be investigated as part of a study comparing OOC with OOC plus Euston. It is only a possibility, however, and if there were a serious risk that it could happen, there are several ways it could be dealt with. The cost of these actions is
likely to be small compared with the huge savings in resource costs and in social and environmental impact that would be avoided by not taking the line into Euston.

I am sorry to hear that you feel that HS2 Ltd has not provided adequate responses to your correspondence on modal split and the environment. I will ask colleagues in the company to look into this and respond to you.

I hope you find this reply helpful.

Yours sincerely,
Rupert Seebohm - DfT High Speed Rail Team

ANNEX 6 A NOTE ON THE GOVERNMENT’S REPLY TO THE HOUSE OF COMMONS ENVIRONMENTAL AUDIT COMMITTEE’S RECOMMENDATIONS ON REDUCING THE SPEED OF HS2

1. This report was published on 7 April 2014. The Committee made a number of important recommendations, including the following:

   The Department of Transport and HS2 Ltd should put forward proposals for an emissions monitoring system to help resolve, and bring transparency to, the likely effect of HS2 on overall transport emissions. While the impact of lower maximum train speed on reducing emissions is currently not seen as substantial, the legally binding commitment to reduce emissions makes even a small reduction desirable. HS2 Ltd and the Department should therefore examine the scope for requiring a reduced maximum speed for the trains until electricity generation has been sufficiently decarbonised to make that a marginal issue, and publish the calculations that would underpin such a calculation.

2. The Government’s reply was as follows:

   HS2 Ltd will undertake further examination of the possible emissions benefits of changing the operational specification. However, HS2 Ltd is clear that operating at lower speed would reduce carbon emissions from the operation of rolling stock by only a relatively small degree, and would increase journey times, making HS2 a less attractive option to customers on roads and using flights. This is likely to result in less mode shift and potentially less carbon benefit associated with the operation of HS2, which could lead to an overall increase in UK carbon emissions compared to the existing proposed operating speed.

3. The idea that the modal changes that could result from reducing the speed of HS2 could possibly lead to an increase in UK carbon emissions is not credible. The official prediction is that 69% of the trips that would be made by HS2 are trips that would be made by conventional rail if HS2 were not built; 26% would be new trips that otherwise would not be made at all; 1% would be diverted from domestic air; 4% would be diverted from cars. Reducing the speed of HS2 would risk losing some of the diversions from domestic air and
Stephen Plowden—Written evidence

cars, and in that way would lead to some extra carbon emissions (at least on the assumptions, both of which are very doubtful, that HS2 will be as successful in attracting traffic from cars as HS2 Ltd predicts, and that in future emissions from cars will be greater than those from HS2). But lower speeds would also mean that there would be less diversion from conventional rail, which emits less carbon than HS2, fewer new trips with all the carbon emissions associated with them, and a lower rate of emissions from all the travel that would still be made by HS2 despite the lower speed. These savings would easily offset any extra emissions from domestic air and cars.

4. Is it because the Government realised that it wasn’t true that it attributed this view to HS2 Ltd rather than giving it as its own opinion? When responding to a Parliamentary Committee, the Government should state its own views not someone else’s.

5. If the Government is prepared to treat a Parliamentary Committee in this cavalier way, with an answer that a moment’s reflection shows could not be true, what chance do private citizens have?

STATEMENTS BY MINISTERS AND OTHER PROMINENT PEOPLE

Philip Hammond’s letter to The Economist published 17 September 2011

SIR – Your report on the government’s plans for high-speed rail (HS2) made a number of assertions that are simply not backed up by the facts (“Railroad to nowhere”, September 3rd). For example, you claimed that existing rail services to towns such as Crewe and Rugby “will also be hit” if HS2 is built. But the modelling assumptions we have published make it clear that we expect train services to Crewe and Rugby to increase; services to Milton Keynes could double as a result of the released capacity provided by HS2.

You also implied that capacity can be painlessly increased by enhancing our creaking network. This is fantasy. The west-coast line is already the busiest mixed-use rail line in Europe: the scope for further gains is comparatively small and will not provide the capacity over the medium term. Given that the west-coast line will soon be full, if HS2 is not built travellers from places like Coventry and Milton Keynes may find that they can barely get on trains in peak hours in the future.

As for your assertion that regional cities will lose out if they are given better connections to the capital, perhaps we should let regional business leaders be the judge of that. The fact is that they and their civic counterparts have been crystal clear in their overwhelming support for high-speed rail. The inexorable logic of your argument is that prosperity for regional cities can only be assured by isolation. That is not a credible blueprint for building a sustainably competitive economy.

Philip Hammond, MP
Secretary of state for transport

Comment
The arguments in the second and third paragraphs of this letter are considered in other documents in the package I am sending to the House of Lords. The arguments in the first paragraph are not covered by any documents in the package, but Chris Stokes has dealt with them in some of his writings. The statement “the inexorable logic of your argument is that prosperity for regional cities can only be assured by isolation” is a sad example of the debating tactic of trying to discredit an opponent’s point by exaggerating it.

**Extract from Lady Kramer’s speech in the House of Lords debate, 19 November 2013**

There are three key arguments for HS2 and the high-speed rail network that this Bill presages: capacity, connectivity and growth. In Britain, we are running out of capacity on our most important north-south routes. Demand for intercity rail travel has doubled in the past 15 years. By the mid-2020s, the west coast main line, our main rail line connecting London, the Midlands and the north, will be full. That is calculated on very modest figures for passenger growth: 2.2% a year. I should note that for the past decade demand has grown at 4.4% a year or more. Already in 2011, during the morning peak, 4,000 people were standing on arrival into Euston and 5,000 people were standing on arrival into Birmingham. It is close to impossible to get train paths for new services on the west coast main line.

We need a high-capacity answer, and that is HS2. It gives us 18 trains an hour in each direction when complete, each carrying up to 1,100 passengers. By taking long-distance travellers off the existing lines, it releases space on the west coast, east coast and midland main lines to be used for much needed regional and commuter services. Network Rail estimates that more than 100 cities and towns could benefit from the released capacity. It also releases essential capacity for freight: demand for rail freight is forecast to double by 2043, and there is not the capacity to carry it.

I am, of course, aware that many have proposed alternatives: upgrades to our existing lines to provide that capacity. Many of the ideas are interesting—in fact, some will probably be implemented—but they leave us with two problems. The first is scale. Including every reasonable alternative, we can achieve a 24% increase in capacity. HS2 gives us a 105% increase. It is a complete step change.

The second problem is disruption. As upgrades mean working on active lines in daily use, we have to resort to closure for much of the work. This House will have seen the Atkins report showing 14 years of weekend closures, and that is with an aggressive work programme of two simultaneous schemes on each route at any one time. It would frankly be a nightmare.

**Comment**

The arguments about growth and capacity are considered in some of the other documents in the package. Lady Kramer is right that building a new line would provide a step change in capacity which improvements to the existing lines could not match (although to acknowledge that is not to endorse the particular percentages she quotes). But that is not an argument for HS2, because improvements to the existing mainline can provide all the
capacity needed to meet HS2 Ltd’s implausibly high demand forecasts. If Lady Kramer wrote this speech herself, I think the civil servants in the DfT should have told her “you can’t quite say that, you know”. If it was the civil servants who suggested this argument to her, that is shameful.

The arguments about releasing capacity for commuter services and freight are not dealt with in the other documents in the package, but Chris Stokes has dealt with them elsewhere.

What Lady Kramer says about the extent of disruption that improvements to the existing mainline would cause is completely wrong if it is intended to refer to the plans that Chris Stokes prepared for 51M.

Extract from Lady Kramer’s speech to an engineering organisation, 22 October 2013

(Unfortunately, the extract in my computer file does not identify the particular organisation)

And we have to do something to create the capacity we need to grow.

Alternatives?

Simply upgrading existing lines is not a practical solution.

We have studied the alternatives to HS2, and both Network Rail and Atkins confirm they will not offer the same benefits.

We have considered 5 different packages of rail improvements as alternatives to phase 1 of HS2.

Not only did these projects fail to deliver the astonishing extra capacity that HS2 will.

The scale of work required for upgrades would cause so much disruption that the system would grind to a halt.

I am sure commuters on the West Coast Mainline will remember the problems caused during the £9 billion upgrade programme….

Yet the extra capacity released by this huge project has already been filled, and with passenger numbers growing, thousands of commuters are standing during the morning peak.

And despite the huge investment, it wasn’t enough to finish the job.

The overhead wiring on the West Coast line is getting on for 50 years old.

If upgrading existing lines were a feasible and effective answer to rising demand…. 
Stephen Plowden—Written evidence

And a genuine alternative to HS2….

Believe me – we would do it.

Comment
The points Lady Kramer makes in this speech are answered in other documents in the package. The fact, if it is one, that alternatives to HS2 would not provide the same benefits does not mean that they would not provide sufficient benefits or would not have a higher benefit-cost ratio than HS2, which in fact they do. I hope the House of Lords will hold Lady Kramer to her assurance that if someone could suggest a way of meeting rising demand by upgrading existing lines, the government would do it.

Andrew Adonis in the New Statesman blog, August 2013 (extract)

The case for High Speed Two is as strong now as when Labour committed itself to the project in March 2010 and virtually none of the arguments of the latest critics, including the Institute of Economic Affairs, affect it.

For the key justification is not speed but capacity. There will be an acute shortage of transport capacity from the 2020s to convey freight, commuters and other passengers into and between the major conurbations of London, the West Midlands, the East Midlands and South and West Yorkshire. Since there is no viable plan, let alone political will, to build new motorways between these places, or to dramatically increase air traffic between them, this additional capacity must largely be met by rail or Britain will grind to a halt. Rail is, in any case, the most efficient and green mode of transport for mass passenger and freight movements.

To meet this capacity crunch there is a simple choice: upgrade existing (mostly Victorian) rail lines and stations, or build entirely new lines and stations. Upgrading existing lines is hugely expensive and yields far less additional capacity than building new lines: the last major upgrade of the West Coast Main Line from London to Birmingham and Manchester was recently completed at a cost of £10bn, after a decade of disruption, and yielded only a fraction of the capacity improvements of HS2.

HS2 trebles existing rail capacity between the conurbations it serves, to the benefit not only of intercity services but also local and freight services because of the capacity freed up on the existing lines. Detailed costings that I commissioned in 2009 suggested that to secure just two-thirds of HS2's extra capacity by upgrading existing lines would cost more in cash terms than building HS2.

So there is no free lunch - or pot of gold which can be diverted to other projects in anything but the very short-term, with more costly consequences thereafter.

Debates about the benefits of faster journey times to Birmingham, and whether or not business travellers work productively on trains, are beside the point. If the additional capacity is required, it ought to be provided in the most cost-effective manner.
Comment
The fact, if it is one, that to secure two thirds of HS2’s extra capacity by upgrading existing lines would cost more in cash terms than building HS2 is irrelevant. What matters is that it would only cost about £2 billion to upgrade the existing lines in a way that would comfortably meet HS2 Ltd’s implausibly high demand forecasts. I hope the HoL will urge Lord Adonis to follow the logic of his remark that additional capacity “ought to be provided in the most cost-effective manner”.

Although he doesn’t say this, implicit in Lord Adonis’ support for HS2 is the idea that the “required” capacity should be provided not only whatever the resource cost (though of course he acknowledges that that cost should be minimised to the extent possible consistent with supplying the capacity) but also at whatever environmental cost (obviously with the same proviso). This is exactly the “predict and provide” approach that used to inform road planning and is now widely discredited. Of course, if it were really true that without all this investment “Britain will grind to a halt”, such an approach would be justified, but this is a chimera. Even if nothing much were down to cope with congestion, people would adjust their behaviour in response to it, but in fact a great deal can and should be done to restrain road vehicle mileage (I can go into detail if the Committee would be interested) and a significant amount can be done to reduce the demand for rail travel.

Extracts from Lord Adonis’ speech in the House of Lords debate, 19 November 2013
So, capacity first, with speed and connectivity significant additional benefits. That was the argument for HS2 in 2010, it is the argument in 2013 and, if we see this through, it will be the argument on its completion in 2033—and no doubt on HS2’s centenary in 2133—because capacity is the fundamental problem, solved for a generation and more by HS2. It is a problem that, if not solved, will mean that in just 10 years’ time we will have to start closing the north-south intercity railway to new business, which would be a betrayal of the future prosperity of this country, given that HS2 connects the five principal cities and conurbations of the UK.

The question before Parliament and the country is this: if not HS2, what? Given that we are not going to be building new intercity motorways or encouraging more domestic aviation—nor should we—the only alternative to HS2 for dealing with the capacity crunch is massive further upgrades of the existing Victorian main lines. This would be very expensive and destructive and yield only a fraction of the capacity and other benefits of HS2. You do not need a crystal ball to appreciate this reality. It is only five years since the most recent upgrade of the west coast main line was completed; it cost £9 billion and entailed a decade of constant chronic disruption, at weekends and often on weekdays too, without services or with severe delays and diversions. Upgrading a busy main-line railway is like conducting open-heart surgery on a moving patient—horrendous for all concerned.

The 2010 Command Paper estimated that to achieve two-thirds of the capacity of HS2 by conventional line upgrades, just for London to Birmingham, would cost more in cash terms than HS2. In practice, though, many of those proposed upgrades, like four-tracking the
Chiltern line, are simply unattainable. If I was in any doubt about that, I have been seriously disabused by the large number of your Lordships who live in the Chilterns and rightly treasure it, and who have given me freely the benefit of their advice on these matters.

The present Government have since identified a more credible upgrade alternative from London to Birmingham, Manchester and Leeds, which is set out in chapter 6 of the strategic case document that was published last month. The key points about the upgrade alternative are these. First, the upgrade is projected to cost £19 billion. That is nearly half the cost of HS2 but the capacity increase would be less than one-quarter—so half the cost for one-quarter of the capacity.

Secondly, that increase in capacity would be insufficient by the late 2020s even to keep pace with the lower of the growth projections for intercity traffic set out in the Government’s strategic assessments. So in all likelihood we would complete the upgrades of the existing lines, spending £19 billion, only to be faced with the prospect of either carrying out yet more expensive upgrades to the existing main lines or, at that stage in the 2020s, of embarking on HS2. That would be an even more expensive repeat of the situation that we now face in taking forward HS2, having already spent £9 billion on the most recent upgrade of the west coast main line when we might have done better to have started HS2 15 years ago.

Comment
The forecasts to which Lord Adonis refers have almost certainly exaggerated the need for a new capacity on this route. In any case, all the capacity required to meet HS2 Ltd’s demand forecasts can comfortably be provided by the scheme which Chris Stokes has prepared for 51M. None of Lord Adonis’ remarks about the cost and disruption that upgrading would cause apply to this scheme. Please see paragraphs 2 and 3 of the attached document Summary of Case Against and paragraphs 25 to 27 of the attached document Environment Consult Reply.

Speeches by David Cameron

1. At the CBI, reported in the Mail on Line 4 November 2013
Opponents of the controversial HS2 line are ‘putting the future of the North of England at risk’, David Cameron told business leaders yesterday.

Speaking at the CBI annual conference, the Prime Minister insisted HS2 was a ‘vital investment’ which will guarantee that in future, economic growth will not be confined to the South of England.

He also dismissed suggestions that there are other ways of tackling the cost of modernising the railways.
In a clear swipe at Labour, Mr Cameron said: ‘To people who say there is some other cost-reduction plan we could also have, I say that is nonsense.'
Stephen Plowden—Written evidence

‘People who are against it, in my view, are putting our country’s future at risk, they are putting the future of the North of England at risk.

‘We need to have a concerted consensus across business, across politics, that we are going to get behind these large infrastructure projects.’

The Prime Minister said he was ‘passionate’ about the HS2 scheme, which will initially link London with Birmingham before being extended into a Y-shaped route that will reach Manchester and Leeds.

He added: ‘We need to build new railway lines in our country. We haven’t built a line that is north of London for 120 years. I think it is absolutely right to make this investment.

‘It is going to unite our country, it will help drive economic growth, it will make sure our economy shares growth between the North and South, it will link eight of our ten biggest cities.’

2. On BBC local radio, reported in Daily Telegraph 13 December 2013
Speaking to BBC local radio Mr Cameron said: “There are always people who oppose infrastructure investment and I think we have a choice in our country – do we get on board with the high-speed rail revolution that’s making a big difference in other countries, that can bring real economic success to our areas.

"We do have to think of the bigger picture of how do we make sure that as the economy recovers that this time we don’t leave the West Midlands, the north-west, the north-east of our country behind."

Comment
By the date of these speeches Mr Cameron should have been better informed about the criticisms made by Professors Overman and Tomaney of the claims for regional generation.

George Osborne’s remarks on BBC One’s Andrew Marr show, reported by the BBC online 1 September 2013

"As we demonstrated with the Olympic Games, we can deliver these big projects actually sometimes under budget."

"I think we have got a good budget, which has got a very big contingency in it, we’ve set a budget.
"I’m passionate about this project because time and again, we have this debate in our country about how we’re going to bring the gap between north and south together, about how we’re going to make sure that our growth is not just based on the City of London.

"High Speed 2 is about changing the economic geography of this country, making sure the North and the Midlands benefit from the recovery as well."
Comment
Like David Cameron, George Osborne does not seem to be well informed about the authoritative criticisms made of the claims for regional regeneration.

The Olympic Games cost less than the estimates in the final budget made in 2007, but those estimates were nearly 4 times those made at the time of the successful bid in 2005. The successive increases are shown in the following table.

“How 2012 estimates have changed” (Source: BBC News 15 March 2007)

2003: Consultants Arup put total cost of building and staging the Games at £1.796bn
2003: Tessa Jowell launches bid in May telling MPs it will cost £2.375bn - including a 50% contingency
2005: Bid succeeds in July with "prudent" estimate of preparing for games of £2.4bn
2006: Tessa Jowell says Olympic Park costs up to £3.3bn
2007: Olympic Park budget now at £5.3bn - including regeneration and infrastructure
2007: Total budget, including contingency, security and tax, reaches £9.35bn

“London 2012 forecast to come in almost £400m under budget”
(Source: Department for Culture Media and Sport press release 23 October 2012)
The overall cost of the Games is forecast at £8.921 billion, a saving of £377m on the £9.298 billion budget.

Patrick McLoughlin, Extract from speech to the Institute of Directors 16 June 2014 reported in ukpolitics.org.uk

Everyone agrees that Britain’s railways are reaching capacity but people quite rightly ask whether the money we are spending on HS2 would be better spent elsewhere.

The first thing to remember is, as I have said, we will be spending £38 billion upgrading Britain’s railways over the next 5 years.

So this isn’t an either or question.

But even that record investment will not provide the capacity needed.

The West Coast mainline is one of the busiest stretches of mixed use railway in the world.

We’ve spent £9 billion upgrading it over recent years. But it still twists and turns too much to be efficient because it was never a dedicated north-south railway. It was the result of stitching together a patchwork of Victorian tracks in the 1920s. And as well as high speed intercity services, it carries stopping commuter services and huge amounts of slow moving freight.

That’s why even on moderate forecasts it will be full by the mid-2020s.
Adding further capacity would be difficult, expensive and result in years of disruption. So instead of spending more money upgrading the existing railway and getting diminishing returns, we are better off building a new dedicated north-south link.

As well as faster, more frequent high speed connections between our major cities, HS2 also frees up the existing railway for new uses.

We can run far more commuter services to fast growing towns like Milton Keynes or between Birmingham and the Trent Valley.

It means we can run more services across the Pennines.

It means that towns that don’t currently have direct links could do so with the capital. And it means we can carry much more freight than is possible today.

**Comment**

I hope the Committee will ask Mr McLoughlin what consideration he has given to Chris Stokes’s comments on these points and to his alternatives.

**Remarks by Nick Clegg reported in the Liverpool Daily Post 24 September 2014**

Nick Clegg said the government would have to be "ruthless" to force through the planned £32bn high-speed rail (HS2) network – but insisted it must happen.

Quizzed by party members the Liberal Democrat leader brushed off criticism Britain’s ancient woodland would be sacrificed saying: "I am a passionate advocate of HS2."

Under the latest plans, 225mph trains would run at top-speed most of the way from London to Liverpool before slowing down for the 30-mile pull into Lime Street.

The journey time is expected to be around 1hr 28mins – dramatically less than the 2hr 8mins it takes currently – but not until stage two of HS2 is completed in 2032.

Yesterday Mr Clegg said: "I totally accept it is unpopular with some people. But my view is that this country, again and again and again, has underinvested in radical steps forward in infrastructure."

**Comment**

The Lib Dems, like the Liberals before them, have traditionally been the most the environmentally conscious of the three main political parties, so it is sad to see their leader brushing aside important environmental concerns.

Mr Clegg did not give any examples of Britain’s repeated failure to invest in “radical steps forward in infrastructure”. Since the first 12 miles of motorway were opened in 1958, Britain has completed a national motorway network, rebuilt its ports to cope with the container revolution, built the Channel Tunnel and HS1, built several new railway lines in London and in some provincial cities, upgraded the WCML and invested large amounts in
other railway improvements, built Canary Wharf, built a new airport at Stansted and new terminals at Heathrow.

**Nick Clegg’s and Vince Cable’s views on HS2 and the regeneration of the North**

The evidence which Professor John Tomaney gave to the HoC committee looking at HS2 on 9 July 2013 can be seen as a video. In this video Professor Tomaney refers (at 11.00.26) to Nick Clegg’s view that HS2 would “heal” the north-south divide. I don’t know what Professor Tomaney’s source was.

Vince Cable’s view was reported by the *Camden New Journal* on 3 May 2012 as follows:

And he promised to make sure Camden voters would be heard when it comes to HS2 even though he is in the government backing the scheme.

“I have to be clear on the side of national policy,” he said. I and my party are very clear that we are committed to high-speed rail.

“I think we need to have it. It is absolutely critical to developing provincial Britain, it will break down barriers through public transport.

“But that is a separate issue to the details of alignment which has to be sensitive and has got to take in local concerns.

“We can’t have a high-speed route that goes like this [he made a hand-waving gesture as he spoke]. That would be ludicrous, but the alignments have to be thought through.

“The sense I have from local communities is that this isn’t happening.”

In an interview with *The Observer* published on 16 March 2014, Dr Cable, who according to the paper is concerned by London’s overheating property market, is reported as saying:

Creating jobs outside London, and closing the gap between north and south, has been one of this government’s top priorities. On every visit I make to the north of England, I’ve heard businesses and council leaders make a compelling case for getting to the north more quickly by accelerating parts of the HS2 build.

That would ensure the economic benefits can be shared sooner by everyone around the country and deserves serious consideration by government.

**Comment**

I wrote to Dr Cable at length on the day that this article appeared in *The Observer*, pointing out that views which were strongly held were not necessarily strongly supported by evidence and that academic opinion did not support the views he had heard. I quoted statements by Professor Tomaney and Professor Overman. When I did not hear from Dr Cable, I wrote to him again, but again received no reply. I wrote in similar terms to Mr
Written evidence

Stephen Plowden—Written evidence

Clegg and to the Policy Department at the LibDems. I received acknowledgements but no substantive reply.

Since Dr Cable made the remarks quoted in the Camden New Journal, a very damaging and pointless line through Camden (the HS2-HS1 link) has been scrapped, although another equally damaging and pointless one remains, but as far as I know, no realignments of the kind he asked for have been made elsewhere in the country.

Remarks by Vince Cable quoted by the Daily Telegraph of 19 July 2013 under the heading “Vince Cable: Case for HS2 still being made”

In an interview on BBC Radio Four Today programme on Friday, Mr Cable confirmed that costs were still being looked at.

He said: “Well, the case for High Speed 2, which is still being made – I mean, the figures, as you know, are being revisited – have to meet a standard of cost/benefit analysis which the Treasury seeks, and which meet the requirements of the Green Book, as it’s called, on public investment.”

Comment
I hope the House of Lords will put to Dr Cable the arguments in other documents in this package showing that HS2 does not pass a cost-benefit test, even when assessed against an unsatisfactory “do minimum” alternative

Michael Heseltine’s views reported in Local Transport Today, 29 November 2013 (extract)

Its [the Hybrid Bill’s] submission came as Tory grandee Lord Heseltine made an empassioned plea for the Government to hold its nerve in the face of continuing opposition to the project.

Heseltine likened HS2 to his own project to regenerate London’s Docklands 30 years ago. Speaking to the Royal Town Planning Institute, he said he could not have foreseen all the development that would take place in the then depressed Docklands when he made the case to then Prime Minister Margaret Thatcher in 1981.

Likewise, he couldn’t predict what impact HS2 would have either. “All over the world governments are making decisions about a future which they cannot predict but in which they believe,” he said.

Heseltine criticised the Government for failing to “promote the most imaginative transport project in this country in my lifetime”.

“I find it unbelievable that what should been a vision for much of England has been caricatured as simply clipping a handful of minutes off the journey time between London and Birmingham.”
Comment
It is unusual for an advocate for a transport project, or for any other massive investment, to admit a complete inability to predict its impact and to argue that it should be supported all the same. There are in fact many things about HS2 that can be predicted. Its impact on the rural and urban environment can be predicted in detail; its cost and its implications for CO2 emissions are also predictable, at least within a reasonable range.

Is the faith that Lord Heseltine says we should embrace faith in what HS2 would do to regenerate the Midlands and North? It would be foolish to treat that as a matter of faith rather than evidence, and the evidence is against it.

A more imaginative approach to transport planning is certainly needed – at present, it mostly consists of trend planning and “more of the same” – but there is nothing novel or imaginative about the idea of faster trains. Many other countries have built high speed railways (presumably Lord Heseltine had this experience in mind when he referred to what governments all over the world are doing), and to keep up with foreign practice has always been a principal inspiration for HS2.

Shadow Secretary of State Mary Creagh’s article in the Independent on Sunday, 27 April 2014 (extract)

The project’s cost is significant, but the benefits will be great. Cost-benefit analysis says it will deliver £2.30 in benefit for every £1 spent. The first phase will create 40,000 jobs and phase two between 48,000 and 70,000 jobs in Manchester, Leeds, Sheffield and other cities along the route. A new further education college will train the next generation to become rail engineers. Our cities’ transport plans should maximise HS2 opportunities to benefit the whole country. Advanced engineering skills must become a national priority. Small businesses need support to become HS2 suppliers.

HS2 follows in Brunel’s great tradition, and we should learn from the Victorians’ ambition for our railways. The recent destruction of Brunel’s line at Dawlish reminds us of the imperative to protect our transport links from climate change. Any new rail infrastructure must be resilient to climate change. HS2 is our opportunity to connect our cities, drive jobs and growth, and deliver a railway fit for the 21st century.

Comment
Mary Creagh had been in her post for something over seven months at the time she wrote this article. There is no sign that she had made herself familiar with the reasoned criticisms of HS2’s opponents.

Advocates for HS2 often refer to the Victorian experience of building railways. If the Victorians had been inspired by a similar wish to emulate their predecessors, they would have built canals.

Philip Rutnam’s interview in the Spring 2014 issue of Public Service Magazine
Mr Rutnam was appointed Permanent Secretary of the DfT on 22 March 2012 from outside the Department. The report of the magazine’s interview with him contained the following passage:

In the foreseeable future, Rutnam names high speed railway HS2 as his biggest challenge and has no time for the project’s naysayers: “All the analysis suggests HS2 is essential if we’re going to have the transport capacity needed to cater for the population and economic growth expected this century. Yes, it is a big investment, but it’s a big investment to create a world fit for the next generation and the generation beyond that. It’s the same capacity as two 6-lane motorways for a fraction of the land-take and a fraction of the environmental impact.”

Comment
Mr Rutnam must have been very selective, and also very uncritical, in his reading of analyses of HS2.

There must be many civil servants in the DfT and the Treasury who understand what a bad proposition HS2 is, and it is disappointing that there have been no whistleblowers. These remarks by the Permanent Secretary may help to explain that.

ANNEX 8 CV SUMMARY
Concern about the growing impact of traffic on towns led me to change my career from market research to transport planning in 1964. I went to Imperial College to research the US-style transportation studies which the Ministry of Transport was then introducing in British towns. This work resulted in an article in the Journal of Transport Economics and Planning arguing that these studies were not suited to the problems of British towns, very different from those in America. Over the next few years this point of view gradually gained ground and these studies were finally discontinued.

In 1966 I joined an international firm of consultants where I worked on a wide variety of transport problems for clients including the World Bank, the UNDP, the European Commission, government departments in Britain, France and the Netherlands, local authorities, commercial undertakings and citizens’ groups. During this time I wrote two books, *Towns against Traffic* and *Taming Traffic*, published by Andre Deutsch in 1972 and 1980 respectively, and undertook a very influential study for the Dutch Ministry of the Environment on the urban environment and transport efficiency. I argued for the objectors at various road inquiries and at the inquiry into the Greater London Council’s plan for a comprehensive redevelopment of Covent Garden to accommodate more cars. I was seconded from my firm in 1973 to be the Executive Secretary of the Independent Commission on Transport, whose report *Changing Directions* was published in 1974.

In 1967 I was one of the founders of the London Amenity and Transport Association (LATA), an umbrella group of local societies from all over London set up to represent their interests at the London-wide level. I remained on LATA’s committee until its friendly takeover by the London Forum in 1994 and participated in many of its activities. In 1971, I helped prepare and present the evidence opposing the creation of a motorway network in


As a freelance, I have worked for the World Bank in Algeria and the Ivory Coast on road safety, for UNCTAD in west Africa on the transport problems of landlocked countries, in Mauritius for the Ministry of Transport, and in Britain for the Treasury, various citizens’ groups and several local authorities in London.

September 2014
This paper demonstrates that HS2 phase 1 Route 3 is not fully priced/costed and therefore it does not show fully the National benefits and disbenefits. There are omissions in the HS2 budgets of sections or works and their costs and this is a significant issue. How many extra £billions should the Lords and other authorities recommend be added to the £50 Billion declared.

Questions with answers:

1: Is there an Economic case for HS2?

1,1: At the moment there is not a convincing case because the reviews by the House of Commons select committees were only partial overviews of different scopes and aims. There was not a comprehensive peer debate with specialists on the HS2 scope and the reasoning options were curtailed or not included. One of the members of the HS2 challenge group on economics ‘retired’ to then argue there were issues with the development benefit method being used. There are a range of significant consequential problems which were not included in the select committee deliberations, involving, by way of example, the full costs to local authorities, to the highways agency and to the London municipal waste handling and disposal operations accessing Calvert and other locations.

1,2: The full costs of the HS2 project and its consequential cost impacts are not all included, ranging from increased public travel delays on the M4, M40, A4, A40, A41 and A413 and local county roads. The HS2 planned tunnelling infrastructure is very expensive due to the route through the Chilterns and the further tunnelling that communities and the Aylesbury Golf Club are requesting to be agreed will increase the total budget above the current budget significantly.

1,3: The very extensive land to be taken and lost from farms over the next decade is very wasteful. This loss has to be added to the economic costs as these are not currently all included. There are significant owner and tenant compensation issues to be resolved, which will greatly increase the costs above budget. Some large housing development land schemes are being devalued due to the direct severance impacts of the HS2 land take. HS2 is drawing development investment away from farms.

1,4: UK Rail Networks should be improved for both the long and short journeys but HS2 has not been fully involved in these matters, except from the narrower consideration of WCML. This has led to inadequate consideration of the aims of a rail route for middle England and particularly what the populations of west of London to Banbury require most. HS2 falls short of wider rail services needs.

1,5: The Princes Risborough to Calvert rail route as well as the East West Freight and Passenger route will be adversely affected by HS2 but the costs of this local damage are not in the HS2 budget. A strong example of a cost omission will be the impact on waste rail deliveries to the proposed Calvert incinerator, as well as the cost of the movements of large
Christopher Prideaux DL—Written evidence

volumes of sub soil out of London to land and the land-fill site as far away as Calvert. Some of the rail movements will have to be transferred to road during those periods the freight route to Calvert is suspended for rail works. The HS2 plans for soil disposal have not been fully disclosed, or assessed. It may be that the Aylesbury spur to Calvert and the East West line will be closed for some time. This would cause a very major financial claim by FCC, the company operating the Calvert Greatmoor incinerator.

1,6: The selection of the HS2 route alignment that Secretary of State Hammond decided in 2011 was not under taken by using a full comparison of the detailed construction cost and environmental losses/damages, for all route options. HS2 Route 3 Phase 1 is considered by local communities to be the wrong route on grounds of the total damage, extensive Chiltern and Urban/Sub-urban tunnelling and other infrastructure costs for a one track each way route when there are alternative alignments with shorter tunnels and better user patronage.

1,7: The omission of the large gauge HS2 to HS1 link is the loss of an essential rail connection and is a total budget misrepresentation, a recurring theme. Cross Rail 2 is needed and a percentage should be added to the overall costs in the assessment of HS2 and ranked in the National priorities.

2. Is there the need for better National investment priorities to address backlogs?

2,1: The HS2 investment decision has now been shown to be wrong in terms of National priorities. There was never an overall assessment of the full project and so the House Of Commons select committees have missed and over looked some of the core issues.

2,2: The HS2 Community Forum Meetings were rendered ineffective in assessing economic impacts and this was ignored by the Hybrid Bill debate in Parliament in November 2013. It is not known what influence the petitioning procedure will have in reversing damage, but there is a lack confidence by the public with the narrower remit and HS2 aim to rush the petitions using a group process. The Department for Transport have taken the decision to proceed regardless and are controlling the procedure to justify a poor investment. They have the protection from the UK Judicial processes which the public used to try and raise concerns.

2,3: There is no aggregated log of all the escalating and missed costs. The House Of Lords Committee Economic Affairs inquiry will is most welcomed if it can consider the HS2 project fully and diligently. Hopefully it will not be another incomplete review as with the House Of Commons Select Transport Committee, Environment Committee and the Public Accounts Committee not to mention the Treasury Select Committee were, by being partial in their scopes.

2,4: The Chairman of the City Growth Committee is considered to be wrong when he says the UK economy is on a roll with the Governor of the Bank of England saying we are only half way to recovery. The trade gap in June widened to £9.4BN. There is still a problem
Christopher Prideaux DL—Written evidence

with the National Deficit despite what we were told 3 years ago, by Secretary of State Hammond. Furthermore the National debt keeps rising and wages are flat lining.

2.5: The Prime Minister will be aware of the problems facing the nation which HS2 exacerbates. The Prime Minister has adopted the poor rail investment project left behind by Labour Lord Adonis. The Prime Minister has made a decision without examining all options and the consideration of the growing list of National priorities. How can an investment of this magnitude be wise for such narrow contribution to small percentages of the population when:

The waiting list at hospitals is longer than ever.

There is little proper broadband expansion programme.

Our energy development programme is not properly costed or scaled currently.

Growing road accidents and congestion with more wasted consumption of fuel and delays increase due to shortage of road construction.

The Defence budget will need revising because of lack of recruits for the Reserves.

The list goes on.

3: Should the strategic case for HS2 published in 2013 by the Department for Transport (DFT) and the analysis from HS2 have taken into account any other factors in making an Economic case for the project?

3,1: The key matters addressed in question 1 are very relevant. Network Rail, Crossrail, TFL, Heathrow Airport and the main city road authorities were insufficiently involved by DFT/HS2 in establishing a coordinated plan, assessments in competition with the vital road and motorway requirements. Urban road tunnelling for motorway and trunk roads were not included but are needed. Conflicting demands for urban and suburban surface and subsurface spaces have not been determined, for example from west London across Camden.

3,2: The HS2’s expected range of the benefit cost ratio is not acceptable because the benefit reported is too low with too many omissions from the scope. The Massachusetts Big Dig programme had similar omissions from budgets and scopes which resulted in extreme increases in expenditure and resultant debt and a much reduced final BCR.

4: What are the likely Economic benefits of HS2 to the Midlands, to the North of England and to Scotland?

4,1: Development of High Speed Rail without a comprehensive rail route linking plan fails to determine and assess the wider benefits for rail users and localities. The regeneration of the main city stations are likely to cost billions of pounds per site and these developments cannot be justified on speculative guess work and requiring such additional route costs.
4.2: What is meant by including Glasgow, Edinburgh, Aberdeen and Inverness without the track upgrades and costs. What about Wales and the South West England? The cost estimates for a High Speed network for the United Kingdom is projected between £500 Billion and £1 Trillion. A backlog of new roads and lane demands similarly multi billion pound projects as congestion and accident rates are now rising with extreme delays and losses.

5: Might some parts of the UK suffer Economic disadvantage from HS2?

5,1: HS2 has a total negative impact on the outer west of London Boroughs and Buckinghamshire. The negative impacts cannot be satisfactorily costed on a locality basis according to leading Economists. How can you assess the Economic and Environmental destruction of 100 miles of this geographically small country?

6: Is London likely to be a main Economic beneficiary of HS2?

6,1: The HS2 project will attract people to commute more from the North, whereas the outcomes should be the reverse, but businesses will not relocate to the North. The Ex-Mayor of London suggests London is at its maximum population currently. It is not practical or effective to increase the people in and commuting to and from London into the future.

7: How might the expected benefits of HS2 to the National Economy be realised?

7,1: This can only be achieved with a major reappraisal of the sections of HS2 in the North and also those in the London areas. Reappraisal will most probably address medium distant commuting as a priority and realign the route(s) to deliver more local regional user benefits.

7,2: Where there are bio-diversity proposals these should be based on trees and forests with the land owners consent to enable the national and local economies to benefit and not small plants and grasses.

8: How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

8,1: As there is only one track each way for the HS2 route and the main cities connected are well served by rail currently, HS2 will not be a significant revenue generator because of increasing cost and rail services competition.

9: Should travellers expect to pay higher fares on HS2 than on other lines?

9,1: HS2 cannot attract the most fare paying passengers unless pricing is competitive. This would require massive government subsidy to compete with the Chiltern Line and WCML. Is this what the nation requires?
Christopher Prideaux DL—Written evidence

9.2: Power up grades can increase the maximum train path capacities on the WCML and on the ECML which would further the competition for HS2 and its train operator more effectively.

9.3: People complain about the ticket price increases currently. The HS2 services will be much more expensive with Government wanting to increase debt recovery from passengers, leading to more increases and complaints and migration to the lower priced routes.

10: Does the prospect of HS3 affect the Economic case for HS2?

10.1: Yes it demonstrates that a single track each way long distance passenger route is unattractive compared to a multipurpose rail corridor with two tracks each way providing more reliability and better operating resilience.

10.2: Surely George Osborne should develop fully the larger gauge Northern Hub to address large gauge freight from Liverpool to Hull and better cross Pennine passenger connections. This would achieve much more rapid development in the North and at realistic costs.

11: Concluding opinions

11.1: The current HS2 proposals will not come close to meeting the Governments aspirations as judged by local communities along the route.

11.2: The HS2 proposals are fundamentally inefficient offering limited connectivity, unable to deliver either the necessary economic or environmental benefits in terms of emissions reductions and being needlessly intrusive by following unsuitable expensive rural alignments.

11.3: HS2 must be fundamentally reconfigured to maximise connectivity and passenger demands. Emission reductions and other benefits must be achieved through comprehensive, interregional integration with the existing rail network. Environmental intrusions are not minimised as far as practicable by following existing transport corridors and avoiding the ‘Greenfield’ alignments especially those requiring large scale land excavations.

Annex of issues for consideration impacting the Economic evaluations.


HS2’s fundamental London-centricity and lack on integration prevents it from delivering either the promised affordable railway services, or the environmental or economic benefits, especially to the UK Regions. HS2 concentrates the connectivity into London and this will draw economic development away from the Regions.

A2. Segregation or Integration into Network Rail’s routes and stations.
The apparent presumption without supporting rationale that the new High Speed Railway must be effectively segregated from the existing railway is very questionable. This limits the communities that will benefit from HS2 and it also limits the reduction of possible environmental problems. The Government should compare and explain the integrated and segregated approaches.

**A3. Limited regional and commuter connectivity.**

There are no connections with the existing rail network for a length of over 160km. This lack of integration and resilience will massively compromise its environmental performance. The route does not provide the Javelin rail service potential of HS1.

Far more connections and therefore superior integration, resilience and environmental performance are possible for a London, West Midlands High Speed Line routed along and close to the existing corridors. Connections to the existing network could be located much more frequently serving wide catchment areas and commuter populations.

**A4. Alternative design speeds.**

Undue value has been placed on saving a few minutes on journey times. This has been given as one of the primary reasons behind selecting the route that passes through the Chilterns AONB and rejecting routes following less intrusive environmentally significant corridors. Such small time savings cannot possibly justify the level of environmental damage and costs that is certain to result, even with the best efforts to mitigate, which is currently not being proposed to people losing land and amenities.

**A5. High Speed Alternatives to the Y network.**

The alternative configurations do not represent an adequate consideration of options for development of a National High Speed Rail Network. It is controversial that the London – Old Oak Common – Birmingham Interchange plan is fixed. No account is taken of the potential of other corridors as the primary route to the North and to Scotland running East of the Pennines with the West Midlands placed on a spur, any East sided approach to Scotland would be more efficient both economically and environmentally with a lower requirement for tunnelling than the currently favoured west sided approach through the ability to place Newcastle and Edinburgh on a single route.

**A6. Alternative rail services and route requirements.**

HS2 Route 3 Phase 1 precludes routes and stops for Javelin services which would benefit the East West Route connectivity. The East West line will be excellent; but its value would be badly damaged without stations for local commuters. The East West cost benefit ratio is 4 or 5 times better that proposed for HS2. HS2 fails massively short of the Treasury’s cost benefit requirements. With no intermediate stops on HS2 for the Buckinghamshire County and no East West Route connectivity and with Calvert being in the wrong location for
commuting the site of the East West and HS2 Route 3 intersection does appear to be an error of rail and road transport planning, with the IMD being sited also in the wrong location due to the severe local impacts.

This Government plans to force through the HS2 project with unsound financial and transport assessments and divert resources from more immediately necessary operations and projects.

The proposed HS2 interchange with Crossrail services along the GWML to Old Oak Common effectively predetermined the very intrusive HS2 route alignments from London to the West Midland. The HS2 preferred Route 3 Phase 1 alignment has prevented fair consideration of other transport routes such as near the M40, and M1 and the M6. Lower environmental impacts could be achieved and would serve the Home Counties and East Midlands with shorter city centre to city centre journey times at less cost and damage more economically and effectively than HS2.

HS2’s excessive focus on the extreme speeds along the straightest high speed line that they chose to develop has determined the limitation of their consideration of better value for money options. It would surely be better to increase the capacity and connectivity of the rail network as a whole. A high speed network should be the conduit for all express intercity passenger traffic along particular corridors, so that the existing main line can be dedicated to slower speed freight and local passenger traffic. This demands close alignment and interconnection between High Speed lines and Classic lines but cannot be achieved with the current Chiltern aligned HS2. The population centres to be bypassed by HS2 including Stoke, Coventry and Milton Keynes will continue to consume capacity on the West Coast Main Line rendering the HS2 route irrelevant to thousands of commuters.

The Government has over estimated the value of each minute saved on a HS2 journey by failing to accept in 2011 that laptop computers and mobile phones do enable people to use time spent on a rail journey more productively. Economic benefit can accrue from configuring a High Speed Rail network to reduce the time for the inter-regional journeys, which HS2 has neglected which would help to integrate the existing network.

The Government has greatly underestimated engineering costs for the extreme speed rail operations as Japan found in practice. The required near straight alignments make it difficult if not impossible to follow existing transport corridors or the folds and flat sections of land, where environmental damage would be is minimised. The failure to use curves dictated rural alignments with much greater impacts outside existing corridors and population centres. The result is there are more sensitive areas such as the SSSI’s and ancient woodland now requiring expensive tunnelling for mitigation but not likely to obtain this mitigation.


Energy use and therefore CO2 omissions also rises with the square of speed, this results in the 400kph rail operations with almost twice the CO2 profile of 300kph. This is probably understated. HS2’s overall environmental performance was predicted in the 2010 command
paper to be broadly carbon neutral, this appears to be in fundamental breach of the
requirement of the 2008 climate change act for an 80% cut in CO2 emissions by 2050. This
deficiency is attributable not only to High Speed Rail but to HS2’s basic lack of connectivity
and integration. This renders the HS2 proposals unacceptable in a modern carbon-critical
world. A fully integrated High Speed Railway with National coverage indicates that there is
huge potential to reduce CO2 emissions across the transport sector.

To offset some of the greenhouse gas increases from HS2, or similar any carefully planned
bio-diversity is better based on planting forests and trees and not small plants and grasses.
The trees are more effective for water management and for carbon extraction from the
atmosphere. This should be in agreement with land owners not by imposition to enable
their economic affairs to be beneficial.

**A8. Mitigations.**

All necessary environmental mitigations that must be employed to make the route
acceptable to the communities which HS2 passes and generous compensation packages that
must be made available to alleviate losses suffered may not be affordable. Costs and transfer
housing in Camden are rising. It must be acknowledged that effective mitigation in sensitive
areas with tunnelling will greatly increase costs. The payment for land losses is being resisted
by HS2, as is proper compensation for estates, farms and businesses.

The best mitigation against the environmental impact of High Speed lines is to follow
existing transport corridors. Insufficient attention was given to making use of existing
transport corridors as the primary environmental mitigation due to the singular objective or
highest speed across undulating land.

The regulatory requirements have been handled badly with the lack of professional planners
and checking processes omitted. The route option selected should have been the one that
best balances the benefits of a new High Speed line against its costs and environmental
impacts. The Government has been presented with alternatives that both achieve greater
benefits and have lesser environmental impacts but there was not the process to weigh the
economic costs fully. As such the Government selection of the current HS2 proposals
seems illogical to local authorities, communities and people, perverse and in apparent
contravention of its own planning legislation.

The question of strategic alternatives has not been addressed fully as there was no national
transport road and rail growth and usage policies. Upgrades of existing rail routes may be a
viable strategy in certain regions such as the Cross Rail North. Construction of more High
Speed classic lines must be within the primary strategy to address National Transport needs.
But without the necessary integration with the existing classical network HS2 may bring
some direct benefit to around only 12 cities. This is a small fraction of the total scope the
UK intercity network requires. This restricts the benefits that HS2 will provide.

*August 2014*
TUESDAY 18 NOVEMBER 2014

Members present

Lord Hollick (Chairman)
Baroness Blackstone
Lord Carrington of Fulham
Lord Lawson of Blaby
Lord May of Oxford
Lord McFall of Alcluith
Lord Monks
Lord Rowe-Beddoe
Lord Shipley
Lord Skidelsky
Lord Smith of Clifton
Baroness Wheatcroft

Examination of Witness via video-link

Emile Quinet, Expert on French High-Speed Trains

Q122 The Chairman: Welcome to this session of the Economic Affairs Committee. Can you hear me clearly?

Emile Quinet: Yes, I do. Thank you very much, my Lord Chairman.

The Chairman: Thank you very much for joining us. It would be helpful to the Committee if you could just make a few remarks to tell us a little about your involvement with the French railways, and your current activities and engagements with it.

Emile Quinet: Yes, of course, thank you. My name is Emile Quinet. I am emeritus professor at the École des Ponts et Chaussées and a member of the Paris School of Economics’ research centre. During my professional life I was part-time in charge in the Ministry of Transport, essentially on economic affairs, and a part-time academic. Following my retirement from the Ministry of Transport, I am working only on the academic side, doing research, teaching and expertise. Currently, I work mainly on cost-benefit analysis. For instance, recently I chaired a working team appointed by the government in order to update the cost-benefit analysis procedure in France, a report that is referenced in your
questions. My other topics are in transport economics. I worked mainly on rail transport, but also on inland waterway transport and intermodal transport, as well as road transport.

Q123 The Chairman: Thank you very much for that. Could I start off with a fairly general question, which is how successful has high-speed rail been in France? As you answer that, could you perhaps indicate to us lines that have been less successful, and why they have been less successful?

Emile Quinet: It is a very wide question, which can be assessed through several points of view. Generally speaking, high-speed lines had a very large impact, first inside the railway system. It induced an increase in market share for the railway. It led to an important increase of traffic, beyond what was kept from other modes. The growth of high-speed line traffic was larger than the normal growth of rail traffic. The high-speed system had also an impact on French railway productivity, as was shown by several studies. Furthermore, more visible from a customer point of view, it induced a reshuffling of services through matching connections between high-speed lines, TGV, and normal services. It was a way to change the management and the operation. It also had an important impact on air traffic, a negative one, of course. In France, it changed the whole geography of the country, inducing important decreases in travel times for many journeys. For instance the travel time from Paris to Lyon has been reduced from 4 and a half hours to two hours and Marseille can now be reached from Paris within three hours, instead of six or seven hours before. It was a big change in geography and in mobility patterns.

Last but not least, cost-benefit analyses, both ex ante and ex post, proved that the overall return on the whole set of presently implemented lines is fairly good, though probably some particular links do not pass the criterion. The impact was very large, and was roughly very successful. What is more difficult to assess, but we will probably come back to this point later on, is the impact on the overall economic growth of the country. So as a whole, the French HS policy was up to now successful, though it could have been more successful if some parts of the programme had not been implemented so early.

That was the first part of the question—has it been successful—so should I come to the other part of the question about what lines have been less successful?

The Chairman: It would be helpful to know which lines have been unsuccessful and why.

Emile Quinet: Among the lines presently implemented, two have been unsuccessful in my view. They are the high-speed track east from Paris to Strasbourg, and also probably the high speed track from Besançon Mulhouse, which we call the Rhin-Rhône link. For the first one we have in depth ex post studies, which show that the traffic was insufficient to justify the high building cost. The ratio of traffic to cost is rather lower than for other lines. We have not yet such study for Besançon Mulhouse line, but there many reasons why it should be the same: the ex ante cost benefit analysis gave a low rate of return, and generally speaking the ex post returns are lower than the ex ante ones; the two cities at each of the extremities of the link are rather small in the hierarchy of French agglomerations. For the high speed east, the end of the line in the agglomeration of Strasbourg is large, but not that large compared, for instance, with Lyon, which has been also connected to Paris but has a very much larger population and economic weight. That is the main reason I can see for the lack of success of those lines.
Perhaps I may add that, beyond the track itself, some dispositions concerning the service raise questions and can lower the profitability of the project. It is the case for instance when, some services that are not profitable are imposed as public service obligations, such as calling at small cities between the origin and the destination, or running services at too high a frequency during off peak hours. In those cases, the profitability is much lowered.

**The Chairman:** We will explore those points in other questions.

**Q124 Baroness Blackstone:** What were the original objectives, when it was first established, of high-speed rail in France?

**Emile Quinet:** In fact, there was not a single objective, and during the time the objective has changed. If you allow me, I will do a bit of history. For the first line, which was implemented in 1981, Paris-Lyon, it came from technical research on high speed, which were run by different research centres. Several devices were tested, and at the end the choice was made for the TGV system, the high speed of SNCF. This allowed a radical change between Paris and Lyon, and provided a good competition with air transport. The distance between Paris and Lyon is the minimal one for air transport to be viable, and a high-speed train could gain a large market share, which happened. That was the beginning.

The second line, in 1992—this is the high-speed train in the west, TGV Atlantique—was built perhaps a bit for industrial concerns, but mainly for territorial equity needs as a balance to the Paris-Lyon line, which was in the eastern part of France. Furthermore, the cost benefit studies showed that it was profitable. So, the beginning of the HS process was technical—a kind of new mode—and the second was industrial, the exploitation of the new technique. After that, with the Channel Tunnel we had a third wave of implementation, the aim was to build profitable links, and also links that aimed at avoiding the central position of Paris. In the third wave you have, for instance, L’interconnexion Nord-Sud, the south interconnection, south of Paris. We have also a network in the Rhône area, near Lyon. This was a third wave, with the objective of spreading widely the benefit of high speed, and avoiding the centrality of Paris.

In 2010, another wave came, linked to what we call the “Grenelle de l'Environnement”, which is a special French political momentum. This, through a consultation between central government, local authorities, trade unions and environmental associations, gave us an outcome on several decisions, especially on infrastructure planning. They were aimed at combating global warming and ensuring sustainable development, and at restricting the destruction of the countryside and to be in favour of biodiversity. In this framework, a huge programme of public transport was approved, among it an important programme of high-speed trains. The hope was that this high-speed train would foster public transport and induce a diversion from road transport and road traffic on highways. However, this programme proved difficult to sustain for financial reasons, as it was very costly, and a recent decision downsized it by around 30%.

So, you see that the objectives of the high-speed programme have changed over the years. The objective of developing a new technical device has been achieved, competition with air transport has been met, but the objective of developing modal split in favour of rail probably not, because, in fact, the shift from road to rail, from air to rail, is rather limited. For instance, road congestion has not been highly reduced by high-speed trains; appeared clearly
that the effect of such program on global warming and modal shift would be very limited.
However, this is the situation in France, and I am not sure at all that this conclusion and assessment would be valid for the UK.

Baroness Blackstone: I take it from what you say that some of the objectives have been achieved, and you have just listed them, but not all of them have. One of the ones that have not been achieved is that all these lines should be profitable and commercially viable, and it is for that reason, presumably, that you have cut the network back by 20%. Is that correct?

Emile Quinet: Yes that is exactly what I meant; the programme that was decided by the government in 2009, coming from the Grenelle de l'Environnement, has been downsized for the future, of course, by 30%. We have now a bit more than 2,000 kilometres of high-speed lines. From the present forecast and present decisions, it will increase also by about 2,000 kilometres by 2030, in the long term; and in my opinion, it is still rather large. Did I answer your question correctly?

Baroness Blackstone: Yes, you did. Thank you very much.

Q125 Lord Lawson of Blaby: Monsieur Quinet, the Cour des Comptes has recently published a review of the TGV system, which is highly critical. Do you accept their criticisms? If you accept some but not others, which of their criticisms do you accept and which do you not accept?

Emile Quinet: The Cour des Comptes has criticised the TGV system on several grounds. The first one—I already quoted it—is the fact that many services are not profitable and should be cancelled, especially for calling at small cities. Another criticism, which is true too, relates to the ex ante assessments of the financial rate: they are especially difficult to make. Those criticisms are valuable. Generally speaking, I am rather in line with the Cour des Comptes judgments, but I think that what they said about, for instance, traffic forecasting or cost overtaking are general phenomena which happen in most countries, if not all.

Q126 Lord Skidelsky: I would like to ask you what role cost-benefit analysis plays in a decision to build a high-speed rail line? I ask that question as one of our witnesses said that there was, I quote, a “political promise” in France to provide every region with a high-speed rail connection to Paris. My question is: does political benefit count as a benefit in cost-benefit analysis, or is it an independent objective?

Emile Quinet: I would quote a few enlightening points on the role of cost-benefit analysis. The first one is that when you look ex post, a few years after the implementation of the project, to the rate of return of the lines that have been implemented, you find that they are almost all beneficial, and that they have been implemented according to the order given by cost-benefit analysis. This point is not fully surprising, because all projects have been and are subject to a cost-benefit analysis. Even if it is not compulsory, it is a guide, a moral reference, for the decision-makers, though cost-benefit analysis has two flaws. The first one is the optimism bias, which I implicitly quoted previously, and the second one is that cost-

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488 they are sensitive to the traffic forecasts, to the estimates of assets, to the choice of the discount rate; these parameters are not easy to set, and subject to strategic manipulations
benefit analysis, as presently operated, does not provide ideas on the economic development, but perhaps we will come back later on this point.

The other point is that on top of socioeconomic analysis, high-speed line projects are subject to a financial analysis and to a constraint from this point of view. This is that the rail infrastructure manager, RFF, has to break even with infrastructure charges, in that it cannot spend more on projects than what infrastructure charges will provide it as revenue. It is a rather severe constraint, which obliges the public authority that wants new lines that are not financially profitable to provide subsidies. It is a constraint, and a large constraint that may prevent the state from engaging in a too expensive programme. That is the reason why the programme presented in 2009 has been downsized, because it was too costly for the public budget.

As an answer to your second question, political benefits, which are often difficult to distinguish from benefits hopefully gained from local economic development of the infrastructure, are not explicitly taken into account, but they are measured and in some way, paid by those who trust in them. If a region wants a non-profitable high-speed train to be built, hoping that it will bring some form of economic development, it has to pay for it. That is why some lines, such as the high-speed Paris-Strasbourg Est, have been highly funded by the region. The political benefits are paid by those who are supposed to benefit from them—political benefit in a wide sense, of course.

Q127 Lord Smith of Clifton: You recently chaired a commission that recommended adjusting the values placed on time savings for the purposes of assessing transport projects in France. Can you explain how your commission arrived at the values it came up with, and whether your recommendations have, in fact, been accepted?

Emile Quinet: In fact, we made a survey of studies on value of time that have been done by academics and are used by other countries. In this survey we put, of course, a special emphasis on French-originated studies, but we looked also to all other European countries, and especially the UK, of course. From this survey, we decided the value of times we proposed in my report. There are two specificities for this survey and our recommendations. First, the values of time that come from French studies are mainly revealed value of time, which comes from our experience drawn from toll motorways and also past high-speed trains. We have a lot of toll motorways; we have a lot of past high-speed trains. From this experience we can infer the real trade-offs between price and time. In comparison, many of the foreign studies are based on what is called stated preference. They come from surveys where you ask the users questions of the kind: “Would you choose such a mode that is more costly but faster than another one?”

Lord Smith of Clifton: Does that mean the two methodologies, yours and the methodologies used in the UK, are really not compatible or comparable?

Emile Quinet: Yes, they are. In fact, it appears that they are quite comparable. I have made a small comparison of the figures, and it appears that the figures are not that different. More precisely, for intercity travel, our professional value of time is, let us say, 10% to 20% lower than yours, and for urban trips it is roughly the same.

Lord Smith of Clifton: Do you take account of the fact that the time spent travelling on a train can be productive?
Emile Quinet: Yes, in a sense we do. On this point, I come back to my first assessment. As we use mainly revealed values of time, based on the real choices made by users when they have to pay for time, in fact, implicitly, we take this point into account. This is because businessmen, when they have to choose between high-speed train and air transport or road transport, take into account the fact that in rail they can do some productive work. So, in a sense, I consider that we take into account this factor.

Lord Smith of Clifton: Thank you very much.

Emile Quinet: However, we have seen that the value of time did not increase over the years as quickly as it could have been expected. We thought that this point was due to the fact that, with the smartphone and other devices, more and more time in travel time can be used to do something.

Q128 Lord May of Oxford: My question is question five: what proportion of passengers using the TGV are travelling for business reasons? The question is prompted by the report last month from the Cour des Comptes that only about a third of the passengers travelling on the high-speed trains were doing it for business reasons. As I understand it, this calls into question the justification for high speed: namely, that working people lose less time. I would value your comment on that.

Emile Quinet: In fact, working people are only a limited part of all the users. I have in mind a percentage a bit higher than 30%, or one-third. I have in mind a percentage of 40%, because we must take into account the difference between trips and passenger kilometres. The difference depends on the length of travel. That shows that the high-speed trains are not used by workers in the majority. However, as the value of time of businessmen, of professional travel, is higher than the value of time of leisure, non-professional travellers, it comes to the fact that a bit less than half the total travel time saved in euro or pounds is coming from professional trips. Furthermore, the value of travel time savings represents about half the total benefit, the other benefit being benefit to the environment, which is a very small part, and also benefit to rail operators.

Lord May of Oxford: It seems to me that those issues complicate the evaluation of time saving. Admittedly, I have a rather peculiar view because I like slow trips on trains, because I can get work done without all the interference that is inflicted on me when I am in the office. That was not in the notes of the question I was supposed to ask.

Emile Quinet: I agree with you, I too like trips which take, let us say, between two and three hours, not too short trips. But there is a difference in geography between France and the UK. I give lectures in Lausanne, which is not in France but quite near the border of France. Even in a mid-high-speed train, it takes a bit more than four hours for more than 500 kilometres. At a rather high speed, it takes more than three hours. I am very happy to have time to read, to look out and so on, and to work, but before the high-speed line, the travel to Lausanne took a bit less than six hours. Three hours, three and a half hours, is a very good duration, but six hours is beginning to be long. I think that the situation of travel times between London and Birmingham is a bit different as the travel times and distance are much smaller. In France, due to the distance, due also to the density between London and Birmingham, it would be considered almost as urban travel.
Q129 Lord Rowe-Beddoe: Monsieur Quinet, we turn to question 6, and that is to do with the costs. With your experience of the TGV network in France, are you surprised at the anticipated cost of our HS2 project?

Emile Quinet: I am surprised, but I am also an engineer. I worked as an engineer at the beginning of my career, and even now not working as an engineer, I know that the cost comparisons are very difficult between countries. This is because the ground is not the same, the topography is not the same and furthermore, for the present point, the surroundings are not the same. In France, our price per kilometre is around £20 million. That is a bit more in euros, due to the exchange rate, but it comes to £20 million. However, that is for a high-speed line in rural areas. When we have high-speed lines in urban areas, or semi-urban areas, in agglomerations, the cost can jump to very high levels. I do not know exactly what the surroundings of the line are. Near Euston and near the departure station, it is very urbanised. It would be necessary to look more precisely at what the surroundings are and the technical difficulties.

Lord Rowe-Beddoe: Thank you. The price differences, as we understand them, are considerable on a kilometre basis. You have achieved €25 billion for 2,000 kilometres, and we are looking at somewhere between £20 billion to £25 billion for 225 kilometres, so we clearly need an awful lot of infrastructure that you have not had to do, such as tunnels I suppose. Anyway, a little supplementary: what has been the significance of having a single contractor carrying out the necessary work in France in terms of keeping the costs down?

Emile Quinet: I am a bit embarrassed to give a clear answer to this question, which is a very difficult one. In France, we have no experience of working with many contractors. The way RFF is working is quite common in France, and so I have no point of comparison. I think that having a single contractor gains savings in co-ordination, leading to smoother working and so on. On the contrary, dealing with a single contractor can induce a less competitive auction. Apart from this point, which can be solved by various means, I would be in favour of a single contractor.

Q130 Lord McFall of Alcluith: To what extent does ex post analysis in France provide evidence that investment in transport infrastructure generates economic growth? I am mindful of your commission report in 2013, which stated that there were hardly any results robust enough to conclude that investments in infrastructure have a positive effect on growth.

Emile Quinet: Yes. And perhaps your question put me in front of a possible misunderstanding of my report, on an issue which is especially difficult.

Lord McFall of Alcluith: Sorry. It was just an innocent question.

Emile Quinet: And a very important one. We have done a lot of ex post surveys and statistics on high-speed lines in France, and I must say that the conclusions are very hesitant. First, we observe a general increase in mobility, as I already quoted. The second point: is that, very often, there an increase in business trips? Yes, often, but it depends on the conjuncture. If, for instance, a high-speed line is put in operation just during a period of bad conjuncture—during a decrease of economic growth—business trips will be reduced. Another source of information comes from surveys at the level of firms. There are several surveys on that point, where firms were asked what high-speed lines have changed in their
behave. What appeared is that high-speed lines changed the mobility patterns inside the firms, and between one firm and the other firms it was in contact with. For instance, there have been more one-day trips. There has been some internal reorganisation inside the firms. However, when asked whether the HS line has caused an increase in economic activity, the firms did not give a clear answer. It is not surprising, because the impact of high speed on economic activity, we tried to say, is very tiny. 489

We are a developed country where all parts of the territory have a good accessibility to all other parts. What we can expect as an effect on economic activity is a very small increase compared with what would have happened without this infrastructure. We are not in the far west; it is not a void territory to develop. On top of that, the change in infrastructure is only one part of the change that happens along the years. A lot of other changes happen concomitently, for example macroeconomic or demographic change, so it is very difficult to assess a very small change that can hopefully be gained from the infrastructure.

**Lord McFall of Alcluith:** Do you think the link between transport infrastructure and productivity is just as inconclusive and as mixed a picture?

**Emile Quinet:** No. It is difficult to assess such a link, especially asking firms or just observing what happens to them. 490 In my view, the links between transport infrastructure and productivity are quite clear at the agglomeration level. In the UK, a lot of studies have been done by Professor Dan Graham, for instance. In France, similar studies have been done by Pierre-Philippe Combes and Miren Lafourcade. It is clear that we have several relations between transport infrastructure and accessibility, and between accessibility and productivity. At the level of agglomeration, this point is clearer, which is less of it. In fact, what we observe is that the high-speed train has led to a polarisation of activity in the centre city and in the city around the station. There is an effect of polarisation, which, through the effect of density, leads to increased productivity.

A more difficult point is about what happens in intercity links—what happens when you improve the link between two cities. Good studies in this field are scarce; what appears from them, and also from theoretical analysis, but not specifically from France, is that when you increase the accessibility between two cities, the bigger one benefits more than the smaller one. However, in fact, we are rarely just in a situation of two cities, but we face a whole network, in France and certainly also in the UK too. When you have a third city, which is apart from the link that has improved, this third city probably will not benefit but be worsened by the new infrastructure. I think that these conclusions are not that different from the conclusions of other academics.

**Q131 Lord Monks:** In the same area, the biggest city in France is Paris, and the biggest city in the UK is London. The explicit objective of High Speed 2 in the UK is to benefit the north of England, eventually, and to regenerate and rebalance the economy, which is more prosperous in the south-east and around London than it is in the Midlands and the north. From your analysis, it is clear that you think that Paris has been the biggest beneficiary of

489 This is mixed with a lot of other impacts (for instance the general conjuncture, the price of petrol, migrations, other public policies …).

490 Refined econometric analyses are more conclusive; there are more and more studies of that type, in the UK, in France and in other countries, and they provide a rather clear picture.
Emile Quinet—Oral evidence (QQ 122-132)

this, rather than the outlying, smaller cities that are serviced. Would you just confirm that, perhaps by mentioning some of the cities that might have done quite well, Lyon, for example, and others that seem to have perhaps got rather little from a TGV connection?

Emile Quinet: My view is that with a very high probability, Paris benefited more than Lyon, for instance. However, Lyon probably also benefitted from the TGV, to a lesser degree. The point is about small cities along small agglomerations. For instance, let us take the small agglomerations along the line Paris-Lyon, such as Mâcon, or in another way Dole. They did not benefit, because they did not have sufficient size to benefit. It is difficult to say, but at least I must say that the hope that has been given to the people from Mâcon or Dole has been deceived.

Lord Monks: Have you got a view on whether the location of the station makes a big difference? For example, it has been put to us that in the case of Avignon, who did not really want a TGV line through the middle of their historic city, the station is pushed away on the outskirts of the town. Does that make a big difference, in comparison with, say, Lille, where there is a centre-ville location for the town? We think Lille looks like a winner and maybe Avignon looks like one of your small cities like Mâcon.

Emile Quinet: The location of a station has an important impact. As you recalled, it has been the case in a historical period. For instance, there is no station inside Orléans. We have to change trains near Orléans and take another train to go to the centre of the city. It is the same for the high-speed train in Tours. If I take this point as an example, the high-speed train passes about 10 kilometres from the centre of Tours. It stops at St Pierre des Corps. Tours has not benefited as much from the high-speed train as would have been possible if it had gone into the center. Furthermore, at St Pierre des Corps, which is a small city in the suburbs of Tours, there has been a large parking place, and people come by car to St Pierre des Corps. The effect of density and of accessibility has been much reduced by this dichotomy between the centre of the city of Tours and the high-speed station of St Pierre des Corps. They did not benefit from the increase in that city that could have been hoped for in another situation.

The Chairman: Could we come, in the last couple of minutes, to the final question?

Q132 Lord Shipley: Could I ask you to say something about how high-speed rail in France has been funded, and how that funding has related to decision-making on the structure and level of fares, and also on whether investment in TGV has displaced funding for other rail and road projects in France?

Emile Quinet: Your question is very important. If we look at the rate of funding of the share of public subsidies on high-speed trains, we see that the public subsidies of the presently implemented lines has been very low, except for the LGV Est, the high-speed line east, and the high-speed line Rhin-Rhône, which I quoted at the beginning. It is a result of the mechanism I explained at the beginning: RFF, the infrastructure manager, has to break even and has to get subsidies when infrastructure charges cannot give sufficient revenue to match the expenses. The point is that it is very difficult ex ante for a project to assess what

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491 The attraction due to the larger size of the Paris agglomeration was not hampered by the repulsive effect of a large congestion, as the Paris area is not that congested.
Emile Quinet—Oral evidence (QQ 122-132)

will be the right infrastructure charge. That is a point that is stressed by the Cour des Comptes, in that those calculations are very difficult to achieve. The result of this mechanism has been a kind of struggle between RFF and SNCF about the level of the infrastructure charges, RFF wanting high infrastructure charges and SNCF, of course, wanting the opposite. It seems to me that the infrastructure charges of RFF, and I think I am not the one with that opinion, are at the maximum level that is sustainable for SNCF. Right now, with the lower growth of traffic and of revenue for both SNCF and RFF, with the burden of the debt for RFF, we are at the threshold for the equilibrium of infrastructure charges between the two firms and for the sustainability of the whole rail system

The Chairman: Mr Quinet, that brings us to the end of this session. Thank you very much for joining us. Thank you very much for your illuminating answers. You have been most helpful. Thank you.

Emile Quinet: Thank you very much for your attention, my Lord Chairman.
Transcript to be found under Professor Chris Nash, Network Rail and Rail Delivery Group
Rail Freight Group—Written evidence

1. Rail Freight Group (RFG) is pleased to respond the House of Lords Economic Affairs Committee Inquiry into the economic case for HS2.

2. RFG is the representative body for rail freight in the UK, and we campaign to increase the volume of goods moved by rail. We represent around 120 member companies who are active in all areas of rail freight including train operators, customers, ports, terminals, suppliers and support services.

3. RFG has consistently supported HS2 as it will deliver significant additional capacity to the nation’s rail network necessary to support freight and passenger growth. However, concerns over how freight benefits will be secured have led us, along with other freight interests, to petition the Hybrid Bill for phase 1. This does not alter our fundamental support for the scheme but recognises a number of strategic and tactical considerations. Presently we do not know when our petition will be heard by the Committee.

4. In responding to this call for evidence, we have only commented on the case for rail freight within HS2, and the economic benefits which could be delivered. We have no comments on the wider economic case.

Is there an Economic case for HS2 for Rail Freight?

5. The rail freight sector is acknowledged as one of the success stories of UK rail. Over the last two decades it has seen growth of over 70%, and there have been step changes in efficiency, with each freight train now moving over 50% more cargo that it did a decade ago.

6. This success is built on the back of significant investment by private sector freight operators, customers and service providers in new locomotives, wagons, terminals and handling equipment. Collectively there has been over £2bn of private sector investment since rail privatisation with more planned. This is in addition to the investment made by Government in upgrades to the rail network.

7. As a result of this success it is now estimated that rail freight contributes in excess of £1.5bn annually to the UK economy. Collectively the five largest rail freight operators employ around 5000 people and pay around £150m in direct taxes. Rail freight is also estimated to keep some 7.6m lorry journeys off the roads each year.

8. Research for Rail North’s Long Term Rail Strategy also evaluated the benefits of rail freight, stating that;
In the North of England the direct value of the rail freight industry is £209m per year (2010) around 0.03% of the economy of the North. The industry supports economic output of £862m through indirect links and £1,567m through induced links, which represents around 0.15% of the economy. The rail freight industry brings important benefit to the national and local economies in the North. It is therefore important that the forecast growth in rail freight is accommodated to ensure that rail freight continues to support the national and local economies.

9. Network Rail’s forecasts of rail freight growth are shown in its Long Term Planning Process Freight Market Study. [http://www.networkrail.co.uk/improvements/planning-policies-and-plans/long-term-planning-process/market-studies/freight/](http://www.networkrail.co.uk/improvements/planning-policies-and-plans/long-term-planning-process/market-studies/freight/). This document, which has been produced in conjunction with the industry, shows that for the containerised sector, growth of around 6%pa is forecast, driven by increasing road costs, and by the development of more rail linked warehousing provision across the UK. Other bulk commodities, such as biomass and construction materials are also expected to increase although this is offset by expected reductions in coal traffic as power stations close.

10. The increasing growth in containerised freight means that freight operators will need to operate services on the main trunk rail network between major ports and warehouse clusters, and centres of consumption. This will increase capacity needs on the main lines and away from the minor routes where bulk traffic has more typically operated.

11. It is clear that to accommodate this growth, alongside passenger growth, will require new network capacity provided by HS2. It is also clear that allowing rail freight to benefit from this new capacity can deliver economic benefits.

12. Independent studies on HS2 also highlight these environmental benefits. Greengauge 21’s report into the carbon impacts of HS2 ([http://www.greengauge21.net/publications/the-carbon-impacts-of-hs2/](http://www.greengauge21.net/publications/the-carbon-impacts-of-hs2/)) concluded that: ‘The carbon savings from using the additional unclaimed capacity of three train paths per hour in each direction for freight are considerably larger still, adding 55% to the direct carbon savings from HS2. This is such a strong advantage that it will be worthwhile examining complementary measures to ensure that a major switch from HGV road haulage to rail freight is achieved as a consequence of HS2.’

13. Similar research by WSP ([http://www.wspgroup.com/en/Welcome-to-WSP-UK/WSP-UK/Press-centre-UK/?item=20665](http://www.wspgroup.com/en/Welcome-to-WSP-UK/WSP-UK/Press-centre-UK/?item=20665)) also found similar results, stating that: ‘HS2 could take 500,000 HGV lorry journeys off the M1, M40 and M6 motorways each year leading to environmental benefits worth over £45 million per annum and saving over 65,000 tonnes of carbon dioxide emissions per annum.’

**Regional Benefits**
14. For rail freight there is no doubt that the benefits of the new capacity created by HS2 can be distributed across the UK. Presently the pattern of demand for rail freight is heavily dominated by the Midlands and North, partly due to a lack of adequate facilities in the London and south east area, and also recognising the pattern of logistics activity within the UK.

15. However there is a danger that the benefits from rail freight will not be realised unless a holistic approach is taken to how the released capacity that HS2 creates is allocated. Presently there has been little work undertaken to assess this, and the early work has tended to focus on the needs of the passenger sector.

16. This is exacerbated by the two phase approach to the construction of the route, which means that the potential freight paths risk being artificially truncated at Handsacre. It would be easy, if only looking at Phase 1, to underestimate the need for freight capacity, as much of that need is driven by the northern conurbations, where capacity is not released until Phase 2 is constructed.

17. For this reason, we are asking the HS2 Committee to make specific provision to safeguard a proportion of released capacity for freight, between London and Crewe, as part of the Hybrid Bill.

How Should HS2 be operated?

18. Although we have no specific opinion on the structure of passenger services on HS2, when they operate on the existing network we consider it imperative that they comply fully with the open access provisions of UK railway law. Access provisions, timetabling rules and charging must be consistent.

19. We are also firmly of the opinion that the ORR must have full powers over HS2 as it does on the rest of the network. The experience of HS1 is that this is necessary to ensure common approaches, and should be built in from the outset.

Does the prospect of HS3 affect the case for HS2?

20. As outlined above, the north of England is a vital region for rail freight, and there are significant prospects for growth including on the Transpennine Corridors. Capacity is increasingly tight, with the north Transpennine routes already having little or no available freight capacity. Investment to create new capacity, linked with expansion of the north/south corridors is therefore critical.

21. As such we support the principle of HS3, and await with interest the expected initial study. Assuming that HS3 does not delay, or de-scope HS2, then we would expect a positive synergy.

September 2014
Matthew Semple—Written evidence

Matt Semple  BSc(Econ);Chartered Statistician  - Individual

1. There are many assumptions in calculating cost/benefit that omit key elements; include elements but are based on out of date/inadequate data; or where the assumptions are just unreasonable. As a result the benefit cost calculations are flawed; so per se the range is meaningless.

2. I focus on the one I regard as most important:-

Saving time on a train journey is always beneficial.

Firstly, not making the train journey is more beneficial – e.g. video-conferencing increasingly prevalent & relevant, with time saved, not to mention savings on pollution; energy use, etc.

Secondly,

(a) train travel can be enjoyable (both intrinsically, and for the opportunity to relax/chill out/think, etc).

(b) productive work can be done whilst travelling (and I would contend that some reduction in journey times is counter-productive – e.g. the starting set-up/close down of work leaving little time for the actual work – say in a journey reduced to 1-1.5 hours. This also applies to (a) e.g. the chance to get stuck into a novel).

September 2014
Sheffield Chamber of Commerce, Sheffield City Council and Nottingham City Council—Oral evidence (QQ 170-181)

Sheffield Chamber of Commerce, Sheffield City Council and Nottingham City Council—Oral evidence (QQ 170-181)

Transcript to be found under Nottingham City Council, Sheffield Chamber of Commerce and Sheffield City Council
Sheffield City Council, Nottingham City Council and Sheffield Chamber of Commerce—Oral evidence (QQ 170-181)

Transcript to be found under Nottingham City Council, Sheffield Chamber of Commerce and Sheffield City Council
Dr Nigel Shepperson—Written evidence

**Question 1  Is there an economic case for HS2?**

I do not believe that the expenditure on HS2 can be justified. This is based on figures published by the Government and HS2 and my own experience attending business meetings at Government departments in London.

I live less than 20 miles from Curzon Street, Birmingham. According to figures presented by HS2 and discussed with them at their road shows it will take me longer to get to London using HS2 than the time taken by existing rail services. This based on the fast HS2 journey from Curzon Street to Euston offset against the time it will take me to get to Curzon Street station.

**Estimated journey time using HS2**

| Lichfield Trent Valley railway station to Birmingham New Street station | 41 minutes |
| Walking from New Street railway station to HS2 Curzon Street station | 10 minutes |
| Time allowed waiting for the next HS2 train | none |
| Birmingham to London using HS2 | 49 minutes |
| Total journey time (assumes no waiting time for HS2 at Curzon Street) | 100 minutes |

**Current trains from Lichfield Trent Valley**

<table>
<thead>
<tr>
<th>Train operator</th>
<th>Departure from Lichfield</th>
<th>Arrival at Euston</th>
<th>Journey time</th>
<th>Ticket price</th>
</tr>
</thead>
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<tr>
<td>Virgin Trains</td>
<td>7:08</td>
<td>8:23</td>
<td>75</td>
<td>£169</td>
</tr>
<tr>
<td>London Midland</td>
<td>7:56</td>
<td>9:37</td>
<td>101</td>
<td>£95</td>
</tr>
</tbody>
</table>

Tickets bought on the day of travel.

The current total journey time to travel to London using the existing Virgin train service on the West Coast main Line is 25 minutes faster than the proposed HS2 service. This means that the use of HS2 on the basis of speed cannot be justified.

The current journey time from Lichfield Trent Valley station to Euston using the slower London Midland train takes an extra 26 minutes compared to the Virgin train or 101 minutes in total. This means there is no justification to use HS2 for somebody living as little as 20 miles from Curzon Street. The slower train is £74 cheaper than the Virgin train, which means that HS2 cannot justify over the slower London Midland train.

Contrary to the original business case proposed by HS2, I usually work on the train, where quiet time away from the office is built into my work plan. Whilst travelling on the train I can catch up with reading as well as doing work on my laptop computer. This means that the time on the train is not wasted as suggested by HS2.

These observations clearly show that for people who do not live or work at or very close to Curzon Street, the time savings may be negated by their travelling time to Curzon Street. The expected cost of using HS2 must also be considered against the possibly very limited
time benefit. This is further compounded by the fact that people on business work on trains, which means there may be little if any benefit in the extra speed of HS2.

**Question 2** Other factors that should have been taken into account in the business case

The business case is flawed because it is not based on real door to door journeys. I have not seen any calculations based on the starting point of journeys for passengers who may use HS2. It must be noted that any passenger starting their journey in Staffordshire will not be adjacent to an HS2 station. This means that any saving in time taken to travel by HS2 from Curzon Street to London must be offset against the time taken to get to Curzon Street. This often negates any speed advantage of HS2.

Local trains stop at New Street and there appear to be no plans to connect directly to HS2 at Curzon Street. This means a 10 minute walk from New Street must be added to journey times, further offsetting any time saving with HS2. There will also be waiting time at Curzon Street for the next HS2 train to London. The same argument is true for many people in the Midlands, since few people live or work in close proximity to the proposed HS2 station at Curzon Street.

Apart from using Lichfield Trent Valley station, I can catch the train from Rugeley Trent Valley Station, which is more convenient and means I drive fewer miles. This is beneficial to the environment. This further emphasises that the existence of local stations with direct services to London are likely to outweigh any benefit of a high speed line from Curzon Street Birmingham.

I have to question the wisdom of building HS2, when internet meetings mean that fewer meetings are held face to face and instead use video links. Ten years ago video conference meetings were a rarity and had to be held in very expensive custom built video conference suites. I can now attend a video conference from my desk using my laptop. A review of my diary shows that approximately three quarters of all meetings I attend these days that involve attendees from more than one location include attendees by video link. This further demonstrates that long distance train travel is no longer essential for business meetings. By the time HS2 opens, I would expect that video conference options will have developed even further and the need for travel will be reduced even further.

**Question 3** What are the likely economic benefits of HS2 to the Midlands

Does the business case depend on measures to attract investment?

**Question 6** How might the expected benefits of HS2 to the national economy be realised?

The Department of Work and Pensions in recent years have spent less than £10 000 per job created.
The £3.2 billion Regional Growth Fund (RGF) supports eligible projects and programmes that are also raising private sector investment to create economic growth and sustainable employment. Selected bidders must drawdown their grants between 2011 and 2017. Rounds 1 to 5 of the RGF have supported over 400 projects and programmes across England – allocating £2.9 billion of government support, which is projected to deliver 573,000 jobs and £16 billion of private investment between now and the mid-2020s. To date over £750 million of RGF support has been drawn down by companies, delivering over 90,000 jobs and £1.8 billion of private investment.

Source: https://www.gov.uk/understanding-the-regional-growth-fund

The £2.9 billion invested in rounds 1 to 5 of RGF generated 573,000 jobs, which works out at £5061 per job. In addition, this attracted £5.52 investment from private industry for every £1 invested by the government.

The current £750 million invested by the RGF will generate 90,000 jobs. This works out at £8333 per job. This attracted £2.40 investment from private industry for every £1 invested by the government.

HS2 are proposing to invest £42.6 billion and expect to create between 88,700 and 110,300 jobs. This works out at between £480271 and £386219 per job (HS2 figures). This means HS2 is between 46.3 and 94.9 times less effective at creating jobs than the Department of Innovation and Skills. This is compounded by the fact that HS2 have been unable to quote any figures for inward investment attracted from private industry. It should be noted that loans from the Chinese government cannot be considered as private investment.

If the money was given to the Department for Innovation and Skills, they could create the same number of jobs as HS2 for between £449 million and £919 million. This is less than one billion pounds even using the worst case figures. This has to be compared with the £42.6 billion HS2 plan to spend to create this number of jobs. This is not a viable business proposition. As a comparison, the Department of Innovation and Skills could create a job for every unemployed person in the UK (2.08 million, June 2014) for between £10.5 and £17.3 billion. Even using the worst case figures, they could only spend 40 per cent, (i.e. less than half the money budgeted for HS2) by the time they had created a job for every single unemployed person in the United Kingdom.

Question 4 Might some parts of the UK suffer economic disadvantage from HS2?

Question 5 Is London likely to be a main economic beneficiary of HS2?

Question 9 Does the prospect of HS3 affect the economic case for HS2?

It is inevitable that a line that only connects London with 5 other cities in a linear fashion will have the most benefit to London. HS2 will not benefit cities other than London in the same way. For example HS2 will connect both Manchester and Leeds to London, but do
nothing to help connect these cities together. It is therefore inevitable that HS2 will benefit London more than other cities.

HS3 in comparison will benefit the northern cities it connects, but will not give any benefit other cities such as Newcastle upon Tyne. Many cities are poorly served due to the London Centric basis of the electrified railway lines. For example it is not possible to catch a train at any time in the morning from Birmingham New Street to Hull that arrives by 09:00 or earlier. You have to travel the night before the meeting, or drive to Hull. The fastest trains from Birmingham to Cardiff (99 miles) take 2 hours and 5 minutes (47.5 mph). The current trains from Birmingham New Street to Euston (115 miles) take 1 hour 13 minutes (94.5 mph), which means they run at twice the speed. These examples show just how unequal rail travel is between cities excluding London when compared with travel to and from London.

If the Government want to invest in rail, they should look at non-London centric journeys rather than making unjustified improvements in the existing railway lines between London and Birmingham. I travel regularly to London by train, but drive when I go to Cardiff or Hull because the rail journey is not acceptable.

**Question 7  How should HS2 be operated?**

If HS2 is built, an effective way of operating HS2 or HS3 should be found. Recent attempts by the Government to organise franchises for both the East Coast and West Cost main lines have been less than successful due to accepting the cheapest bid or the bid offering the greatest return to the treasury, rather than looking for a system that will operate successfully.

**Question 8  Should passengers be expected to pay higher fares to use HS2?**

Using the slower London Midland save £69 and are very well used including business users such as myself. The savings can be further enhanced by starting meetings later to allow use of cheap rate trains. The delegates of the various meetings I attend have agreed that all London based meetings start at 10:30. This allows attendees to use cheap rate tickets including non London-based Department of Health delegates. This represents a direct saving to the Government. See price details below.

<table>
<thead>
<tr>
<th>Train operator</th>
<th>Departure from Lichfield</th>
<th>Arrival at Euston</th>
<th>Depart Euston</th>
<th>Arrive Lichfield</th>
<th>Ticket price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virgin Trains</td>
<td>7:08</td>
<td>8:23</td>
<td>16:57</td>
<td>18:06</td>
<td>£99</td>
</tr>
<tr>
<td>London Midland</td>
<td>7:56</td>
<td>9:37</td>
<td>16:46</td>
<td>18:21</td>
<td>£30</td>
</tr>
</tbody>
</table>

Tickets purchased more than 14 days in advance.

This clearly demonstrates that higher fares to use HS2 cannot be justified.

Further savings can also be made by using local stations. Parking at New Street currently costs £20.00 for more than eight hours and it would be reasonable to assume parking at the Curzon Street station would be similar. The day rate for parking at Lichfield Trent Valley is
Dr Nigel Shepperson—Written evidence

£7 per day, whilst there is no charge to Park at Rugeley Trent Valley station. This gives a further reason to avoid travel by HS2 from Curzon Street.

Summary

- The justification of speed as a way of saving business people lost dead time is a fallacy. Business people work on trains.
- The business case has not been modelled on real journeys starting at distance from HS2 stations. Real journeys do not start at Curzon Street in Birmingham.
- The cost of rail travel is a significant factor and business people often use slower trains which save money and allow quiet time to do some work.
- HS2 is a costly and ineffectual way of creating jobs compared to other Government investments. HS2 figures show HS2 is at least 46 times less cost effective at creating jobs as the Department for Innovation and Skills.
- Existing and future internet video conferencing resources are likely to make many rail journeys obsolete.

September 2014
Introduction

1. The Society of Motor Manufacturers and Traders (SMMT) is one of the largest and most influential trade associations in the UK. It supports the interests of the UK automotive industry at home and abroad, promoting a united position to government, stakeholders and the media. The automotive industry is a vital part of the UK economy accounting for more than £64 billion turnover and £12 billion value added. With more than 160,000 people employed directly in manufacturing and in excess of 770,000 across the wider automotive industry, it accounts for 10% of total UK export of goods and invests £1.9 billion each year in automotive R&D. More than 30 manufacturers build in excess of 70 models of vehicle in the UK supported by around 2,500 component providers and some of the world's most skilled engineers.

2. SMMT welcomes the opportunity to provide written input to the House of Lords Economic Affairs Committee on connected and autonomous vehicles in relation to its inquiry on the Economic Case for High Speed 2. SMMT is not in a position to comment on the specifics of High Speed 2 but has outlined in this paper the opportunities that connected and autonomous vehicles present to the UK.

Summary

3. SMMT would like to highlight the following points in summary:

- The move to connected and autonomous vehicles represents a significant economic opportunity for the UK which will require collaboration between government, the automotive industry and other technology sectors.
- For the UK to exploit this opportunity, it is important for government to provide a supportive regulatory environment for increasingly connected vehicles and funding for research and development to encourage greater testing and trialling of this technology in the UK.
- It will be important for government and industry to work together in overcoming uncertainties of new technology and removing barriers to the deployment and uptake of connected and autonomous vehicles. It will also be important for the automotive industry to work in close collaboration with adjacent industries such as technology, telecoms, creative and digital, consumer electronics, business services, legal and insurance to develop technologies and applications that are fundamental to connected and autonomous vehicles.
- The increased focus on data will present issues as well as business opportunities. This will be an important area of focus as connected and autonomous vehicles become a commercial reality.
- It is too early to determine the impact of autonomous and connected vehicles on the road network or on wider road transport, however key benefits around improving
traffic flow and journey times will lead to reduced emissions and wider economic benefits.

Background

4. Intelligent mobility, connected vehicles and autonomous vehicles are terms that are often used interchangeably to describe the increasing level of connectivity and autonomy within vehicles. Each term has a distinctive and different description that is important to understand when looking at the future technological trends in vehicles.

5. Intelligent mobility is the overarching term describing the interlinking of technologies that will deliver integrated transport systems that “increase mobility, improve safety, and enhance user benefits whilst simultaneously reducing pollution, consumption, and congestion”.

6. The Automotive Council has produced a roadmap (below) on the timeline for intelligent mobility with targets for the delivery of certain technologies.

![Intelligent Mobility Roadmap](http://www.automotivecouncil.co.uk/wp-content/uploads/2013/09/Intelligent-mobility.jpg)

7. The roadmap demonstrates the timeline for introduction of various technologies within intelligent mobility, highlighting the value to consumers, business and society each evolution of technology will bring. Although targets such as 2020 to 2030 are provided

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regarding the mainstream introduction of autonomous vehicles autonomous features are already a readily available aspect of many new vehicles on the UK’s roads today.

8. Connected and autonomous vehicles are two terms that describe the growing introduction of technology into vehicles that enables them to become more connected with their surroundings and benefits to drivers from increased levels of autonomy. Although autonomous vehicle technology will aid the advent of connected vehicles, the two terms must be recognised as separate features.

9. Connected vehicles refer to the ability of vehicles to communicate with infrastructure and other vehicles as part of the wider trend to greater connectivity of technology and the ‘internet of things’. Vehicle-to-vehicle and vehicle-to-infrastructure connectivity could fundamentally change the way in which roads are used with potential improvements in emissions, safety and congestion. The connected nature of road transport presents opportunities for vehicles to be able to respond to changing road conditions and connect with other modes of transport.

10. Autonomous vehicles refer to the ability of vehicles to take control of various aspects of driving. Connected vehicles and autonomous driving elements are already on our roads and feature in the vehicles we drive today. There are various stages and levels of autonomy which will proliferate vehicle development and deployment over a number of years. A fully autonomous vehicle can be characterised as a driverless car, however there are various stages of autonomy that have been identified which demonstrate varying technological capabilities:

0 = No autonomous features
1 = Features such as automatic braking sensors are fitted on vehicle
2 = Features such as car parking assist where driver relinquishes control of vehicle
3 = Features such as smart, adaptive cruise control allow for ‘platooning’ of vehicles
4/5 = Vehicle is highly or fully autonomous
11. As described previously, levels four and five of high and full automation are some way from being mainstream on the UK’s roads, however technologies enabling levels one and two and to some extent level three are already being utilised on vehicles today. This demonstrates that the move to greater autonomy is already happening and that ‘driverless’ cars are part of this transition of gradual introduction of technology.

12. According to a study by management consultants Oliver Wyman, 80% of all autos sold in 2016 will be connected. This figure shows a projected annual growth rate of over 36%, from 45 million autos in 2011 to approximately 210 million by 2016.

The UK industrial opportunity

13. Opportunities from connectivity and autonomous vehicles present the ability to harness new investment into the UK automotive industry, as well as offering benefits in terms of road safety, mitigating congestion and reducing emissions. The Automotive Council has identified intelligent mobility as one the five ‘sticky’ or priority technologies crucial for the UK’s industrial strategy.

14. The development of intelligent mobility technologies also needs to be supported through intensified collaboration between automotive and relevant sectors and specialisms such as electronics, robotics, satellite and data/communication technologies and transport planners. The different ‘clock-speeds’ of the contributing sectors and lack of common development process are key challenges that need addressing. Below are the average development cycles of new technologies and policies from various sectors:

    Automotive = 3 - 7 year cycle
15. To bring interested organisations together, SMMT is hosting an event on 26 March which looks to initiate greater collaboration between government and interested sectors on connectivity. It will be important to engage with those sectors not traditionally involved with the automotive industry to ensure the UK can deliver on becoming a centre of excellence on connected and autonomous vehicles.

16. SMMT is currently undertaking a study into the economic impact of connected and autonomous vehicles in the UK to assess the industrial opportunity and would be happy to brief the Committee on the findings when complete.

**Government’s role**

17. The development, trialling and deployment of connected and autonomous vehicle technologies will raise new regulatory and legal questions around use on public roads, shared data, communication and insurance issues. Government assistance and intervention, such as in the LUTZ (Low-carbon Urban Transport Zone) Pathfinder project in Milton Keynes, the £19 million driverless car fund for cities and the recent DfT regulatory review for the testing of autonomous vehicles are welcome.

18. SMMT highlighted connected and autonomous vehicles as a priority area in its representation to HM Treasury ahead of Budget 2015. SMMT will work closely with the Department for Transport in the development of a Code of Practice to establish a supportive framework for further trialling and deployment of technology.

19. Greater investment and innovation support is needed in order for the UK to maximise its potential as a leading location for connectivity. Large scale R&D funding is required to realise the significant opportunities both connectivity and intelligent mobility present the UK economy. SMMT supports the introduction of a specific R&D fund for connected and autonomous vehicles to create a world-leading offer to innovative companies wanting to invest in intelligent mobility, providing the necessary communications and infrastructure to initiate co-investment from industry.

**Policy perspective**

20. The UK is already in a positive position in relation to the trialling of autonomous vehicles and the regulatory framework to allow autonomous vehicles to operate on public roads. In partnership with Innovate UK, £19 million funding was assigned by the Chancellor at the 2014 Autumn Statement to facilitate trials in Greenwich, Bristol and a Milton Keynes-Coventry joint project with an initial time-frame of 18-36 months. As trials have begun to take place, further commitments from government have been made.
with the “Pathway to Driverless Vehicles” regulatory review published by the Department for Transport on 11 February 2015. This document builds on the announcements already made by central Government on connected and autonomous vehicles and will provide the regulatory certainty for trials to be carried out. This review also lays the foundations for enabling wider use of autonomous vehicles on UK roads.

21. With regards to potential barriers to progress, the following areas have been identified:

22. As with the introduction of new technology, initial costs are likely to be high, reflecting the costs of research and development and introduction of new hardware and software requirements such as new sensors, communication and guidance function technology, and software.

23. Licensing has been identified as an area where further consideration needs to be given. Without a consistent licensing framework manufacturers may be left with regulatory uncertainty and unnecessary overlap.

24. Liability issues around autonomous vehicles need to be considered and clearly defined in the event of an accident. This is particularly key in relation to legal certainty as well as insurance.

25. With the introduction of new technology, particularly in the case of connected and autonomous vehicles where high levels of intelligence and communications are present, security will be a key consideration in order to protect systems and vehicles from hackers, terrorists or hostile nations.

26. There are research gaps that need to be addressed due to the inherent uncertain nature of new technology in new contexts. Autonomous vehicles are not yet present in our traffic streams therefore research, trialling and testing will be critical to ensuring this technology can operate on public roads and delivers the benefits outlined previously.

27. Issues around data ownership and privacy are of crucial importance to the development and deployment of connected and autonomous vehicles. Questions around who should own or control data will need to be addressed, but this also presents potential new business opportunities as described below.

28. The development of connected and autonomous vehicles technology requires cross-industry collaboration. Though led by the automotive industry, without close collaboration with adjacent industries such as technology, telecoms, creative and digital, business services, legal and insurance, the development of these vehicles will be hampered, and their diffusion and adoption delayed. The practicalities of bringing companies from disparate disciplines and industries together in secure networks are arguably challenging.

**Importance of data**
29. Four key attributes of big data include volume (quantity), velocity (speed of communication), variety (different formats and sources), and value (converted to meaningful insights). Connected vehicles could provide a stream of data on vehicle movements, condition, wear and tear of parts, and ambient conditions. The challenge will be to extract meaning from this mass of mixed data, which will need to be transmitted, analysed and they redistributed to all the relevant subjects – all at high speed.

30. Benefits of big data in the connected vehicle context could include:
   - Improved car development
   - Enhanced planning of service and repair intervals due to early fault recognition
   - Increased customer satisfaction and retention
   - Improved response time to emergency, accidents and breakdowns
   - Better optimisation of traffic flows through vehicle routing and infrastructure management
   - Improved optimisation of energy distribution for connected electric vehicles through smart grids
   - New services, from retail and FMCG to insurance and healthcare, are spawned through better understanding of drivers/customers’ preferences, needs and behaviour

31. At present, the majority of connected car data is used internally for diagnostics, location, speed, and vehicle status. By 2020, the IHS Automotive study expects four core categories of data to be most important to automakers, suppliers, third parties and end-users – diagnostics, location, user experience/features, and adaptive driver assistance systems/autonomy data.

32. The rate at which data is flowing from the connected car landscape is also growing dramatically. The study by IHS Automotive, Emerging technologies: Big Data in the Connected Car, says that about 30 terabytes of data would be collected each day from the 152 million connected cars on the road in 2020, or about 350 megabytes per second, compared to about 15 megabytes per second in 2013.

33. The importance of data and its communication reiterates the need for various industries and sectors to collaborate to realise the potential economic benefits of this new technology.

**Impact on transport**

34. It is too early to be able to predict the impact of increased connectivity and the introduction of autonomous vehicles on road or public transport, however changing driving trends and models of vehicle ownership can point to the future direction of mobility. Short urban and suburban journeys have already seen the introduction of car sharing clubs and short-term renting arrangements. The introduction of the concept of purchasing mobility rather than the traditional concept of purchasing vehicles.
demonstrates the growing interconnectedness of transport, reflecting the needs of travellers and drivers. Whether these trends will reduce the number of vehicles within the parc (vehicles on the road) going forward is unknown although it is clear that opportunities will be created by the introduction of connected vehicles across all sectors.

35. The Roads Investment Strategy announced in December 2014 has included elements relating to the introduction of autonomous vehicles bringing together ‘connected’ infrastructure and intelligent mobility on the Strategic Road Network (SRN). Planning for future trends is an important element of government priorities for transport infrastructure funding. It is also vitally important that long-term funding is considered for wider infrastructure impacts that will be required with increasing connectivity, particularly with increased data and the need for greater investment in digital infrastructure and bandwidth.

36. The nature of connected vehicles will mean that not only will vehicles communicate with other vehicles, they will also communicate with the road infrastructure around them; this phenomenon can be characterised as the “internet of things”. In becoming more connected, communicating intelligently with the transport system and road network, there are significant benefits that could result including improved traffic flow, reducing congestion and emissions from a reduction in stop-start nature of traffic. These benefits could be realised both in urban environments where air quality issues are prevalent, but also on the SRN including motorways to increase free-flowing traffic that improve travel times and increase capacity.

February 2015
Steer Davis Gleave Consultants, Volterra Consultants and KPMG—Oral evidence (QQ 24-37)

Steer Davis Gleave Consultants, Volterra Consultants and KPMG—Oral evidence (QQ 24-37)

Transcript to be found under KPMG, Steer Davis Gleave Consultants and Volterra Consultants
Stoke-on-Trent City Council—Written evidence

HS2 STOKE ROUTE: MUCH MORE THAN A RAILWAY
The Smart Way to the North

The Stoke Route proposal for HS2 Phase 2
The below documents are the strategic introduction and economics chapters from the Stoke Route business case, which is shortly to be published. We submit these documents to inform the Committee’s deliberations on how best to extract maximum value for money from HS2. When it is published, we will make the full business case available to the Committee.


The Stoke Route is a proposal to route the western leg of HS2 Phase 2 through the only city between Birmingham and Manchester, thereby securing substantial additional benefits. It was originally submitted in response to Government’s formal consultation on the Phase 2 route, which closed in January 2014.

The Stoke Route proposal is now under appraisal by HS2 Ltd. The information in this document has been made available to HS2 Ltd, to assist them in conducting a full and fair appraisal of the relative merits of a) the final Stoke Route ‘Ultimate’ by 2033 and b) the Stoke Route ‘Accelerator’ by 2026 versus the Crewe scheme, proposed by Sir David Higgins, again delivered by 2026.

Our business case identifies which route offers most benefits for least cost and risk in 2026, accelerating the benefits of HS2 by bringing forward construction of the southern end of Phase 2, so that it enters service at the same time as Phase 1 from London to the Midlands.

A second stage of appraisal compares the Consultation Route to the Stoke Route ‘Ultimate’ proposals, offering broadly comparable dedicated high speed line all the way to Manchester.

The following are the key benefits of the Stoke Route (Ultimate and Accelerator):

• On ‘narrow’ transport economics alone, the Stoke Route has a 60 year NPV £2.8bn better than any route involving Crewe, which is longer, would be more costly to construct, and would entail the risk of years of major disruption at perhaps the most complex junction point on WCML, as Network Rail’s proposals to demolish the existing station and build a ‘Parkway’ style replacement are implemented.
• Has a net additional benefit to the UK economy £2.3bn vs £0.9bn for the Crewe scheme (both 60 year NPV).
• Saves the taxpayer up to £5.0bn of the original £8.4bn estimated capital cost of creating HS2 link to form the end of Phase 1 to Manchester.

• Brings HS2 services to the North seven years earlier than the original 2033 target for completion of Phase 2.

• Adds the existing ‘Greater Stoke’ market of 470,000 people, or nearly twice the population of Milton Keynes, to the commercial case for HS2.

• ‘Greater Stoke’ comprises the city of Stoke-on-Trent, plus the immediately adjoining Newcastle-under-Lyme and Staffordshire Moorlands Local Authority areas.

• Routes HS2 through the only city on its entire route with sufficient capacity to accommodate population growth, largely on readily available brownfield land, on the strategic scale required to ‘take the heat off’ London and the South East, and where a comprehensive programme of urban and economic development is already in delivery to support it.

• The abundant ex-industrial brownfields in and around Stoke-on-Trent make Greater Stoke the only urban area on the HS2 route with sufficient development potential to accommodate housing and employment growth on this ‘New City’ scale. The planned population growth adds a third Milton Keynes-sized demographic (c.300,000) to the commercial case for HS2.

• Uses a combination of both new build High Speed Line (HSL) and existing ‘classic’ Network Rail lines, at a total cost of around £3.4bn, to enable direct HS2 services to reach Manchester in 2026, at the same time Phase 1 services start.

• Recycles uncontroversial ex-railway urban brownfield land, alongside an existing mainline railway, to construct the central section of the route, removing the need for a costly, heavily tunnelled, section through environmentally sensitive rural Staffordshire and Cheshire.

• Provides a 1h 20m non-stop London to Manchester service in 2026. This is exactly the same journey time modelled by HS2 Ltd for their originally-proposed Consultation Route, which would:
  • be around 20km longer;
  • not be operational until 2033.

• Provides direct HS2 services to the important West Yorkshire market from 2026, thus adding East-West links across the Pennines to the fundamentally North-South HS2 project.
Stoke-on-Trent City Council—Written evidence

- Benefits 11m rail users with direct HS2 services via this ‘arc’ of the Stoke Route alone, at Stoke-on-Trent itself, Macclesfield, Stockport and Huddersfield. This size of market is considerably greater than the 3m rail users along the entire North Wales line who would only enjoy indirect services via Crewe.

- Empowers the HS2 project to meet its own primary policy objective – delivering economic growth – by integrating with the coordinated programme of economic development and urban transformation already in progress at Stoke-on-Trent and in the surrounding ‘Greater Stoke’ catchment.

- Provides a new hub station connecting both Network Rail and HS2 lines with a comprehensive array of road and public transport in the heart of Stoke-on-Trent. With the station in an urban location (as opposed to a ‘parkway’ style out-of-town location) HS2 will connect directly into, and accelerate, a comprehensively masterplanned growth of housing, employment and infrastructure, supporting population growth across the ‘Greater Stoke’ area to around 750,000 by 2033.

- Overall the Stoke Route plans for the western leg of HS2 Phase 2 are the most comprehensive, and most highly developed, proposals for:
  
  - securing most economic benefit from Phase 2 of HS2;
  - providing more direct HS2 services;
  - to more places;
  - at substantially lower cost;
  - with significantly less environmental impact;
  - seven years sooner.

September 2014
Chris Stokes—Written evidence

Introduction

This submission updates my article “The case against HS2”, published in the December 2012 issue of Modern Railways. The sections of the submission correspond to the sub-headings in the article.

Regeneration

The Government has yet to make a convincing case that HS2 will lead to any reduction in the “North-South Divide”, and it remains the case that academics in this field are highly sceptical of such benefits, with such evidence as there is indicating that HS2 will tend to increase the dominance of London and the South East.

It is likely that major infrastructure investment across the North of England would produce greater and faster benefits, both during the construction phase of any projects, and, when completed, the decongestion and agglomeration benefits produced by better connectivity in the region.

In contrast, the construction work for HS2 will be weighted towards London and the South East, as this end of the route is much more complex and expensive.

I note that the Government has now indicated it will take forward “HS3” to improve regional connections in the North of England, although there is no definition of the project as yet. In principle, I would argue this should be taken forward before HS2.

Business case

The Benefit Cost Ratio (BCR) for HS2 is shown to decline from 2.5 in the August 2102 appraisal to 2.3 in the October 2013 strategic Case, including “Wider Economic Impacts” (WEIs) which are normally excluded from DfT appraisals; the BCR excluding WEIs is only 1.8.

Compared with the 2012 case, costs have increased and revenues have gone down, so the net cost to Government (the Taxpayer!) is shown to increase from £25.7bn to £31.5bn. However, the transport benefits are shown to increase. This largely reflect a jump in the proportion of passengers assumed to be travelling on business from 28% to 38%. This is much higher than the proportion consistently indicated by the regular, large scale surveys carried out by Passenger Focus, and in my view is not credible. The BCR would be very much lower without this highly questionable change.

Similarly, the value of time savings has essentially been kept at previous levels, even though DfT now accept that business travel on trains is often productive. DfT have argued that these values are supported by “willingness to pay”, but the arguments are thin and based on overseas comparisons which are out of date and themselves are derived from the previous
value of time assumptions. No actual evidence is provided to support businesses being willing to pay the same to reduce travel time regardless of whether it is productive. The business case still fails to consider price competition from existing routes. The Virgin service between the West Midlands and London has direct competition from two other franchises (Chiltern and London Midland) which also offer frequent services at lower fares, albeit with longer journey times. Chiltern and London Midland between them now have c50% of this market, yet the HS2 business case implicitly assumes that all Birmingham – London rail travel will be on HS2. Proper modelling of price competition would both lower the number of passengers using HS2 and lower the average fare paid.

The business case also failed to take into account expected improvements on the existing network, even though these could have been anticipated at the time it was prepared. As an example, the recent East Coast franchise award commits to a 50% increase in capacity and faster journey times, including 4 hours to Edinburgh, only marginally longer than the 3 hours 38 minutes promised by DfT for 2033, and 2 hours to Leeds. These commitments will reduce the capacity and journey time benefits of the eastern part of HS2 Stage 2 very significantly.

Environmental benefits

The Government has now effectively dropped the proposed links to HS1 and Heathrow Airport. Whilst the business case for both links was dreadful, this change further reduces the minimal environmental case for HS2.

Capacity

The Government has consistently failed to evaluate alternatives to increase the capacity of the existing network properly. The existing nine and eleven car trains on the West Coast Main Line from Euston can generally be lengthened to 12 cars\footnote{Euston – Liverpool services would still be limited to 11 cars because of major physical constraints at Liverpool Lime Street.}, with the number of first class cars reduced from four to three; this would increase standard class seating by 102% for nine car trains and 34% for eleven car trains\footnote{The additional cars are full capacity, without buffet space, conductor’s compartment, driving cab or disabled toilets etc, hence give a high increase in overall seating capacity.}, at a fraction of the cost and much more quickly than HS2. Furthermore, more InterCity trains could be operated without impacting on freight capacity by investment at a couple of bottlenecks. Similarly, the number of fast commuter trains to Milton Keynes and Northampton could be increased, although I argued in the article that this would require grade separation of Ledburn Junction, south of Milton Keynes.

Some of these changes are now being implemented. Since December 2014, additional fast commuter trains have been operating at peak periods between Northampton, Milton Keynes and Euston, directly relieving the regularly overcrowded trains on the route. This change has been introduced without grade separation of Ledburn Junction, but is operating satisfactorily, suggesting that my approach was too cautious. And, as part of its recent...
franchise extension, Virgin Trains have committed to converting one first class vehicle to standard class for all its nine car sets.

There is another, immediate way to increase commuter capacity on the route. Around one third of Virgin services stop at Milton Keynes throughout the day, but at peak times a number of these trains are barred to commuters, only stopping to set down in the morning and to pick up in the evening. Taking the evening peak as an example, the 1610, 1710, 1720, 1743, 1810 and 1820 services from Euston all stop at Milton Keynes, but commuters are not allowed to board them at Euston, even though none of these trains are full, with average load factors of only around 45%\textsuperscript{495}. This restriction is unique and inexplicable; commuters are able to use InterCity trains from London to Reading, Luton, Bedford and Peterborough, but not to Milton Keynes. Yet the capacity problems on the West Coast Main Line are essentially between London and Milton Keynes, and the case for HS2 is largely based on the alleged need for additional capacity.

DfT has also consistently argued that increasing capacity on the existing network would cause years of disruption. This is simply not the case; but it is quite clear from papers released following a Freedom of Information request that the reconstruction of Euston for HS2 will cause massive disruption at the key location on the route, with a reduction in peak capacity over most or all of a 7/8 year period. There will also be a permanent reduction in the number of platforms and approach tracks for the existing route.

The Government has argued that HS2 will release capacity for additional freight and commuter services. However, there will only be very limited benefits. At the south end of the route, which has four tracks (a “fast line” and a “slow line” in each direction), the number of 100-125 mph trains still required will preclude the use of these tracks for either freight or stopping commuter trains, giving no benefit to towns such as Watford, Hemel Hempstead and Berkhamsted. Similarly, DfT has argued that HS2 will provide additional peak capacity into cities such as Manchester and Leeds; but only 2 InterCity trains from London arrive at Manchester before 0900, and the great majority of passengers on these services are commuters from Stoke-on-Trent, Macclesfield and Crewe, so replacement trains would still have to be operated in any case.

**Growth**

I challenged DfT’s growth assumptions in my article, arguing that long distance rail growth was likely to flatten out. Passenger numbers did stall between 2012 and 2013, but have increased since, with average growth over the last three years of 2.1%. This is a significant reduction on previous rates of growth, and still below the levels assumed in the HS2 business case; and in any case the alternatives described above and in my article will meet DfT’s demand forecasts.

I would also argue that HS2 represents a high stakes gamble on the future. DfT do not appear to have considered potential technological and social change. There is strong evidence that modern information technology is reducing business travel, albeit not yet by

\textsuperscript{495} Data released by DfT as part of the judicial review hearing in 2012
rail (as people can work on trains!), and further advances are likely to increase this effect – it is after all less than twenty years since the advent of 3G and modern mobile phones. Similarly, the potential widespread adoption of driverless cars is likely to have a dramatic impact on transport patterns – it may de-stress door to door travel, reducing rail use, or may prove to be complementary to rail use, by providing easy access to stations. The world may look very different when HS2 is finally finished in 2033 or later.

*February 2015*
Stop HS2—Written evidence

Stop HS2—Written evidence

This submission to the House of Lords Economic Affairs Committee inquiry into HS2 is on behalf of Stop HS2, the national grassroots campaign group opposing HS2.

0.0 Overview of HS2
High Speed 2 (HS2) is the Government’s proposed new ultra-high speed rail line. The Government says it will cost £42.6 billion to build, plus £7.5bn for the trains, in 2011 prices. Phase 1 would not run until 2026 at the earliest, with stations in just Birmingham and London. Phase 2 would have stations in Manchester, (near) Nottingham, Sheffield and Leeds but is currently due for completion in 2033.

An April 2014 YouGov poll found 48% of voters are opposed to HS2, with only 30% in favour.
The House of Commons Transport Select Committee inquiry into HS2 in 2011 concluded:

http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/118510.htm

“123. Many issues about the Government’s proposal for HS2 and about high-speed rail in general have been raised in the course of our inquiry. We have pointed to a number of areas that we believe need to be addressed by the Government in the course of progressing HS2. These include the provision of greater clarity on the policy context, the assessment of alternatives, the financial and economic case, the environmental impacts, connections to Heathrow and the justification for the particular route being proposed.”

The case for HS2 has got significantly worse since 2011, alternatives have been repeatedly dismissed with the Department for Transport admitting that a high speed railway is worse for the environment than a conventional speed railway. The policy context now shows that the HS2 announcement just before the last election was rushed through by the previous Labour Cabinet without proper scrutiny, and connections to Heathrow and to HS1 have been dropped.

1.0 Is there an economic case for HS2?
“So far the Department has made decisions based on fragile numbers, out-of-date data and assumptions which do not reflect real life.”

“High Speed 2: a review of early programme preparation” Public Accounts Committee, September 2013

Costing £50bn, the economic case for HS2 must stand up to scrutiny - but it does not.

Patrick McLoughlin has dismissed independent Parliamentary and non-governmental bodies as “bean counters” when they have raised concerns about the huge costs and risks of HS2. Sadly, this is symptomatic of a ‘fingers in the ears’ attitude which dismisses out of hand anything which can be construed as negative regarding HS2.
The DfT’s economic case for HS2 relies so heavily on the economic value of journey time savings that every decision about the railway has been made to maximise speed, at the expense of connectivity and the environment. In the latest economic case, 79% of the supposed benefits of HS2 are made up of the cash benefit to the economy of journey time savings. This approach has meant the wholesale dismissal of alternatives which provide greater viability and value for money.

The economic case for HS2 has always completely relied on the assumption that all time spent on trains is wasted, and therefore by business travellers going faster, there is an economic benefit to the economy of HS2. With the advent of technology like tablet computers and mobile phones, even the DfT now publicly admit the assumption is outdated, but the October 2013 economic case relied even more heavily on the flawed concept that absolutely no-one uses a laptop on a train when calculating the Benefit Cost Ratio.

Additionally, the concept that there is a benefit to the economy from business passengers going faster relies completely on the idea that the journey taken on HS2 is the only journey being taken, that the station is the end destination of all travellers. Because the HS2 proposal is to only connect to two existing stations: Euston and Manchester Piccadilly, travellers making ongoing journeys at other stations will lose the time saved by travelling on HS2 to transfer stations and complete their journey, a fact which has been completely ignored when calculating the business case.

The benefits attributed to time savings have risen in the latest economic case to 79% of the total benefits. The number of expected business travellers on the train has doubled in the HS2 calculations, to approximately 60-70%, depending on the precise journey being made. This in spite of Transport ministers now agreeing publicly that time on trains can be productive.

### 1.1 Signing the blank cheque

“It is not possible to give a definitive figure for expenditure that will result as a consequence of this Bill.”

*House of Commons Explanatory Notes, High Speed Rail (Preparation) Bill, May 2013*

The expected cost of HS2 from London to Manchester and Leeds was originally £33bn, in 2009 prices, but, at the time of the 2013 High Speed Rail (Preparation) Bill debate, the cost leapt to £50bn, in 2011 prices. This still excludes such things as localised infrastructure to connect with HS2, foot bridges and farm bridges to cross it.

In addition, this does not include the Heathrow Link which was suspended pending the Davies Review, which has produced the interim conclusion that Heathrow should at least stay in its current form, or any provision for changes to the scheme. Changes such as these are inevitable.

In 2013, incoming HS2 Ltd chair David Higgins was asked to investigate ways of reducing the costs of HS2. When he reported in March 2014, the fact that his original brief was to cut
the costs of HS2 was conveniently forgotten. The resulting ‘HS2 Plus’ report failed to find any cost savings, claiming it would be “irresponsible” to reduce the budget. Further, Higgins blamed “the uncertainty over the legislative timetable” for his inability to find any cost savings.

In fact, Higgins' HS2 Plus report also claimed a need to be “more ambitious about Euston” and rejected the HS2-HS1 link. It seems politically unlikely that any new proposal for either Euston or a link to HS1 will be put forward without a substantial increase in the overall budget. Higgins also saw fit to pre-empt the results of the consultation of Phase 2 of the route, saying he wanted to add a ‘hub station’ the Crewe, but again had no costings for this. The results of the Phase 2 route consultation, which closed on 31st January, have still not been published.

Despite political rhetoric that there will be 'no blank cheque' for HS2, the High Speed Rail (Preparation) Bill allows unlimited spending on preparatory works. Many of the items specified were included in the 2010 budget, and although the bill asks for annual expenditure reports, the first one will not be put before Parliament until after the next General Election.

This Bill is not a necessary part of the process of building HS2, but was introduced to Parliament because the original budget was seriously underestimated and costs to date are already significantly over budget. Of the 16 ‘professional services’ contracts awarded by HS2 Ltd in 2013, every single one was over-budget by February 2014, with the average overspend being 86%. The original budget for these six contracts was £101m, but in February before they all had been completed, the total was running at £188m. These overspends included five contracts for environmental services required for the Environmental Statement accompanying the Hybrid Bill which were running at 150% over budget, despite the fact HS2 Ltd admitting that 40% of the route had not been surveyed.

1.2 Speed "almost irrelevant" but dictates everything
Transport Secretary Patrick McLoughlin said that for a new north-south railway, the speed was “almost irrelevant” but that as HS2 will only cost around 9% more than a brand-new conventional speed railway, we might as well spend the extra taxpayer’s money to make it ultra-high speed. However the unjustified design speed of 250mph (400kph) reduces both connectivity and capacity, and removes the possibility to run heavy freight on the new line. It also means the line has to be straighter than a conventional railway, increasing the impact on communities, woodlands and habitats.

The economic case for HS2 is reliant on the assumption that time on trains is wasted. Proponents of HS2 say every option that would reduce its speed “won’t have the same benefits”. In essence the DfT are saying we have to build a high speed railway, which costs £4bn extra, because a conventional speed railway isn’t high speed, even though they also say the speed is irrelevant.

However a conventional speed railway would mean lower cost to build and run, greater connectivity, more freight paths, greater versatility, lower energy requirements and therefore a lower carbon footprint, and would be less damaging to communities and the
local environment. If the argument that capacity can be increased on the existing network by addressing pinch-points, the costs would drop even more.

2. Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?

2.1 Shifting Arguments
Since the inception of HS2, there have been a series of justifications used as a reason for building it. Initially, the justification was shorter journey times, but this assumed all time on trains was wasted. Then it was about replacing airplanes, but HS2 Ltd say HS2 will neither achieve modal shift, nor reduce carbon emissions. It was heralded as an environmentally friendly solution, but it is massively damaging to local environments.

The HS2 business case has been downgraded time and again. It’s been condemned by the National Audit Office, Taxpayers Alliance, Public Accounts Committee, New Economics Foundation, Treasury Select Committee and Institute of Economic Affairs amongst others. It has now been claimed HS2 will rebalance the economy and heal the north-south divide, but international evidence shows it is almost certain HS2 will suck more economic activity towards London.

What’s more it now appears that HS2 was never properly assessed by the last Labour Cabinet: Peter Mandelson wrote in the Financial Times in July last year about the situation at the time:

http://www.ft.com/cms/s/0/5db4c212-e301-11e2-bd87-00144feabdc0.html#ixzz2i5QY4uZV

“In 2010, when the then Labour government decided to back HS2, we did so based on the best estimates of what it would involve. But these were almost entirely speculative. The decision was also partly politically driven. In addition to the projected cost, we gave insufficient attention to the massive disruption to many people’s lives construction would bring. ….. We were focusing on the coming electoral battle, not on the detailed facts and figures of an investment that did not present us with any immediate spending choices.”

2.2 Capacity
The current rationale for HS2 is that a new railway is needed for capacity reasons. This is being used because everyone who uses trains has been on a busy train, but HS2 would deliver capacity where it is needed least, whilst the majority of passengers will still face crush-hour conditions. The growth in rail travel is mainly commuter and regional travel but the economic justification for HS2 is for long distance business travel to meetings, whereas in reality this is falling.

This is backed up by the latest figures from the Department of Transport (published September 2014, table RAI0214). These DfT figures for passengers standing show that there are significant numbers of passengers in excess of capacity on commuter services into all
major cities in the morning peak hours including on London Midland and the Trans-Pennine Express into London and Manchester respectively: on the long distance services run by Virgin and East Coast there are zero passengers in excess of capacity. The figures are similar for evening trains departing from major cities.

In responses to specific questions, the DfT have said that WCML long distance peak hour trains are just 56% full. What is worse are the suggestions that HS2 may displace commuter trains. The One North report suggested:

“In some locations, existing capacity constraints might be overcome by developing new arrangements to reduce the number of local trains terminating in central stations – a potentially expensive use of crucial platform capacity that could be freed up for HS2 trains.”

Rather than making the journey to work better for commuters, HS2 could make overcrowding worse for ordinary people.

While it has been claimed that HS2 will ‘free up capacity’, it is clear that to many destinations this means ‘losing the trains you already have’, as it can mean nothing else. Over 30 destinations will receive fewer, slower or no services to London after HS2 under current plans, due to the cost savings from the existing network which the HS2 business case requires. It also has to be remembered that these London services which would be reduced are also used as the fast regional services, for example the Virgin service from Birmingham to Coventry.

HS2 documentation claims that passenger growth will carry on rising, for decades. However, the increased growth in passenger numbers has happened over 15 years, after a much longer period of static growth. Across the world, high-speed rail programmes have failed to achieve the grossly inflated passenger numbers used to justify their construction. HS2 is presented as the only possible solution to an urgent problem, even though improvements to the existing railway can supply the new capacity that the railway industry say we need. These could be operational long before HS2 opens, and all represent better value for money.

### 2.3 Modal shift
With every economic case, the modal shift has dropped. With the 2013 revision, only 5% of passengers are expected to have shifted from air or car.

<table>
<thead>
<tr>
<th>Year</th>
<th>Classic Rail</th>
<th>New Trips</th>
<th>Air</th>
<th>Car</th>
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<td>2011 economic case</td>
<td>65%</td>
<td>22%</td>
<td>6%</td>
<td>7%</td>
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<tr>
<td>2012 economic case</td>
<td>65%</td>
<td>24%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>2013 economic case</td>
<td>69%</td>
<td>26%</td>
<td>1%</td>
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It is now projected that over a quarter of projected HS2 passengers will only chose to travel because HS2 has been built, whilst over two-thirds are expected to transfer from existing
services, which will almost certainly be cheaper than HS2, but may well be cut to force passengers on to HS2.

2.4 Dismissing digital technologies
Stop HS2 have repeatedly criticised HS2, because it ignores the growth in digital alternatives. This is already happening. For example, a report produced for the Department for Culture, Media and Sport, published in November 2013 says:

“Large corporates have made significant inroads over the last few years into reducing their travel costs (and emissions) by reducing the need for face-to-face meetings through the use of collaboration software and video-conferencing. With affordable faster broadband with low latency now widely available, we anticipate that the next few years will see this trend increasingly applying to smaller businesses.”

- p41 UK Broadband Impact Study


To begin with the Department for Transport and HS2 Ltd simply ignored that these technological changes were happening. More recently they have deliberately twisted the argument, linking the growth of technologies to growth in rail passenger numbers, but ignoring detailed studies by Government departments. Overall long-distance travel has been falling, and car usage has been static for the last 15 years, following a period of growth from the 1950s. In contrast, rail usage was static for much of that period, before it began to grow again, after privatisation.

In recent years, owning and running a car has becoming increasingly expensive: The costs of fuel and car insurance have rocketed, pricing younger drivers out of cars. Anti-congestion measures have further discouraged car use in towns and city centres. By ignoring changes on other modes of transports, HS2 Ltd is appearing to encourage a simplistic and one-dimensional view of the interactions between transport and communications technology.

3. What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

3.1 HS2 – No link to Europe
Many people in the Midlands and the North of England expect to be able to use HS2 to get to Europe, but this is incorrect. The original 2010 proposal did not have a link to HS1. The subsequent proposal to use the North London Line – criticised by TFL and other groups as well as Stop HS2 - has been dropped, but there is no current alternative suggested. What’s more telling is that when HS1 was being planned, the expectation was Eurostar trains would be able to use the North London Line to access the West Coast Main Line: but that proved impossible due to engineering constraints.
3.2 Spending £50 bn on HS2 has a huge opportunity cost.
In September 2014 the Conservative Home website polled the public on a suggested policy of “Scrap HS2 and give the savings to northern cities”. Voters in the North were overwhelming in favour of this policy with 55% agreeing with it and a mere 19% preferring HS2. Overall, 42% of voters were in favour of giving the HS2 money to the Northern cities, with 29% opposed and 29% undecided. It is not possible to know how many of these voters wanted HS2 scrapped but a different use for the savings.

It's clear even the supposed beneficiaries of HS2 realise there is a huge opportunity cost to it.

Alternatives to HS2 would not cost as much as HS2 and are much better value for money, would benefit far more people, better balanced in meeting needs across the whole country. These alternatives could be implemented much sooner than HS2.

For example, the independent think tank the New Economics Foundation has proposed a £33 bn package of investment including major upgrades to the East Coast and West Coast main lines; regional rail enhancements; investment in urban mass transit and bus networks; and improvements to cycling and walking infrastructure. These investments would still leave funds to extend the roll-out of super-fast broadband.

A package of this kind would not only meet rail capacity needs but would be much more effective than HS2 in catalysing growth and job creation and contributing to a low carbon future.

4. Might some parts of the UK suffer economic disadvantage from HS2?
Stop HS2 has long argued that many places will be at a disadvantage from HS2, as this is both what the international evidence shows and what reports conducted in this country have predicted.

4.1 Disruption from HS2
Building HS2 will cause disruption to the rail network, estimated at 7.5 years of weekend closure according to a Network Rail report published by the Government in October 2013. Constructing HS2 would cause disruption to the rail network at at least; Euston, Camden, Old Oak Common, Calvert, Kenilworth, Berkswell, Birmingham, Strecthay, Handsacre, Crewe, Manchester Piccadilly, Long Eaton, Church Fenton, Meadowhall, Golborne, Carstairs, and Preston.

There would also be severe impacts on the road network from building HS2. HS2 will cause years of constant road works along the proposed 351 mile route, including moving the M1 in two places, and causing years of traffic chaos near Birmingham Airport where HS2 Ltd would have to build a station and cross two motorways and two dual carriageways in less than two miles. Such disruption would be replicated throughout the proposed route, but there has been no attempt whatsoever to assess what effect these road works would have on the economy.
4.2 September 2013 KPMG Report shows economic losses in many areas
The Government has been using the September 2013 KPMG report, commissioned by HS2 Ltd to bolster support for HS2.

The report cost HS2 Ltd £242,000 and invented a brand-new untested methodology to claim HS2 would create £15bn of economic benefits per year. The main assumption of the report from KPMG was to assume that the only factor influencing business location was access to labour markets. This methodology has been widely criticised, including by two different former advisors to HS2 Ltd. Even the KPMG report itself states on p83: “We recognise that this approach does not have a firm statistical foundation”.

The published KPMG report only tells part of the story in their data. It took a FOI request to get the details of places which KPMG had calculated would suffer economic loss if HS2 goes ahead. This included counties and cities far from the line, such as Cardiff, Cornwall, East Anglia and Aberdeen. However even cities like Liverpool, Lancaster and Glasgow could lose out even though it is proposed that they would get HS2 ‘classic compatible’ trains to their stations.

Henry Overman, former advisor to HS2 Ltd, wrote in the Telegraph:


“For one thing, part of the calculation that has “no firm statistical foundation” (it’s made up, to put it bluntly) nearly doubles the estimated good effect from £8 billion to £15 billion. Consider also that a lot of this projected effect comes from shifting workers around Britain: that might help specific places (Birmingham, London and Manchester) but it won’t mean a positive benefit for the British economy as a whole.”

There are a number of other problems with the report. For example, it used the August 2012 economic case, which included a link to Heathrow: this link had been ‘paused’ months before KPMG began work, but it was still included in their analysis. Since then the proposed link to HS1, along the North London Line has been dropped.

Whilst using a flawed methodology to calculate benefits of HS2, one finding was consistent with international evidence, in that high-speed rail networks do not necessarily create economic activity, but they can have a significant role in the relocation of businesses, meaning businesses are encouraged to move out of deprived areas where jobs are needed most to unsustainable new developments around stations, which increase the need to commute greater distances to work.

4.3 Businesses and areas directly affected by HS2
HS2 Ltd have worked on the assumption that in businesses which are displaced by HS2, 20% of jobs will be lost. This will have a knock on supply chain effect, meaning further jobs will also be lost in.
No value has been put on the lost output from farming or tourism during the construction and operation of HS2. In an attempt to offset the effect of increasing costs to the business case for the project, HS2 Ltd previously dropped the value of the countryside that would be destroyed by HS2 from £4bn to £1bn.

As previously mentioned, 30 destinations would get reduced rail services as a result of ‘freeing up capacity’ from HS2, without any economic value put on what this will mean for these locations.

Additionally, it is clear that losses to property values have been incurred by home, land and business owners along the route. This is another factor which should be included in the business case for HS2.

5. Is London likely to be a main economic beneficiary of HS2?
Yes.

5.1 Euston
Euston is the main London terminus for HS2, but more than four years after the original HS2 public announcement, it is still unclear the extent of the rebuild at Euston, the costs of the rebuild or the timescale needed.

Original plans to rebuild Euston were dropped when it emerged that the budget had been underestimated by £500 million and that the plans would take a decade to build – longer than the rest of Phase 1.

The alternative of an extension to the existing 1960s building would still take around 8 years and was described as “a shed being bolted on to an existing lean-to”. This was clearly untenable and were dropped by the Higgins HS2 Plus report. However no alternative design has yet been proposed and it is likely that the budget for HS2 would need to be increased. Frank Dobson, the local MP, told the House of Commons in September 2014 that in discussions with HS2 Ltd, “HS2 let slip at meetings that it is now thinking in terms of £7 billion.” This is a massive extra cost from HS2.

What’s more, HS2 will funnel existing passengers on the East Coast Main Line into Euston instead of Kings Cross and St Pancras. This will add to the pressure on the station, and HS2 Ltd say that Euston will not be able to cope with these passengers, which will increase the urgency for building Crossrail 2. With many pro-HS2 commentators arguing that the current spend on Crossrail 1 (of which 60% comes from Londoners), can simply be transferred to spending on HS2, there is clearly a black hole in the budget.

5.2 HS2 and the South-East airport
Originally a High Speed Rail Line was suggested by the Conservative Party as an alternative to expansion at Heathrow, but the original design of HS2 did not include a link to Heathrow. This was subsequently added as a spur line, but has now been ‘paused’. The on/off Heathrow link is a result of the unclear and incomplete objectives for HS2, leading to uncertainty for potentially affected businesses and homes.
HS2 will not reduce demand for air travel. Not only has the clamour for expanded airport capacity got louder since the election - including from proponents of high speed rail like Andrew Adonis and David Begg - but HS2 Ltd’s own modal shift figures have collapsed away. In the 2010 case, HS2 Ltd said 8% of HS2 passengers would have shifted from air, but by the 2013 economic case, HS2 Ltd’s own figures say that 1% of passengers would otherwise have gone by air. Any claims that HS2 might replace air travel are unfounded.

6.0 How might the expected benefits of HS2 to the national economy be realised?

The predicted benefits of HS2 are at best ‘voodoo economics’, hoping that replicating existing transport links, but without the same levels on connectivity, will somehow lead to an overall increase in economic output. This conclusion is suspect at the very best. Whilst the firms involved in the construction of HS2 and associated developments will see benefits, it has not adequately been evidenced that there will be any net benefits to the national economy at all. Those drawing up the various business cases for HS2 have strived from day one to maximise the anticipated benefits, whilst in most cases ignoring negative effects to the economy, such as increasing unemployment in areas which businesses might move away from in favour of locating near the HS2 line, and indeed the impacts of businesses closed due to the construction of HS2 and the negative effect on the economy of road works.

The other extremely significant factor in this equation which we believe has been significantly underplayed is the cost of HS2. The official cost of construction has already risen by £10bn, but this is still fraudulently based on 2011 prices. We also believe the current engineering solutions offered by HS2 Ltd are inadequate on issues such as visual mitigation, flood prevention and the transmission of noise and vibration, meaning there will be additional costs for the project beyond simple cost inflation. The fact the HS2 plans are not robust in engineering terms is no better evidenced by the fact that in September 2014, additional provisions were announced because HS2 Ltd had made no effort to understand standard construction practices concerned with traversing the routes of electricity pylons and gas and oil pipelines.

As such we are convinced the construction costs will significantly increase. Additionally, estimates for operation of the railway underplay the costs and overplay the income. HS2 have followed a long-established pattern with high-speed rail projects internationally, to grossly inflate the passenger forecasts, and therefore the income the scheme will reap. They have also underplayed the costs, for example HS2 Ltd forecast that electricity prices would increase 81% in 18 years, but instead of building this in to cost forecasts, they have instead decided that electricity costs will only ever rise in line with inflation until the end of the century.

Most telling with the costs of HS2 is that there has been no attempt made to estimate the financing costs. It is certain that HS2 would be funded by borrowing, but there is no cost associated with this.
Given all this, and the opportunity cost associated with spending on HS2, we believe HS2 will deliver a negative effect to the UK economy.

7.0 How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?
HS2 will have to be operated with a massive ongoing subsidy. Whilst this will on its own stifle the idea of genuine competition, it is feared that the Government will legislate to force people on to HS2. It is of significant concern that future franchises on the East Coast Mainline, West Coast Mainline, Midland Mainline and Chiltern Line will have restrictive franchises which cut the number of existing services to destinations which would be served by HS2 to force people to use HS2. This is has been common practice when high-speed rails have been introduced around the world, including in Kent.

8. Should travellers expect to pay higher fares on HS2 than on other lines?
The HS2 Ltd passenger figures assume that fares on HS2 will be the same as conventional fares, but Patrick McLoughlin refused to say this would be the case when repeatedly asked to confirm this in a BBC interview last year. It is not a valid assumption to assume the ticket prices would be equivalent to current fares, as in reality faster services cost more than slower services and Mr McLoughlin did warn that some passengers will have to pay “a lot of money” to use HS2. With higher energy and maintenance costs than a normal railway, the only way to keep HS2 fares in line with current services would be a massive increase in taxpayer subsidy for HS2.

Speed-based pricing is already evident on London-Birmingham routes, with the hierarchy of speed correlating with the hierarchy of ticket price, in descending order being: Virgin, Chiltern, London Midland. It is clear that excluding premium pricing in the HS2 model has only been adopted to make the passenger numbers work.

Most high speed rail projects forecast far more passengers than use the service when the project is completed, including HS1.

On HS1, not only are the high speed tickets more expensive, but the fares for the conventional speed alternatives have been increasing more than most other fares to try and make HS1 more attractive. HS1 currently carries 9 million passengers per year instead of the 25 million forecast for now: unexpected competition from low cost airlines and ferry operators is blamed for this. The National Audit Office reported that HS1 will cost the taxpayer £10bn more than expected because of this shortfall.

9.0 Does the prospect of HS3 affect the economic case for HS2?
George Osborne’s “Powerhouse” speech in June 2014 set out a nebulous idea for the next high speed railway after HS2 is built. This was a blank slate chance for cities in the north to develop ideas about a new version of HS2 to go across the Pennines.

However the One North report published in response makes no mention of “High Speed 3”. Although there are numerous mentions of a new east-west railway, it only once refers to
“east-west high speed rail link” and the tentative design is a very long way from the design of HS2.

The speed is very different. It suggests 125 mph, the current operating speed of the West Coast Main Line, compared to 250mph for HS2. It is also proposed to carry freight – but from the start, campaigners were told that HS2 would never carry freight. What’s more a request in the One North report for “Recasting HS2 in Yorkshire” clearly implies that the Northern cities are unhappy with the current HS2 proposal.

The HS3 proposals have been mooted against a backdrop of the current Trans-Pennine electrification being under threat. In July, Paul Plummer, Network Rail’s strategy director told the Transport Select Committee: “I can’t give you that absolute, categorical confirmation.” that the proposed electrification of the Trans-Pennine route from Manchester to York would go ahead, again due to rising costs.

It is notable that support for HS2 amongst Northern Councils had been born out of the fact they had been offered ‘HS2 or nothing’. Now that the option of HS3, or a similar proposal which would do more to regenerate the north for a lower cost is being proposed, support for HS2 is in decline.

**10.0 An alternative vision for a modern Britain**

The HS2 proposal completely ignores the reality of transport needs in the UK, with the warning coming from the Eddington transport study of 2006, which warned:

“It is critical that the government enforces a strong, strategic approach to option generation, so that it can avoid momentum building up behind particular solutions and the UK can avoid costly mistakes which will not be the most effective way of delivering on its strategic priorities.”

“The risk is that transport policy can become the pursuit of icons. Almost invariably such projects – ‘grands projets’ – develop real momentum, driven by strong lobbying. The momentum can make such projects difficult – and unpopular – to stop, even when the benefit/cost equation does not stack up, or the environmental and landscape impacts are unacceptable.”

“The approach taken to the development of some very high-speed rail line options has been the opposite of the approach advocated in this study. That is, the challenge to be tackled has not been fully understood before a solution has been generated. Alternative options do not, therefore, appear to have been fully explored so it is not clear what the highest return solution to a problem would be; nor indeed is the challenge clear.”

As such, HS2 has remained a solution looking for a problem, which ignores that the vast majority of rail users travel on short-distance commuters, whilst long-distance inter-city journeys are mainly the preserve of the business elite. More investment in local transport which enables more people to work close to where they live is required to deliver sustainable solutions fit for a digital age.
Stop HS2—Written evidence

New options for travel are coming into widespread use. People are choosing to buy electric cars, which will need a whole new infrastructure to support their use. Driverless cars - which will be trialled in Milton Keynes in 2017 - could be coupled together in carriages they could transforming public travel. Britain could be at the forefront of the electric car revolution.

But it’s not just 21st century transport which is changing.

The advent of digital technologies and the interconnected world have radically changed the way we work and communicate. Digital technologies mean that physical face-to-face meetings are no longer so necessary, 3-D printers allow us to remotely reproduce objects, and remote sensing means we can find out what is going on somewhere else without going there. A British citizen invented the World Wide Web, so we should ensure that Britain continues to be a world leader in this new digital world.

If we spend £50bn on HS2, future generations will ask why we spent so much money on a 19th century solution in 21st century Britain. They will ask why we built a long-distance railway destroying sensitive wildlife sites at a time when long-distance travel is falling, and they will ask why we integrated it so badly with the existing transport network. They will ask why we spent money on a railway rather than on the infrastructure needed for electric cars at a time when driverless cars were being trialled. They will ask why we ignored the exponential growth in digital technologies, just when it allowed instant communication anywhere across the world.

Rather than emulate the Victorian railway barons with the HS2 proposal, we should be looking ahead and building the digital and other infrastructure needed for 21st century technologies.

September 2014
Stop HS2 and HS2 Action Alliance—Oral evidence (QQ 78-87)

Transcript to be found under HS2 Action Alliance and Stop HS2
1. The UK government is proposing to build the HS2 railway with 330 miles of new line for an estimated cost of GBP 42.6bn – i.e. £129 per mile.

2. The government claims to have looks at alternatives to HS2 and has published a small number of reports such as that by the Atkins consultancy and Network Rail.

3. The government claims that HS2 is needed to provide extra capacity on lines that would otherwise be full. Economic benefit is thus provided by this extra capacity enabling more journeys and by reduced journey times.

4. Capacity is a function of both the number of people on the train (passenger capacity) and the number of trains on the track (train capacity).

5. Extra passenger capacity could be provided by longer trains, more second instead of first class seats and the dividing of trains (for example, many trains from Victoria to Brighton and other south coast destinations split en route).

6. Timetables, published by the railway companies, and the Route Utilisation Strategy documents, published by Network Rail, show the main lines from Euston, St. Pancras and Kings Cross are operating at about 40% of their (passenger) train efficiency. This is due to their operation as mixed traffic railways with different speed passenger trains and freight trains sharing the tracks.

7. HS2 provides a new pair of tracks for the fastest trains, but an alternative way to increase capacity would be to improve the efficiency of the existing lines by diverting freight trains on to alternative routes, thus allowing many more passenger trains to be run on the existing lines.

8. Freight trains are run on the West Coast Main Line due to its large loading gauge. Other routes could be used if their loading gauge was increased. Network Rail has projects in progress to increase the loading gauge on the Felixstowe – Nuneaton and Southampton – Nuneaton routes. The cost of these projects is of the order of £1mn per mile.

9. Further capacity could be obtained by reopening lines closed by British Rail between 1950 and 1990 for freight use. One example would be between Hitchin, Bedford and Northampton to provide a north-west to south-east link across the Midlands and better enable freight to run from south-east ports to the West Midlands and North West of England. Lines are being reopened in Scotland at a cost of the order of £10mn per mile.

10. The government should consider an alternative strategy to HS2, whereby freight trains are diverted away from the fast main lines onto slower lines via loading gauge enhancement and line reopening. This strategy would be a much less costly than HS2
and likely provide a similar increase in capacity. As a result, the economic benefit per unit cost would likely be increased.

September 2014
Introduction

1. This submission is made by the Tonge & Breedon HS2 Action Group (TABAG) which represents some 60 people living in the villages of Tonge and Breedon, situated in North West Leicestershire.

2. The Preferred Route of Phase 2 of HS2 passes across the Eastern corner of Tonge and close to Breedon [HS2 Drawing 55605 refers]. HS2’s Phase 2 Route Consultation document itself states: “A bridge over the A42 and embankment would result in landscape and visual impacts in the surrounding area, including the Conservation Area at Tonge.” Further, the severe environmental impact is recognised by the Temple-ERM Sustainability maps (commissioned by HS2) which show that the whole of Tonge and half of Breedon will experience “a noticeable noise increase” and that the length of track discussed in the Tonge and Breedon section is a “Preliminary Candidate Area for Mitigation”.

3. TABAG submits that it has economic concerns that it wishes to bring to your attention, both as taxpayers, as to the general economic value of the HS2 project, and as residents, with a special economic interest in HS2 and its local design, should the HS2 project proceed.

National Economic Concerns

4. HS2 will come into service in 20 years’ time (ie. around 2035) and will need to provide economic value for 100 years thereafter (ie. to around 2135).

5. TABAG considers that, conceptually, HS2 is the modern expression of technology which dates from around 1850. The concept of a traveller being forced to make his way from his initial location to some central point in order to board a train in order to be transferred to another central point (which is not where he wants to be) in order to make his own way to his intended destination, is out-dated. Modern travel is, and will increasingly be in the future, point-to-point.

6. According to a 2012 Reuters poll, approximately "one in five workers around the globe, particularly employees in the Middle East, Latin America and Asia, telecommute frequently and nearly 10 percent work from home every day". Electronic systems of work and work behaviour will continue to evolve so that the concept of physical travel in order to conduct a business, or leisure, interaction will be out-dated.

7. Should travel be deemed necessary, there are already vehicles operating in California which provide point-to-point travel without driver input, thus providing the “driver” and passengers with opportunity for work, rest or play while in transit. This will
become commonplace by the time HS2 commences operation, let alone 100 years later.

8. There is a logical inconsistency at the heart of the HS2 project. Originally, it was designed for “high speed”, ie 400kph, and it was therefore required to run in a straight line across the country without regard to community and environmental impacts. Later, it emerged that the purpose of the project was “capacity”, not “speed”, but the opportunity was not taken to reduce the impact and economic cost by re-designing the route. Instead, much of the line is now to be tunnelled in order to avoid these impacts. The original design is economically wasteful.

9. There is much dispute about the pressure on capacity on existing rail routes from London to the North of the country – particularly when projected forward for 100 years. Many would contend that the “capacity” demand for HS2 is fallacious, based on dangerous extrapolation of relatively short term growth.

10. Conversely, there is little dispute that economic activity needs to be encouraged within the Northern part of the country. Many have argued cogently that improved transport links within and across the North are what the nation really requires – therefore, not HS2.

11. Experience in France and Spain shows that high speed links from the capital to the rest of the country result in more economic activity being transferred towards the capital than vice versa. It will be generally acknowledged that this is exactly what the UK does not need the consequence of HS2 to be.

12. TABAG therefore offers to the Committee the conclusion that the expenditure of £50 thousand million on a high speed North-South railway is a disastrous waste of public funds in order to build a “white elephant” vanity project. TABAG believes that there are far better ways in which such funds could be deployed to ensure that the UK economy and infrastructure are fit for the 22nd Century.

Local Economic Concerns.

13. It will be apparent, from the Introduction above, that TABAG has grave concerns about the impact on its local communities about the Preferred Route of Phase 2, should the Government be determined to proceed with this project. By themselves, these could easily be dismissed as NIMBY’ism but TABAG has offered an alternative routing which benefits our community while conferring a significant improvement in the economics of the project.

14. The present proposed route requires twin bored tunnels under East Midlands Airport and under the adjacent Strategic Rail Freight Terminal to its North. This SRFT has just been given Planning Permission and, although the project was well advanced at the time Phase 2 was announced, it was apparently ignored because
Planning Permission had not been granted. The Secretary of State subsequently announced that these twin bored tunnels under the Airport would be doubled in length to pass under the SRFT. It is understood that the original Airport tunnel was to cost £250m and therefore it would save some £500m if tunnels of twice the original length could be avoided.

15. TABAG has demonstrated both to the Secretary of State (meeting with Mr McLoughlin in June 2013) and to HS2 engineers that an alternative route is entirely feasible, that it involves less impact on communities along the route and that it makes use of the M1 corridor (in accordance with HMG policy) which the present HS2 Preferred Route does not.

16. HS2 have argued that the alternative requires one extra 10km radius bend which TABAG calculates might add approximately 1 minute to journey time.

17. Conversely, TABAG has argued that the extended tunnel now proposed by HS2 will require a slowing of trains because of the rapid change in elevation in order to travel over the M1 – a vertical S-bend, described by HS2 engineers as the “Alton Towers Effect”.

18. TABAG therefore concludes that its alternative route offers a saving of £500m with no significant increase in journey time, better use of motorway corridors and open country and, consequently, reduced impact on local communities.

19. TABAG has noted that Sir David Higgins was appointed as Chairman of HS2 Ltd by the Prime Minister with a specific brief to reduce the cost of HS2. TABAG has sought assurance from Sir David that he is aware of this cost saving opportunity and, indeed, is insisting that his engineers should adopt it. Sir David has studiously evaded the issue by stating that TABAG must await the outcome of the Phase 2 Route Consultation.

20. TABAG urges the House of Lords Economic Affairs Committee to use its powers to demand a proper and full response from HS2 Ltd. as to whether it proposes to take advantage of this massive potential saving to the public purse and, if not, why not.

*August 2014*
The Chairman: Ms Dix, can I welcome you to this meeting of the Economic Affairs Committee? It is our 8th session of taking evidence in our inquiry into the Economic Case for HS2 and we are delighted that you are able to join us today. Thank you very much.

Network Rail's development director for Euston, who gave evidence at the Committee last month, raised some issues recently about the cost benefits for Euston Station. The minutes say that HS2, “simply could not get the costs and benefits of the scheme to balance in an affordable way”, so the designers have stopped work. This was reported in the Sunday Telegraph as being the end of the story for Euston. Could you give us an explanation of what is happening and what is planned to happen on the development of Euston?

Michèle Dix: I can tell you what I understand, having had a conversation with the mayor and David Higgins, which is that the work has not stopped. There is work that is still ongoing for Euston. The costs for Euston were higher than the envelope of costs expected for Euston. That work is ongoing to re-examine the scheme and the way it will be laid out, and they are seeking to bring those costs down. At the same time, they are also committing to deliver against the objectives for the Euston area plan, such that the scheme is properly integrated into the wider area. The aim is to produce a master plan for the area that is consistent with the Euston action plan, and then to understand how each component of that
The master plan can best be delivered. So as far as I understand, there will be a scheme at Euston. It will be brought back to the Committee next year, towards the end of the summer, and we will want to work closely with HS2, Network Rail and others to ensure that the design of that layout fits with our own aspirations.

**The Chairman:** I presume this work has been ongoing for some considerable time already, so can we infer from this pause or delay, or however you like to describe it, that there is some difficulty in achieving the overall objectives within the cost envelope that has been suggested?

**Michele Dix:** What was put into the hybrid Bill was not thought to be a satisfactory solution. Sir David had said that he wanted to review the scheme within the hybrid Bill and to come back this December with some additional provisions for a revised Euston Station. The aspirations were that the whole station would be a level station, so HS2 platforms, the Network Rail platforms, would be levelled. When they looked at producing that scheme, which most people would support given the fit with the area plan, the costs were deemed to be too high but the construction time to deliver it was also considered to be too long. So effectively they have gone back to the drawing board to ensure that they can come up with a design that fits in with the cost envelope but still meets the aspirations for the area. As I said, we want to be very much part of that to make sure that the bits that we are concerned about are still addressed within that plan.

**The Chairman:** What role does TfL have in the preparation of this plan and the discussion of this plan?

**Michele Dix:** The Euston area action plan is something that the London Borough of Camden produced as a planning authority. They have had a board that has comprised members of TfL, the GLA, HS2, the Department for Transport and Network Rail to come up with a plan that has been consulted upon, and as I said the ambition was that the plan for Euston itself should fit with that overarching plan. The design that was on the table did fit until recently, but the work they have done shows that the cost of developing and delivering that, and the timetable for delivering that, exceeds the envelope that they have. One of the discussions was whether or not, if you developed Euston in that way, you could give rise to a greater economic uplift and whether or not that economic uplift would justify the additional costs. As I understand it, they have concluded that it does not. But we would want to work closely with them to understand why and to influence their design. What we do not want is a fragmented approach to Euston whereby they just deliver the HS2 platforms but do not make the improvements that are needed to the Network Rail side of the station, or—importantly for us—the improvements that are required on the underground and those for onward travel, be it by bus, cycling, walking or taxi. Making sure that it is integrated and that it does include some of these important cross-station walk links are certainly a key feature of the Euston plan, so that the local community is not severed by the station.

Another key thing that we want to make sure is still within that plan when it comes back is that there is a direct link between Euston Station and Euston Square, which again helps with the onward dispersal of passengers—passengers being able to get on to the Hammersmith and City and Circle lines. A key part for us in TfL is making sure that the redesign of Euston
fits in with the designs that we are developing for Crossrail 2, because we know from our own work that when Euston is up and running—particularly with phase two of HS2—the volume of people arriving at Euston will exceed the capacity on the Underground lines, even after all the upgrades that we are going through, and we will need additional Underground capacity in the form of Crossrail 2 to help with that dispersal. We have been working closely with them to ensure that there is a link between the stations and that it fits together.

The Chairman: So Crossrail 2 is an essential additional investment that needs to be made to make HS2 work when it is fully built?

Michèle Dix: We have argued that Crossrail 2 needs to be opened before phase two of HS2 goes live in order to help with that dispersal, otherwise the benefits that HS2 claims—particularly the journey time savings of people getting to London quicker—will be lost if people then stand in queues waiting to get on to the Underground.

The Chairman: Just remind us what the total cost of Crossrail 2 is.

Michèle Dix: The total cost of Crossrail 2, depending on which scheme you go for—and we are promoting the regional scheme—including all the optimism bias and so on, Network Rail and rolling stock is £27 billion.

The Chairman: It is £27 billion. Thank you.

Q193 Lord Lawson of Blaby: Following on from the discussion about Euston, you have talked in general terms. Can you give some numbers? Crossrail 2, you have just said, is £27 billion, so in a sense, because it is necessitated by the HS2 project, as you have said, that is really an additional cost of HS2. In addition, you have said that with the transformation of Euston Station—I am not quite sure whether this is to include the Underground station as well, which again you have indicated is going to be necessary, but maybe that is in the Crossrail £27 billion figure—there is a problem because it is running ahead of budget. I understand that the original budget was £2 billion. Can you give an indication of how much above budget it is running? We have had evidence that it is likely to be something like £7 billion. Does that accord with your own analysis?

Michèle Dix: As I understand it, the scheme they had on the table until recently would be about £4 billion to £4.5 billion. Obviously that does not include the HS2 project, as you have said, that is really an additional cost of HS2. In addition, you have said that with the transformation of Euston Station—I am not quite sure whether this is to include the Underground station as well, which again you have indicated is going to be necessary, but maybe that is in the Crossrail £27 billion figure—there is a problem because it is running ahead of budget. I understand that the original budget was £2 billion. Can you give an indication of how much above budget it is running? We have had evidence that it is likely to be something like £7 billion. Does that accord with your own analysis?

Lord Lawson of Blaby: You are quite experienced in this area. That is unlikely, is it not, because in practice with these schemes, costs tend to rise rather than fall, even though you may be able to contain to some extent the amount by which they rise. It is unlikely to be less than it now looks at the present time, is it not?

Michèle Dix: Sometimes costs go down. The optimism bias figure can go down because you have designed the scheme in more detail, so you do not need to add such a large optimism bias. We want to work with Network Rail and HS2, as I said, to ensure that whatever the design that comes out it works and that the plan for the area is an integrated plan, so that even if the proposals are such that they build it in sections, they build it to a plan that delivers a proper scheme for the whole area. TfL would want to see that our
station—nothing to do with Crossrail 2, but the station at Euston itself—is an integral part of that plan and is paid for as part of the HS2 costs, because you need to upgrade the station to accommodate the people coming in just to the ticket hall area before you even go down to the platforms. We want to make sure that is an integral part of the cost for HS2, and we will work with the HS2 and Network Rail teams to try to make that whole thing work.

At the same time, we would not be prepared to see things that should be in that scheme omitted from that scheme. We want to work with them and so, before they come back with a proposal, we are trying to influence their design.

Lord Lawson of Blaby: One last point about Crossrail 2. I think you said—and certainly this is the view of the Mayor of London—that Crossrail 2 has to be completed to make sense of HS2. What is the timescale for this? When will it be completed and what is this £27 billion expenditure? Do you know how that is phased over the next five years, say?

Michèle Dix: We have said that Crossrail 2 needs to be in place before phase two of HS2 is completed. If you just built phase one up to Birmingham, the level of flows that come into Euston can be accommodated on the Tube with the uplift that we are providing on the Tube. When you build phase two you double the flows that come through Euston and you will need the Crossrail 2 capacity going through Euston. Crossrail 2, though, is not dependent on HS2. Crossrail 2 is needed regardless of HS2, so we are progressing Crossrail 2 separately. But because we want Crossrail 2 to go past Euston, to help to relieve the pressure at HS2 we want to make sure that the works that we do on Crossrail 2 align properly with the works associated with HS2. If you can build them together so that you only have to have one worksite, one hole and one mess, that would be better.

Our timelines for taking Crossrail 2 forward are that we are currently in a consultation. The DfT has issued a consultation on the safeguarding for Crossrail 2, which is an amendment of the old Chelsea-Hackney line to accord with the new route that we have determined following consultation, subject to getting confirmation from the Secretary of State on that. We are preparing a more detailed case for Crossrail 2 to go back to the Government for the comprehensive spending review next year, along with all our own ideas as to how Londoners can help to pay to deliver Crossrail 2. It is not going to the Government and saying, “Give us a grant for the lot”. It is, “How can we come up with a mechanism that shows that we can get funding from other sources?”. Subject to that, we would seek to prepare Crossrail 2 to submit for powers in 2017 in the hope that we get them by 2019, can start constructing it in 2020 and can have it built by 2030—before phase two of HS2.

Lord Carrington: Just to clarify something, because I am not terribly clear, you were talking about having HS2 and Network Rail on the level at Euston. In simplistic terms, does that mean that there are no steps between the platform levels, or am I misunderstanding?

Michèle Dix: The aim is to level the lot. At the moment you have the HS2 coming in at a lower level, so you would have to lower the Network Rail tracks. But the proposals that are being considered at present are to keep the Network Rail tracks where they are and to bring the HS2 lines in at a different level. That is not completely unworkable, but it has to look like a complete station from the outside. You do not want a bit of a box here and then a new box added on to it. What we do not want to see is what we felt happened with Waterloo. When the Eurostar platforms were added to Waterloo they were just like an
add-on. We want the same comprehensive plan that is being done for King’s Cross, where the whole thing is a comprehensive redesign. That has a much more significant effect, so that is what we want to see. If they can do that, even by keeping the platforms at different levels but making sure there is good access, and making it look comprehensive from the outside and meeting the other ambitions for taxi provision, bus provision, cycling and walking provision, then fine.

Lord Carrington: When you say “look comprehensive from the outside” how important is that? Going from one platform to another is what is important, is it not, rather than the aesthetics of what the station looks like?

Michèle Dix: It is, but there are two things. If you are bringing more people into London and you have the opportunity for more development in that area—particularly oversight development—you want to capture that, so you would want the opportunity to have oversight development and have the frontage look comprehensive. You do not want it to look like some temporary building added to what is there already. There are some people who also want the Euston Arch popping back in front as well.

Q194 Lord Carrington: Absolutely. On the first stage of HS2 coming through to Birmingham, how many passengers would that produce, would you estimate, into Euston?

Michèle Dix: With HS2 phase two we add another 30,000, which is a doubling of number of the passengers.

Lord Carrington: That is 30,000 in the peak time in the morning?

Michèle Dix: Yes, in the am peak period, and I think it is about half of that in phase one.

Lord Carrington: So it is 45,000 in total?

Michèle Dix: With phase two it is 60,000. You are adding 30,000 more.

Lord Carrington: So you have 60,000 coming in?

Michèle Dix: Yes.

Lord Carrington: But you can cope with the ones that come from Birmingham, can you, because Euston is pretty crowded now in the morning with the Underground?

Michèle Dix: We are upgrading the Northern Line. We have upgraded the Victoria Line. We have further upgrades that we are making across the whole network, which is adding capacity to the Underground network generally. We have Crossrail 1 in 2018, and all these things cause some people’s journeys to change so that you can accommodate more on the system. We are sort of playing catch-up with growth in the sense that if we look at the growth that is taking place, even though we are providing additional capacity, that gets filled up. So when HS2 phase two comes along there is what we call reference case growth, and then there is the addition of phase two, added to phase one, which tips it.

Lord Carrington: These passenger numbers, particularly on phase two, are the ones you have from the HS2 project team, or are they your own assessment of it?

Michèle Dix: They are ones that we have worked with with them, because we have our own rail plan model and they have their PLANET model. Our planners have been working with their planners in order to understand the flows at Euston and, in particular, because
our models are more accurate for measuring crowding, then to understand the knock-on effects on our wider area.

**Lord Carrington:** You are confident that those numbers are robust?

**Michèle Dix:** We have been looking at them, we have been scrutinised by HS2 on them many times and we are confident that our numbers are robust.

**Lord Carrington:** One last question then, coming back a bit on Crossrail 2, if you are constructing Crossrail 2 during the period when you have the first phase of HS2 coming into Euston, it is going to be a bit of a mess, is it not? Are you going to be able to cope with the construction project of Crossrail 2 disrupting the new Euston Station, at the same time as getting all this extra traffic coming into Euston Station?

**Michèle Dix:** Crossrail 2 is completely under the ground and the design of Euston Station, which makes provision for Crossrail 2, is to provide access down from the ticket hall at Euston to Crossrail 2. We have identified within the area certain worksites that we want to use in which we can get down into the ground. We will be doing the works, but the sensible thing is to try to do those works at the same time but to co-ordinate them rather than to do Euston, make it all nice again and then come back just a few years later and dig it up again. One would like to co-ordinate them.

**Lord Carrington:** Crossrail 1 has created quite a lot of disruption on the Underground network during the construction phase.

**Michèle Dix:** I think it is being quite well managed though, given the scale of development that is taking place.

**Lord Carrington:** Indeed, but it has shut down quite a lot of interchanges.

**Michèle Dix:** For required periods of time, but as with the Bond Street Station it has been opened again in time for Christmas, so all those works can continue.

Q195 **Lord Rowe-Beddoe:** Could we turn now to the Stratford Spur? The Committee received written evidence, as I am sure you must be aware, from the London Borough of Newham, which is very concerned about this whole question. They say, “A link with robust capacity would enable Stratford International to play a supportive role in serving additional growth”, and so on. What are your comments on that?

**Michèle Dix:** We objected to the original HS1-HS2 link that was in the original proposals, because it would have been totally inadequate and it would have had an adverse effect on our own overground trains. We wanted to see that link taken out, but at the same time we want to see a proper link put back in. So we do want to see an HS1-HS2 link provided but we would like to see that as a twin-bore tunnel that went from Old Oak Common to join with HS1 and onward to Stratford. We did some work with Jim Steer and SYSTRA on the case for that link, because HS2 considered that it would not be well used and could not justify further investment over and above the proposals that they had. We would argue that that particular link, if put in place, would certainly help with the regional movements across London and the wider south-east towards the north, as well as provide a direct link to Europe. So we will continue to lobby HS2 for work to be done on looking at a link between HS1 and HS2.
**Lord Rowe-Beddoe:** Thank you. No doubt you have had the conversations with the Borough of Newham. Are they aware of what is going on currently?

**Michèle Dix:** I do not know if they are aware of the later stuff, because when we spoke to HS2 about the work that they are doing we asked to be more involved in the options that they are looking at. They say that they are looking at the wider networks, so this is not necessarily a link between HS2 at Old Oak Common and HS1 at Stratford but a wider network beyond London. If they are, we would want to understand what they are joining to what and what benefits that would deliver.

What one would not want is to miss the opportunity to be able to provide that link between HS1 and HS2, particularly when they are doing the tunnelling work around Old Oak Common. We have told them previously that if, when they are doing that tunnelling work, they could provide what we call a little spur that was big enough to get a tunnel boring machine in, even though they did not then provide the link now they would be able to go back and start tunnelling again at a later stage without causing disruption. We would like that work to be done to examine whether that particular location is the best location for providing that link.

Again, it is one of the things on which we want to work with HS2 and Network Rail so that we can understand what they are doing about that, certainly before we get to the Select Committee stage.

**Lord Rowe-Beddoe:** I assume that Newham would know of this and should be somewhat relieved.

**Michèle Dix:** There is no guarantee that there will be such a link. As we understand it, the current thinking of HS2 is that they are not necessarily looking at what we are asking them to look at. They are looking wider afield at where there can be some connections somehow in relation to the East Coast Main Line. But we want to understand what their proposals are and importantly then to say, “If you do not have a firm proposal, please make passive provision in the current Bill for a link to go from Old Oak Common through to HS1 now”.

**Lord Rowe-Beddoe:** Finally on this point, and I am sorry to push it, Newham said in its written evidence that the absence of a link, putting it in a negative way, would, “greatly reduce the prospect of ever substantially improving the connection”—and this is the interesting one—“between east London, Kent and Essex with the regional cities”. So they are looking further than themselves, so to speak.

**Michèle Dix:** Yes. Based on the work that we did with Jim Steer and SYSTRA, when you look at the volumes of traffic that would go through that link—so if you were able to join HS1 and HS2 with a direct link—you would see much more activity not only in east London going northwards but into Kent going northwards, more so than perhaps the activity going across the Channel. Linking the south-east with the north would be a valuable regional link.

**Lord Skidelsky:** Arising from that, are you satisfied that these various schemes are being adequately co-ordinated? It seems to me there are quite a lot of things going on: a lot of possible links, spurs, different timescales, and consultations. Is there a danger that a lot of things will be done that in the end do not make any sense as part of an overall plan? Whose job is it to knock heads together when it really comes to the point?
**Michèle Dix:** Within TfL and the Mayor’s Office we are very keen to ensure that all these things are joined together, because they are affecting London and the connections to London. HS1 and HS2 are something that we are actively keeping on the table because it is important for us to have that link, but because we are not the promoter we have to lobby, petition, argue or engage to make those changes come about. So there is an overview of what is going on, but then there is a requirement to influence how things are taken forward.

**Lord Skidelsky:** So ultimately it is the Secretary of State who decides?

**Michèle Dix:** Ultimately, yes.

**Lord Skidelsky:** But you lobby?

**Michèle Dix:** We lobby. We do the work and we say, “If you do this, it fits in with that. If you do this, then please make provision for that”. We want to do that through collaborative working, being part of forums, boards and so on, but when we cannot achieve it through collaborative working we petition.

**Q196 Lord Griffiths of Fforestfach:** We have received evidence from the Mayor of London, who argued that the full benefits of HS2 for London were not being captured by traditional cost-benefit analysis because that is more appropriate if you have an incremental improvement to an existing structure. He argued that what you have here is a major restructuring through HS2. To what extent do you think there are other things that we should take into account in the cost-benefit calculation, and if there are, what should they be?

**Michèle Dix:** There are two ways of answering that. The first is that when we are evaluating schemes we look at a strategic appraisal framework: what are the broad objectives, particularly for London; what are the Mayor’s transport objectives; and how does the scheme compare against those objectives? They are not all monetised into some value, so we are looking at wider accessibility, supporting regeneration, jobs and growth, physical accessibility, quality of life, safety, security, and so on. In complying with government, though, we will calculate BCRs and the wider economic benefits. In fact, the work that we did on Crossrail 1 was a starter for including, in that wider economic benefit, the impact on jobs and growth through agglomeration benefits and through increased productivity benefits. That effectively doubled the benefits associated with Crossrail 1. So that has been incorporated into WebTAG.

We also recognise, particularly in London, that because a large proportion of foreign direct investment gets made in London and because London is competing on a global scale, it is bringing new jobs. There is an element of increased connectivity that is also attracting new jobs into the equation, not just relocated jobs and not just more productive jobs. So for the Northern Line extension then, in the various scenarios that we calculated we looked at the impact of new jobs coming to London as well as more productive jobs and jobs generally being more active. That bit makes quite a big difference. Separately, that means taking a traditional BCR approach and then adding these wider economic benefits, so with the Northern Line you effectively double the benefits associated with that.

One thing that we have done recently—and I notice that Bridget Rosewell came to speak to your Committee—is commission Volterra to do a piece of work with Transport for
Greater Manchester on how we can case-make for transport investment, particularly in association with supporting jobs and growth. The recommended approach, which we would have to argue with Treasury, is to look at it slightly differently and to ask, “What could the future look like in an area? How could this be developed? How many jobs could you support in this area? What transport infrastructure is required to support that new future? Does that new future then provide some sort of payback mechanism to cover the costs of the transport infrastructure?”, which is different from the way we do it at present. It is the way that we feel we will need to make the case, particularly if we are moving to a world where less money is available. Then you are thinking of mechanisms outside of just straightforward grants to be able to pay for infrastructure schemes.

Q197 Lord Griffiths of Fforestfach: You mentioned that with a Northern Line extension there were two methodologies, and that using the larger methodology or the greater, more extended methodology doubled the benefits. Do you have any sense of what the multiple would be for this particular scheme if you were to apply the larger methodology?

Michèle Dix: I do not know what the sense would be for the whole of the scheme, because we have not looked at the whole of the scheme. What we have been arguing with the department is that if you imagine the future and then you imagine the transport requirements for that future, such as Old Oak Common, it is not just a question of having an HS2 line running through it and a station intersecting with Crossrail and that is it, because that is not going to deliver future growth in that area. What is required, then, is the local connections that will enable people in the vicinity, the local people, to get to that location to support the jobs that can take place there and to allow more people to go through that area. Part of the debate for Old Oak Common is that if you want Old Oak Common to be able to grow and benefit from HS2, and if you also want HS2 to be able to claim wider economic benefits, then looking at the local connections and ensuring that they are part of the scheme becomes very important. The work that we did at Old Oak Common, in conjunction with Jones Lang LaSalle, was to look at the development that could take place around Old Oak Common and then to look at the infrastructure requirements associated with that on top of HS2 and Crossrail 2.

A key piece of infrastructure would be needed, because you have two railway lines—the West London Line and the North London Line just running past Old Oak Common—but no station, and you could go past the development site but you could not get off. Therefore, you need to put two stations there so that you can get off and then you can access HS2 and Crossrail 2. They would then help to deliver the uplift in value that would be associated with that development, which would then add to the benefits of the scheme. That is the approach.

Lord Griffiths of Fforestfach: They would also involve a cost?

Michèle Dix: They would involve a cost, but the cost could be covered by the uplift in the scheme because of their existence. If they are not there, all you have is an interchange.

The Chairman: We are coming to Old Oak Common in a bit more detail in a minute, but you have your own model in London. Does your model come up with an overall benefit to
London from the investment in HS2, and how much of that is included in the calculation that the DfT has done?

**Michèle Dix**: TfL has not calculated a value. Some work was done in association with the Growth Taskforce, which identified development value uplift, which I think was of the magnitude of over £5 billion, but that did not come from TfL.

**The Chairman**: So in addition to the benefit that was included in the model done by the DfT?

**Michèle Dix**: The DfT did not include that. That was in association with the work done by Lord Deighton. The DfT does a calculation that is a BCR and then calculates the wider economic benefits. Then there is this additional bit that looks at the economic value, the uplift, in terms of land values. We are interested in how to capture that, particularly by developing a mechanism by which you can get some payback. If you take the Northern Line extension as an example, it would cost us £1 billion to build the link. The link was needed to support the scale of development. The development could not go ahead without the link, but the link could not go ahead without a mechanism for getting some payback from the development. The mechanisms were the community infrastructure levy and the business rate supplement.

**Lord Griffiths of Fforestfach**: The study done by Lord Deighton, that would have been a Treasury study, would it?

**Michèle Dix**: He did a piece of work with the taskforce and he collected evidence from—

**Lord Griffiths of Fforestfach**: Before he was a Minister?

**Michèle Dix**: No, he did this work last year. He led a taskforce last year that involved holding stakeholder groups with key stakeholders along the route: Birmingham, London, various stakeholders, collecting evidence.

**Q198 Lord McFall of Alcluith**: Can I bring you back to the Chairman’s question? In written evidence to us, the mayor said that analysis by Transport for London has suggested that the addition of a new station in west London could boost the London economy by at least £3 billion.

**Michèle Dix**: That is specifically in relation to Old Oak Common, so that is the Jones Lang LaSalle work.

**Lord McFall of Alcluith**: How do you get to that figure? Give us an idea.

**Michèle Dix**: That was on the basis of looking at the development opportunities that could be supported at Old Oak Common and the impact that the overground connections in particular, which I just referred to, would make in allowing more people to access that area within 30 minutes, 45 minutes and 60 minutes.

**Lord McFall of Alcluith**: Yes, but have you taken into consideration the fact that the proportion of jobs at Old Oak Common and Euston could be jobs that were displaced from elsewhere?

**Michèle Dix**: This is the big argument about increased productivity and this is the case that we were making with Manchester last week. It is not a zero-sum game. There are additional
jobs that can come into the economy. It is not just a case of displacing a job from one area to another area. With London, there is a lot of direct foreign investment into London whereby jobs are coming to London not from Manchester or Leeds but from Tokyo or Paris. Therefore, that is additional.

Lord McFall of Alcluith: What you are saying to me is that this is dependent on increased productivity, but if you look at our productivity over the past 40 or 50 years in the UK it has not been that great. Is this a magical solution that is coming to increase the productivity now?

Michèle Dix: No. The department accepts the increased productivity. So of the work that was done on Crossrail, the department accepts the two bits that were done for Crossrail 1. They accept that there is an agglomeration effect. If you increase accessibility to an area, the people within that area become more productive and there is an agglomeration benefit. That is taken into account in the department’s WebTAG proposals.

They also accept, if you look at the relationship between density of jobs, that there is a relationship between how dense an area is in terms of employment activity, the wages associated with that and the output. If you get more people into an area and they become more dense, there is an uplift there. Both those factors are taken into account in WebTAG. They were things that were done as part of Crossrail 1. They are now part of WebTAG.

The bit that they have not accepted—the bit that we want to argue for—is that there are also new jobs. It is not a case of jobs moving from one area to another just because you made it more accessible; there are new jobs that come in from elsewhere because we are part of a global economy. The question is how you attract those new jobs from other countries into the country in order to add to that.

Q199 Lord McFall of Alcluith: I use Euston quite regularly, and it is a very busy station. We have a £2 billion project here. For the life of me, I cannot think that if you have a £2 billion project there will not be some great discomfort over quite a period of time to passengers, given the tightness of the situation there just now. We have—what is it?—17 platforms in use at the moment all on the one level. What is Euston going to look like? As a commuter, is it going to be worth my while having a weekly journey from Scotland to Euston for the next few years, or do I not have anything to worry about?

Michèle Dix: If your question is whether Euston is going to be busy and whether something needs to be done about it, the answer is yes.

Lord McFall of Alcluith: No, my question is going to be: I am going to come down from Scotland and there is going to be a £2 billion project at Euston, so is it worth my while to persevere in coming down to Euston? In other words, will the quality of my travelling life be good or will there be an adverse effect on the quality of people’s travelling lives? That is what I am trying to get at, because £2 billion is one hell of a big sum.

Michèle Dix: In TfL, we support HS2 because we support increased connectivity to the rest of the country and—

Lord McFall of Alcluith: Yes, but I am interested in Euston.
Michèle Dix: No, but that is because the lines coming into London, into Euston, will get busier and busier. You talk about it being uncomfortable. Euston will be crowded. King’s Cross will be crowded. Paddington will be crowded. The lines coming into these stations will be crowded. The Underground will be crowded.

Lord McFall of Alcluith: It is crowded at the moment.

Michèle Dix: It is more crowded than people thought at this stage because the population and number of visitors have grown more quickly than we thought. It will be crowded. We need to do something about it. We very much support HS2 because it can provide new capacity. It is going to provide new capacity linking London to the rest of the UK. Yes, we want to see those improvements take place.

Lord McFall of Alcluith: I understand that you do. I am just trying to get a bit of a qualitative sense from you. What would the impact be? I have nothing against it, but when you have a £2 billion scheme it is quite considerable. What do you think the impact will be on the travelling public over the next few years? Is that a real big thing for that change in Euston?

Michèle Dix: There will be an impact on the travelling public if no improvements are made at Euston and if capacity is not provided for the reasons—

Lord McFall of Alcluith: I understand that. I am asking you about this project. I am asking you to turn your attention to this project, if you can, and the impact that there will be on the travelling public. I understand that if we do not do anything about it there is going to be an impact later on down the line, but you have decided that you are going to do something about it: a £2 billion project. What will the impact be, do you think?

Michèle Dix: On the travelling public?

Lord McFall of Alcluith: Yes.

Michèle Dix: It will be better than not spending £2 billion on the travelling public, because you are going to provide for the travelling public. If you do not spend any money—I am not sure whether your question is: should we spend money on—

Lord McFall of Alcluith: My question is dead simple. I am coming into London, Euston every week, and I am told there is a big project coming along. I want to know what impact that will have on the travelling public. I do not need theory about what it will be like in 10 or 15 years if we do not do anything, just what it will be like with the project as it goes ahead.

Michèle Dix: It will depend on what the scheme looks like, because at the moment we do not know what the scheme is. There was a scheme on the table a few months ago. There is no scheme on the table now. I am not designing the scheme.

Lord McFall of Alcluith: I understand that.

Michèle Dix: I am TfL. HS2 and DfT are designing the scheme with Network Rail. We want to influence the shape of the scheme, such that the travelling public and the people who live in that locality have a station that works. What will £2 billion look like? It depends in part on what comes out of the design, but we hope that it will look like a station that works and
that is accessible, a station where onward distribution is easy and where it is obvious where you go when you come out of the station.

**Lord McFall of Alcluith:** Okay, thanks.

**The Chairman:** I think we have exhausted that one.

**Lord McFall of Alcluith:** Yes.

**Michèle Dix:** I am sorry if I have not understood your question properly. I apologise.

**The Chairman:** I think “very crowded” is probably one answer.

**Q200 Lord Skidelsky:** We heard evidence from cities in the north that due to specialisations they see themselves as complementary to London rather than direct competitors. Would you agree?

**Michèle Dix:** Yes.

**Lord Skidelsky:** Last week Mike Blackburn, from the North West Business Leadership Team, told the Committee that Manchester is complementary to, rather than competes with London. He cited areas such as the development of graphene in which Manchester is a world leader. Similarly, Jerry Blackett, chief executive of the Birmingham Chamber of Commerce, said that Birmingham’s competition came from outside rather than inside the UK. In written evidence, the Mayor of London said that the benefits from HS2 “should not be seen as a ‘zero sum game’. Improving connections between the UK’s regions will help create several clusters of economic activity that are more internationally competitive”. You mentioned earlier that you accept the agglomeration argument; in other words, you accept the case that clusters improve productivity. Is there robust evidence that that is the case?

**Michèle Dix:** There is evidence in other countries, in the Rhine and in the Amsterdam region, that that is the case. Because, as I say, we are working with Manchester, Leeds and Sheffield, we would be supportive of the linkages between them so that they can create a cluster. The interesting thing is how close Leeds and Manchester are. A line between them would be no longer than the Central Line. So we would support a clustering of the northern cities.

**Lord Skidelsky:** But the benefits of the clustering are offset by the disbenefits of congestion?

**Michèle Dix:** I am not sure they would be offset by disbenefits. The clustering will work if the transport infrastructure is in place to enable that clustering to work.

**Lord Skidelsky:** The transport system that you are planning is designed to accommodate the increased clustering that you think is desirable. How far does that logic go? Is there no limit to clusters? Is there no limit to the growth of London’s population?

**Michèle Dix:** I am talking about clustering of the northern cities to form a cluster themselves.

**Lord Skidelsky:** Yes, but the argument is more general than that.

**Michèle Dix:** In terms of London being a centre and the northern cities forming a centre through clustering, they can form a centre through clustering if they have the right transport
connections between them. We would support proposals for a link that connected Manchester and Leeds so that you had a wider catchment area for the centre of Manchester support, and similarly Leeds and Sheffield so that you get more agglomeration. We do not see that as being in competition with London.

**Lord Skidelsky:** Leaving aside the competitive bit, just on the general point, you regard the function of a transport system to accommodate whatever population increase other economic forces may be producing. Is that right? In London terms, that is the logic of the mayor’s argument. London’s population will just grow. We know that it is going to grow. It is projected to grow, so we must provide a transport system to accommodate that growth.

**Michèle Dix:** We have looked at the growth of London in the context of the 2050 plan, we looked at the mayor’s transport strategy back in 2010, and we have looked at whether or not you can disperse some of the economic activity within London, and so more of the housing activity, such as to reduce the activity in the centre. From a transport planner’s world, does that lead to a less congested, better plan? The work that we did then showed that it does not necessarily do so, because in some instances if you do not have the concentration of links, some of the public transport links that you would provide would not be as justified. Some of the tests that we did there led to more car traffic, particularly in the outer areas.

The key to all that was not so much whether or not from a transport perspective we could reshape London by providing different links but who, in part, wanted to invest where. If people are coming to London and saying, “We want to invest in this location and we are not interested in investing in that location”, the question is: do you turn them away or do you seek to accommodate them? The pressure is to accommodate people who want to be located in and around the centre. That is why you are seeing more development outside the traditional CAZ area—the central activities zone—and the expansion of that, because there is a desire to expand in that area. You either respond to it or you do not.

**Lord Skidelsky:** But there is a limit to how much you can respond, is there not? There is just a limit of land.

**Michèle Dix:** There is a limit to the quality of life, yes, and whether or not people are prepared to accept the densities associated with that. In any design you would want to ensure that places were designed such that there was good quality of life and you were taking care of air quality, providing spaces and providing transport links that were pleasant to travel on. They are important factors, and certainly part of the 2050 discussion has been about continuing support of the centre and how you can spread some of that activity further afield, particularly housing and the densification of housing.

**Lord Skidelsky:** That is dispersal.

**Michèle Dix:** Yes. These are options to be considered where people are saying, “I want to be in the centre”. Going back to the Volterra work that I referred to, Volterra is looking at the relationship between the productivity of jobs and the density of jobs. The central area and the Canary Wharf area occupy about 1% to 2% of the London area. They accommodate 30% of the London jobs, and on average those jobs are 70% more productive than average jobs elsewhere.
Lord Skidelsky: That would include jobs in the retail and service sectors? Restaurants, everything, becomes more productive?

Michèle Dix: All jobs in that area, because those jobs are also helping support other jobs.

Lord Skidelsky: Okay, thank you.

Q201  Lord May of Oxford: I will read you the title of the question here. I am strongly tempted, and trying to resist it, to say that I find much of this discussion leaving me grateful that all my life I have moved in a world where the people I have to deal with know what they are doing, have a focused approach to interacting with people, and you can have coherent conversations with them. I find this painful. Having said that, I will go back to the question here, and God knows what will then follow. Do you think London will gain proportionately more benefit from HS2 than the cities of the north and the Midlands? Last week, council and business leaders from Manchester and Birmingham were confident about the regional benefits that it would bring, and people in Sheffield and Leeds were a little more cautious, thinking it was a risk that London would benefit more. Of course, the Mayor of London said, “There is a highly visible and powerful risk that London and the south-east will become still more unbalanced”. Then people went on talking about it and there was very little in the way of believable quantitative analysis. I wonder if you could tell me that I am wrong.

Michèle Dix: On what? On whether London will benefit more or the regions would benefit more? I would just say that I am not responsible for the economic evaluation of HS2. I am responsible for how HS2 interacts with London and how we can ensure that the design of HS2 is such that we get the most out of it.

In terms of whether or not the regions will gain more than London, I think the regions have more to gain than London, but London supports HS2 for the reasons I gave before: it will provide increased capacity and capacity is at a premium, the trains are loaded, and we would welcome those increased provisions.

Lord May of Oxford: You think, “Just go ahead and do it, it will be vaguely a good thing for everybody”?

Michèle Dix: I think it is a good thing for everybody, and I do not know why that is incomprehensible.

Lord May of Oxford: It is the lack of coherent underpinning analysis that I find painful. I am not talking about you, in particular, but of a long-winded—

The Chairman: In this context, we had Emile Quinet, a French transport economist who is very familiar with the TGV, and he made it clear that all the evidence suggested that the capital city benefited to a much greater extent than the long distance cities that were joined in. That was based on quite a lot of actual data. That was the conclusion we drew from him, but in a sense that takes us to the next question.

Q202  Baroness Wheatcroft: It does. Thank you, Chairman. Understanding that you are not responsible for the economic arguments in favour of HS2, TfL does want to ensure that London functions from a transport point of view. Among his numerous statements, the
mayor appears to have said that for the capital Crossrail 2 is more important than HS2. Do you have a view on that?

Michèle Dix: I would say that we value both schemes. Both schemes are in the mayor’s transport strategy. Both schemes perform slightly different functions. Crossrail 2 is necessary for the capital because of the growth, and as I said before we have people who are living in London, living longer, and having more babies. Even though more people are coming into London to work, not as many people are going elsewhere because we are growing older, living longer. We are also attracting a lot of visitors, so all—

Baroness Wheatcroft: So Crossrail 2 is necessary. Would it be fair to say that Crossrail 2 is essential, and as far as the capital is concerned HS2 would be nice?

Michèle Dix: I would say that Crossrail 2 performs three distinct objectives. First, it relieves the congestion that will otherwise arise in the centre. Secondly, it is a solution to the problems that exist on south-west trains, in the sense that they cannot get any more mainline paths into Waterloo. They have problems at Waterloo so if we can take some of those suburban trains off those paths and stick those in a tunnel under London that would help solve quite a lot of the congestion problems in the south-west. The third element is opening up the whole of the Upper Lee Valley for improved connectivity. A key aspect of that, but all the way along the route, is that Crossrail 2 would support the development of up to 200,000 new homes, and one thing that London does desperately need is new homes. Crossrail 2 will be needed regardless of whether or not there is an HS2. We support HS2 for the reason I have given: because all the mainline trains coming into London in the future will be beyond capacity. They will be very busy. Something like 70% of all the trips that will be using HS2 will have a trip origin and a trip destination in London, because London is the capital city and is obviously a gateway to the rest of the UK. People want to come here in the same way as people want to go to those cities. They are equally important for London.

Baroness Wheatcroft: If one has to prioritise—and that is usually the case—which would you prioritise, and would it be right to say, as has been said I think, that it would be foolhardy to do HS2 and open HS2 into London if Crossrail 2 was not there?

Michèle Dix: We would say that it was a big problem to do that. We would still want both. We would want them timed properly. The point that we are trying to make, in the work that we have been doing with Volterra, is that there are ways in which these schemes can be funded that do not automatically involve everyone going back to the Treasury and saying, “Give me the grant to do it”. It is about looking at the areas of land these schemes open up and identifying new ways in which the value of that land can be captured to help pay for the scheme in the first place, so if HS2 is going to promote economic growth up and down the country a lot of the mechanisms by which we can capture that increased value. The same for Crossrail 2; we have to find mechanisms by which we can help pay for it.

Baroness Wheatcroft: I understand that but I am slightly confused. Did you say the problem would be if we did try to do Crossrail 2 before finishing HS2 or if we did not?

Michèle Dix: No, whether there was an HS2 on the table or not, we would want to do Crossrail 2. We are going ahead with promoting Crossrail 2. We want Crossrail 2. We support HS2. If HS2 is going to go ahead and if HS2 phase two is going to go ahead, we would want the timing of those things to be such that Crossrail 2 was in place before HS2
phase two opened. The gentleman said, “Is there someone who is trying to join these together?” We are trying to make sense of that.

**The Chairman:** That brings this first session to a close. Thank you very much, Ms Dix, for your answers.
This evidence is based on work by Dr Geoff Dudley and Professor David Banister on the project ‘The Politics of Decision Making in Large Infrastructure Projects: The Case of High Speed Rail 2,’ funded by the Rees Jeffreys Road Fund. The evidence seeks to place the Economic Case for HS2 in the wider context of its relevance to the overall decision making process, but within this framework it addresses Questions 2 and 4 posed by the Committee.

I. Contested Expertise and Assessing the Economic Case for HS2

1.1 This submission explores the economic limits for decision making on large infrastructure projects such as HS2 through making the case for contested expertise, the increase in the numbers and densities of experts (economic and other), and through the diversity of methods that are now used as part of the economic case for large scale transport infrastructure projects. It also makes the case for understanding the complexity of decision making, and the limits of just using economic methods to resolve problems that are also essentially political. An important element here is the need to have a strong vision of the purpose of the investment and its long term impact on the transport system in the UK – this requires the development of a narrative that captures both the public and political imagination. This submission examines the nature of contested expertise through tracing the dynamics of expertise in the road transport sector (from the 1960s to the 1990s), and then places a similar analysis on the development of the debate over the economic case for HS2.

1.2 Decisions on large scale infrastructure projects have become more contested, in particular where there is a long time horizon and where there is great uncertainty. Projects like HS2 demand the best available expertise to accurately assess and forecast the many elements involved in the construction phase and the operational impacts. The dynamics of decision making may result in the reduction of risk and uncertainty through increasing the number of project elements under review, and this in turn significantly raises the numbers of experts involved, and the types and methodologies employed by them. In addition, this density of expertise, instead of clarifying the issues under review, can have the effect of generating conflict over the results of alternative (or possibly competing) analyses, and also over the bases of the various methodologies employed (contested expertise). Paradoxically, these expert assessments can then give way to the construction of political narratives that rise above, or even bypass, the clusters of expertise that gather around such contested and complex elements.

1.3 Consequently all expertise on large scale and long term infrastructure projects, to varying degrees, remains conditional and provisional. Nevertheless, expertise can and should have an important influence over decision making. But to do so it must capture public and political attention through such means as constructing coherent narratives that define the project, but even here there needs to be a common definition of the storyline. A successful narrative can therefore have a key role in establishing and fixing assumptions for decision-making under conditions of high uncertainty (Roe, 1994).
1.4 However, if expertise arenas, such as those for assessing the economic impacts, remain congested and adversarial in character, then it becomes extremely difficult to construct effective narratives, either for or against the project. The analyses concerning the potential economic impacts of HS2 have been particularly vulnerable to these latter expertise dynamics, and these conflicts may have important implications for the project's decision making processes. Prior to examining these in more detail, however, it is important briefly to place the HS2 dynamics of expertise within a historical context, in terms of understanding more clearly the factors underpinning the trends towards greater density and complexity.

2. The Historical Context of Expertise Dynamics

2.1 In the earlier post war years, the focus of expertise in large transport infrastructure projects was almost entirely on the construction process, rather than assessing and quantifying in detail the even more uncertain operational impacts. For example, the formative years in the construction of the motorway network, during the late 1950s and 1960s, were notable for the success of the government and the road builders in offering a vision to the public of increased prosperity that would lead to major increases in car ownership, which in turn would allow high quality mobility and easy access to chosen destinations through the new motorways. This narrative of 'popular consumerism' successfully established the modern highway network as a good in itself, so that the expertise of the road builders was generally unquestioned (Dudley and Richardson, 2000, 82-110).

2.2 From the 1970s, the dominance of the road builders was increasingly challenged by the emerging environmental lobby that employed expertise to question the need for new roads, and brought new knowledge to assessing their environmental impacts. Landmarks in the development of environmental concepts and knowledge included publication of the 1987 Brundtland Report *Our Common Future* (Brundtland, 1987), that put forward the politically potent concept of sustainable development; the 1991 Report *Transport: The New Realism* (Goodwin et al, 1991) that advocated a novel policy mix including substantial improvements in public transport, traffic calming, and road pricing; the 1994 Report by the Standing Advisory Committee on Trunk Road Assessment (SACTRA, 1994) which concluded that induced traffic on new roads can and does occur, probably quite extensively; and the 1994 Report *Transport and the Environment* (Cm 2674, 1994) by the Royal Commission on Environmental Pollution that set out clearly and methodically the dangers to public health posed by vehicle emissions.

2.3 Each of these reports offered authoritative and salient expertise that could not be ignored politically and, together with persistent work by the environmental lobby, by the late 1990s successfully shifted the narrative for roads from a policy 'solution' to a policy 'problem' (Dudley and Richardson, 2000, 163-96). At different times, therefore, both the road and environmental lobbies were able to employ expertise that established coherent narratives that had major impacts on decision making. In this task they were aided by the comparatively limited number of experts, and the range and number of issues under review. This is in marked contrast to modern equivalents such as HS2.
3. Expertise Dynamics and HS2 Decision Making

3.1 The dynamics of the increased pressures placed on expertise in large infrastructure projects such as HS2 are underpinned by interactions between its demand and supply. On the demand side, the sheer scale of the publicly funded £50 billion HS2 (including contingency costs and rolling stock) places political pressures to not only deliver on time and to projected costs, but also to demonstrate its value to the UK as a whole. This latter demand brings into play factors that exist well beyond the direct operational impacts, including the promotion of economic growth and regeneration, the reduction of regional wealth inequalities, and the attainment of environmental goals such as reductions in carbon emissions. On the supply side, the numbers of experts available, and the variety of their expertise, has risen markedly to meet these demands. For example, significantly greater emphasis is now placed on gaining greater insights into the dynamics of human behaviour (Dudley and Preston, 2013), such as the value placed on savings in travel time, and how changes in travel patterns may impact on wider economic decision making.

3.2 The overall effect is that an extremely wide range and variety of issues are drawn into the HS2 decision making process, making it more complex and difficult to manage politically. In turn, as the issues become more complex, so the interests and alliances either for or against the project become more unpredictable and unstable. In terms of expertise, as new subjects come under review, and methodologies are adapted and refreshed to meet these needs, then this allows greater scope for dispute on not only the results produced, but also the quality of the methodologies themselves.

3.3 With regard to assessing the economic case for HS2, the examples of the dynamics of benefit cost ratios (BCRs) and of calculating the wider economic impacts (WEIs) illustrate how the introduction of new knowledge and methodologies make these types of calculations more contested and problematic, with the consequence that their influence over decision making is likely to decrease. In the case of the BCR for HS2, Department for Transport (DfT) figures indicate that between February 2011 and October 2013, the BCR for the full network (Phases 1 and 2) without the inclusion of WEIs, fell from 2.2 to 1.8, particularly as a result of revised assumptions about economic growth and rail demand (HC 851, 2013, paras. 19-20). The sharp downward revision of these figures, over a relatively short period of time, indicates how the volatility of economic conditions and forecasts can have major impacts on the credibility of large infrastructure projects such as HS2, and bring into doubt the suitability of BCRs as a guide to decision making.

3.4 This suitability is further called into question when new knowledge causes reinterpretations and consequent reassessments of BCRs. In the case of HS2, this is evident in the case of the value placed on savings in travel time. Initially, significant time savings was given as a principal motivation for the construction of HS2 (e.g. Cm 7827, 2010, 13-15), but subsequently the value to be ascribed to time savings has become the subject of expert debate, given the ability of the modern traveller to work on the train with the use of computer technology. Considerable pressure eventually persuaded the DfT to reduce the value of time savings by one third in the case of business travel (HC 851, 2013, para. 22).
this case, therefore, new knowledge on the dynamics of travel behaviour can have significant impacts on the assessment of the economic case for HS2.

3.5 The unpredictability and volatility of BCRs has caused some critics to question their credibility as a methodology. For example, Helm argues that marginal analysis, which lies at the heart of BCRs, has little to offer in the case of deciding how much infrastructure to provide. Instead, with regard to HS2, he believes that the question is whether to have a high speed rail system, within which this particular section would fit. This means that the costs and benefits of the system as a whole need to be taken into account first, and in this context it is essential to place HS2 in a wider historical context, and understand its ability to change the economy as a whole over time (Helm, 2013, 290).

3.6 As we noted above, the character of HS2 as a large scale publicly funded project has placed political pressure on the government to calculate its wider economic impacts over time, and how these may benefit the country as a whole. However, these types of calculations require the introduction of fresh expertise and innovative methodologies, which in turn generate new debate and controversy. For example, in 2013 KPMG was commissioned by HS2 Ltd to develop a methodological framework designed to analyse the potential scale, range and distribution of regional economic impacts associated with the substantial improvements to the rail network brought about by HS2, and the use of freed-up capacity on the classic rail network. KPMG acknowledged the innovative nature of this work and the methodologies, and stressed that the analysis focused on the potential impact of investment in HS2 on the structure of regional economies in the longer term, and that this made it different from conventional approaches to the appraisal of transport schemes, which are based on the estimation of the monetary value of travel (HS2 Ltd, 2013, 7). Nevertheless, KPMG estimated that investment in HS2 could potentially generate £15 billion a year in productivity gains for the GB economy in 2037 (at 2013 prices), and that this would represent an increase of around 0.8 per cent in the total level of GDP (HS2 Ltd, 2013, 13).

3.7 The apparently high figure of £15 billion, and the methodology employed to achieve it, attracted widespread criticism from other experts in the field. For example, Professor Henry Overman of the London School of Economics, and a former advisor to HS2, claimed that KPMG used a procedure that was ‘essentially made up,’ (HC 788, 2013, Q99) while Dan Graham, Professor of Statistical Modelling at Imperial College London, argued that the statistical work by KPMG was not reliable (HC 788, 2013, Q97). The political sensitivity of this type of expert analysis was also illustrated when the BBC obtained statistics that KPMG had not included in their own report. These indicated that more than fifty locations across the UK would be worse off as a result of HS2 (BBC News, 19:10:13), and highlighted that, although the nation as a whole would be paying for HS2, there would be significant numbers of ‘losers’ as well as ‘winners.’ In this context, it is significant that the DfT has now commissioned a team of experts to undertake a comprehensive study of the mechanisms through which transport investment affects economic performance, and the extent to which these are captured in the current appraisal methodology (HM Government, 2014, para. 2.3.16). Once more, therefore, official pressure is placed on economic expertise to deliver results in policy areas that carry a high degree of uncertainty.
4. Implications for HS2 Decision Making

4.1 To address the important issues raised in this submission, we would suggest a multilevel approach to decision making on large scale transport infrastructure projects:

a) There needs to be a strategic long term vision for UK Transport Policy that covers all modes of transport, and examines the links between land use and transport development more widely. Within this vision, the role for rail transport should be clearly identified, including within that the role for HSR. This debate is now taking place, with consideration being given to links between the Northern cities and HS3, and HS2 has also alluded to this.

For example, in his 2014 Report HS2 Plus, HS2 Chairman Sir David Higgins places the line in the context of a historic and strategic national need and argues that, if done right, HS2 can provide an answer that stands the test of time, and addresses the issues of congestion in the South, and lack of connectivity in the North. Conversely, he argues that, without HS2, the people of this country will continue to face the failures of our transport system on a daily basis (HS2 Ltd, 2014, 18). HS2 Ltd itself appears to have constructed new narratives that overlook the detailed economic analyses.

b) The analysis stage can take place within this strategic perspective, and this would primarily involve the economic case for investment, both in terms of transport (BCR) and economic development (WEI). It should also look at the environmental and the social implications of the investment, and the means by which strong narratives can be generated to capture the public and political interest. There are important alliances that are developed to promote or to resist large scale investments, and these have been instrumental in raising the degree of complexity and the contestations around HS2. There also needs to be openness about the processes being followed, so that there is wider political support (at the local levels and from the electorate). Such an approach helps to acknowledge the essentially political nature of many long term large scale infrastructure projects.

c) As the decision is over such a long time scale, and even the starting date is years away, there needs to be more explicit consideration given to the monitoring of HS2 during its construction, to cover cost control and the capacity that is needed. This means that systems need to be flexible and adaptable to new external factors and other decisions taken within the economy.

It is through a more open and flexible decision making process that the issues of uncertainty and complexity can be addressed, and also the means by which the economic case can be reconciled with the political reality.

References


HM Government (2014) *Getting Set for HS2: Responding to the HS2 Growth Taskforce*


*September 2014*
Transport Watch—Written evidence

Transport Watch—Written evidence

Transport-Watch is an independent association not connected with any business or political Party funded by a trust and dedicated to making the best use of land already committed to transport in the interests of the Community as a whole.

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HS2 – THE QUESTIONS TO ASK, THE COMMENT TO MAKE

(1) **The cost**, including the trains and the often omitted links to the new stations, will be at least £80 billion. That is equivalent to over £3,000 for every household in the land. Is it right to ask for such contributions? After all, 45% of us use a train less than once a year and 99% of us will seldom, if ever, use a high speed one.

(2) **The financial loss** faced by those living in 2036, assuming the fares out to the remote year of 2096 actually arise, will be £74 billion at 2011 prices—equivalent, in purely financial terms, to wasting the wages of 74,000 working men’s lives.

(3) **Transformational?** HS2 Ltd say that the project will generate 76,000 new passengers-journeys per day, (FoI request 13-873). The 76,000 corresponds to roughly 22.8 million per year. It is only those new trips which can be “transformational” since all the rest (obviously) pre-exist. There are currently 1.5 billion passenger-journeys per year by surface rail, and 43.5 billion passenger-journeys by all modes (walk and cycle excluded). Hence generated, or new, passenger-journeys may account for only 1.5% of all surface-rail journeys and for only 0.05%, or one in 2,000, of all passenger-journeys. How can that be transformational?

(4) **Regeneration?** The network is said to generate 100,000 jobs although many, if not most, may be relocations. Hence each of these supposedly new jobs will cost the taxpayer £800,000. How many will that destroy in that part of the economy which makes a profit?

(5) **Wider Economic Benefits, the WEBs:** The KPMG report claims that the proposal will generate WEBs worth £15 billion per year. Those can arise only because of new business and commuter trips (the supply side). They number circa 7.75 million per year. Dividing the £15 billion by the 7.75 million yields £1,930 or close to £4,000 per return trip. In contrast, the average WEB from existing commuter and business trips by all modes amounts to only £141 (£282 for a round trip); 14 times less than supposedly arising from the new HS2 trips!!

(6) **Existing Trips** on the West Coast Main Line must have higher WEBs than those generated merely because HS2 has reduced a journey time somewhat. The usual theory suggests double. Hence, if KPMG’s £15bn is to be believed, existing trips on the West Coast Main Line generate WEBs with an average value 28 times as high as the national
average (the £141 from (5) above). That seems unbelievable – a reality check which suggests the £15bn from the KPMG report has to be rejected.

(7) **The passenger forecasts:** The original forecasts for HS1 were three times as high as the numbers which materialised. Those for HS2 require eighteen 1,100-seat trains per hour, an extraordinary thing not yet achieved on any high speed network in the world. In the light of that, and of the HS1 history, it is regrettably that no risk factor has been assigned to the HS2 forecasts.

(8) **A key driver** for the forecasts is the growth in Gross Domestic Product. Between 1955 and 1995 GDP grew by 150% but rail use did not change. In contrast, since 1995 GDP has grown by 40% but rail use has increased by 70%. The comparison casts doubt on the rational which underlies the forecasts. Instead of GDP growth, it may be the razzamatazz of privatisation which has lead to the recent surge in rail use. If so, the case for applying a risk factor to the forecasts is greatly strengthened.

(9) **Capacity:** The proposers point to lack of capacity and the forecast growth on the West Coast Main Line. However (a) as above, the forecasts may be far too high (b) Virgin’s trains carry an average of only 166 people. In comparison an 11-car Pendolino offers over 600 seats and could offer over 700 if 1st class, shopping and restaurant areas were converted to 2nd class (c) In the peak three hours half the seats out of Euston are said to be empty (d) substantial increases in capacity could be achieved at relatively low cost by lengthening the trains and some platforms.

More importantly, the sensible approach, when demand exceeds supply, particularly if a product makes a loss in the billions of pounds, is to balance supply and demand by raising the price.

(10) **Extraordinarily** the CPRE and DfT claim that HS2 will have the same capacity as a 12-lane motorway. The railway is said to provide eighteen 1,100-seat trains per hour, offering 19,800 seats. In comparison one lane of a motor road may carry 1000 75-seat express coaches per hour at 100 kph. At that speed the headways would average a comfortable 100 metres. The single lane would then offer 75,000 seats, nearly four times that of the railway. The difference between the DfT / CPRE claim and reality is unnerving.

(11) **The “Willingness to pay calculus”,** upon which the economic analysis depends, allows fares to be subtracted from costs and the difference, the net cost to the Government, to be compared with the supposed social benefits. However, the theory reduces to the absurd when it is realised that changing the economic boundary of the scheme, or changing the tax regime, changes the net costs. Instead of that, where there is a market, as there is for rail fares, it would be better for the nation if the rule were: “If it makes a loss, particularly if the loss is in the tens of billions of pounds, do not build it".
Transport Watch—Written evidence

(12) **The North-South divide**: Proposers suggest HS2 will reduce the North South-divide. However, Phase 1 is said to generate 40,000 jobs with 9,000 in construction and 1,500 attributed to operating the line. Of the remainder, 70% would be in London. … Begging the question, will HS2 worsen rather than reduce the divide?

(13) **International comparisons** confirm that such schemes benefit capital cities rather than the regions and that the financial losses are vast. For example the debt due to the much lauded Japanese system is $300 billion, see Ronald D Utt’s paper, “America’s Coming High Speed rail Financial Disaster” – it’s a frightening read. Why should the UK aspire to that?

At what point is irrational enthusiasm mis-selling and at what point is mis-selling plainly fraud?

**Calculations and notes:**

**Item:**

(1) **Cost** –the October 2013 economic case provides, at table 5, £43.3bn for construction and at para 3.3.3 6, £7bn for the trains all at 2011 prices. To that should be added £30bn for connections (page 45 of the IEA report The High Speed Gravy Train, August 2013) providing a total of £80bn. The UK population is circa 60m. Setting the family size to 2.2 provides £2,933 per household. That ignores tax at 20.9%, included in the economic assessment. (That ignores tax at 20.9% added to costs within the economic analysis).

(2) **Financial Loss.** Table 15 of the October 2013 Economic analysis shows a financial loss at the 2011 price and discount base of £31.5bn for the “standard case”. Rolling that up at the Treasury Discount rate of 3.5% to the presumed opening year of 2036 provides £74bn. That represents the actuarial loss, at 2011 prices, faced by those then living - supposing the very high passenger forecasts, and the corresponding fares, out to the remote year of 2096, actually arise.

(3) Transformational? The claim has been made be a variety of politicians, Phillip Hammond, Justine Greening and McLoughlin, and by HS2 Ltd in its web site see: [http://www.hs2.org.uk/press/phase-two-professional-service-contract-framework-agreements](http://www.hs2.org.uk/press/phase-two-professional-service-contract-framework-agreements) Also the slide show by Alison Munrow, Chief Exec HS2 Ltd available here [http://assets.hs2.org.uk/sites/default/files/event_speakers/Presentation%20%20Alison%20Munro.pdf](http://assets.hs2.org.uk/sites/default/files/event_speakers/Presentation%20%20Alison%20Munro.pdf) See also The Strategic case for HS2 October 2013

(4) **Regeneration – cost per job.** If the scheme cost or the long term financial loss are both circa £80bn, see above, and if the supposed 100,000 generated jobs, widely canvassed in the reports, (e.g., the DfT Guidance Note ‘High Speed Two: and engine for growth’, 11th September 2011 at [https://www.gov.uk/government/publications/high-speed-two-an-engine-for-growth/high-speed-two-an-engine-for-growth](https://www.gov.uk/government/publications/high-speed-two-an-engine-for-growth/high-speed-two-an-engine-for-growth) actually arise, and are indeed new, and not relocated jobs, then the cost per job is, by division, £800,000.
(5) **Wider Economic benefits.** KMPG’s report, High Speed Two Ltd, Regional Economic Impacts, September 2013, in Table 2 page 13 claims £15bn per year. These can only arise from generated or new business and commuter trips, the supply side, since all the rest obviously pre-exist. HS2 Ltd refuse to say how many of the 76,000 new trips (FoI request 13-873) are for business and commuting purposes. However, paragraph 5.2.13 of the April 2012 Demand and Appraisal report says one third of the HS2 trips are for business purposes. Increasing that by 25% to allow for commuting provides 41%. Here we will use 40%, which appears very high indeed compared with the 20% which applies to the nation as a whole. There are 255 effective days per year for such trips. Hence the new business plus commuter trips may number 76,000 x 255 x 0.4 = 7.75 million per year. Dividing the £15bn by that number provides £1,930 or close to £4,000 for a round trip. Nationally Travel Survey Table 0409 provides 177 commuter plus business trips per year per head per year. The GDP is about £1,500bn. Dividing that by the population, 60mn, and by the number of trips per head, the 177, provides £141, which is 13.7 times less than the £1,930. The value associated with a round trip or a return trip would be double that. (The £141 is a high estimate since a proportion of people work, or do business, from home).

(6) References not applicable – it’s all in the text and follows from (5)

(7) NAO report ‘The completion and sale of High Speed 1’, Para 6, p 6, 28 March 2012.

(8) Is well established data. Passenger-km from Transport Statistics Great Britain.

(9) **Capacity:** The Office of the Rail Regulator’s data provides passenger-km and train-km by train operating company. For Virgin. In the year 2012-13 there were 5958.4 million passenger-km and 35.8 million train-km. Dividing passenger-km by train-km provides the average occupancy of 166 passengers. An 11-car Pendolino has over 600 seats. The 166 amounts to 27.6% of them. If first class, shop and restaurant areas were converted to second class there would be over 700 seats

(10) **McLoughlin:** A speech at the Conservative party conference of 2013, HS2 Engine for Growth 29th October 2013 available at [https://www.gov.uk/government/speeches/hs2-engine-for-growth](https://www.gov.uk/government/speeches/hs2-engine-for-growth) - The transcript provides. ‘It (HS2) will provide the capacity of a 12-lane motorway, but only take the space of a dual carriageway’. Similar is in The Strategic Case for HS2 published in October 2013. The CPRE repeat that although in its report, ‘Getting back on track’, February 2011, a 10-lane motorway is cited.

(11) The Willingness to pay calculus is well known theory developed by Professor Sugden of the University of East Anglia and adopted by the DfT and the Treasury... However, others, such as Dr Richard Wellings, Deputy Director of the IEA disagree. Payments for fares are transfer payments of no interest in a social cost-benefit analysis.

(12) **North South divide:** the HS2 report, High Speed Rail: Investing in Britain’s Future – Consultation - 2011 provides estimates of job creation associated with Phase 1 as
follows: 9,000 construction jobs, 1,500 operational jobs, of which 340 are in London and 420 in Birmingham, 30,300 from regeneration around the stations, of which 22,000 would be in London (Euston and Old Oak Common), and 8,300 in Birmingham (Curzon St and Birmingham Interchange). Hence 70% of the new permanent jobs would be in London.


*September 2014*
1.0 INTRODUCTION

1.1 Twyford is a community of some 200 dwellings and electoral roll of some 450. It is a tight knit community and in many ways it is self sufficient having community volunteer run general stores, a public house, Anglican church dating to eleventh century, listed and mentioned in Pevsner, a URC place of worship, Village Hall and church first school which also serves the adjacent communities of Charndon, Calvert and Calvert Green. There are a plethora of clubs and societies in the village covering such interests as oenology, amateur dramatics, gardening, etc. The village also sustains a decent standard cricket team playing in the first, fifth and ninth divisions of the Cherwell League together with junior teams at most age groups and an association football team on a Recreation Ground for which the curators have been awarded prizes for its undoubted quality.

1.2 The current proposals for route 3 phase 1 of HS2 pass through the parish for around four kilometres and pass within 210 metres of the nearest dwelling, around 250 metres from the church and around 200 metres from the boundary of the recreation ground. It is currently proposed that the line passing Twyford shall be on an embankment which will result in the top of the power catenary on a train set being around 8 metres above current ground level. It is proposed that a bund be built between the line and the village although there is no current indication as to the height of this.

2.0 SUMMARY

The current economic analysis is flawed.

No account is taken of the effect at micro level.

Clear that the burden is borne by the few rather than the many.

3.0 EVIDENCE

3.1 I am not an economist, rather a statistician by discipline and a market researcher in recent employment, which does allow me an insight into the dark arts of number manipulation and the power of words in surveys and reports.

3.2 My opinion, having reviewed both numbers and words is that the manner in which the HS2 project has been examined from an economic point of view is flawed.

3.3 There have been a number of assessments by HMG/DfT/HS2 of what they see as the Costs and Benefits accruing to the development of the HS2 project at both Phase 1 and Phase 2. However, by and large, these have been considered at the national level and therefore, I would assert, are deficient in the accumulation of costs at a micro level.
3.4 What is clear in most major projects is that the costs are going to happen and, in recent experience, are likely to be incurred at a somewhat greater rate than was originally thought. The benefits, even at a national level, are much more difficult to calculate in as much as they are directly attributable to the project at hand.

3.5 It is also clear that the benefits of any major project such as a railway will not be enjoyed equally across the nation. Indeed there have been reports published by well respected organisations that suggest that certain counties, my own, Buckinghamshire, amongst them, will be penalised in terms of future development whilst others will gain.

3.6 It is wrong of HS2/DfT, in my opinion, not to break these benefits to county level and in certain instances to district and parish level. I will, if I may concentrate on Buckinghamshire, although your Lordships will immediately understand that this situation will be replicated elsewhere. Within this county the four districts will not be affected equally. It is clear, I would suggest, that the will be greater impact when the route is above ground than when it is in tunnel. This implies that the Aylesbury Vale district, where virtually the whole track of the railway is above ground, is likely to be relatively more affected than the other districts where the track is either in tunnel or has the possibility of so being.

3.7 The analysis can be taken further, of course, as there are parishes in Aylesbury Vale District that are so far away from the track as to be totally unaffected and others, such as my own, Twyford, that will be very badly affected. Indeed such an effect is already manifest in respect of the differential impact that HS2’s announcement has had on both the ability to sell property and upon the price that has been achieved.

3.8 It has also been comparatively more difficult to achieve sales within the parish as evidenced by the need of six owner occupiers to seek sales through the Exceptional Hardship Scheme because of the protracted process of advertising without achieving acceptable offers. The received wisdom from HS2/DfT is that the effect on sales is more profound within a comparatively short distance from the proposed line of route and diminishes significantly thereafter. It is interesting to note, therefore, that two of the EHS related sales in the parish were situated in excess of seven hundred metres from the line of route. The remaining four EHS sales are located within five hundred metres of the line and, within that distance only two owner occupiers have achieved private sales since the line was announced in March 2010 and both of these sales have been to purchasers who have long term family associations with the parish.

3.9 PricewaterhouseCoopers have published a report on the likely blight effect on house prices and the ability to sell close to the line as your Lordships will be aware. Applying the percentage blight rates to the 43 owner occupier properties within a five hundred metre distance from the line of route in Twyford suggests that the reduction in house values within this area is of the order of just in excess of five million pounds.

3.10 For this reason it will not surprise your Lordships that only two properties are being offered for private sale currently. One of which is being offered at a price which almost
exactly reflects the reduction from its unblighted value as predicted by PwC in respect of its distance from the line.

3.11 Now PwC is an extremely well respected firm with vast economic experience so it is reasonable to accept that their research is robust. I would, therefore, suggest that the results presented in respect of Twyford can be replicated in every community which is close to the line of route where the trains run above ground. The cumulative effect thus runs into many millions of pounds which I suggest has not been factored into the cost base of the project. It has not been a difficult exercise to create such an impact assessment at parish level and certainly not one that was beyond the means of HS2Ltd/DfT to achieve in their planning stage.

3.12 What is also clear is that the discount for properties which fall in the distance band of 120 metres to 300 metres has not been published although it is obvious that this will be far in excess of thirty percent. However, the compensation offered for owners of properties within this band range between £22000 and £7500 although the discount sustained on the currently achievable values of the average house in that part of Twyford (c£400k) is at least £120,000. This can hardly be democratic, fair or just.

3.13 My contention is that it was a gross error on the part of HS2/DfT not to consider impacts of this sort in their assessment of the number of routes and route sectors that it is claimed were carried out prior to the selection of Route 3 phase 1. Following on from that contention is that the budget and rules for awarding compensation are also inadequate and not fit for purpose. I realise that there is currently a consultation on this matter and this parish will be responding robustly in terms to this.

3.14 I would also like to turn to the issue that PwC raise about the recovery of house prices following construction of the line. I am happy to accept that this contention is generally true, but at the macro rather than micro level. The assertion is that a discount on unblighted value at three hundred metres is of the order of thirty percent and that the discount reduces to twenty percent at five hundred metres. It seems likely, therefore, that house values in badly affected areas will take years, maybe decades, to achieve parity within similar properties in other places. The issue is exacerbated in as much that even with the larger corridor of say five hundred metres from the line some portions will be affected by construction for maybe a couple of years whilst others, and particularly those close to HS2 construction depots, the largest of which is to be situated within 2000 metres of this parish and parts of the parishes of Charndon and Calvert Green and even closer to the parish of Steeple Claydon, will be blighted for the whole of the ten years of the construction of the line. This will render it impossible for affected home owners to have the normal freedom of movement that we expect in this country without them paying an extremely high price. Effectively, therefore, making them prisoners in their own homes. Your Lordships are therefore respectfully urged to recommend that HS2Ltd/DfT respond in a very positive manner to suggestions for the improvement of compensation that will be received through the current consultation.
3.15 There will, of course, be arguments that adopting such suggestions will change the nature of communities. The nature of this community changed on 10th March 2010 when we first learned of the plans for HS2.

3.16 Lastly, I should like to turn to the effect on this community of proposed land takes in the area. Whilst there is not a great deal of local employment on offer in the parish the local dairy farm, Portway Farm and Shepherds Furze Farm, do offer a number of agricultural jobs. Current landtake plans, specifically at Shepherds Furze Farm, are to remove over 60 hectares of arable land for spoil disposition. This could put the future of the enterprise, and certainly any plans for expansion in jeopardy. Clearly any land take will be compensated at the appropriate level but this just points up another instance of the lack of economic analysis at the micro level of the effect of this project. It will be clear to your Lordships that 60 plus hectares of decent arable land does not grow on trees and that to acquire a piece of land this size within a reasonable distance of this parish, in an area where agriculture is reasonably intense, will only be achieved at a significant premium to the current land price. Will Hs2/DfT cover this premium in their compensation payments? Probably not, should the land owner needing to replace land taken by HS2 cover the premium themselves, certainly not.

4.0 CONCLUSION

4.1 I, therefore, contend that the quality of financial and economic analysis supporting this project has been woefully inadequate at the micro level and therefore the balancing of cost and benefit at this level is showing itself to fall far more on the side of cost than benefit.

September 2014
Professor Tony Venables and Professor Dan Graham—Oral evidence (QQ 13-23)

Transcript to be found under Professor Dan Graham and Professor Tony Venables
Professor Roger Vickerman—Written evidence

1. This note addresses some of the areas of interest noted by the Committee in its Call for Evidence and raises some general points for the Committee’s consideration. It focuses more on methodological issues concerning large scale infrastructure projects than detailed forecasts or critiques of forecasts of possible outcomes. Four issues are addressed:

   a. Forecasting models
   b. The distribution of wider economics impacts
   c. Business response to changing connectivity
   d. The value of business time-savings and the growth of non-travel communications.

2. Large-scale infrastructure projects are notoriously difficult to provide accurate forecasts for. This is true of both the base traffic forecasts and even more so for any wider economic impacts which lie outside the conventional estimation of user benefits. The main reason for this is that the conventional assumptions under which economic appraisal is undertaken are much less likely to hold true. This is essentially because the larger the scale of the project, the more likely it is to change underlying behaviour affecting the generation of trips, their distribution between alternative destinations and the likely choice of mode and/or route. The conventional model works well for minor changes to networks which have a marginal effect on journey times or generalised costs and is well represented by the components of the Department for Transport’s WEBTAG procedures. This is because the transport change leads essentially to transport responses which can be modelled more effectively. But non-marginal changes can lead to more significant change, not just in the transport response, but also in a wider range of activities which are sensitive to transport costs such as market areas, location decisions etc. Given the extent to which each large-scale infrastructure project is unique, it is very difficult to calibrate models on past experience. The best we can do is to provide a range of possible outcomes from a range of different approaches rather than relying on a single model, and especially a modelling structure based on traditional marginal changes.

3. Evidence from around the world makes it clear that wider economic benefits are not automatic from high-speed rail investments. There is no presumption that any such benefits accrue more to core or peripheral regions; indeed in many cases they seem to be shared between connected metropolitan areas. There is, however, more consistent evidence that smaller intermediate towns on high-speed lines do not benefit and that major metropolitan areas may benefit at the expense of their immediate hinterlands. The exceptions to any of these generalisations are where local and regional authorities have been in a position to invest in accompanying local infrastructure giving good interchange with the high-speed line and with planning policies designed to attract new business. This is particularly relevant for redevelopments immediately around the high-speed stations. This argues that high-speed rail needs to be seen as part of a multi-modal national network and not an isolated link between two, three or four major cities. The
realisation of the full benefits may depend on many local initiatives to take advantage of the new opportunities provided.

4. Understanding the impact of such new infrastructure on local economies is more complex than a simple attempt to estimate changes in gross value added or employment. Significant changes in the accessibility of business to other businesses and markets can lead to changes in the way businesses are organised. Improved transport can reduce internal transaction costs and enable firms to benefit from skill clusters in particular locations allowing a degree of deconcentration. We need to focus attention on this aspect rather than the more conventional use of industry measures of concentration and effective density.

5. Opponents of large-scale transport infrastructure projects such as high-speed rail often claim that new means of communication are rendering travel less important for business. And even where such travel is undertaken the measured gains from time-savings are overvalued because of the ability to work and keep in touch during the journey. The evidence on the first of these points is that generally travel and other communications are complements rather than substitutes. The advent of email, on-line booking etc makes arranging journeys much simpler and can increase the overall amount of travel. Furthermore changing social order has led to people living further from their workplace and that is compounded by the difficulty of optimising locations for multi-worker families. The second has been less studied. What evidence there is suggests that those working on trains are tending to perform lower level functions, answering emails, reading documents for meetings or editing reports or presentations rather than being creative. This suggests that there are still significant benefits from time-savings to be gained. This benefit is compounded by the generally greater reliability of high-speed train services that ensures on-time arrival and makes meeting planning easier.

September 2014
Virgin Trains and London Midland—Oral evidence (QQ 203-215)

Transcript to be found under London Midland and Virgin Trains
Volterra Partners—Written evidence

Volterra Partners—Written evidence

1. Is there an economic case for HS2?

Yes. We believe that there is a strong economic case for HS2. However, the route appraisal method risks undermining the economic case since it results in sub-optimal decisions, for example with regards to station location.

We believe the central argument for the HS2 economic case is focussed around capacity. Existing rail routes are becoming increasingly capacity constrained as rail demand continues to grow: rail usage has more than doubled in the last 20 years. This increase in rail demand is resulting in rising fares and a lower quality of service as congestion means that passengers are forced to stand.

The ability to add to this capacity on existing lines is minimal and will not deliver the required increase in capacity. Despite an £10 billion upgrade to the West Coast Main Line (WCML) completed in 2008, there is still major congestion on the line: a Rail Utilisation Strategy report published by Network Rail in 2010 found that the WCML was ‘Britain’s busiest long distance rail route’ and was ‘nearly at full capacity’. By 2019, there is expected to be high capacity pressure on the section of the route into London, Manchester, Birmingham and Liverpool.

Transport is a crucial artery in how people move around the country and deliver economic growth. This is for commuting, business trips, and leisure. Capacity is typically most constrained at peak times, and therefore arguably less of a constraint for leisure trips than commuting and business trips.

The case for HS2 is not directly about commuting. However it could still have impacts on this:

- Birmingham Interchange will become a similar travel time from central London as parts of the south east which contain many large commuter zones into London (Milton Keynes, St Albans, etc). Residential around Birmingham Interchange could therefore become attractive to commuters to London. This is not something that any of the current analysis has considered.

- It could release capacity on constrained commuter routes on the southern part of the network. This was considered in a report by Greengauge 21 and we believe is included within the HS2 business case implicitly although clearly the actual benefits will depend crucially upon the timetabling assumption for how the released capacity would be used. More explicit information on critical assumptions like this would be usefully shared outside of HS2.

HS2 could also have the benefit of making tourism across the rest of the UK more attractive, meaning that tourists who visit London are more likely to jump on a train to
other cities if it is quicker. This will have a positive regional impact as tourism expenditure is spread more equally across the country.

2. **Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?**

Yes, there are several factors that the strategic case fails to take into consideration. We believe that the Benefit Cost Ratio (BCR) for HS2 is definitely ‘value for money’ and the expected range of the BCR (1.25 to 3.25) is probably in the right ballpark. However, we do not think the case has been made persuasively.

- **Too much focus on time savings**

The existing case rests almost entirely on user benefits through time savings, therefore it underestimates the benefits of HS2. The main focus of HS2 should be the capacity argument: connecting major cities allowing for economic growth and regeneration, rather than simply time savings. However the existing appraisal method rests entirely on valuing time savings and does not explicitly capture the benefits of capacity, except through crowding. Not only does the focus on time savings in the appraisal mechanism underestimate the benefits, it also jeopardizes the station location choice. Despite acknowledging in the strategic case that there are many unknowns and many wider benefits that are not captured, this appraisal method is still the basis on which decisions of station location are being made. This has led to some incorrect decisions. For example, HS2 Ltd ruled out a route via Sheffield City Centre, without ever considering any of the Wider Economic Impacts (WEIs), favouring a cheaper, quicker route via Meadowhall (6 miles north east of Sheffield City Centre).

Implicit in such an analysis is a disconnect between the economy and transport. The wider economic benefits now accepted into guidance is really only connected to city centre densities and is only considered a scenario add-on. Yet the impact of high Speed Rail over time will be and should be planned to change the economy and facilitate new opportunities. It is at the heart of the case, not an option.

There are a variety of aspects that HS2 should have taken into consideration as outlined below.

- **HSR must connect city centre to city centre**

HS2 must connect city centre to city centre. Without this direct connectivity, HS2 loses its competitive advantage over rail and air travel. International evidence clearly shows that the economic development generated by a city centre station is significantly greater than a parkway station: on the French HSR route parkway stations such as Aix en Provence and Avignon have failed to generate economic activity, whereas Lille pushed for the HSR station to be located in the city, rather than out of town, which lead to a transformation of the city.
Parkway stations can have negative impacts on city centres by sucking economic activity outside of the city. This is the danger of a HS2 station in Meadowhall: the proposed HS2 parkway station is 6 miles outside of Sheffield City Centre. A HS2 station in the centre of Sheffield has the potential to generate significant economic activity through additional employment and agglomeration impacts, helping to strengthen the north and rebalance the economy. It is expected that the net additional employment created by a station at Victoria (the proposed city centre station) would be 9,400 compared to 3,050 at Meadowhall. A HS2 station in Meadowhall not only prevents the generation of higher economic activity by a city centre station, it also risks having a negative impact on Sheffield City Centre as existing economic activity is attracted out of the city. The impact of HS2 on Sheffield could be negative if the station is located in Meadowhall. This is entirely missed in the current appraisal method by not having any mechanism by which to capture economic growth of this kind.

- **Regeneration, growth potential and additionality**

Development around the city centre stations is the key to the success of HS2. This is completely ignored in the economic appraisal yet it is the only way in which any financial return could be captured by the city or national authorities (via land values).

The current transport appraisal also fails to capture the impact of regeneration of the most deprived communities. This is evident in the choice of Crewe over Stoke-on-Trent as the station between Manchester and Birmingham. The economic benefit of regeneration in Stoke-on-Trent has never been considered by HS2, despite high levels of deprivation and unemployment meaning that Stoke-on-Trent should be a prime candidate for the transformational impacts that HS2 aims to create: in 2010, 31% of the Lower Super Output Areas (LSOAs) in Stoke-On-Trent were in the top ten percent of most deprived LSOAs in England.

The current transport appraisal also fails to effectively capture real growth and additionality: the economic impact of the investment and growth on top of what would have happened anyway. This has much more value than just the marginal productivity uplift on existing jobs. In Northern Line Extension the Move to More Productive Jobs (M2MPJs) added 81% to the business case.

High Speed 1 (HS1) illustrates how the current transport appraisal failed to capture the transformational benefits. The BCR of HS1 was 1.8. In additional to the benefits captured by the BCR, an assessment revealed that the regeneration around stations would support the delivery of over 15,000 new homes and 70,000 jobs. If, as the transport appraisal claims, all of these are simply activity that would have been located elsewhere in the absence of HS1, then the only value that can be placed on them is any productivity uplift along with any inherent benefit of them being located in regeneration zones rather than elsewhere.

However, if only 5% of this additional activity was actually completely new to the UK, then the value (60yr NPV) to the UK economy was estimated at £10bn. This considerably exceeded the cost of the project and would have fundamentally increased the BCR.
However our appraisal methods do not currently allow for any new activity to be completely new or additional, they only allow for marginal uplifts to be captured.

- **Speed requirements**

HS2 is being designed for 400kph even though trains will not travel at speeds of more than 330kph. That has a large impact on the costs and no impact on the benefits.

City centre stations, by the nature of their location, are more likely to require tunnelling. By insisting that the tunnels can accommodate trains travelling at 400kph, HS2 Ltd are adding unnecessary costs to the routes via city centres resulting in a bias towards parkway stations. Despite the clear economic advantages of a HS2 station in the centre of Sheffield, HS2’s current preferred station location is in Meadowhall. One of the main reasons given by HS2 Ltd for the preferred station location in Meadowhall is that the cost of tunnelling via Sheffield City Centre would be too large: a Victoria Loop is expected to be £900 million more expensive than a route via Meadowhall. By nature of building the loop (where stopping trains loop off the main track to travel via Victoria), all trains travelling into Sheffield will be stopping trains and therefore will be slowing down on approach to the station. Therefore, designing the tunnel to operate at 400kph is a completely unnecessary cost. If HS2 allowed for lower line speeds through urban areas, the cost of tunnelling would be reduced and therefore the viability of city centre stations would increase.

Similarly, a HS2 station in Stoke-on-Trent was ruled out initially partly on the basis that a suitable route could not be found through the city where a speed of 400 kph could be maintained despite the fact that trains will not be running at this speed, especially not through urban areas.

- **Accounting for uncertainty**

The current transport appraisal fails to account for uncertainty. The strategic case includes lots of scenarios around demand levels, economic growth, etc which would fundamentally alter the overall business case for HS2, but wouldn’t alter specific decisions as to where it goes.

However, there are no sensitivity tests that take into account factors that might affect the route choice: the current appraisal method doesn’t take into account the level of growth that might occur or where growth might occur given different route choices. This is fundamentally important to the economic case: the station location choices will impact on the level and location of growth and therefore impact on the whole economic case. The economic benefits will be higher if a HS2 station is located in Stoke-on-Trent rather than in Crewe and if the station in Sheffield is in the city centre rather than in Meadowhall. These route choices are significant for the economic case yet they are not accounted for under the sensitivity costs.

- **Trade-offs and balancing objectives**
The current evaluation of the economic case doesn’t effectively balance conflicting objectives: cost savings are prioritised over regeneration; time savings over the potential for economic growth; one location versus another. The existing appraisal method is not able to value a variety of things such as regenerating an area or reducing long term unemployment (this doesn’t just lead to reductions in the number of people claiming benefits, but has knock on impacts such as crime reduction and reduced impact on the health service too).

This inability to correctly value trade-offs is evident in the station location choice in Sheffield where the quicker, cheaper route via Meadowhall has been chosen over the marginally slower, more expensive route via the city centre which has significantly more opportunities for regeneration and economic growth. HS2 Ltd concluded that a Victoria loop would produce £480 million in benefits, £190 million in additional revenue at an additional cost of £900 million. The route was rejected on the basis that the BCR (at 0.64) was lower than the BCR for the whole route (2.3), despite the fact that there were no Wider Economic Impacts (WEIs) included as the guidance had not yet been adopted. It is estimated that a station at Victoria would create 6,400 more net additional jobs compared to a station at Meadowhall: translated into GVA, this has a 60 Year Net Present Value of £6 billion, however this was not taken into consideration in the decision making.

The Rolling Stock Maintenance Depot in Washwood Heath is also located in a sub-optimal location. While a depot in the Birmingham area is a positive impact for the local economy creating around 640 jobs, the location of the depot on this site prevents the site being developed to provide significantly more jobs, around 4,000, in sectors which match the skills of the local population. This is particularly important in Washwood Heath where unemployment and deprivation are significant: 40% of the area within 5km of the site is in the top 4% most deprived in the country and there are 15,900 people claiming unemployment job seekers allowance within a very local commuter catchment area. The current appraisal method for HS2 does not include enough consideration for this kind of opportunity cost, and the impacts upon deprived communities where impacts could be much more pronounced (both positive and negative).

3. **What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?**

There are significant potential economic benefits that could be generated by HS2 in the Midlands, North of England and Scotland, thereby reducing the north-south divide and rebalancing the economy. However, as discussed previously, in order for these benefits to be maximised the optimal route and station locations must be chosen.

Furthermore, Phase 2 must be completed in order to generate benefits in the north and, equally Phase 3 must be completed in order to generate benefits in Scotland. If HS2 is stopped after Phase 1 (route between London and Birmingham or possibly Crewe), it would be a disaster for the northern cities as strong links between London and Birmingham with no links further north is likely to increase the dominance of London.
Coordinating policy between government, local authorities and Local Enterprise Partnerships is crucial for maximising the benefits of HS2. Intra city connectivity packages must be carefully planned and coordinated to spread the benefits of HS2 across the city regions. Planning policy must actively encourage development around the station site: high density employment around the HS2 station is crucial to maximising economic growth. Development must be encouraged not deterred by strict planning policy or funding models.

An effective transport system is necessary for a successful economy, but it is not sufficient. Supportive planning policies, private sector investors and suitable skills are all equally necessary.

4. **Might some parts of the UK suffer economic disadvantage from HS2?**

As previously discussed, sub-optimal station location choices mean that that the economic benefits of HS2 are not maximised and in some cases the station location even has a negative impact on economic growth.

If the HS2 station in the Sheffield area is located in Meadowhall as proposed, this will have a negative impact on Sheffield City Centre as it will lose out of the opportunity to grow like other northern cities which are directly served by HS2.

Similarly, the location of the Rolling Stock Maintenance Depot in Washwood Heath restricts the employment generation on the site. If the site is developed for industrial, warehouse and distribution uses it could create 4,000 jobs that match the skills of the local population, rather than the 640 jobs created by the depot. As discussed previously, this is particularly important in the Washwood Heath area where there is high unemployment and deprivation.

HS2 cannot serve the whole country and therefore some areas will not be able to directly benefit as they will not be connected to the high speed network. Bristol has been long underinvested in terms of rail links, although electrification is now being planned. This makes it especially importance that HS2 is not seen as a silver bullet. In order to spread the benefits across the countries, further transport investment will be required to ensure that intra-city transport links are also improved. This is evident in all cities served by HS2, for example Leeds, where many commuter links within the city region could be improved and where they have received a record SEP to invest in the future, which is crucial.

However, the economy is not a zero-sum game. New investment can improve economic performance in some areas without making others worse in absolute terms.

5. **Is London likely to be a main economic beneficiary of HS2?**

London will be a significant beneficiary as the biggest constraints on capacity are on the lines into London, and releasing existing tracks for commuter trains will help this. As in other cities, getting the centre right is important.

An evaluation system less focused on time savings could have taken a more strategic view, allowing the main tracks to be started between Manchester, Birmingham and London, while
a more collaborative debate on city centre links, development prospects and local funding took place.

6. **How might the expected benefits of HS2 to the national economy be realised?**

High Speed Rail is essential for the UK to remain globally competitive and attract inward investment. Whilst no one is likely to invest in the UK as a direct result of HS2, it may be a factor in their decision and so a proportion of potential increased inward investment could have been included in the economic case.

The construction of major infrastructure, such as HS2, benefits the UK economy by up-skilling the population: big projects necessarily tend to demand higher standards of quality and safety, which can then be transferred back to other smaller projects. It is essential for businesses and workers to have experience of major project construction in order to be competitive abroad: an example of this is after the completion of the Jubilee Line Extension, many of the workers went to Hong Kong to work on the Hong Kong Metro. Each major construction project will lead to lessons being learnt for the next major project: for example, lessons learnt in the construction of Crossrail are already being shared with Crossrail2, the Thames Tideway, HS2 and Network Rail.

7. **How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?**

Competition is powerful in helping to build markets.

8. **Should travellers expect to pay higher fares on HS2 than on other lines?**

Yes.

The assumption that HS2 will charge the same fares as non high speed intercity rail services is hugely misleading. High Speed Rail services charge a premium fare, and rightly so.

9. **Does the prospect of HS3 affect the economic case for HS2?**

Yes.

The biggest catastrophe would be if Phase 2 of HS2 is not built and only Phase 1 (London-Birmingham) goes ahead. We need to link the northern cities. HS3, both the original option mooted to serve Newcastle and Scotland, and the latest trans-Pennine option, could have significant impacts. The case for this is unlikely to be made using current appraisal methods however – need to allow for growth and regeneration to make this case stack up.

*September 2014*
Volterra Consultants, KPMG and Steer Davis Gleave Consultants—Oral evidence (QQ 24-37)

Volterra Consultants, KPMG and Steer Davis Gleave Consultants—Oral evidence (QQ 24-37)

Transcript to be found under KPMG, Steer Davis Gleave Consultants and Volterra Consultants
Madeleine Wahlberg—Written evidence

1. I am submitting this evidence in a personal capacity. I am retired and have no financial or other interest in any aspect of the issue raised below.

2. I have taken a particular interest in the development of the EU transport policy (TEN-T) to which this submission refers. Details of TEN-T can be found here: http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/legal-basis_en.htm


4. I am submitting on a single issue, which could be seen to refer to a number of the questions outlined by the Lords’ Economic Affairs Committee, but I will raise it in relation to question 7 – How should HS2 be operated.

5. The essence of this submission is to ask the Lords’ Economic Affairs Committee whether they feel confident that the development of HS2 has taken and is still taking into account, the specificities of EU TEN-T policy. If they do not feel confident I ask that they enquire into this issue: i) to ensure that there is no misunderstanding or disjuncture between the development of HS2 and EU legislation and policy; ii) to ensure that there is public and Parliamentary transparency on the relationship between TEN-T policy and HS2.

6. The TEN-T policy is codified into Regulations that are binding (under the terms of the subsidiarity principle) on the UK. The Western arm of HS2 (but not the Eastern arm) is part of an EU designated Core Network Corridor called the North Sea to Mediterranean Core Corridor. http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/corridors/northsea-med_en.htm A European Coordinator, Mr Péter Balázs has recently been appointed to take forward the development of this Core Corridor and his authority and powers derive from the Regulations above.

7. Given that context, I have been disturbed to hear the Rt Hon Patrick McLoughlin, Secretary of State for Transport, insist that “HS2 has nothing to do with the EU”. I understand that it might be a sensitive issue politically but the public need to be aware of the actual relationship between the implementation of TEN-T policy and the development of HS2.

8. Having attended TEN-T meetings and read some of the background over the years, it is apparent that one key issue is that these Core Corridors should be developed and run on the basis of what is referred to as ‘European Added Value’ as distinct from purely national interests. In that context, the processes of franchising and contracting the
services along the Core Corridors, and the management of their operation, are seen to be issues of interest for 'European Added Value' not national issues.

9. In relation to Question 7 [How should HS2 be operated?] I therefore submit the observation that it will be necessary to understand the intentions, powers and role of the EU in the management of the Western arm of HS2 before coming to some view on how HS2 will or should be operated. If the Government and HS2 Ltd are denying that there is any issue of alignment between their view on the management of HS2 and the EU’s view of the management of that Core Corridor, then that is a serious lacuna.

September 2014
Michael Wand—Written evidence

Response to Q1-Q4 and Q6:

1. A quite different HS2 is needed to avoid Britain's North South economic divide being widened by HS2 Stage One.

2. If HS2 is launched super-speed first from Euston as proposed, it will bring central Birmingham to within an hour’s travel of central London. Far from bringing net economic benefit to the Midlands, it would add central Birmingham to the London commuter catchment and open Birmingham’s business district to predation by London’s vastly bigger business sector. Worse, this would increase London's domination of the UK economy and widen the North South Divide before Stage 2 of HS2 was even started.

3. It need not happen like that. London's commuter catchment and spending power may be twice that of Birmingham and Manchester put together, but the opportunity to assemble an economic counterweight to London still exists, well removed from London's effective reach.

4. The corridor of northern cities between Liverpool and Hull has a combined economic and skills catchment big enough to become such a counterweight, but it lacks connectivity. In particular, it needs an east-west railway to fast-connect its city centres and best airports. Much of the obvious route for this fast connector is in place as part of the Lancashire and Yorkshire rail networks. However, they are separated by one of England's major economic barriers, the Pennines. Manchester may be only forty miles from Leeds but it is a whole hour's travel by diesel train.

5. The construction of a fast rail link from Manchester Victoria to Leeds, following the M62 corridor eastwards through the Pennines from Rochdale, is part of HS2 Plan B, the writer’s counter-proposal to the government's scheme for HS2. Plan B would be built North-first and instead of HS2. Its construction would start with the Manchester-Leeds fast link, halving today's rail times between the two cities and fast-connecting the main centres of East Lancs to those of West Yorks. HS2 will not do this.

6. Plan B’s main line extends this Crossrail north towards the Tyne and Edinburgh and south from near Jn.27 of the M62 towards London via Sheffield-Meadowhall and East Midlands Airport.

7. Plan B's Midlands Cities fast connector from Wolverhampton, Birmingham and Coventry, would join this main line by M1Jn.19 of the M1.

8. Plan B’s first train fleet would be successors to the Class 395 high speed commuter sets running on HS1. They would terminate at St Pancras International or continue south via the St Pancras Thameslink platforms to interchange with the London Crossrail at Farringdon and with the Southern and Gatwick lines at Blackfriars.
9. The Plan B route is shown in bold red on the map. Unlike HS2, it follows existing rail and motorway corridors where possible. Existing routes where Plan B trains could continue beyond the major stations are shown in thin red.
Response to Q5:

10. London is likely to be the main beneficiary of HS2, but it would benefit some parts of London a lot more than others. To begin with, its Euston terminus tends to favour the western half of central London. Customers from the City, from Canary Wharf, from the Great Eastern main line, the Lea Valley and Stansted would face the same Euston interchange penalty and walk as they do now west of Kings Cross or St Pancras.

11. Secondly, HS2 does not reach south of the Thames. Today’s congestion on the South London lines into London Bridge Station (similarly into Liverpool Street) is much worse than the more publicised congestion on the WCML/Milton Keynes route into Euston. As the congestion at London Bridge also impacts through-traffic from St Pancras, Plan B includes a rail tunnel, jointly proposed with BML2, to connect the South London rail network at Lewisham to the Lea Valley line at Stratford via Canary Wharf. It would materially relieve London Bridge and the Jubilee Line connection to Canary Wharf at peak hours. It would also allow more Plan B trains not terminating at St Pancras to continue south on the Thameslink route and to interchange with the London Crossrail at Farringdon (for the City and Canary Wharf) and with the South of London network at Blackfriars and London Bridge (for Gatwick and Brighton).

Response to Q7:

12. Route operation: the Plan B route on the map is, in effect, a major upgrade of the Midland Main Line. If built, it would give Manchester and Leeds, Wolverhampton, Birmingham and Coventry a second main line each to London, with Bradford getting its first direct line for decades. The scheme would be operated with the MML but in competition with the train operators on the West Coast and East Coast Main Lines.

Other aspects of HS2:

13. Airport connectors: HS2 is unable to stop at East Midlands Airport because its main line goes to Birmingham direct first. It is a missed economic development opportunity. Plan B would instead have a main line four-platform station inside the eastern boundary of East Midlands Airport and direct connectors from it into Derby, Nottingham, Loughborough and Leicester. By fast-connecting these city centres the airport would become the growth driver of the wider East Midlands economy.

14. And, Yorkshire gains limited benefit from the existing Leeds-Bradford airport. It is on high ground at the back of Leeds and Bradford and it would be extremely expensive and disruptive to connect it to the motorway and main line rail networks.

15. Plan B’s Crossrail would extend eastwards to reach the East Coast Main Line just south of York, with ease of access to the best two alternatives to Leeds-Bradford: Church Fenton, currently an RAF base and Elvington, previously an RAF base. Both are surrounded by land.
Michael Wand—Written evidence

with potential for the type of garden city developments foreseen by the list of Wolfson Prize winners this month.

Conclusion 1:
London is the UK’s great economic and political asset. It has four international airports. Its commuter arteries fan out across the south of England to access an economic catchment and skills base twice that of Birmingham and Manchester put together. But it is akin to a giant monopoly and much closer to government and more able to gain publicity for new infrastructure than regions that could otherwise become more competitive.

Conclusion 2:
If HS2 is launched speed-first to Birmingham and extended as proposed, the London economic monopoly will grow even bigger than it is now. Birmingham, the East Midlands and cities further north of the North South Divide will lose more ground to it and the chance to ease the London-wards bias in the UK economy and give the North a one-off (but lasting) boost from fast east-west connectivity will be lost.

Michael Wand
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   Strategic Adviser, HS1 route-planning team, 1990-94
   Director, Trafalgar House Corporate Development Ltd, 1986-1990
   Chief Development Surveyor, London Docklands, 1981-84
   RICS President’s Prize winner 1965

September 2014
Michael Wand—Supplementary written evidence

Supplementary submission: a Northern Cities Crossrail

The writer submitted (15 September) that HS2 risks making the North South Divide worse and that it should instead be built North-first, preceded by a fast rail link between Manchester and Leeds to cut through the economic divide of the Pennines.

The map shows how a 40 mile link between Manchester Victoria and Leeds would at the same time fast-connect the Lancashire and Yorkshire rail networks to each other and open up a Northern Cities Crossrail, cutting centre-to-centre rail times from Liverpool and Preston in the west to York and Hull in the east.

More east-west line electrifications would be needed for the crossrail to open. A second stage of the fast link would make Sheffield and Bradford part of this economy of northern cities, which would be half as big again as Birmingham. The shape of the HS2 scheme might have to change in response.

Michael Wand

November 2014

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Website: http://hsnorthstart.wordpress.com/
I hope that you will be able to consider my comments, in spite of my missing the deadline. I have been travelling abroad with my husband and was away at the time of the closing date.

I understand that many commentators consider the government’s financial case for HS2 to be very weak. I share their concern, especially regarding the long term implications for the entire country.

Estimates for large Government sponsored investment projects are notoriously unreliable, they have been for decades. An analysis by the Tax Payers Alliance published in 2009 demonstrated the high risk of cost overruns on such projects. Bearing this in mind, the plans to expand HS2 beyond Phase 1 (Birmingham) are unlikely to be ever fulfilled, as they will be unaffordable. Thus the whole concept of HS2 will be destroyed.

The government needs to consider the way businesses and communications are developing in the 21st century. Videoconferencing is now a regular way of life in business replacing the need for most face to face meetings. On the social scene we are witnessing a dramatic increase in the use of personal videoconferencing tools, such as Skype and Apple’s FaceTime.

Government investment in the next generation of infrastructure to facilitate vastly superior communication than we see today would be a far wiser use of the tax payers’ money. This would get us ahead of our overseas competitors at a fraction of the cost of HS2 Phase 1, let alone, the complete HS2 “project”, whatever that may be.

I believe that the concept of HS2 improving the UK’s regional development will in practice increase the emphasis and demands on London – the absolute opposite of its intentions.

I sincerely hope that HS2 will be abandoned and any monies spent will be on more affordable ways of encouraging economic development.

September 2014
Please let me start by apologising for the lateness of my submission. I have been overseas and I mistakenly noted that the closing date was the end of September 2014.

However, if you are able to take my points into your considerations then I would be grateful; if not, then I do understand.

Let me start by saying that I live in the Chilterns; a very attractive part of England and relatively close to London. HS2 will be of absolutely no benefit to me or those along the majority of the planned route since access to it is either at Euston or in the Birmingham area. However it will scar forever the countryside near to my home of 30+ years, some of which is Green Belt and AONB. Hence as a tax payer I see absolutely no financial benefit, nor economic case.

If I stand back from “local” issues, what I see is a plan for a new railway line that is a series of tactical blunders; in no sense is it strategic. For example:

- it does not link directly to HS1 (apparently you will need to get a tube between Euston and St Pancras stations).
- It does not link directly to the UK’s most important hub airport – Heathrow (a spur is planned for some future date).
- It will, I understand, not be able to go to key main stations such as in Birmingham (not NNNew St, but Curzon St), Nottingham & Derby (Toton which is neither Nottingham nor Derby). So any time “saved” will be lost through the need for local transport connections, eg., buses or taxis. This is analogous to Ryasnair flying you to Frankfurt … unfortunately the airport is some 80 miles away from the city centre!

These tactical choices are as a result of various attempts at various times to reduce costs and make the project appear more justifiable. I have no doubt that other tactical compromises will emerge in future attempts to contain expenditure; these will further undermine any semblance of a sensible transport strategy.

The Government’s economic argument for HS2 can at best be described as marginal. In order to bolster its case it has included a valuation on business people’s time whilst travelling. I have travelled for most of my career and I can assure you that the majority of such people do not use their time on business matters. I would therefore argue that this contribution to the financial case is vastly overstated.

The budget for HS2 Phase 1 is some £50bn. Whilst indeed, this is a great deal of money, I do not believe that this project will be delivered within this sum. All governments, of all persuasions, have an appalling track record on large scale investment projects. Some recent examples are:

- The 2 aircraft carriers that are being built initially for a sum of £3.9bn, now projected to be in excess of £6bn.
- Olympics 2012 – original budget £2.4bn – actual cost nearer to £10bn.
- The Scottish Parliament building with an estimated final cost of £414 million, many times higher than initial estimates of between £10m and £40m.
- The Millennium Dome.

So with an already weak economic case for HS2, any budget overrun, which is the most likely outcome, will undermine it completely.

I contend that HS2 is an investment in yesterday’s technology. If there was a case for doing it, it should have been done 20 years ago – during the last century. Most of our competitors did just that; eg., the French with their TGV.

The UK needs to be investing for tomorrow and be leapfrogging the competition. A far better use of capital would be to build a world leading ultra high speed BroadBand network throughout and to all corners of the country – an order of magnitude faster than anything that we have or know today. Business communication would be revolutionised.

This could be done, I believe, for nearer to £5bn (nationally) rather than the £50bn for HS2 Phase 1 alone.

The need for people to be able to move, especially for business, is out of date. As one of my bosses said, you need one face to face meeting with a client (with dinner) to establish contact and credibility, thereafter the majority of future contacts can be accomplished using technology (telephone and video conferencing). As someone who works in Technology I can vouch for this.

September 2014
Wendover HS2—Written evidence

1. Context and aims of the submission
   - The focus of this evidence concerns debt, whether HS2 “operating profits” can cover the interest payments on the loans and if it can be ever be repaid. Although the hybrid bill has received its second reading, the financial implications and risks of may not be fully apparent to Parliament.
   - This evidence uses figures from the October 2013 HS2 business case to derive the likely 2036 financial position of HS2. This year is the first of full HS2 operation with all projected passenger numbers.
   - Analysis indicates that in 2036, HS2 may have debts of perhaps £104,000 million, depreciated assets of under £70,000 million and interest charges of perhaps £3,500 million a year. Against this, it might have fare income of about £5,000 million but have to pay running costs of about £2,100 million, franchise profits of at least £250 million and a franchise fee of £3,500 m to support the conventional network.
   - The DfT may therefore have to fund a net cash loss of about £4,500 million each year,
   - Any debt repayment may be an extra £2,000 million each year.
   - If passenger numbers are lower than forecast, the cash drain will escalate rapidly.
   - The promised social benefits do not contribute any cash to fund the project.
   - Business benefits (if real) subsidise employer profits; leisure time saved is a gift from the taxpayer to users.

2. Wendover HS2
   - This evidence is at the national level only although presented by Wendover HS2 (WHS2). WHS2 is an active local Chilterns campaign group with professional expertise and strong local support.
   - Since March 2010, WHS2 has carried out a review of each iteration of the HS2 business case based on the detailed, year by year underlying business case numbers. The aim was to derive cash flow numbers and enable scenario analysis. These cash flow numbers are not otherwise available.
   - Dr John Savin is happy to provide verbal evidence if requested. He is an experienced financial analyst.
   - In 2013, WHS2 and made available to MPs an interactive spreadsheet model integrating all aspects of the 2012 business case. This allows rapid testing of different assumptions and multiple scenarios.

3. Modelling HS2 – is it possible?
   - The HS2 case is kludged together from multiple, independent computer models. The core is an opaque passenger number forecasting program. This is a UK-wide prediction and is not HS2 specific. Peripheral, separate regional models are used and connected via “wornholes”. Benefits are based on 2002 prices. They are then

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496 Wendover HS2 was formed in April 2010. It opposes HS2 in the Chilterns Area of Outstanding Natural Beauty (AONB) as an overwhelming national interest case has not been made and alternatives have not been adequately considered.
updated for GDP real price changes and inflation to 2011. Construction and operational costs are estimated in a different model based on 2011. Stage 1 and the Y-arms northern extensions are separately modelled. Each item is then calculated as a Net Present Value at a low discount rate (3.5% or less) and assembled to get a Benefit Cost Ratio (BCR).

- In HS2 there is no inflation but, crucially for the case, real passenger wages (but not staff or supply wages) are increased by GDP.
- DfT is able to forecast GDP and demography accurately till 2092.
- Because HS2’s case is a series of independent model outputs, HS2 can only test single assumptions; it chooses to do so selectively over a narrow range of values.
- HS2 does not provide a cash flow forecast as it does not have an integrated model.

4. **Should debt be an issue?**
   - The Department of Transport (DfT) has claimed that HS2 can be funded directly from taxation on a year by year basis (with implausible help from the Chinese).
   - This means there is therefore no debt in the calculation. This does not seem likely - but is convenient.
   - To fund HS2 out of cash tax receipts, the government needs a yearly surplus to at least 2033.
   - Other high-speed rail projects incur significant debt, for example, the French high-speed project appears to have a debt of about €44,000 million - and rising. The National Audit Office report on HS1 noted that “The cost to the taxpayer is higher than originally expected because the Department is now responsible for servicing and repaying the project debt”. The estimated “net taxpayer support may reach £10,200 million (present value to 2070, in 2010 prices)”.

5. **Might HS2 cost over £70 billion?**
   - Construction costs are presented by HS2 as factor prices. This is the market price less the tax theoretically recovered by the Treasury. This assumes that HS2 is fully UK sourced and taxed. Even then, the tax recouped is not identifiable. HS2 itself pays market prices so its balance sheet would show market-price debt plus interest. (The conversion from factor to market is 19% - so £100 factor price is £119 market price. Benefit ratios use market prices.)
   - Table 1 shows the factor prices (2011 money) used by HS2 for the 2013 business case. These have been converted by WHS2 to market prices and then uprated by the GDP growth factors used by HS2 to give the “real” price. This makes the possible bill £67.5 billion. Finally, 2011 values have been increased by the CPI to 2013 prices, about £71 billion.

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497 Specifically the GDP per capita. DfT require that real GDP growth will be in the 2-25% range to 2092 and assume 0.5% annual population growth. The 2010 case had to be recalibrated by 2012 as this did not happen in 2010 and 2011.
Table 1

<table>
<thead>
<tr>
<th>Phase</th>
<th>Category</th>
<th>Factor 2011</th>
<th>Market plus GDP 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Track</td>
<td>£19,243m</td>
<td>£28,488m</td>
</tr>
<tr>
<td></td>
<td>Trains</td>
<td>£3,182m</td>
<td>£4,937m</td>
</tr>
<tr>
<td>Y-arms</td>
<td>Track</td>
<td>£18,982m</td>
<td>£30,477m</td>
</tr>
<tr>
<td></td>
<td>Trains</td>
<td>£3,750m</td>
<td>£6,802m</td>
</tr>
<tr>
<td>Total project</td>
<td></td>
<td><strong>£45,157m</strong></td>
<td><strong>£70,703m</strong></td>
</tr>
</tbody>
</table>

- HS2 prefers to believe that the project can be completed at 2011 prices. However, since most of the costs are in skilled labour and imports, it seems likely that they will rise in real terms. HS2 assumes its passengers will get richer in this way; its staff do not.
- If interest at 3.5% is charged, the debt in 2034 might be around £104.3 billion of which about £33.7m might be interest (2013 prices). It would seem appropriate to be realistic about debt and interest.
- To repay £100bn of debt over 25 years at 3.5% interest will cost £6bn per year.
- Note that there are significant extra episodic costs from 2039 for renewal of track and trains. At market 2013 prices, this bill is £14.7 billion (£12bn in 2011 factor prices).

6. **Passengers**
- HS2 has released demand matrices of journeys between regions per day - excluding the London commuter regions (as these are the bulk of UK rail travel) and Scotland.\(^{498}\)
  In 2008, there were 585,912 one-way journeys per day. By 2036, without HS2, this may rise to around 610,000. Although the rise is only 4%, this masks large decreases within individual regions and big increases in journeys to London. (The 2008 figures are from the 2010 case as no 2013 baseline was provided.)
- Whereas HS2 is seemingly based on the prediction of a doubling of passenger demand, in reality it is the other way round. HS2 is not viable UNLESS London demand doubles AND GDP rises six fold.

**Table 2: individual passenger journeys per day nationally and to /from London**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2036</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Base+HS2</td>
<td>HS2 impact</td>
<td></td>
</tr>
<tr>
<td>Total trips</td>
<td>585,912</td>
<td>609,519</td>
<td>701,644</td>
<td>92,124</td>
</tr>
<tr>
<td>London</td>
<td>92,343</td>
<td>207,729</td>
<td>263,249</td>
<td>55,520</td>
</tr>
</tbody>
</table>

\(^{498}\) The 2008 figures from DfT show that there were 271,000 journeys within Scotland per day. There were about 2 million London and SE journeys. Journeys in the London area have been increasing rapidly but long distance and regional rail travel seems to have stagnated.
Wendover HS2—Written evidence

- HS2, by adding network capacity, generates 92,124 more national journeys but only 55,000 of these involve London - not all of those will be on HS2.
- The HS2 specific figure on the Old Oak Common to Birmingham interchange route section is 243,000 daily journeys in 2036, Table 3. This is about 20,000 lower than estimated in 2012.

Table 3: HS2 Passenger origins

<table>
<thead>
<tr>
<th>Origin</th>
<th>Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotland</td>
<td>58</td>
</tr>
<tr>
<td>Carlisle</td>
<td>21</td>
</tr>
<tr>
<td>Newcastle</td>
<td>36</td>
</tr>
<tr>
<td>Preston</td>
<td>2</td>
</tr>
<tr>
<td>Leeds</td>
<td>33</td>
</tr>
<tr>
<td>Manchester</td>
<td>61</td>
</tr>
<tr>
<td>Sheff+Nott+York</td>
<td>28</td>
</tr>
<tr>
<td>West Y-arm</td>
<td>84</td>
</tr>
<tr>
<td>East Y-arm</td>
<td>97</td>
</tr>
<tr>
<td>Birmingham</td>
<td>62</td>
</tr>
<tr>
<td>London</td>
<td>243</td>
</tr>
</tbody>
</table>

There are some oddities. About 58,000 people extra people a day travel between Carlisle and Scotland but only 21,000 travel further South. Most Scottish business people will still fly south.

- DfT now model that other transport modes, like coaches, will become less favourable increasing rail’s share of journeys. However, rail fares will rise by 25% in real terms relative to 2013. In the real world, this might offset any gains. It is not clear why DfT modelling of coach fares is any better.

7. Why so many?
- The reason why rail projects project fantastically high passenger numbers lies in the simplistic theory.
- To do a rail forecast, one takes a baseline year and each year multiplies it by a factor, called an elasticity, and that year’s GDP growth.
- So if there are 1000 passengers, GDP grows at 2% and the elasticity is 1.5, the sum is 1000 x (1+(1.5 x 2%)). So the following year 1030 passengers travel, the year after 1060, the next year 1092.
- To do this, one just needs the elasticity (which never alters) and each year’s future GDP.
- Elasticity values are arbitrary and unvalidated. For example, in 2036, HS2 needs to know the elasticity for business travellers from Leeds to London to calculate how many Leeds business people go to London each day. This has to be done till 2036 for every HS2 station and each passenger type year. Hence, the model decides for itself, the programme finds parameters that let it work.
- DfT believes that GDP growth will be over 2% a year to 2092 with no recessions.
- So of course passenger forecasts become ridiculous. GDP never falls, growth is compound, elasticity factors are always positive. If there is a BCR problem, one can always tweak a parameter.

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499 HS2—style trains through the Borders have less capacity and will be slower as the trains do not tilt.
500 There are some overall standards, PDFHS set a lower long-distance elasticity than before.
In 2010, WHS2 calculated the correlation using historic data between GDP and WCML passenger numbers. The correlation with GDP was 0.45 for the WCML and 0.26 for UK rail as a whole (1 is a perfect match, 0 is no match at all). The HS2 module and discount rate assume 100% accuracy.

HS2 also gets such a big forecast as it tunnels through a massive loophole in the DfT’s own guidance.

To avoid runaway forecasts, DfT state that only seven years of such forecast are used. Otherwise, the growth of passenger numbers becomes exponential so that the entire population lives on HS2.

HS2 use 31 years of exponential growth to do this.

HS2 now use an arbitrary cut in 2036 as apparently the Y-arms will fill up within three years. Basically, HS2 needs a more than a doubling in passenger numbers to have a viable case.

In the private sector, one applies high discount rates to risky future projects.

The discount rate compensates for the progressively greater uncertainties and widening error range.

However, Treasury discount rates have only a small catastrophic risk adjustment of 1.5% which falls over time. Forecasts are regarded as less uncertain the further in the future they occur.

8. Business is booming

The original HS2 prediction was that about 30% of passengers would be business paying higher fares and earning much higher social benefits.

In the 2013 business case, the number of passengers fell but costs rose. HS2 escaped the jaws of this squeeze by finding that up to 65% of passengers will be business. This depends on passenger origin: over 60% of travellers from Leeds and Sheffield are business but only 30% from Edinburgh.

WHS2 estimates that about 35% of HS2 use might now be classed as business. This is very high.

9. Paying the debt – fares

The HS2 objective is to maximise social benefits - but these do not yield any cash return.

HS2 treats revenues: fares, as a negative cost. This helps the BCR calculation, as it is a fraction, as reducing the denominator is better than increasing the numerator.

Fares in the business case are the overall national extra revenue (HS2 + “classic”) from new passengers across the whole network once HS2 is built. Since about 80%
of HS2 passengers have shifted from other travel options, mostly from conventional rail, their money is already in the system so not counted. To estimate HS2 Profit and Loss accounts, their HS2 fares need to be estimated.

- In 2036, the value of new fares, including real increases, is £1.7 billion per year. Assuming 55,000 out of 93,000 are actual HS2 users, then HS2 will have about £1bn per year in new passenger fares.
- If new users are 20% of HS2 passengers, then HS2 alone might have fare revenues of £5 billion.

10. **Paying the debt – costs**
- HS2 in 2036 will cost £1.3 billion per year to run at market prices. These costs are still at 2011 values but, by 2036, passengers have become 60% richer in real terms relative to 2011. If staff earnings rise in line with passenger wages, then the operating costs will be £2.1 billion. (Drivers get increases anyway.)
- HS2 calculate that £447 million can be cut annually from the conventional rail network.
- It seems reasonable to assume that HS2 will be franchised. If so, the operator will need a profit. This might be 5%. Of revenues of £5bn, that is £250m, probably more given the line importance.
- To get enough passengers using rail by 2026/2033 to make HS2 viable, conventional rail capacity needs to be doubled. In 2026, 68,000 West Coast Main Line (WCML) passengers need to transfer to HS2; 93,000 need to transfer by 2036.
- HS2 therefore adds huge capacity to a much enhanced network. (These existing operators will be well placed to compete with lower fares so the DfT will have to rig the market.)
- Although network cuts are planned, HS2 serves directly only six cities. As the major franchise, HS2 will have to transfer revenues. As it needs an estimated 200,000 passengers, the network revenue loss is about £4 billion less the savings of £447 m. The net transfer will need to be about £3.5 billion.

11. **Social Benefits**
- Other evidence is likely to focus on the top line benefits. This evidence is directed to how the benefits are manipulated in the business case.

**Business Benefits**
- As HS2 business passengers are on fixed salaries, the less time on trains, the more work so more profit for the employer. HS2 is therefore a subsidy for corporate profits.
- However, current rail business users are just not rich enough to use HS2. Their employers do not get enough extra profit so the social benefits are too low.
- HS2 therefore increase the real wages enjoyed by their passengers by around 1.9% a year. This is like a 4-5% annual pay rise every year including inflation. There are no recessions.
The effect is that a passenger earning perhaps £50,000 a year in 2011 would expect their grandchildren travelling on HS2 in 2092 to be earning £300,000. This is real money with no inflation.

This improves the net present value of the social benefits because it offsets the discount factors.

HS2 is inconsistent in this. The HS2 staff cleaning the trains in 2092 will be earning exactly the same as train cleaners in 2011. Passengers will be six fold richer.

If HS2 charges premium fares, it offsets the social benefit from time savings. In 2002 prices, the extra business profit is £8 per journey. If HS2 charged an £8 premium, an employer makes no extra profit. The effect is to decrease the social benefit and increase the “negative cost” of fares. There would also be 80p fewer economic benefits. Hence, premium fares lower the Benefit Cost Ratio.

Using HS2 data, WHS2 calculated in 2012 that a franchise operator would best to charge a 20% business premium to optimise the cash yield.

Other users

The proportion of commuters has markedly increased since the 2012 case. This implies a hollowing out of the Birmingham business sector or building over the Birmingham Eastern green belt.

Leisure traveller benefits are based on what someone would pay to get a better service, but HS2 provides this extra benefit for free. Why?

The nominal value of the free benefits is treated as a national gain. This seem appropriate when assessing public road projects (the social benefit is a return to all taxpayers who have already paid) but less so when rail is used by a small minority and the users pay fares - which should reflect the benefits received. (Victorian railways builders priced fares to reflect benefits.)

Leisure travellers are very sensitive to price. HS2 has disclosed limited work on this but evidence from 2010 indicates that a 30% premium could cut leisure use by 50%+.

Discounting might become common to fill excess capacity but this is not accounted for.

Economic impacts

Imperfect competition is the theory that HS2 creates local long-lasting monopolies or oligopolies that can charge excess profits. The benefit is the value of the excess profit. It is impossible to estimate, if it exists at all, so DfT add it as 10% of the business traveller time benefit. Hence, if social business benefits increase, this “benefit” rises.

Wider Economic impacts seem to be modelled in terms of distance from a HS2 station. WHS2 noted a £7m claimed benefit from HS2 to its local area even though it is 40 miles from the nearest station.
These benefits may instead be gained by better local transport, be cheaper and offer higher returns.

- Other commentators have noted that the economic pull of London is such that HS2 is more likely to drag higher paid jobs out of leading regional cities. It will also reconfigure local economies to favour the few zones with HS2 stations; for example, business may relocate from central Nottingham to Toton in the outer suburbs. The extra costs of reconfiguring local transport needs to be factored in.
- HS2 makes virtually no impact on car or air travel.
- The main beneficiaries seem to be property developers. This effect is already apparent.

12. **A 2036 Profit and Loss Account**

- Table 4 shows the basics of a possible set of 2036 accounts with a 3.5% interest rate.

<table>
<thead>
<tr>
<th><strong>Table 4 (all values £ billion at 2036 real prices in 2011 money (GDP growth but no inflation))</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income statement</strong></td>
</tr>
<tr>
<td>Fares</td>
</tr>
<tr>
<td>Direct Costs</td>
</tr>
<tr>
<td>Depreciation</td>
</tr>
<tr>
<td>Transfer to network less cuts</td>
</tr>
<tr>
<td>Franchise profits</td>
</tr>
<tr>
<td>Interest</td>
</tr>
<tr>
<td>Net loss</td>
</tr>
<tr>
<td><strong>Cash flow</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| **Balance sheet** | £ |
|---|
| **Assets** | |
| Cost of build and trains | 67.5 |
| Cumulative Depreciation | -2.7 |
| Net Value of HS2 network | 64.8 |

| **Debt** | £ |
|---|
| 104.0 |

- To make HS2 breakeven, costs could be cut, the existing conventional network could be radically cut or fares could be substantially increased (although this will hit passenger numbers).
- HS2 is most vulnerable to low passenger numbers.
- To sell or lease HS2, a buyer will have to have a guaranteed annual return. Inevitably, this will require a substantial write off”. As with HS1, any write off just means that the debt is hidden, it does not vanish.
13. **Disbenefits**

- It would seem that HS2 has no disbenefits. There is the need to pay a few thousand pounds each to shut up individual NIMBYs and some property to buy and bulldoze. But no other impacts.
- Landscape value is not considered. This is difficult but current generations seem to place a high value on unspoilt areas, like the Chilterns, judging by property and land prices.
- Future generations may place even more value on these areas given development pressures.
- In the Winter 2013-14 environmental consultation, WHS2 presented evidence, not relayed to MPs in the summary report, that using HS2 GDP growth metrics and discount rates, there were substantial adverse economic effects from HS2. Specifically, the NPV of the loss of GDP due to reduced property market transactions and jobs was £1,254 million and the GDP loss though reduced tourism was £440 million. This applied only to a small area around Wendover. Route wide figures would be substantial.

14. **Conclusions**

- Parliament is clearly keen to boost regional growth but the HS2 evidence is limited and contested.
- More rail capacity into London seems to be needed but HS2 only indirectly addresses the required needs. It would be more sensible to build HS2 via Milton Keynes to address the specific needs there.
- The methodology may be distorting the decision of Parliament. The use of social benefits as a driver may be appropriate for public infrastructure like roads as a method for selecting between competing projects. It does not seem appropriate for a stand-alone business with a massive capital cost used by a minority and which generates its own revenues. Cash flow analysis would seem more appropriate.
- Financially, the project is very vulnerable to lower passenger numbers, higher costs and any delays. Because HS2 is so rigid and inflexible, it becomes an all or nothing investment. Adding specific London commuter capacity to HS2 (Crossrail 3?) would reduce risks because that at least seems a robust future demand. The social methodology used works against optimal decision making.
- It is probably likely that the system will carry many fewer passengers at much higher prices and with a reduced service interval. A major debt write off seems inevitable.
- Perhaps the biggest risk is to the conventional network which might be starved of investment to feed HS2. This may get HS2 built - but it will not generate the passengers that it needs to be viable on social grounds or the fares to repay investment.
- Finally, the DfT business case is very clear that at current income levels, HS2 is not viable. Parliament is funding project today to provide future generations social benefits on the basis that they are up to six fold richer on average than their ancestors (current taxpayers).

*September 2014*
West Midlands Integrated Transport Authority—Written evidence

Summary

This response has been submitted to the House of Lords Economic Affairs Committee Inquiry into HS2 by the West Midlands Integrated Transport Authority (WMITA) on behalf of the seven metropolitan Local Authorities in the West Midlands.

We support the findings of the latest strategic case for HS2 (as published by the Department for Transport (DfT) in October 2013), which concludes that HS2 is the only option that allows us to simultaneously provide the step-change in capacity to meet future demand and reshape the economic geography of the UK.

The term ‘High Speed Two’ does not, therefore, correctly reflect the wider positive outcomes for the national economy. Investment in infrastructure can help growth in the regional economies. Transport infrastructure such as HS2 can create opportunities for regeneration and bring cities closer together by improving connectivity.

Shorter journey times are essential to improved productivity, but the HS2 scheme will also free up much needed capacity on the existing rail network, providing better regional connectivity and space for further passenger and freight growth. It will also act as a catalyst for vastly improved local public transport links and regenerate wider areas around the new station hubs.

Independent research commissioned by Centro/WMITA estimates that this improved connectivity provided by services on the HS2 Y-Network will bring £2bn GVA per annum in additional economic benefits to the West Midlands region and support the creation of 22,000 jobs.

This research has also concluded that there is an opportunity to double the local economic benefits of HS2 to £4bn GVA p.a. and 50,000 jobs, and also spread them across the West Midlands region if we invest in new and improved transport connections to the two HS2 stations.

There is further evidence that these two proposed HS2 hub stations at Birmingham Curzon St and Birmingham (West Midlands) Interchange are already acting as the catalyst for significant economic development, as demonstrated by Birmingham City Council’s latest Curzon Masterplan and Solihull Council’s UK Central Prospectus.

However, we strongly believe HS2 needs to be properly integrated into the existing HS1 route and the wider European High Speed rail network via a direct HS1-HS2 rail connection, if the full benefits of the new high speed rail are to be realised.

In respect of fare levels, the additional capacity provided by HS2 in the market should actually relieve the current pressure to manage demand through ticket price increases.
In terms of future rail franchising, there may well be benefits from the integration of a future HS2 franchise with elements of the existing West Coast Inter City and Cross Country franchises. However, this will also need to be considered in the context of the re-mapping of the current “London Midland” WCML franchise in a future devolved West Midlands Rail franchise proposition.

The West Midlands Integrated Transport Authority (WMITA) response to the specific areas the Committee are inviting evidence on appears below:

- **Is there an economic case for HS2?**

Yes. There is an urgent need to provide additional transport network capacity for both passenger and freight growth and, in particular, an urgent requirement to relieve the congested West Coast Main Line railway between the West Midlands and London.

Without investment in the additional capacity which HS2 will provide (both directly and through releasing capacity on the existing rail network for more freight and improved regional passenger services) the transport network will increasingly act as a constraint on further economic growth.

Furthermore, HS2 will bring about a step-change in connectivity for the West Midlands region, which will find itself located at the heart of the new national high speed rail network. The dramatically reduced journey times afforded by new high speed rail services will transform the links between the region and other major economic centres in London, the East Midlands, the North of England and Scotland.

Independent research commissioned by Centro/WMITA estimates that this improved connectivity provided by services on the HS2 Y-Network will bring £2bn GVA per annum in additional economic benefits to the West Midlands region and support the creation of 22,000 jobs.

This research has also concluded that there is an opportunity to double the local economic benefits of HS2 and spread them more widely across the West Midlands region if we invest in new and improved regional transport connections to the new HS2 stations.

There is evidence that the two proposed HS2 hub stations at Birmingham Curzon St and Birmingham (West Midlands) Interchange are already acting as the catalyst for significant economic development as demonstrated by Birmingham City Council’s latest Curzon Masterplan and Solihull Council’s UK Central Prospectus (see below).

- **Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?**

We believe that the Government and HS2 Ltd may well be underestimating both the transport and potential economic benefits of HS2.
External factors such as land use planning and provision of the appropriate local transport connections to the HS2 stations (as mentioned above) can have a significant impact. and there may also be lessons to learn both from the impact of high speed rail services elsewhere in the world and from recent major infrastructure investment in the UK, notably the Jubilee Line extension and, in the near future, from Crossrail.

More specifically, there is significant concern over the removal of the HS1-HS2 link from the Hybrid Bill. The potential benefits of domestic HS1-HS2 services from the West Midlands across London to locations such as Stratford Olympic Park, Kent and Essex, and the requirements of business and leisure travellers for direct international high speed rail services, appear not to have been taken fully into consideration. This puts the West Midlands at an economic disadvantage compared to London and the South East and directly affects the region’s prospects for growth.

If a direct HS1-HS2 rail link is not progressed, this would represent a serious strategic error and a lost opportunity which would have long-term negative repercussions, not just for the West Midlands but across the UK (see also final question response).

- **What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland?**

  Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?

The economic benefits from improved connectivity between Core Cities will kick-start wealth creation outside of London, helping to ensure that our regional economic centres can compete with European cities like Munich, Milan, Lyon and Barcelona.

HS2 will allow the West Midlands to promote itself as a great place to do business; at the heart of Y-network and with lower operating costs than the South-East.

The £2bn GVA p.a. and 22,000 jobs created by HS2 in the West Midlands are not dependent on complementary action by government and local authorities. However, as stated above, independent research undertaken for Centro/WMITA has demonstrated that a circa £2bn West Midlands Local Connectivity Package (LCP) of transport improvements would double the potential economic benefits of HS2, generating 51,000 new jobs across the West Midlands region and increasing our economic output by £4.1bn GVA per year.

This West Midlands Local Connectivity Package not only includes investment in new rail, rapid transit, sustainable transport and highway connections to the new HS2 hubs, but also envisages making best use of the rail capacity released by HS2 on the main East - West (Rugby – Coventry – Birmingham Airport/NEC – Birmingham – Wolverhampton/Walsall - Stafford/Stoke-on-Trent) corridor through the region in order to provide improved
connectivity not just to the new HS2 hub stations, but also between many of the region’s major centres of population and economic activity.

Crucially, as well as doubling the economic benefits of the new high speed line to the region, the West Midlands LCP provides the new transport infrastructure required to spread these benefits across a wider area, maximising the economic gains from HS2 to the region as a whole.

Whilst the economic case for HS2 alone is substantial, Local Authorities and Local Enterprise Partnerships (LEPs) can undoubtedly play a major role in maximising the economic benefits of HS2 through complementary measures within their own spheres of influence.

The March 2014 HS2 Growth Taskforce (GTF) report examined set out how economic growth and job opportunities from the new high speed rail line can best be realised. In response to the GTF report, local Growth Strategies are being worked on for both West Midlands HS2 stations in order to maximise the local economic benefits and contribute to the Government’s wider economic development strategy.

In July 2014, the launch of Birmingham’s Urban Regeneration Company included several major and very positive announcements about HS2 as outlined below:

- The new regeneration company will lead the redevelopment around Curzon Street Station, including the Curzon Masterplan (see below)
- Birmingham was chosen as location for the HS2 Construction HQ, creating 1,500 jobs, the majority of these will be additional employees in new roles
- £30m of funding has been allocated by the Greater Birmingham and Solihull LEP (GBSLEP) to kick-start development activity
- £130m was secured from Local Growth Fund for HS2 related projects – work has begun on a project to extend Midland Metro to Curzon Street Station.

**Birmingham City Council’s (BCC) Curzon Masterplan** provides a detailed framework and principles to guide development, regeneration and connectivity to ensure that the city can fully capitalise upon the arrival of the HS2 railway through:

- Promoting the city’s expectation of Birmingham Curzon HS2 station as a world-class 21st century landmark building that further strengthens a positive image for Birmingham and its economic role
- Ensuring the station is fully integrated into the urban fabric of the City Centre and opens up accessibility between the City Centre Core, Eastside and Digbeth
- Setting out the key requirements for the station design and proposals to ensure that high quality and efficient walking, cycling and public transport connections continue into and throughout the city centre.
With its focus on the major regeneration and growth opportunities afforded by the catalyst of the new HS2 Station, the Curzon Masterplan, will lead to the creation of:

- 14,000 (net) jobs
- 600,000m² new business space
- 2,000 new homes
- £1.3 billion economic uplift

Further details are available at www.birmingham.gov.uk/birminghamcurzonhs2

Birmingham City Council is also working with HS2 Ltd and others to prepare a Masterplan for the development of the Washwood Heath area, incorporating the HS2 Rolling Stock Maintenance Depot and other employment land-uses. BCC (in accordance with the assurance from the Secretary of State) will work with HS2 to minimise the land required for the operation of the railway and depot at Washwood Heath and maximise the land that will be available for development following construction. Washwood Heath will also be location for the HS2 Network Control Centre.

BCC is working with HS2 Ltd to develop a package of training and skills measures to connect local people to local HS2 jobs, both at Washwood Heath and in the construction of HS2 in Birmingham.

Solihull Metropolitan Borough Council is similarly working to maximise the benefits from the new HS2 Interchange Station, by integrating HS2 into its UK Central (UKC) development proposals for the Hub@UKC, which also includes the significant adjacent assets of the National Exhibition Centre (NEC), Birmingham Airport, Birmingham Business Park and Jaguar Land Rover.

Rather than the large car park and “Ebbsfleet” style of station proposed by HS2 Ltd, UK Central envisages four key development zones centred on the new HS2 Interchange station:

These four zones (Interchange Station, Innovation, High Tech and Residential) provide the opportunity to create somewhere in the region of 20,000 jobs. There will also be a new residential community of at least 2,000 homes and 4,000 people, creating a thriving Hub in the centre of UKC.

Further details are available at: www.uk-c.com

HS2 will also provide rapid access to Birmingham Airport, effectively making it as easy to reach from London as other airports in the South East, thereby helping to relieve the pressure on those airports that are at or close to capacity. HS2 will also expand Birmingham Airport’s wider catchment resulting in 30% of the UK population being within one hour’s travelling time. This will encourage the growth of the airport which in turn will stimulate the regional economy through increased employment, inward investment, exports and tourism.
Similarly, the NEC will benefit and allow businesses and their customers to benefit from greater access to trade and retail shows, and other events, including wider foreign markets.

- **Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?**

Whilst London will undoubtedly benefit from improved connectivity with the major economic centres in the Midlands and North of England, proportionately, HS2 will have a far greater impact on the economies of the regions compared to the capital. This will be especially true once Phase 2 of HS2 is completed. Currently rail journey times between the West Midlands and northern cities are slow compared with the relatively fast link to London. Phase 2 of HS2 will slash these journey times in half bringing Leeds, Sheffield and Manchester all within an hour’s travelling time of the West Midlands’ two HS2 hub stations.

Working closely with national government and business interests, the regions served by HS2 will need to ensure that the rebalancing of the economy is maximised through the regeneration around the new stations coupled with improved connectivity to the stations from other regional centres.

This wider approach is needed to minimise the risk of negative rebalancing and redistributing economic capacity from the Core Cities to the capital. For example, KPMG predicts that the above West Midlands benefits could be halved without the wider connectivity package.

Plans also need to be developed now as to how the future high speed rail network will be expanded beyond HS2 to improve connectivity to other regions and centres that are not initially major beneficiaries of HS2. As with HS2, the benefits of future new high speed lines will need to be considered in the wider context of releasing further capacity for increased freight and local passenger services and the ability to reduce congestion or provide a more sustainable alternative to the expansion of some road corridors.

A smaller, but arguably more direct consequence of HS2 putting the West Midlands at the heart of the new national high speed rail network, has been the recent decision to establish the Headquarters for HS2 construction in Birmingham City Centre which will lead to the creation of 1,500 new jobs and which, together with the proposed HS2 college, demonstrates the Government’s commitment to ensuring that the regions benefit from the new HS2 line.

- **How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?**

It must be remembered that individual rail franchise contracts are themselves the outcome of a competitive process and that the principal competition for any rail company comes primarily from the private car and, for longer distances, from the airline industry.
However, a competitive market (between three train operators) already exists for rail services between the West Midlands and London and similar competition is likely to continue post 2026 with future train operators on both the West Coast and Chiltern Main Lines offering alternatives to HS2 services which will further add to consumer choice.

The West Midlands region is also currently developing proposals for a devolved West Midlands Rail franchise in the Travel to Work area from 2017, based on the current “London Midland” services. As a result of the WMR franchise proposition, some re-specification / remapping of the franchises serving the southern end of the West Coast Main Line (WCML) between the West Midlands and London may well be appropriate before the completion of Phase 1 of HS2 in 2026.

In the longer term, HS2 will undoubtedly have a transformational impact on how the regional rail network is used and this will need to be monitored and addressed as required. North of the West Midlands, the current service offer from London to places on the existing West Coast (Virgin Trains) franchise network such as North Wales, Lancashire, Cumbria and Scotland may to be closely coordinated with future high speed classic “compatible services” using HS2 and the West Coast Main Line north of Lichfield or Crewe.

This coordination, which is likely to be required to maximise use of scare capacity on the existing rail network infrastructure and hence maximise the spread of economic benefits from HS2, may best be achieved through placing both the new HS2 services and the conventional West Coast Main Line inter city services to the North West and Scotland within a single integrated franchise.

On the East Coast Main Line (and also to some extent the Midland Main Line), the existing inter city franchises will, to a large degree, continue to serve different corridors and/or markets to the HS2 route and should be able to continue to operate relatively efficiently as standalone franchises.

However, it is likely that some re-specification or “remapping” of the East Coast and Midland Main Line (East Midlands Trains) franchises may still be required to take account of the impact of HS2 services on the overall rail transport market.

In addition to the above franchises, it should also be recognised that HS2 Phase 2 services will also offer a faster alternative to the Cross Country services on West Midlands to Manchester and West Midlands to East Midlands/Yorkshire/Newcastle/Scotland corridors. There could therefore be some advantage in combining some Cross Country services into the future HS2 franchise, especially if (as proposed by Centro/WMITA, the Rail Delivery Group and others) through “classic compatible” HS2 services are to operate from the North of England to Bristol/Cardiff via a new connection between HS2 and the existing West Midlands rail network.
Comparison of Proposed HS2 Services (centre) with existing West Coast (left) & Cross Country (right) franchises
• Should travellers pay higher fares on HS2 than other lines?

The lack of capacity on the current West Coast Main Line, coupled with the lack of control over the price of unregulated fares, has already led to significant above inflation fare increases (especially for “walk-on” peak and shoulder-peak travellers) and more restrictive travelling times for supposedly “un-regulated” off-peak fares.

As an example, the Anytime peak fare set by Virgin Trains between Birmingham and London increased by 167% between 1998 and 2014 (from £61.50 to £164), whilst the regulated Off-peak fare rose by just 77% (£28.50 to £50.50) over the same period.

Similarly, in 1997 Off-peak tickets from Birmingham to London could be used anytime after 0915 and only use of the two busiest return services in the evening was restricted to Peak tickets.

In 2014, however, the same Off-peak ticket can’t be used for travel from Birmingham before 1010 (nearly an hour later) nor for any Virgin Trains services back from London between 1501 – 1844 (a PM peak period restriction which now lasts for almost 4 hours).

As a result of HS2 adding significant additional capacity to the rail network we therefore expect that overall, rail fares which are currently used to manage peak demand on corridors served by HS2 ought to reduce rather than increase in accordance with high level models of supply and demand.

On the existing HS1 route, local Kent to London passengers do pay a premium to use the faster “Javelin” services, but this is primarily as result of a franchise condition imposed on the operator South Eastern Trains by the Department for Transport. Conversely, there is no premium for long distance passengers from, for example, Birmingham to Ashford who choose to use HS1 Javelin services rather than slower train services on the classic rail network.

On HS2, whilst there may be a case for a premium fare where the market would stand this, the key driving factors are speed and cost of competing services and the available capacity in the transport market as a whole.

Ultimately the fare levels on HS2 and competing rail routes are likely to continue to be set through a combination of government regulation and market forces. This is likely to result in a continuation of the situation where Britain has both the highest walk-on fares and, simultaneously, some of the lowest advance rail fares for inter city journeys in Europe.

One area where fares policy will need to be established is the cost of HS2 season tickets. This will have a major impact on demand as all journeys under an hour could be considered suitable for commuting. From a West Midlands perspective this includes journeys to/from London, Leeds, Manchester, Sheffield and Nottingham. The price of season tickets could have quite significant impacts on how the new HS2 services are used and the effectiveness of labour catchments. It would also influence
those areas where commuters move to in response to the new travel opportunities afforded by HS2, which could help further spread of wealth if, for example, high earners spend their incomes away from the south east.

Another area where the impact of specific fare setting ought to be considered is for **connectivity to and between airports** served by HS2, notably Birmingham Airport, Manchester Airport and (via Crossrail at Old Oak Common) Heathrow. Consideration will need to be given to fares charged for these airport-specific journeys and the availability of capacity. “Interlining” of tickets and allocation of revenue is also an issue which will need to be resolved if HS2 is to play any role in reducing short haul connecting domestic flights.

- **Does the prospect of HS3 affect the economic case for HS2?**

There currently are no firm proposals for an “HS3”. The next UK high speed rail line after HS2 could be either:

- an extension of HS2 to Scotland (via East or West Coast routes)
- a new Edinburgh – Glasgow high speed line
- a new line between London and Yorkshire (potentially via Stansted/Cambridge)
- a new line connecting HS2 in the Midlands with the South West & South Wales

or any one of a number of other proposals.

However, most recently the term “HS3” has been used specifically in the context of a new **Trans-Pennine** rail line connecting Liverpool/Manchester with Leeds/Sheffield/Hull/Newcastle. Whether this “HS3” is completely new high speed rail line like HS2, or as George Osborn has suggested a new line using existing rail corridors is still unclear.

In the **Trans-Pennine HS3** example, a new line improving connectivity between northern cites would assist in realising a “One North”/Northern economic powerhouse by bringing business and employment centres closer together and facilitating further agglomeration. A new line would also have the potential to free up capacity for rail freight and local passenger growth, provided that it consisted of largely new infrastructure and did not impinge on existing rail lines.

However, ANY new high speed rail line which better connects major economic centres should bring economic benefits in its own right.

Furthermore, new high speed lines which are **linked together with HS2** in order to create a more coherent national high speed transport network, including a link to HS1 and Europe (see below), are likely to bring greater economic benefits than a new line built in isolation.
Organisations such as Greengauge 21 have already started to consider what such a national high speed network might look like. Future governments will need to give serious consideration as to how further high speed rail lines should be developed, prioritised and integrated with HS2, HS1 and the existing inter city rail network. Such long term planning will not only maximise the additional economic benefits of the “network effect” of high speed rail services but will also enable the high speed network to develop in a coherent manner.

One of the few potential downsides to the HS2 proposal is that, once the Y-network is complete, the section of HS2 between London and the West Midlands will be effectively “full”, with the majority of train paths already provisionally allocated to various service groups.

However, there will still be scope to provide some additional capacity for growth through longer or (as in France) double-decked high speed trains.

Irrespective of which route forms the basis of a future HS3 line, as previously highlighted above, we believe that the provision of a direct rail connection between HS2 and the existing HS1 route to Stratford, Kent and Europe should be regarded as a priority.

However, following the publication of Sir David Higgins’ HS2 Plus report earlier this year and subsequent removal of the originally proposed HS1-HS2 single track rail link from HS2 Hybrid Bill, the HS2 project now has changed from having an imperfect rail connection to HS1 and the European High Speed Rail network to having no direct link at all.

This effectively removes any prospect of direct high speed services between the North of England / West Midlands and Paris / Brussels and beyond for the foreseeable future.

Whilst we, therefore, welcome the decision of the Secretary of State for Transport to:

“commission a study into ways to improve connections to the continent that could be implemented once the initial stages of HS2 are complete”

we do not believe that simply improving the walking routes or public transport links between Euston Station and St Pancras International would provide an acceptable solution that meets the needs of either businesses or the leisure market. The interchange penalty for passengers transferring between these two London terminals will significantly add to journey times, reducing both potential economic benefits of high speed rail travel and its ability to compete with short haul European air links.

Similarly the inconvenience experienced by passengers, many of whom may be physically-impaired or otherwise encumbered by luggage or children, who will be required to interchange between London’s two high speed rail stations will also act as a significant deterrent to travel.
This is not just an issue of connectivity from the West Midlands and North of England to major economic centres in continental Europe. It is also about the ability of HS1 and HS2 to act as a gateway to the English regions from Paris, Brussels, Frankfurt and elsewhere.

At the very least, in the short term we would wish to see:

- **passive provision for a future double track HS1 – HS2 rail link incorporated into the HS2 Phase 1 design for the Old Oak Common station area in the Hybrid Bill.**

- **passive provision for future international services and associated border control facilities incorporated into the design of the two HS2 stations in the West Midlands**

In summary, however, we regard the provision of a double track, European gauge direct rail link between HS1 and HS2 as essential, if the full economic benefits of HS2 to the regions are to be realised through a physical connection with HS1 and the rest of the European High Speed Rail network.

*September 2014*
West Midlands Integrated Transport Authority and Greater Birmingham Chambers of Commerce—Oral evidence (QQ 156-169)

Transcript to be found under Greater Birmingham Chambers of Commerce and West Midlands Integrated Transport Authority.
West Yorkshire Combined Authority and Leeds Chamber of Commerce—Oral evidence (QQ 182-191)

Transcript to be found under Leeds Chamber of Commerce and West Yorkshire Combined Authority
Is HS2 Capacity Issue Justified?

One of the key elements of justification for HS2 is the capacity of the West Coast Main Line (WCML). As a local action group seriously affected by HS2, which passes through our communities in close proximity with the WCML, we have tried to obtain factual figures on the Capacity of the WCML. We asked HS2 Ltd, under FOI, to provide utilisation figures on WCML at Baldwins Gate, where all north/south traffic on this rail artery has to pass through. We were told that this level of detail was not available. We then asked network rail, which has this information, but after several reminders, has failed to respond. Since capacity is such an important issue, and since it is constantly reported in percentage increases, percentage occupation of trains, assumptions and estimates, with little actual hard facts, we have carried out a real time survey of the route which consists of four tracks, which is the case for the whole route that affects HS2. We recorded the exact time, direction, type of train and in most cases which track the train was travelling on, over a typical 24 hour day. In other words the exact utilisation of the route was measured for each hour over a typical 24 hour week day. We did this over a typical week, Monday to Friday in order to avoid the risk of selecting a particularly quiet or busy day.
It is astonishing how underutilised the route is, as can be seen in the survey summary table above. A photo of the 4 tracks and one of the route and its proximity to the HS2 route are also shown.

The following observations and questions are almost obvious and that is without taking into consideration the occupancy and loading of the trains:

- How few 5, 9, 10 and 11 coach express/cross country and 4 coach commuter/multi-unit trains per hour in both directions were recorded using the route.
Whitmore & Baldwins Gate HS2 Action Group—Written evidence

- How few commuter/multi-unit 4 coach trains use the route. This is not a capacity issue so why are there not more, if this is a service the Government says needs to be developed once capacity has been freed up on WCML by HS2?

- Why so many freight trains during the day when the 4 lines are so little used between midnight and 6 am. Container, Aggregate, Coal and new car trains can be scheduled and adapted to suit passenger capacity, even if long-distance ones may need to be parked in a siding during the day.

- If 18 trains at over 200mph carrying 1200 passengers in each direction hourly are planned for HS2, where are these vast numbers of passengers today? Will HS2 decimate existing routes like the one from Manchester through Macclesfield, Stoke on Trent and Stafford?

- If HS2 can run at such high speed and frequency on two tracks, how much more traffic could be put on the WCML which has 4 tracks, and made to run faster than the current 90 to 100 mph.

- Could WCML’s utilisation be increased by:
  - Longer and faster express trains with 11 coaches as some already are. Stations cope with these.
  - Alter the ration of 1st class and economy according to time table demands
  - Express trains could go faster than the 90 to 100mph measured.
  - More frequent trains could be scheduled i.e. double or treble what exists?
  - Better and more sophisticated signalling allowing greater train frequency, but also greater flexible use of all 4 tracks. This can be and is done for maintenance and other reasons.
  - Run freight trains at high frequency during the quiet night periods using all 4 tracks. Flexibility to do this already exists.
  - Have Network Rail work in a far greater integrated fashion with the operators to maximise and optimise the utilisation of the route. This is poorly done and could be modelled and modified to a higher level of sophistication.
  - Have all the options for increasing capacity, especially in the southern region of HS2, been properly considered. For instance, the abandoned four-track Great Central Main Line from London to Rugby and further North could be reinstated to resolve any capacity in and out of London. This line was closed but the track bed and bridges are intact, as is the track south of Aylesbury which is still in use.

Certainly there are bottle necks along the whole route that will limit greater utilisation but then these should be dealt with rather than building a whole new 300 mile route at great expense, devastation and economic loss to many individuals and regions. Also, we already have high speed trains so do we need these prestigious ultra-high speed ones, especially now that speed and time saved is not considered the key element of justification. The money saved by stopping HS2 could be used to make existing networks throughout the country really efficient, flexible and do more to develop and redistribute economic benefits across the regions, rather than between the regions and London.
I hope this information is useful and may lead to more in depth questioning of the project. We are not experts but what we have surveyed is real. We look forward to this HS2 project being continuously challenged objectively.

*September 2014*
Whittington and Fisherwick Parish Council—Written evidence

Please find attached the Parish Council’s response to questions posed by the House of Lords Select Committee considering the economic case for HS2. As you may be aware the line as proposed would run through the center of the Parish from its southern to northern boundaries, skirting the eastern fringe of Lichfield before rejoining the West Coast Main Line at Handsacre, so clearly our entire community would be directly affected by it, both during the construction phase and once operational.

In this connection it should be appreciated that the Council has already responded to the November 2013 HS2 Environmental Statement in some detail, and more recently submitted a petition to the Commons Hybrid Bill Committee. Nevertheless the submission now enclosed reflects established Parish Council policy arrived at through widespread consultation with our residents, initially soon after the route was announced, but maintained since on an ongoing basis.

Q1. Is there an economic case for HS2?

1. The figures published in 2011 are £42 Billion for the Design, Track and Stations, and £8Billion for the Rolling Stock: £50,000,000,000.

2. The RP2 Report clearly demonstrates that getting rid of 3 pinch points at Ledburn Junction, between Rugby and Nuneaton and at Stafford on The WCML costing £6 Billion, increasing train lengths to 12 carriages, reducing 1st Class Compartments from 4 to 3, and enabling Conventional Trains to travel faster with In-cab signalling will more than provide the forecast capacity requirements for passengers and freight. A European Train Control System (ETCS) is being introduced which will minimise the safe distances between trains.

3. HS2 will not provide any extra capacity until 2026 for the first stage and 2034 for the second stage. RP2 issues can be introduced as and when the increased demand requires it.

4. HS2 takes no notice of our Aviation Policy, because we currently do not have one. When it is announced, additional conventional rail services to The South East Hub from the Midlands, the North, East & West at a cost at least the equivalent of HS2 will be of paramount importance.

5. Euston Station will face 8 years of disruption due to HS2, and The Mayor of London has stated that the Euston Underground and Taxi Services could not possibly cope with an extra 36 HS2 trainloads of passengers per hour.

6. A £7.2 Billion reduction of support for conventional rail is assumed in the HS2 Business Case. Therefore conventional rail fares will have to substantially increase, or the existing services will have to be significantly reduced.
7. The House of Commons Transport Select Committee has reported that the following issues should be addressed:
   a) The Financial Case is unclear.
   b) HS2 is planned to travel at 225mph, whilst for safety reasons, European TGV speeds have been reduced to 180mph, and The South Korean new high speed system travels at 190 mph.
   c) There should be an integrated transport plan including Regional Rail.
   d) Viable alternatives have not been investigated thoroughly.

8. The Prime Minister has vetoed an Independent Report that told the truth about The Business Case of HS2 - a privilege only previously used in times of war.

9. No Private Company would build HS2 because there is no realistic Economic Case.

10. Linking Stage 1 of HS2 to the WCML at Handsacre will totally obliterate freight usage on the WCML for 8 years until Stage 2 is completed, according to The Chairman of The Rail Freight Group.

11. Earlier this year The Environment Agency were restricted to a cost/benefit ratio of 1:8 when providing flood defences to protect people’s property and businesses, whereas it has been acknowledged that the cost benefit ratio for HS2 is 1:1.40. At the time of The Eddington Report, on a cost/benefit league table HS2 was in the lower quartile of projects on the Dft’s books, and will now be in the bottom 10%.

12. The Compensation Package offered to Property Owners near the line is flawed:
   a) The DfT Noise Calculation is based on the Average Noise over 3 minutes, which is relevant to Motorways but not Rail.
   b) There should be 10 year Property Bond based on the value of the Property prior to the announcement of the HS2 route.

Q2. Should the Department for Transport’s Strategic Case for HS2 published in October 2013 have included any other factors in making an economic case for the project?

1. The Dft admit that if they used the up to date forecasting model (PDFH5.0), the demand forecast would be considerably reduced.

2. No consideration has been given to the alternative options for using £50 Billion. Education, The NHS, Immigration Control, Law & Order, Defence, Tax Reduction, Conventional Rail, Motorways, would all significantly benefit from sharing such a huge sum.

3. A link to HS1 should have been included.
4. The DfT has raised the percentage of business travellers on long distance rail journeys from 28% in its previous version to 38%, whereas Passenger Focus Data for the past 13 years shows a consistent 28%. NPS Autumn Survey shows 26%, Virgin Trains 28%.

5. In comparing costs to benefits there is a total mismatch. Benefits are based on assumed increase in real earnings to 2093. Costs only take account of railway employee earnings increasing until 2036.

6. The Environmental effect will be disastrous.

Q3. What are the likely economic benefits of HS2 to the Midlands, the North of England and to Scotland? Do they depend on complementary action by government and local authorities, for example by developing measures to attract investment and skilled workers?

1. The HS2 project does not link into the Conventional Rail System, and so people in the West Midlands will arrive in New Street from where they live and work and have to transport their luggage and pushchairs to Curzon Street. Similarly it will not go to a main commuter station in The East Midlands.

2. The Midland Metro is now considering a link from New Street to Curzon Street. A further cost caused by HS2.

Q4. Will London be the main economic beneficiary of HS2? Might some areas of the country suffer economic disadvantage?

1. There has been no consideration given to the probable transfer of business from the Midlands and the North to the South.

2. The experience of Continental Europe is that High Speed Trains do not increase business investment away from their capital cities.

Q5. How should HS2 be operated? Should it be a franchise in competition with the West and East Coast Main Lines?

1. It should not be nationalised.

2. The government will have an impossible task to find a private company to take it on without a massive subsidy, which is not included in the HS2 Business Case.

Q6. Should travellers pay higher fares on HS2 than other lines?

1. If the answer is “yes”, fewer people will travel on it, if the answer is “no” it will weaken the economic case even further.

Q7. Does the prospect of HS3 affect the economic case for HS2?
1. As a Northern Rail Hub is being constructed for Conventional Rail, the economic case for HS3 will be at least as poor as HS2, and will therefore not be constructed.

September 2014
Daniel Richard Wolfe—Written evidence

1. According to the Strategic Case for HS2, the spending of £50 billion on the project is justified mainly because of the benefits it will provide to the owners of businesses that will use HS2 and the well-to-do business people who will travel on it.

2. This is revealed in Figure 5.7 on page 104 of The Strategic Case for HS2, Oct 2013, showing the breakdown of costs and benefits. Of the total transport benefits of £57.7 billion claimed for HS2, £40.5 billion (70%) are in favour of business travel. It is claimed that these benefits will flow from the saving the time of business travellers that would otherwise be wasted on travel.

3. By contrast, lesser benefits of £19.3 billion are projected to flow to all other users, and lesser still, £13.3 billion of benefits are projected to be in the form of the “Wider Economic Impacts” such as economic development and regeneration which have been the focal points of the promoters’ public relations and the crux of Parliamentary debate about the project thus far.

4. A major portion of the claimed £40.7 billion benefit to business represents a savings to the companies sending their employees on business travel on HS2. The claim is that without HS2, their costs would be some £40 billion higher. With such a radical lowering of costs, these companies would be expected to be much more profitable and pay higher dividends to their owners.

5. The rest of the £40.7 billion in benefits is assumed to flow to the business travellers themselves, who are calculated to have employment costs of £32 per hour (Strategic Case, p 112) which equates to a salary of approximately £70,000 a year when non-salary employer costs assumed to be 21.2% of salary are removed.

6. Because of the limitations in the methodology apparently used to calculate these claimed benefits, known as “Willingness to Pay,” the promoters cannot break out what proportion of benefits are claimed to flow to business owners v. business employees. (p.69, Valuation of Travel Time Savings for Business Travellers, Institute for Transport Studies, University of Leeds, dated April 2013 but published by Department for Transport in October 2013, henceforth referred to as “ITS 2013.”)

7. It is not known what proportion of British businesses are likely to use HS2 but it will in any event be a small minority. It is known that only 10.7% of all rail travel in the UK is business travel. (p 19, ITS 2013)

8. Only part of this business travel is the long distance intercity travel to be addressed by HS2, so the business sector that is claimed to be by far the largest beneficiary of the project constitutes a minority of a minority of a minority.

9. In summary, the published cost benefit analysis has revealed that the economic case for HS2 is based primarily on the proposal to transfer billions of pounds of
wealth from all taxpayers to a small group companies and their well-to-do employees who use the railway.

10. It is remarkable that this extremely regressive proposal enjoys the support of any mainstream political party in the UK.

11. However, analysis of the promoters’ claims about benefits to business do not stand up to scrutiny.

12. To understand why this is so, it is necessary to look in some detail at the method used by the promoters to calculate the claimed business benefits. On page 122 of the Strategic Case they state “The appraisal of benefits requires that we attach a value to the time savings travellers enjoy as a result of HS2.”

13. By looking at the spreadsheets that lie behind the benefit calculations in the Strategic Case, available on the HS2 website, we see that the method involves converting a number of travel factors involving time into money values and then adding up all these values to come up with the £40.7 billion business benefit.

14. The time-saved categories are: In Vehicle Time (IVT), Walk Time, Wait Time, and Board/Interchange Time. Then another calculation, called Crowded Time Savings, is added.

15. Each category of HS2 savings is expressed in minutes, then converted to hours and then multiplied by the £32 per hour gross labour costs, and then all these are added together to produce an overall savings figure for HS2.

16. This means that not only is the reduced length of the journey on the train given credit for restoring lost work time to the employer/employee, but all the other components of travel such as walking waiting, and changing trains are included as well.

17. It has also been assumed that there is an additional savings due to reduced crowding but, leaving aside the strategies available to the real world business traveller to avoid overcrowding in the first place, there is double counting here. The calculation is already assuming that no work is done on the train by using all “In Vehicle” savings minutes in the calculation. If the businessman was already not working for the entire period his failure to work cannot logically be lengthened because of the overcrowding that HS2 is claimed to relieve. It is therefore double counting to take overcrowding into account when it is assumed he is doing no work in the first place.

18. A more fundamental problem is the underlying assumption that business travellers do not work on trains so that cutting journey time gives the time saved back to the employer/employee in the form of cost savings based on their employment costs. In response to widespread criticism HS2 promoters purport to take this fact on board within the Strategic Case but as shown above when you look behind their generalisations to the actual spreadsheet calculations, it is plain that they are still using the discredited assumptions of the so-called Cast Savings Approach.
19. In 2009 a study by Mott McDonald et al., called “Productive Use of Rail Travel Time and Valuation of Travel Time Savings for Rail Business Travellers,” commissioned by the Department for Transport itself, concluded that this approach was not fit for purpose, having found from extensive original research conducted in the spring of 2008 that approximately 80% of business travellers worked on trains and that they did so for 57% of the time. (p 8-4)

20. The DfT’s own publication “Network RUS: Scenarios and Long Distance Forecasts” notes on page 23 that wifi has allowed train travel to become more popular in long-distance (as a percentage of all travel) by making employees more productive.

21. The 2013 ITS study cited frequently by HS2 promoters to defend their case, says that “The Cost Savings Approach involves a number of assumptions, which, it must be said, have been questioned to various degrees by commentators from very different backgrounds and over many years. It is therefore refreshing that the Department (DfT) is recognising these issues and is seeking to identify the best way forward.” It then quotes statements from the DfT’s own Strategy Unit: “Simple observation and a range of academic studies confirm that some of the time spent on trains by business travellers is use productively” and “The current approach should therefore be seen as a necessary simplification in the absence of robust evidence to underpin a more sophisticated approach.

22. The thrust of the ITS 2013 report is that it acknowledges that current approaches are inadequate to assess the value of business travel time saved and that much more research is needed before we can be confident that we have a better method. In particular it cites the evidence surrounding the promoter’s new adopted “Willingness to Pay” approach as lacking required input from employers, and characterised by ambiguous measurements and inconsistent results. (ITS 2013, p 118.)

23. It cannot be right that the Government is proposing to make a £50 billion bet whilst HS2 promoters admit that they do not have the evidence to back up what is by far the biggest benefit they claim, ie the £40.5 billion claimed to benefit business travel.

24. The promoters cite “Willingness to Pay” studies to support their claims about the value of business travel time saved but the promoters refuse to provide calculations incorporating the logical consequences of this, namely a model in which users are charged a premium above classic line fares to reflect the £40.5 billion benefits to business and the £19.3 benefits to other users that are supposedly provided.

25. Surrounding documentation provided by 3rd party consultancies hired to address HS2 issues yield some insight into why this is so. RAND Europe, in study entitled “Comparison of the Long Distance Model and PLANET Long Distance: Phase 2, Demand Model,” revealed on page 39 that the PLANET model used by the promoters to model growth and appraise benefits cannot actually accept differential fares as an input, and also that when premium fares for high speed are
injected as assumptions into other models, demand falls away rapidly in favour of classic rail.

26. An analysis indicating a substantial decrease in high speed passenger numbers would not only require an increase in the already enormous subsidy requirement for HS2, it would also undermine the various claims for economic development and urban regeneration that are dependent on HS2 generating sheer volume of users. Seen in this light, it is not so surprising that we have not seen scenarios or sensitivity cases showing what happens when users are asked to put their “willingness to pay” into action by actually paying more.

27. This also provides an explanation of why the promoters published as their standard case the enormous giveaway to business discussed at the beginning of this paper. As embarrassing as it is, it is preferable to publishing a plan in which users are asked to pay for their supposed benefits but fail to do so, resulting in low passenger numbers and a much less impressive set of “wider economic impacts.”

28. The promoters say that HS2 will help make our companies more competitive in the global struggle for customers but from the perspective of a businessman in the real world, this is an empty promise.

29. As chief executive of a company that won the Queen’s Award for Export in the nineties and owner of a company that was amongst the top UK companies in growth of overseas profits in the noughties, the current writer knows that the key to overseas competitiveness is cost control and that an important component of cost control is minimisation of travel costs. The champions of British industry that have the best chance of winning the export wars are those that will find ways to send their executives on as few trips as possible on HS2 and other modes, in part by maximising use of increasingly smart technologies in video-conferencing and emerging telepresence technologies.

30. It is particularly unlikely that export champions will use HS2 since it now has no international portals—not even the previously included linkages to HS1 and Heathrow.

31. HS2 promoters claim that it is “the only option that allows us to leap ahead of demand” (Strategic Case, p 18) but leaping ahead of demand with massive, all-at-once overcapacity is exactly what we should be aiming to avoid, especially when there are excellent alternatives to tailor supply to emerging demand.

32. From the debate over HS2 we have seen the emergence of the UK’s best chance to at last bring rail supply and demand into balance, to bring rail costs and revenues into equilibrium with great potential benefits to all users in the form of lower fares and lower subsidies paid for by the taxpayer, not to mention increasing the UK’s credit standing in the world by reducing national debt and keeping its interest bills as low as possible.

33. HS2 paints itself as necessary to meet inexorably rising demand that we can’t do anything about, but in fact the business case rests heavily on creating new
demand and taking traffic away from the classic rail lines. This is the only way that the massive oversupply of a new line can be justified. As pointed out in the current edition of the National Travel Survey, page 14, business travel was in fact lower in 2013 than in 1995/1997 and the most recent quarterly release of the Office of Rail Regulation points out that traffic on East Midland Trains and Virgin Trains has fallen year on year (p.8) and that traffic on all long distance operators has been flat for the last 12 quarters (p.10).

34. Even if somehow this turned around and HS2’s predicted 2.2% per annum growth of passengers filled up available capacity by 2026 as they claim, we would still only have excess passengers representing a 2.2% shortfall in 2026, meaning that we were opening a railway with organic demand to fill only 2.2% of its 100% increased capacity. This will yield trains 97.5% empty unless new demand is created and existing lines are beggared, thus reducing their payments to the exchequer and worsening the subsidy problem and the empty trains no doubt throwing off more carbon per passenger mile than any other mode of travel.

35. Fortunately, the Optimised Alternative put forward by the 51m group of county councils also affords the ability to increase capacity by the same amount projected by HS2, but instead is able to do so gradually, cheaply and in tandem with emerging demand which is at the moment is so difficult to predict in light of the technological developments and recent traffic trends cited above. Since Network Rail has now decided to carry out the only expensive and disruptive upgrade required by the Optimised Alternative, it is able to meet massively increased demand without any serious disruption and without any public subsidy requirement at all.

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