MINUTES OF ORAL EVIDENCE

taken before the

HIGH SPEED RAIL BILL COMMITTEE

on the

HIGH SPEED RAIL (WEST MIDLANDS – CREWE) BILL

Tuesday 23 April 2019 (Afternoon)

In Committee Room 5

PRESENT:

James Duddridge (Chair)
Sandy Martin
Mrs Sheryll Murray
Martin Whitfield
Bill Wiggin

IN ATTENDANCE:

James Strachan QC, Lead Counsel, Department for Transport

WITNESSES:

Tim Smart, International Director for High Speed Rail, CH2M Hill
Richard Knight
Philip Sandy, Rebecca Clutton and Angela Brown

IN PUBLIC SESSION
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(At 4.11 p.m.)

1. THE CHAIR: Good afternoon everyone. Today we will be hearing petitions in relation to a change in the Bill proposed by HS2. The Bill proposed providing power through Rugeley power station, the substation adjacent to the former power station. HS2 are now seeking a change proposed in Additional Provision 2, to provide power through a section of overhead power supply between Parkgate and the Newlands transformer feeder station. Today we’ll hear about these proposals.

2. Just to remind everyone of the process; firstly, I will invite the petitioner to introduce themselves and the organisation that they represent. I’ll then invite HS2 to respond to the petitioner’s concerns. Members of the Committee may ask questions at any time and, to remind everyone, we don’t intend to make or announce any decisions today as we have further petitions that are relevant to consider.

3. Having said that, I’ll hand over to Richard Knight. Welcome.

The Parishes of Abbots Bromley, Hoar Cross and Newborough

Submissions by Mr Knight

4. MR KNIGHT: Thank you for hearing our petition. My name’s Richard Knight and I’m representing the parishes of Abbots Bromley, Hoar Cross and Newborough in East Staffordshire. It’s a rural area with a combined population of around 2,000 people, all of whom stand to be affected, either directly or indirectly by the Parkgate proposal, which as we know, is the largest and most significant change in this Additional Provision.

5. Now, I actually live in Sheffield these days, but my family have farmed near Hoar Cross for around 100 years and I still have many family and friends in the area, so it’s the place in which I grew up, so I have a specific interest in it and that’s why I’m here today.

6. Our petition is supported by our local MP, Michael Fabricant, and East Staffordshire District Council. Staffordshire County Council support our point regarding undergrounding.

7. So, just briefly before I get onto what we want, I’d like to start with some context
to our petition. It’s been this context which has affected the mood and thoughts of our area in relation to Parkgate from the get-go. Could I have exhibit A442(1), please? Great, thank you.

8. So this is a letter from HS2 to Staffs County Council in relation to the former Rugeley power station site. The power station is now closed. It closed a few years ago and the site is now earmarked for substantial redevelopment. Now, in fairness to HS2, they’ve always been upfront regarding this political reason for leaving Rugeley. It does, after all, solve the concerns of numerous petitioners to the original Bill.

9. As a community, our concern has always been that this shouldn’t be the only reason for leaving Rugeley, which is a brownfield site with an existing substation, changing instead to Parkgate, which is a greenfield site where an entirely new substation needs to be built.

10. In this respect, matters haven’t been massively helped by HS2’s engineering reason for leaving Rugeley, which, as far as we understood it, as lay people, were basically saying that since the original Bill further work was undertaken to discover that Rugeley couldn’t provide sufficient power for the line in that area. That, as lay people to us, just felt like quite a fundamental error to have made. So that hasn’t massively helped HS2’s PR with regards to the local community at all.

11. Going on to what we want; what we basically wanted when this came to light, the very first thing that we wanted, more than anything else, was as thorough and simple an explanation as possible as to why Parkgate, compared to the original plan of drawing power from Rugeley, when compared to the potential nearby sources of power for the railway, which on the face of it, look nearer and potentially cheaper to use, asking us to take Parkgate, when there’d previously seemingly been a perfectly good plan to power the line from Rugeley, does put a significant burden of proof onto HS2 with regards to why.

12. So we did what anyone would do, and to get to the bottom of things, we had our parish engagement sessions with HS2, we asked numerous questions in this regard. We didn’t massively get sort of fully satisfactory answers that we were looking for, so we wrote our petition asking the same questions. The promoter’s response referred us back to information we’d already seen which, again, wasn’t really cutting the mustard for the
local community.

13. Then we watched with interest. There was a session in this room on the morning of 26 March, I think when Mr Smart from HS2 gave you some opening information about Parkgate, and you may recall the Committee yourselves, you actually asked many of the questions which were in our petition, and Mr Smart, no offence at all, but Mr Smart’s answers at the time were quite reminiscent of our parish engagement meetings: not massively clear to a lay person.

14. I think, Mr Martin, in that meeting you asked for an explanation in words of one syllable. You then went on to ask for a further detailed note, a serious explanatory note, because you weren’t exactly convinced by Parkgate. Well neither were we, and those words of one syllable, and a more detailed explanation, were exactly what we were seeking from HS2 about six months ago.

15. In this regard, we finally got it. Last week, last Wednesday, we had a new document from HS2, a 92-page document which was last week, if you account for the Easter break, a couple of working days before my appearance here today.

16. Now that document does actually answer many of the points in our petition, so it significantly reduces my time here, but suffice to say that had we received this information several months ago it may well have reduced my time here to zero.

17. So if it’s alright with the Committee, what I’ll do is I’ll just run through the points in our petition where we can hopefully and finally tick off numerous items from the list. We just have a few outstanding points and requests.

18. So, firstly, with regard to the original plan to power from Rugeley, and the rather late-on discovery that it couldn’t provide sufficient power, one question we had was, does that revelation come about – this lack of power at the existing Rugeley substation, is that because of the redevelopment that’s planned for Rugeley? Are the new homes that are planned there, the new businesses, new buildings, taking power from that substation which is now rendering it unusable by HS2? A fairly simple question. I suppose what we’re asking is, yes, is that taking precedence?

19. With regard to the alternative locations, again, when this first came to light we did
what anyone would do which was reopen the maps and we looked at the area, and we found we could see straight away there were certain places where there was potential to power the line which looked nearer to the line than Parkgate. So, if I could have exhibit P1175(6)? It’s an HS2 exhibit. That’s the one, thank you.

20. So this map shows the relative locations of Newlands Lane, where the autotransformer feeder station is, and Kings Bromley, and what you’ll notice there is that the 400kV National Grid system actually crosses the HS2 line at Kings Bromley, so one of the first questions we asked was, if that feeder station at Newlands Lane was no longer drawing power from Rugeley, was it in the optimal place? Could it be moved several miles further south along the railway to Kings Bromley, which would negate the need for any pylons whatsoever, just put the substation and ATFS there?

21. So we asked that, but now in the document that we had last week, I think HS2 have given us some very detailed information regarding that. This is from that document of last week. It gives us the information on Yarlet and explains that they’re going to run out of power if they put it there. They will run out of power, so we’ve got a decent enough answer on that from our point of view.

22. With regards to Lawn Meadow Covert, could I have exhibit P1175(15)? Thank you. That’s quite a spaghetti of a map, but I think we’ve got it. So again, when we were first looking and putting our petition together with regard to Parkgate we saw, again, the Lawn Meadow Covert which is very near to the existing Rugeley power station. It’s got advantage in that it’s the north side of the River Trent and the West Coast Main Line. We felt, as lay people, that this had exactly the same basic ingredients as Parkgate, which was a 400kV supply, but the distance from Lawn Meadow Covert to Newlands Lane is only 3.6 kilometres, whereas Parkgate is 7.7.

23. This was considered as an option in the original Bill, but it was dismissed as not viable, but we, at the time of asking, hadn’t really had a good, thorough explanation as to why it wasn’t viable. Again, with the new document we received last week, we do now have that explanation. The only remaining question on Lawn Meadow Covert was that, if you look at the map there, if you add the hypothetical instance of using it, the suggestion is that an additional 275kV power supply would need to come from the south to presumably beef up the grid in that area.
24. So our question is, is that again due to anticipated new demand from the Rugeley redevelopment that’s requiring that to be brought up? Again, I'm just asking as a lay person. I'm not 100% sure on the exact power situation in that area. It just looks, as a lay person, that it’s got the same thing that Parkgate’s got, but nearer.

25. With regard to the plans submitted by Stratera Energy for a new gas-fired power station at Bellamour Lane near Colton, that’s only fewer than two miles from Newlands Lane. This planning application came to our attention last autumn. It’s a proposed new power station. It’s designed as a buffer power station, it’s supposed to kick in at short notice to help buffer power demand on the entire National Grid, but we just wondered if it might provide the resilience that was lacking at Rugeley, seeing as it could kick in at short notice and if it went there, if that was used for the third circuit, then you wouldn’t need to build a new substation at all.

26. THE CHAIR: Can we highlight that on the map?

27. MR KNIGHT: Oh sorry, I don’t –

28. THE CHAIR: No, HS2 should be able to do that.

29. MR STRACHAN QC (DfT): P1175(16).

30. MR KNIGHT: Yes, so it’s only a proposal. The planning application has gone in. It was just from our point of view. We had this knowledge that this was potentially in the pipeline, and we couldn’t just sit on the knowledge of this potential source of power so close to Newlands Lane without at least raising it as a possibility. Again, in the document that we received from HS2 last week there’s some pretty decent information as to why that won’t work. Again, we just felt it was worth raising as a possible, much cheaper option.

31. So, this is the part of our petition which has the support of Staffordshire County Council and it’s of particular interest to Mr Fabricant, so I’m duty-bound to ask if consideration can be given to undergrounding the cables. In this regard, we wrote to all of the landowners directly beneath the proposed pylon lines, only the ones directly under it whose land the lines would cross. We gave them unbiased information on the relative merits of pylons versus undergrounding. We used the HS2’s own
documentation, which we presented. All of the landowners who responded expressed a preference for undergrounding.

32. We obviously understand the difference in cost, but if Parkgate is set to be the panacea which solves all of the previous problems with Rugeley, completely clears that site for the redevelopment, and gives National Grid a useful future asset in a location it would never normally be allowed to have, we felt the least that can happen is consideration be giving to undergrounding.

33. **THE CHAIR:** There’s a question from Sheryll Murray.

34. **MRS MURRAY:** Could either yourself or HS2 give us an indication of the difference in the cost?

35. **THE CHAIR:** Can we come to that? If HS2 can come to that in their introductory comments. I’m conscious the petitioner has the floor at the moment and it may actually be a much more complicated question.

36. **MR KNIGHT:** Yes, we’ve heard some information, but I’ll leave it to HS2.

37. **MRS MURRAY:** Okay.

38. **MR KNIGHT:** Okay. So, with regards to traffic, if you could bring up exhibit A4444 please. So these images show the B5234 through the village of Newborough which would be the main access route to Parkgate for construction traffic. It’s a commuter area, this area, to Derby and Nottingham, so we already have fast-moving traffic in rush hour. We’ve got children crossing the road to and from the nearby primary school, which unfortunately doesn’t have very much in the way of parking of its own, so a lot of cars park on the road.

39. We’ve been made aware of the assurance from HS2 to Staffs County Council with respect to traffic management. Mr Strachan, just before we came in, has brought to my attention some further traffic assurances. All we can say as a community is that the traffic management in this area needs to be taken really seriously, and really adhered to, because the access route through to Parkgate is basically suboptimal.

40. Finally, we put a paragraph in our petition regarding birds on the nearby Blithfield
reservoir. It's a nationally important site of special scientific interest, there's osprey that visit, and all sorts of other birds from time to time. When we wrote our petition, we weren't 100% sure if the West Midland Bird Club were going to write one of their own, but we understand they have submitted one now and assurances have been given.

41. THE CHAIR: We're seeing them tomorrow, I believe.

42. MR KNIGHT: I was going to say any further discussion on birds, I'm going to leave that to the experts. Thank you very much for your time.

43. THE CHAIR: Thank you, Mr Knight. James Strachan?

Response by Mr Strachan

44. MR STRACHAN QC (DfT): Thank you very much. I'm going to ask Mr Smart to help you with the technical side of the issues raised, although Mr Knight very helpfully has indicated what particular outstanding questions he's got, so I'll ask Mr Smart to focus on those. Certainly there are a couple of questions raised, for example about costs. I can deal with those now, or come to –

45. THE CHAIR: Yes please.

46. MR STRACHAN QC (DfT): Just by way of background for the Committee, because you've got quite a lot of documents in front of you, if it helps, I'll just explain the key documents. There's a set of slides which we're going to dip into with Mr Smart behind tab 2, and behind the first red page, beginning at P1175(1), there are a set of slides, some of which have already been referred to and I'll get Mr Smart to go to those.

47. Behind that, a little bit further on after some plans, P1163(1) – you have to go past the plans, and I'm afraid there aren't tabs – but you'll see what's referred to as the Grid supply point connection at Parkgate, and that was a report that HS2 produced in February 2019, which explains, in perhaps more technical detail, the reasons why the connection at Parkgate was selected and the problems with the Hybrid Bill connection.

48. Then just beyond that is a document, P1164(1), which is an addendum to that report and that provides an assessment of the differences between the costs of going overhead versus going underground. So that, I hope just helps you with the
documents you’ve got in front of you. Can I just go straight to the issue of costs?

49. THE CHAIR: Yeah. I’m quite happy to go through things slightly slower and go through the slides, perhaps through Mr Smart.

50. MR STRACHAN QC (DfT): Absolutely.

51. THE CHAIR: This is quite substantial, so do go for the costs, but hopefully you were giving us a short overview of what you’re going to tell us, and go into more detail through Mr Smart. Was that your intention?

52. MR STRACHAN QC (DfT): That was exactly my intention.

53. THE CHAIR: Perfect, we’re on the same page.

54. MR STRACHAN QC (DfT): Because I’m conscious there’s a lot of material on your desks, so I was hoping to give you an orientation as to where it was going.

55. THE CHAIR: Very helpful.

56. MR STRACHAN QC (DfT): When we get to it, in the slides that Mr Smart’s going to speak to, but hopefully not stealing the punch line, but at P1175(22), I indicated at the last session I would give the Committee a one-page summary of the costs of the various options. We’ll come back to this in a moment, but this sets out some assistance on the costs of the different options. The short answer that Mrs Murray has asked me is that the difference between undergrounding and overgrounding is approximately £65 million, which is shown at the bottom entries: option five, AP to revise scheme £105 million, option five underground.

57. But before we delve into that, perhaps I’d ask Mr Smart then to just outline the various options to you from an engineering perspective. And Mr Smart, if you could pick up particularly on the question Mr Knight’s raised about the former Rugeley power station and whether it’s really demand for the development there that’s driven the change rather than anything else.

58. MR WIGGIN: Can I just ask a quick question? Given that Rugeley’s been closed for three years, at what point did it occur to you that you might need to do this and why has it taken until AP2 now for it to occur?
59. MR STRACHAN QC (DfT): Well that is covered in more detail in the Parkgate report, and I’m sure Mr Smart will explain, but in very brief terms, the power station of course is shut, there is still a substation at Rugeley and it was the substation that was originally considered that would have the power to take to the line to power HS2. The substation is still there, but by further work, it’s been discovered that that wouldn’t provide a satisfactory solution. And that occurred post the Hybrid Bill scheme. So that’s it, but Mr Smart may be able to give you more assistance.

60. MR WIGGIN: I can’t wait.

61. MR STRACHAN QC (DfT): So, I don’t know where you want to start, Mr Smart, but I thought 1175(3) is the start of the slides on traction power, but I’ll let you just outline.

Evidence by Mr Smart

62. MR SMART: That just shows we need a 132kV supply to each of our auto-transformer feeder stations. And the one we’re talking about here is how we got to the line in the area that is Newlands substation. So probably, the best slide to go is 1175(9), and I can use this, I think, which the Committee will be familiar with. We talked about this and clearly I wasn’t clear enough when we had this first discussion in the AP, but the original plan was to use Rugeley.

63. Now, to answer Mr Wiggin’s question is when we did the route valuation we needed to get near, as near as we can, to a suitable supply from the Grid, which was the 400kV, but it’s not until you enter into, if you like, more detailed design with the grid, where you enter into a Grid connection agreement, that the Grid can start to actually do work to understand whether they’ve got sufficiency of power there, enough to power the railway, and have the resilience that we need in the railways.

64. It’s not just a question of actually having 400kV supply, it’s what other resilience we need. We need three circuits, and Rugeley was only able to provide two circuits. So the question then became: how can we get another circuit to reinforce the two circuits that exist from Rugeley?

65. THE CHAIR: Can I just confirm on Rugeley, so even without the housing and
industrial estate and whatever is planned in your view, Rugeley is inadequate in terms of power supply?

66. MR SMART: Correct. So we could get another circuit into Rugeley, and we looked at the options which the Committee will be familiar with, and each of them will require a pylon run to support Rugeley, and the options that we looked at you can see on the slide, and option two was an 11.8 kilometre connection, taking another phase into Rugeley and then obviously having to take that also up to the Newlands Lane.

67. Option three was looked at, which was quite a circuitous route, because actually, when you look at this, you’ve got to look at the context of what your traversing in terms of properties and other things, such as avoiding mitigation that we would be putting in.

68. So these are the options that we looked at. And the other issue, which the grid would have to look at, is in order to take another circuit in – this is already a pylon run here with 400kV – we would need –

69. MR STRACHAN QC (DfT): The cursor’s pointing to the blue line.

70. MR SMART: Yes, that line there. We would need to take the third circuit to supply Rugeley from what is the south side of this pylon run, which means you actually loop the cables around, and you can only do that in the certain positions where you’ve got clearance, etc. So that meant that we would couldn’t go along this route here, because that already is powering Rugeley and has a Western Power Distribution company pylon run alongside it. So to have another pylon run along there would have been not in accordance with Holford Rules of having too many pylons along the route. So the Grid looked at this position where they could take a connection from the phase that’s on the southern side and run in. So that would reinforce Rugeley with the third circuit which is sufficient for our power needs. And that of course, is where you get to this rather long pylon run.

71. Now, even when you do that, it does mean that Rugeley would have sufficient power, but of course, you’ve got a very long pylon run now across this section, and you have still got significant issues with getting this cable run, what would be the 132 cables, across the countryside into Newlands Lane, because you’ve got to cross the river Trent, you’ve got to cross the West Coast Main Line and there is an awful lot of other
existing electrical apparatus in this area, not just for the grid but also for the domestic nominated operator, which is Western Power Distribution, so that is a really suboptimal positon.

72. So basically, irrespective of any development, this run resulted in a lot more cost and pylons than coming in from what was our preferred option with the Grid, which is option five coming from Parkgate.

73. MR STRACHAN QC (DfT): Could I, if it’s convenient, just ask Mr Smart to deal with Lawn Meadow Covert, which is something Mr Knight has raised? If you just look at that, there’s a slide 15, which is a variation on options one and two together.

74. MR SMART: So what all this really does is transpose Rugeley from the Rugeley substation to here, which means that you’ve now got the additional cost of building a substation, because there is one at Rugeley, albeit it’s not got the efficient circuitry. So, you’ve now got to run cable lines to that substation, and you’ve still got to do this. So, effectively, that is almost the same as our scheme, except it’s recreating another substation and you’ve still got to have that third circuit pylon arrangement to it.

75. So, as we show on the slide, you’ve still got a 9 kilometre pylon run for the additional circuit, and you’ve got to move Rugeley to that location, and then you’ve got to recreate the substation there, and you’ve still got this run up here, instead of this run here. So again, it doesn’t have any advantages over option two.

76. MR STRACHAN QC (DfT): I think Mr Knight’s question was whether you would need the red dotted line to connect back down.

77. MR SMART: Yes, you would because that’s the third circuit that you need. So you couldn’t just move the Rugeley apparatus to then and then run the two circuits from there, you’d still need to reinforce the third circuit back to that take off point.

78. THE CHAIR: So if Parkgate wasn’t possible, what’s your next best or least-worst option?

79. MR SMART: If Parkgate wasn’t possible then our best option would be to have to do one of these options here which is option four, effectively, which is to put in the whole of the three-circuit supply from Kings Bromley, and you’d have to take it on this
route, all the way across to Newlands Lane, which the reason it’s such a long run and it
does that kind of snaking route is because of all the existing mitigation it would have to
avoid, because you can’t put the grid apparatus on. I’ll come to a slide which illustrates
that.

80. We need, due to something called EMC – which is electrical magnetic
conductivity, which is effectively electrical interference with our railway – a standoff of
about 100 metres from our railway overhead line to the Grid high voltage line. Also, the
Grid would want that to be outside the railway anyway, and so any mitigation that’s
included in the railway lands pushes that line out.

81. So if we couldn’t do Parkgate, which is a reasonably straight run across pretty
much – I know people can see it, but there are some landowners here and we’ve had
objections – petitions, sorry – from a couple of landowners, but not all of the
landowners. This would be a much more expensive and difficult option because the
reason, also the need to take that snaking route, is to avoid – and you wouldn’t
completely do it – interference with the construction of the HS2 railway, which of
course adds to time and programme of us building the route here.

82. MR STRACHAN QC (DfT): Just while we’re on that, if we just show the slides
that deal with that: 1175(11).

83. MR SMART: Yes, that’s the one – is that the one which shows the –

84. MR STRACHAN QC (DfT): I think this was one of the questions that came up
last time. Perhaps, Mr Smart, you could explain this?

85. MR SMART: So this slide gives the reasons, but perhaps better to illustrate it if
we went to 1175(12), which now you see what I am saying about the fact that we need
this standoff from our overhead line. Furthermore, irrespective of that, which we need
for electrical protection purposes, we still would have to be outside of our mitigation,
because we can’t have planting on top of it.

86. This forces you out into a corridor which, if you go along the railway, would end
up with a lot of environmental impacts, which is why, on the previous slide I showed
you, we would have to snake out to avoid far houses which were along this route, and
we've got some water – there's a lake, or there's some water areas – so we end up forcing this supply further out into the landscape.

87. MR STRACHAN QC (DfT): If the Committee would like some more assistance on that, Mr Miller has looked at what are called the CT05 and CT06 plans of the railway as it passes along this section. The Committee will be very familiar with it, because we've dealt with a lot of petitions from various landowners along the way as to the mitigation there. The overhead cable, the way it would have to go or thread through that route, is something Mr Miller can assist you with as an indication of the challenges of adding pylons in that location.

88. MR WHITFIELD: I wonder if could push Mr Smart first on this? I understand the need with regard to the pylons where they're located on that. The going underground rectifies some of the problems of the distance from your rail line, so is actually the big problem the fact that HS2's property and National Grid, you want it separated, and they cannot share the same asset?

89. MR SMART: Well, being underground does help with the electrical protection, so we would be able to close it in, but if Mr Miller does give evidence you'll see that still getting these cables along the route is still a challenge, because further up, you have got water features and Woodhouse Farm, and other things in the way.

90. Furthermore, there are limitations to what you can do above a buried high voltage line, so it first of all has to be dug out. And then there's a limit to what you can do on the surface.

91. MR WHITFIELD: But that challenge with what you can do on the surface exists wherever the underground line runs.

92. MR SMART: It does.

93. MR WHITFIELD: So if it runs from the new one down, you would still have those significant problems and I accept the cost implications, but the challenge will be the same whether it runs along closer to the railway. The only difference seemed to be in the previous – and looking at one of the reports, the conflict seems to be the ownership of the land, or the ownership of the access to the asset that seems to be the
problem, and National Grid doesn’t want to share and HS2 seem unable to share.

94. MR SMART: Right, I do understand. So undergrounding, to use the term, creates more of an issue with the disruption to us trying to build HS2 at the same time as we’re trying to do this. There are limitations to what you can do on the surface, which apply wherever. It would apply to the underground in Parkgate run. So the Grid need access about every 600 metres for apparatus for link boxes, and if they’ve got cable junctions and there’s a fault, they need to be able access that. I think there are restrictions on being able to plough above the land and what you can plant; so it’s okay to graze sheep or cattle or something, but there are other restrictions. Plus the fact, we’ve got to be outside any mitigation, because we’d have to be outside of planting, etc.

95. The other disadvantage, apart from coming along the railway, if we go to slide P1175(14), is that we would have to have near Kings Bromley not only our auto-transformer feeder station but also the Grid supply point, which means that we are putting a lot more electrical apparatus and compounds closer to, effectively, where there is an inhabited village. And also, there is a borrow pit that we would have here. So that, of course, has another construction clash which impacts, ultimately, on us taking more time to build this railway, and therefore any disruption will be felt longer. Plus, of course, the cost to building HS2 in terms of any programme prolongation and disruption of the construction.

96. MR WHITFIELD: So when we come to discuss the elements of the cost, we can’t simply take the cost of underground for the new proposal and say that would be effectively the same cost as running it along the railway line, but underground outside of the –

97. MR SMART: There would be different impacts, yes.

98. MR WHITFIELD: Different impact and different –

99. MR SMART: It would depend on what’s at the surface of that run.

100. MR WHITFIELD: I’m grateful.

101. THE CHAIR: Can I take you back a slide, Mr Smart? I don’t quite understand why, if it was underground and along the line, it has to be outside the area of mitigation?
From a layman’s point of view, just between the line and the treeline looks like an ideal place that could be provided access to.

102. MR SMART: So do you want to go to P1175(12)? Well, because of planting above.

103. THE CHAIR: So planting on this one, on the right-hand side of the tree line, effectively at the peak of the bund?

104. MR SMART: Well, there’s a proximity issue because we would need to have some sort of standoff from electrical interference. And the other thing is –

105. MR WIGGIN: Is it the same underground as it is above ground?

106. MR SMART: I’m sorry, sir?

107. MR WIGGIN: The interference, is it changed by being underground?

108. MR SMART: Potentially. It depends on –


110. MR SMART: The other thing about being in the ground is that these cables get hot and, depending on what the ground is doing, is that you can’t have these cables getting too hot, so it could be when the Grid do further work they might have to force-cool these lines if they’re in the ground. Of course, in the air, they are cooled naturally, but they’re not in the ground.

111. Going back to your point, Chairman, is that, putting them in here would depend on where the railway boundary ultimately is, and it’s liable to be there, because this would fall under the railway jurisdiction, because it’s a side slope of the railway. And the Grid would not want to have to have their apparatus that is inside our operational railway. Otherwise all their operatives, if they have to do a fault, would have to effectively stop the line to come on, or they have to be trained in railway safety procedures.

112. So you’d have to be outside the operational railway. Depending on that boundary, and in this scenario although it’s hypothetical it’s liable to be there, so then you’re in under planting, which wouldn’t be permissible, so you gradually get forced out. So
that’s not to say there might be some areas along the route where you might be able to get closer in, but ultimately, you are ending up with undergrounding for the Grid — which is not their preferred option — restrictions to landowners and costs.

113. MR STRACHAN QC (DfT): Can I go back one slide to help you on the separation distances? At 11, the second bullet point, I think, Mr Smart, is what you were talking to: overhead lines 100 metres and then, in answer to Mr Wiggin’s question, it’s at least 20 metres, so there are three cables, so the nearest one would be at least 20 metres —

114. MR SMART: And it’s timely that Mr Strachan drew your attention to that, because I was about to come on to say you need 65 metres for the width of the cables anyway, so you need a 65 metre strip, so you’ve got to get that positioned, outside of mitigation, outside the railway boundary. So it is not a straightforward proposition.

115. MR STRACHAN QC (DfT): Does it help just to go back to 12, just to see that? I think there are distances. They’re not very clear, but you can see the electric — the catenary is at 450, and then they come back 10 metres at a time.

116. I think, out of fairness, I should say the point Mr Smart’s made is this is an illustrative slide. Of course, where there is mitigation obviously its proximity to the line varies as we go up the route and there are areas which are less challenging, and areas which are more challenging.

117. MR SMART: But of course, the one advantage of being out, where we are out, is there’s less interference with the construction. Otherwise, it’s a time issue of having to get this power line in with us constructing mitigation and building the railway, because obviously, it’s to try and keep traffic off the roads. We have haul roads and all those issues.

118. MR WIGGIN: What’s the reason why circuits need to avoid environmental mitigation? It says it but it doesn’t say why.

119. MR SMART: Because the Grid needs access. First of all, if you plant trees above the cables, then they can damage the cables and there are also issues with that. And they also need access, so if they’re going to be deep —
120. MR WIGGIN: Yes, but how much access? How many trees are we talking about? I mean, not terribly large numbers.

121. MR SMART: Well you’d have to walk along the route and see that, sir. This is just illustrating that you have to go around mitigation, you wouldn’t go under it.

122. MR WIGGIN: But you could, but you don’t want to and that’s why I’m curious.

123. MR SMART: Well that’s –

124. MR WIGGIN: We’ve already identified the somewhat arbitrary nature of mitigation so far, and at this stage, it wouldn’t be impossible to use the land that you’ve bought for mitigation to bury a cable in, or is there a reason?

125. MR SMART: Well, first of all, for the three circuits we need about a 65 metre trace, so we’ve got to fit that in outside the railway, which would mean, ultimately, that you might not be able to do mitigation in that area, so it would mean no mitigation. So you’d have that.

126. MR WIGGIN: But most of the farmers we came across didn’t really want the mitigation anyway, and they’d much rather have fields, so it’s not quite the handicap that you’re making it out to be.

127. MR SMART: Well it is at one issue, but that’s something that, if we didn’t put mitigation in, we could look to say, ‘Well there won’t be; you’ll just have a sterile patch there’.

128. MR WIGGIN: Well it would be grass wouldn’t it?

129. MR SMART: It would be grass.

130. MR WIGGIN: Yes, which is what all the dairy farmers wanted in the first place. I’m sorry, this is going round in a circle to come extent.

131. THE CHAIR: Sorry, Sheryll Murray’s got a question.

132. MRS MURRAY: If you’re going to bury a cable under anything, surely you will also put in protection for that cable?
133. MR SMART: Yes, there is protection.

134. MRS MURRAY: So why would you be concerned that the cable will be damaged if it's under plantations?

135. MR SMART: This is effectively a matter for the Grid, but as I understand it they have concerns about things being planted above cables. They need access as well, and of course, depending on where those access points are, which is every 600 metres, on each of the runs, there can be impediments about where that planting is. So there are standard, if you like, limitations. I’m not suggesting you might not be able to plant something, but what we’re trying to do here is illustrate some of the problems with getting an underground route through. It’s not as straightforward as you might imagine.

136. MRS MURRAY: Just moving on from that, is this plantation that HS2 intends to put in there or is it existing?

137. MR SMART: In this example, which is illustrative of the issue really we have to deal with, this would be planting that HS2 would put in on what is effectively a false cutting here, as part of visual screening.

138. MRS MURRAY: So you don’t necessarily need to put that there, you could put it somewhere else.

139. MR SMART: We could potentially put the visual screening – obviously, it would depend on the location, because this is hypothetical. The other issue we’ve got, if we were to then – if you were to suggest that we were to not have those trees, and we were to move this undergrounding in there, that false cutting is also providing some sort of noise mitigation as well, which we would need to have that, and then you’ve got an issue of clash of construction with trying to build what is a bund for a false cutting which, amongst other things deals with noise and visual mitigation. And you’ve got to try and get some cables through there at the same time.

140. MRS MURRAY: So are you telling me that you couldn’t either increase the gradient of that cutting to have the same effect? Or perhaps use fencing, which would have the same effect?

141. MR SMART: Potentially, to overcome the noise, you could put in a noise barrier,
which is visual.

142. MRS MURRAY: So have you looked at that?

143. MR SMART: We haven’t looked at how, if we didn’t provide the mitigation that we’re proposing to provide because we were undergrounding, we would otherwise provide that mitigation. That would come at an additional cost to the cost that we have looked at, because we’ve assumed that if we were to do the undergrounding we would have to find a route that would not interfere with us being involved with providing mitigation in some other way.

144. THE CHAIR: Mr Strachan, I know Mr Wiggin wants to come in, in a second, but over to you.

145. MR STRACHAN QC (DfT): Sir, I was going to, I hope, help you in two ways. First of all, I know National Grid are here today, and they may well be able to assist you on the restrictions of what can be put over underground cables of this capacity. Our understanding is certainly tree planting is a no-no, because of the root damage, notwithstanding protection.

146. THE CHAIR: We’ve got them later, so thank you. We’ll defer those questions and get their detailed expertise.

147. MR STRACHAN QC (DfT): And the second thing that Mr Miller can assist you with is the exercise that you’re undertaking, which is to look at what happens along this line and route, and I’ll just make a point: there’s a difference between mitigation and types of mitigation planting. Some mitigation planting is landscape mitigation planting to screen the railway visually, not just for the landowner but the wider community. There is also, I know, habitat creation, which is controversial where it’s on farmland.

148. What we are looking at as an illustration is tending to be of the landscape mitigation planting and the difficulties with moving that, because that’s serving a different function, trying to screen the railway for a cutting, for example.

149. THE CHAIR: Very clear point.

150. MR STRACHAN QC (DfT): I just wanted to make that.
151. MR WHITFIELD: Can I just interrupt? Going back to the ownership question, clearly National Grid may have a view of it, and clearly there is an element if you are within the actual rail area, in other words, the rail side of the fence, but do HS2 have a problem with sharing assets outside of that? Would that be a problem?

152. MR STRACHAN QC (DfT): I think I'll defer to Mr Smart.

153. MR SMART: In this case, this wouldn't be a shared asset. It is supplying our railway, but this would be a Grid asset, so it wouldn't be shared.

154. MR WHITFIELD: Yes.

155. MR SMART: So are you suggesting that we would have –

156. MR WHITFIELD: Would HS2 provide a licence to National Grid to go on your property to provide your asset to –

157. MR SMART: Well, one is that that would probably end up being – we wouldn't get it in the corridor because we would need some standoff.

158. MR WHITFIELD: Sorry yes, outwith – I recognise the rail standoff of the train purposes, but the other side, which farmers will have a view and things like that, would there be a problem?

159. MR SMART: So in this area here? Well, there's an issue that even if we were to provide a licence everybody that came on would have to be trained in rail safety, and be put through – and the Grid wouldn't have a dedicated workforce to fault their asset, so that would mean that there would be restrictions on whether they could actually get in, and if they had a fault, to get to their assets because they need an access at about every 600 metres, so it is not something I think that's ever been done on any railway, and certainly in the UK, probably not in –

160. MR WHITFIELD: It's not fallen part of contemplation?

161. MR SMART: No.

162. MR WHITFIELD: Good.

163. MR WIGGIN: If the Committee decides that burying cables is the way forward,
will you come up with any more plans? At the moment I think HS2’s preferred option is to have above ground cables. However, if that is not what we choose, what will you do?

164. MR SMART: Well, I’ll go back to the slide here.

165. MR WIGGIN: Because we’ve got a variety of burying options, and you might have views on that, and I thought it might be helpful to tease those out now.

166. MR SMART: So can we go back to P1175(9)? The point is we’ve still got to get another circuit to the railway.


168. MR SMART: So if we were to do option two, which obviously incorporates option one, then this would involve this rather long route, and we have not looked at the cost of burying that, as far as I’m aware, because that wasn’t the preferred option, because of the other issues we have with the Grid’s effective objection for us using Rugeley, which is what AP2 is substantially about. So the next option would have to be undergrounding this section, which would be a massive cost, and it’s a long distance, because obviously option four is a full three-circuit run.

169. THE CHAIR: Can I suggest –

170. MR WIGGIN: That’s 9 kilometres, as opposed to seven?

171. MR SMART: Yeah. And that, as you will hear, if you do hear Mr Miller, has the problems of that there’s lots of – we’ve got water courses, and we’ve got to miss dwellings, farm houses, etc. So, obviously, we’ve got to get to where the Grid can provide that third circuit. So that is either here, or it’s there, or it’s there. So clearly, there’s really only three options that you can look at undergrounding. It’s the option two and the option four. Option three isn’t really an option because of – we don’t use Rugeley – or option five, which is our preferred option, and we have looked at the cost of undergrounding that.

172. THE CHAIR: Could we perhaps look at the issue of undergrounding through the prism of your preferred option?
173. MR SMART: Yes.

174. THE CHAIR: Talk through that, the course, how many pylons, and then maybe we’ll come back, having learnt a bit more about your preferred option, to some of the other options in relation to undergrounding and overgrounding.

175. MR SMART: I would just say that the issue of having to move, if we went on the side of the rail, effectively the Grid supply point to there is also an environmental effect.

176. THE CHAIR: Let’s move onto your preferred option. We can always come back.

177. MR SMART: So, going to slide – I think it is on costs – slide P1175(22), obviously this is our preferred option.

178. MR STRACHAN QC (DfT): Do you want to just – 21’s got the detail.

179. MR SMART: Okay, go to 21 if you don’t want to go straight to costs. So £65 million, the cost for undergrounding. That is showing a typical undergrounding scheme, although that’s only for two circuits. So we will need three circuits, so our scheme’s potentially a bit wider than that. As I’ve already stated, that £65 million does not include what the Grid may have to do if they needed to provide any cooling or special backfill because it depends on the thermal conductivity of the ground, because these cables do run hot and they need them to not run above certain temperatures. So there could be some additional costs if they found, on the detailed design, that they needed to do some thermal conductivity testing and they might have to do something more. But the additional cost is £65 million to underground on option five, which is our preferred option.

180. THE CHAIR: Just taking you back to your preferred option, how many pylons will there be? How big will they be? Will there be ones alongside one another? Can you just give us a bit of an overview and point out the kind of pictures of what the landscape might look like?

181. MR SMART: I think we’ve got that – let me just find the slide, sir, and I’ll take you to that. For a slide that I think shows the pylons. So if we go to P1175(4), this shows the typical pylon. This is an existing double pylon run near Lichfield. I believe this is actually the Grid supply and this is actually the Western Power supply, the
nominated domestic operator.

182. But we would have a similar arrangement. That’s a circuit here and that’s a circuit there. So we would have something like a pylon like that and potentially a slightly smaller pylon with just three wires beside it, along the Parkgate route.

183. THE CHAIR: Why two sets of pylons, if the circuit is complete on one?

184. MR SMART: Because each pylon takes two circuits, so we need another run for the third circuit.

185. THE CHAIR: Right.

186. MRS MURRAY: So you just have the pylons with just one arm, yes?

187. MR SMART: It might be that effectively instead of hanging down one side you might just have two arms, with one, two and three.

188. THE CHAIR: How many of these pylons are there going to be outside or by the points?

189. MR SMART: Do we have a slide on that?

190. MR STRACHAN QC (DfT): If you turn to P1179(1).

191. MR SMART: This is indicative because obviously the National Grid has not done a design.

192. MR STRACHAN QC (DfT): You’ll have to zoom in a bit.

193. THE CHAIR: I’ve got no idea whether it’s 1,000 pylons or 126.

194. MR SMART: I get that.

195. MR STRACHAN QC (DfT): If we zoom in a bit more even, the dots are the indicative location of the pylons.

196. THE CHAIR: Can you give us an indicative number, Mr Smart? We can go back. If it’s 80 and it actually turns out to be 60-100 that’s fine, but I just have no idea of the quantum.

25
197. MR STRACHAN QC (DfT): Approximately 27.

198. THE CHAIR: 27 pairs?

199. MR STRACHAN QC (DfT): Yes, so just over 50.

200. MRS MURRAY: And one of those would have two sets of conductors and the other one would have three conductors, or certainly two on one side and one on the other, with the earth cable above. You would have pulling pylons on the bends and hanging pylons on straights.

201. MR STRACHAN QC (DfT): Yes.

202. MR WHITFIELD: Sorry, I was just going to say, the next question is the distance between the pairs of pylons is approximately the same distance as the footfall for undergrounding. Obviously you don’t have the damage to all of the ground that you get in undergrounding of the pylon construction.

203. MR SMART: Yes, because obviously –

204. MR WHITFIELD: You’re above the ground.

205. MR SMART: You’re above the ground, therefore inspection is easier. You haven’t necessarily got link pits every 600 metres and the like. Obviously the restrictions are where the pylons are but farmers can go across – well, you can go over undergrounding but there are restrictions on what you can do above it for that 65-metre swathe.

206. THE CHAIR: Sheryll?

207. MRS MURRAY: Would you be entering into the maintenance with the landowners for these pylons or would it be the National Grid that would be doing that? Clearly each landowner that has a pylon has to enter into a maintenance agreement which allows free access to the land, yes?

208. MR SMART: Correct; and that would be with the National Grid.

209. MRS MURRAY: Any idea how many landowners would be involved?
210. MR SMART: I’m not sure how many landowners. We had five petitioners potentially, of which we have only two remaining, maybe.

211. MR STRACHAN QC (DfT): Because of the nature of landing parcels, some are slightly underneath the line. We can work out exactly how many if it would help the Committee. What I understand to be the position, as things stand now, is that we have two outstanding landowner petitions that are going to come before the Committee that may be –

212. THE CHAIR: I don’t think that is the question. The question is – because some wouldn’t have bothered petitioning for whatever reason – how many landowners will be affected by this?

213. MRS MURRAY: Yes, and potential added cost as well.

214. MR STRACHAN QC (DfT): About 40.

215. THE CHAIR: Thank you very much for inspiration. And underneath the pylons, will there be access? So not under the cables, but will the pylons be segregated out rather like a substation or will you be able to wander through as an individual, or indeed a sheep, graze underneath the pylon?

216. MR SMART: Yes, you can pass underneath the wires.

217. THE CHAIR: And underneath the pylon itself, the physical tower?

218. MR SMART: Probably not the pylon itself. I think that is usually fenced off because there might be – underneath the pylon but certainly underneath the wires between pylons.

219. MRS MURRAY: Do you have any idea what the exclusion area is around the base of the pylon?

220. MR SMART: Pretty much just the base of the pylon. Usually there is an exclusion because you don’t want people trying to clamour up them. So there will be some sort of fencing around them, but that is pretty much what it would be. It wouldn’t be much more than the actual pylon itself.
221. MRS MURRAY: And clearly you couldn’t plant around the pylons either?

222. MR SMART: No.

223. MR STRACHAN QC (DfT): The picture on 1174(4) indicates that certainly for these pylons the restrictions on climbing are done with fencing right up the pylon but you can get pretty close to the foot of the pylon itself.

224. MR SMART: That I’m not sure is a Grid pylon. Grid might be able to advise you better on that than I can.

225. THE CHAIR: Okay, well no doubt they’ll hear that interest and will cover that off in their comments.

226. MR STRACHAN QC (DfT): They’re about 250-300 metres apart, the pylons.

227. MR WIGGIN: 1164(13) is rather a good map. You can see every little one.

228. MR STRACHAN QC (DfT): Excellent.

229. MRS MURRAY: What are the colours?

230. MR WIGGIN: Water crossing is blue. It says it underneath if you go down.

231. MRS MURRAY: We can’t see it now.

232. THE CHAIR: I’m so sorry. Sheryll’s asked a question. We’ll ask HS2 to respond.

233. MRS MURRAY: I do apologise.

234. THE CHAIR: No, no, it’s a good question. I just want to make sure we don’t inadvertently incorporate errors.

235. MR STRACHAN QC (DfT): This map is for the underground connections. If you were to underground it, it’s showing places where the underground works interact with something – be it a road or a stream or a crossing. So figure 2 is key crossings. If you go to the key below, you can see light blue is a watercourse crossing. In the addendum report there’s an explanation of where, for example, if you are crossing the
river Blythe, you would have to carry out – under the current assumption – directional drilling rather than digging a trench through the river and diverting the river. For some of the smaller watercourses there’s the ability to go through them and pump the watercourses around. That’s explained in more detail in the addendum report. This is identifying key interactions of the undergrounding route as it passes through the same line. Coincidentally it is 27 interactions; it’s the same number of pylons, which is quite nice.

236. THE CHAIR: Some people don’t want pylons because of the impact on a day-to-day basis. For other people it’s a visual issue longer-term. Have you got anything that takes us through the visual side of things? What is being interrupted? What can be done to mitigate? What is the context through which you’re proposing to build pylons?

237. MR STRACHAN QC (DfT): Yes. In the addendum report at P1164(1) there is what is known in the trade as an ‘environmental sift appraisal’. If I just give you an idea of how it works. At page P1164(32) there are two of these things. One is appendix E to the report, which is an engineering appraisal comparison between undergrounding and overgrounding, which deals with some of those points. There is a similar one for the environmental effects. We’ll just go straight to that, P1164(40). On P1164(42) and (43) we set out the assumptions that are made in carrying out the environmental appraisal. You can see general assumptions towards the bottom. It’s rather small text I’m afraid.

238. We’ve incorporated certain assumptions. For example, vegetation that is removed, for example hedgerows and trees, is reinstated after completion. It’s difficult to give you a very simple answer to what you just asked but if you looked at P1164(44), in the pages that follow you get these environmental sift appraisal analyses for each of the environmental considerations. You can see there are two substantive columns. The two options are compared in terms of overgrounding and undergrounding for each of the environmental considerations. We happen to have the greenhouse gas emissions one here first. Undergrounding has some implications for that. For example, use of carbon, compared to the baseline design. You were particularly interested in the visual.

239. THE CHAIR: The ideal would be to show is a picture of what it would look like when you build these towers.
240. MR WHITFIELD: P1164(45) paragraph 4 deals with the landscape character visual in summary. You appear to get ‘super green’ and three pluses for underground.

241. MR STRACHAN QC (DfT): Yes. Clearly the visual effect is improved from undergrounding cables because they can’t be seen, if that’s the question. I think you were asking about –

242. THE CHAIR: At the outset we saw a video of a mock-up train going down a line. We understood the context in which it was going down the line. What I suppose I’m asking for is: have we got anything available that walks us down the route of the pylons to see the environment in which you’re proposing to build these pylons, so we can take a measure of the validity of the visual objections of petitioners?

243. MR STRACHAN QC (DfT): There isn’t an equivalent fly through or mock-up of that nature. We’ve given you the photographs of what two pylon runs look like. There is, coincidentally, one in that local area, which is that blue line. Up to Rugeley there are those two pylon runs. Of course, there isn’t any better substitute than seeing the land in sight, just to see where the line of route goes. But we don’t have a further visual aid for the Committee right now.

244. THE CHAIR: Okay, that’s fine. If it was available it would have been very useful to have seen it but we’re not going to sit on something that does not currently exist. Martin, a question?

245. MR WHITFIELD: It is just about this environmental option comparison matrix, which is a lovely name. The basic conclusion is that long-term, the environmental impact of going underground is less than going overground but, temporarily, it’s worse while you’re building it. Am I reading this conclusion correctly?

246. MR STRACHAN QC (DfT): Yes. It’s only on environmental grounds.

247. MR WHITFIELD: Yes, on this report, which I notice mixes in the carbon and things like that. But the overall conclusion, am I right: permanent, less impact; temporary, more impact?

248. MR STRACHAN QC (DfT): That’s right.
249. MR WHITFIELD: I’m grateful

250. MR STRACHAN QC (DfT): And I stand corrected. In the environmental statement there are some photomontages of some particular viewpoints of the pylons in place. I’m always wary of showing them because people have different views about photomontages. Can you get up viewpoint O005003.024 from the AP2 Environmental statement?

251. THE CHAIR: I think it’s worth waiting for, given it’s available. It’s crucial information. Would it be helpful to look at this alongside the next petitioner at the beginning of your evidence on the next petitioner?

252. MR STRACHAN QC (DfT): I’m happy to. We could get it teed up on the system now.

253. THE CHAIR: Let’s do it that way. Were you coming to the conclusion of your remarks?

254. MR STRACHAN QC (DfT): Yes, the only think Mr Smart hasn’t dealt with, but I think that was because Mr Knight is broadly satisfied: I know the Committee had asked a question about the potential or difficulties of moving the auto-transformer feeder station further south from Newlands Lane. Mr Knight is satisfied with the information we provided, but Mr Smart –

255. THE CHAIR: There are plenty of things people are unsatisfied on. Let’s not probe where there is satisfaction.

256. MR STRACHAN QC (DfT): But if you want –

257. THE CHAIR: Mr Knight, have you got any final comments or observations for the Committee?

258. MR KNIGHT: Not really, Mr Chair. Only that, as a layperson, it still does beggar belief that the plan to draw a path from Rugeley got all the way through Parliament in the original Bill prior to it transpiring that Rugeley wasn’t a suitable option to draw a path from. That is all.

259. THE CHAIR: It is surprising, but these aren’t binary things, I note. One doesn’t
wake up in the morning and realise something is totally flawed. Perhaps there may be an inkling but a desire for progress. Can I conclude with that petitioner?

260. MR STRACHAN QC (DfT): What I propose to do is, if it’s acceptable, ask that when we deal with the next petitioner, National Grid, just to invite Mr Miller to take you through those CTO-5, CTO-6.

261. THE CHAIR: That’s your call on the next petitioner. Let’s move to the next petitioner.

262. MR MARTIN: Can I just ask Mr Knight a question before he goes?

263. THE CHAIR: Yes.

264. MR MARTIN: Mr Knight, am I right in gathering from your presentation and from what’s been said that, as far as you’re concerned and your organisation is concerned, really the option that you’re looking for is the same route that HS2 are proposing but undergrounded and not above ground?

265. MR KNIGHT: Yes. Now that the alternative sources of power appear to have been successfully –

266. MR MARTIN: Explained away.

267. MR KNIGHT: They told us they’re not going to work. Then with what’s left with Parkgate we would ask for undergrounding, yes.

268. MR MARTIN: Thank you.

269. THE CHAIR: Thank you very much. Let’s move to the next witness.

National Grid Electricity Transmission PLC

270. THE CHAIR: Thank you very much for joining us. We now have the National Grid Electricity Transmission PLC.

Submissions by Ms Clutton

271. MS CLUTTON: Good afternoon. For those of you who can’t quite see the sign,
I'm Rebecca Clutton, appearing on behalf of the Grid this afternoon. I'm accompanied by Mr Philip Sandy, to whom I'm going to handover in just a moment. Mr Sandy is the Project Director for National Grid Electricity Transmission. He's responsible for overseeing the gas, electricity and grid supply point works associated with HS2. He also acts as the central point of contact in National Grid for HS2. He's a Civil Engineer by trade. He's been working for National Grid for the last three years.

272. THE CHAIR: Sorry, could I just pause you? Perhaps Mr Sandy can sit there and counsel can just have their own space. Just so it's less confusing, that was our fault for setting you up incorrectly. Then we've got everyone in the right place. Sorry to interrupt you.

273. MS CLUTTON: Thank you. No, not at all. That's very helpful. Thank you. That is Mr Sandy's background. I'm going to pass over to him momentarily. I'm conscious that we're here today at the Committee's request. Notwithstanding that, I am going to ask Mr Sandy to give you an overview of National Grid's position in relation to the five options that are under consideration. Also to touch on National Grid's view in relation to undergrounding. Then, of course, he'll also be available to answer any questions that you want.

274. I think if we can make sure from the outset we've got up A448, which is a summary table that National Grid have prepared to try and assist with the key reasons why options are either not regarded as workable or desirable. I'm going to hand over now then to Mr Sandy and ask him first of all to talk you through that table, please.

**Submissions by Mr Sandy**

275. MR SANDY: Thank you. As Ms Clutton referred to, what we've tried to do with this exhibit is summarise down the real key points on the five options. So as you'll understand, these aren't all the issues we looked at and everything that we looked at with regard to the options, but these are some of the key points we wanted to take you through. Those key points are resilience. There has been a lot of talk around not enough power, resilience, that I can go into a little further. There's also the construction complexity of each of those options. There is the impact on land take. There's also compliance with the Holford Rules. If I just explain these in a little bit more detail.
276. Resilience, as I think Mr Smart referred to on the session you had previously, is a requirement we have to follow as set out in a document called the Security and Quality of Supply Standard – the SQSS as it’s known. What that means is essentially, depending on how much demand a customer or a part of the network is drawing, we have to provide certain backup suppliers. That’s why we talk in one circuit, two circuit, three circuit, four circuit. That’s what we mean by resilience. It’s not only as has been referred to previously, how much power – but how much backup essentially is needed.

277. The other one I will take you through is the Holford Rules. Mr Smart referred to the Holford Rules. It’s essentially a guidance document that we use. It’s recognised in the industry about how to locate overhead lines. There’s also a subsequent document called the Horlock Rules about where to locate substations. These tell us the rules we have to apply when we located our overhead lines.

278. THE CHAIR: I think Sherryll’s got a question.

279. MRS MURRAY: These Holford Rules, do they take account of environmental impact as well? I notice this shows both residential areas and that sort of thing. Does it also take account of the environmental impact?

280. MR SANDY: Absolutely. So rule number one of the Holford Rules asks that we avoid altogether areas of environmental designation. Whether that be a conservation area, a special protection area, listed buildings, that sort of things. So, yes, it does.

281. MRS MURRAY: Thank you.

282. MR SANDY: Going back to the table, if I talk through each option independently and try and round out some of the conversations that you had previously. So option one, as we know it at the moment, is the option that the Bill refers, is absolutely not viable. It is completely not viable as it does not meet the resilience requirements. Essentially what this is, for option one, based on the demand that HS2 require in addition to the demand of other customers in that area, it simply does not meet those requirements.

283. MR WIGGIN: Did Rugeley belong to you?

284. MR SANDY: Rugeley substation belongs to us. The power station does not belong to us – or did not belong to us, as it’s decommissioned now.
285. MR WIGGIN: But it did?

286. MR SANDY: It did not belong to us.


288. MR SANDY: So the only thing, as has previously been mentioned, that’s remaining is the substation which is a National Grid asset. Moving on to option two, I can summarise options two, three and four in terms of a resilience perspective in that it meets the resilience requirements because it gives us the three circuits that HS2 require. But it is of a lesser standard than option five. If I can refer to A413(9), what we tried to do with this exhibit is give some context to the wider National Grid network in that area.

289. THE CHAIR: Let’s go back and if we have questions we’ll get into more detail, but I think the headline that you’ve given is, I think, sufficient for me at the moment.

290. MR SANDY: Okay.

291. THE CHAIR: So let’s make some progress and if we need to get into the technical detail and question your assertion, we’ll do so. Thank you.

292. MR SANDY: Yes, so just to reiterate, it meets the resilience requirements but to a lesser standard than option five. The other key issues with options two, three and four, we don’t have land take in the Bill. It could potentially require an additional provision. Also, in compliance with the Holford Rules, it runs much closer to residential areas, which Mr Smart referred to previously. All of this combined leads us towards option five being the strongest option.

293. Some of the key differences between option three and four, is option three is in conjunction with option one. So we still take the circuits from Rugeley to Newlands Lane but we also take the third circuit on the maps you’ve seen previously. Also, from a complexity perspective, we have to cross the HS2 asset twice. It’s a much longer route to avoid those areas. There are other crossings on the route – I think you previously referred to reservoirs on the route and those sorts of things.

294. Just to add to that, with option four we’d be taking all three circuits down that route, so all those crossings would be compounded because we’d be taking not only the
one circuit in option three but all three of those circuits. So, in effect, I think it would be 18 cables or overhead line, depending on where we were.

295. Going on to the merits of option five, option five is the strongest electrical connection. It comes off a completely separate part of the network than options one to four. It’s the least risky and least complex solution. It’s the shortest length, also, compared to options two, three and four, and we have sufficient land take in the Bill. Ms Clutton asked me to talk about undergrounding as option five.

296. THE CHAIR: Any questions on that?

297. MR WHITFIELD: Just before we move to undergrounding, are you able to say what National Grid’s view is of the questions I was putting out before about effectively the shared asset. If it was to run along the railway line, away from the railway line, do National Grid have a problem with that other than the fact it becomes this shared asset or licence, or whatever it is to get on them? Is there a fundamental engineering, electrical/mechanical problem that can’t be overcome running at a distance from, but running parallel with, the railway line?

298. MR SANDY: In your question would you be meaning before the environmental mitigation or after the environmental mitigation?

299. MR WHITFIELD: Well the environmental mitigation will have to take account of whether your pylons are running, or it’s running underground. What I’m trying to get at is in the report it says, what I think, is that this has never happened before. You’ve never shared an asset like this. I’m just wondering whether the problem is this has never happened before or there is some other reason for it not happening.

300. MR SANDY: As Mr Smart alluded to, the real issue is down to operation and maintenance and inspection of that. We’d require access at any point if there was a fault for maintenance to conduct works. The real issues come to our employees affecting those repairs next to the railway. We’d be inside HS2’s area. We might even insist on outages on the HS2 network. We would potentially be turning off the HS2 network to affect that. Those are, as Mr Smart alluded to, the real issues.

301. MR WHITFIELD: As you would do where the pylons run over HS2 anyway as
part of the National Grid.

302. MR SANDY: What we'd be referring to if the pylons were going over the top is a much shorter section. We are in effect running perpendicular to that. If we were to run cables all the way up the HS2 route for X kilometres – much shorter crossings can be accommodated, but in terms of running long cables or overhead line, the potential –

303. MR WHITFIELD: So you have concerns above and beyond the fact this has never been done before?

304. MR SANDY: Absolutely. Those concerns are legitimate based on it.

305. MR WHITFIELD: Thank you.

306. THE CHAIR: Sheryll? And then we'll go to undergrounding.

307. MRS MURRAY: Correct me if I'm wrong, but I understood that HS2 was only operational during the daytime and it wasn't operational overnight. Would that make any difference to your concerns about having access for maintenance?

308. MR SANDY: I'm not aware of HS2's operational requirements, if it's for day or for night.

309. MRS MURRAY: I think I'm right.

310. THE CHAIR: Maybe HS can clarify that when it comes to their point. Let's for now move on to undergrounding, if that's okay?

311. MS CLUTTON: Just before we move on...

312. THE CHAIR: Certainly.

313. MS CLUTTON: Just one point. I think it's worth confirming National Grid's position in relation to something Mr Smart said, which was in terms of the resilience requirement, whether your understanding was that it failed the resilience requirements regardless of the new development at Rugeley?

314. MR SANDY: Yes, absolutely. The new development at Rugeley has not been taken into any consideration whatsoever. I don't know for a fact, but would not connect
to the National Grid network. So those resilience requirements are independent of any
development at Rugeley.

315. THE CHAIR: Very helpful.

316. MS CLUTTON: Yes, so in terms of undergrounding then, Mr Sandy, you can
explain what National Grid's position is in relation to that.

317. MR SANDY: So undergrounding, option five, I guess the first point to make is
we don't have a policy. I don't think there's any national policy statement that we
usually have to underground that section as it does not fall in an environmentally
designated area. So fundamentally there's no policy to do that. Secondly, the
construction complexity of undergrounding and the destruction it would cause - I
believe you previously saw a photo of what a cable construction looked like. I sort of
liken it to building a motorway through the land. It's very disruptive. Not only do we
need access to construct the troughs and the actual permanent works itself, but we need
access works to either side. If I can pull up exhibit A413(22), this is an indicative
cross-section of what underground construction would look like in the swathe or area
that would be required if we were to do those works.

318. MR WIGGIN: It's not very deep, is it?

319. MR SANDY: This is indicative. Depth is designated by topography. What
you're probably looking at here is the minimum depth requirements rather than the
maximum depth requirements.

320. MR WIGGIN: It's only 900mm deep. It's less than a metre under the ground.

321. MR SANDY: At a minimum, yes. The other issue with undergrounding is land
sterilisation. We would be sterilising land, certainly above those assets. There's access
maintenance implications that we'd need. As I said, there's reduced operation above
that area.

322. MS CLUTTON: Just actually on land sterilisation, the Committee was asking
before about the implications of having pylons on land and whether sheep could graze
under them and those kinds of points. I wonder if it's worth you picking up now, Mr
Sandy, just the relative merits and demerits of undergrounding and overhead lines of
pylons versus one another?

323. MR SANDY: I think you previously asked questions around cattle grazing. You can access all the way up to the towers. As you previously saw, there’s a photo. The way we restrict people climbing towers is the anti-climb devices. That’s essentially barbed wire that stops people climbing, but cattle can graze right up to pylons. There are no areas that we restrict. In terms of undergrounding, the sterilisation above, you would not be able to carry out any construction works above those cables. If farmers or landowners wanted to build above those cables, we’d actually restrict them from doing that.

324. You also don’t want to put large areas of plantation, trees, those sorts of things above cables. Grass is absolutely fine, but you don’t want trees above cables. That’s because the roots of the trees can interfere with the cables and interfere with the concrete. We encase the cables in concrete or cement-bound sand that’s got certain thermal properties, so tree roots can interact with that. Also, tree roots dry out the soil, so it changes the thermal properties.

325. THE CHAIR: Can I just flip it round? Earlier you said there’s no – I might get it wrong – rules or regulations because it’s not an environmentally designated area. Could you just clarify whose rules those are and in what circumstance would there be a compulsion to underground based on those policies?

326. MR SANDY: So, I mean, first of all, I’m not a planner. That’s not my area of expertise. The two national policy statements I think we refer to are EN-1 and EN-5. Those are national policy statements.

327. THE CHAIR: From DCLG, Government policy statements?

328. MR SANDY: Yes. They’re Government policies, as I understand it.

329. THE CHAIR: And what does an environmentally designated area – if I’ve got the right terminology – look like? I’m more familiar with Areas of Outstanding Natural Beauty.

330. MS CLUTTON: If I could assist there? It is things like national parks, Areas of Outstanding Natural Beauty, conservation areas, those kinds of designations where there
is a formal designation of the land for its environmental quality. To take, for example, a
project that National Grid are undertaking at the moment, taking through an Area of
Outstanding Natural Beauty, the Lincolnshire Wolds, the Viking Link interconnect
project. The section of that that is going through the Area of Outstanding Natural
Beauty is being undergrounded for that reason. But in the areas that are outside that, the
line goes above.

331. THE CHAIR: Thank you, that’s really clear.

332. MS CLUTTON: Is it worth just picking up, Mr Sandy, on the point about depth?
We do obviously have an indicative plan here. It does show some quite shallow depths.
Obviously, we see on options two to four in particular reference to some of the potential
obstructions that are faced. Would that affect the depth at which any cable, if you were
undergrounding, had to go?

333. MR SANDY: Absolutely. So if we were required to cross other assets, whether
that be HS2’s network, the West Coast Mainline or river crossings, we’d have to bury
our cables much deeper. The way we do that is a recognised technique called horizontal
directional drilling. What that requires is a launch and receiving pit. So not only – I
think it would be fair to say we don’t just immediately when we hit the river dive down
and dive back up again. We have to meet bending radiuses and that sort of stuff.

334. THE CHAIR: I think we’ve seen that under AP1.

335. MS CLUTTON: Absolutely, yes.

336. MR SANDY: So as I said there, as is referred to with this exhibit, in an ideal
scenario that’s the minimum depth, but depth would depend on topography and
crossing.

337. MS CLUTTON: And it will be appreciated therefore that where you’ve got the
land take, at the moment there is the potential, even if we’re looking at option five, not
just two, three and four, that once one had undertaken proper assessment of the
obstructions that might be faced with undergrounding, that that land take would be
insufficient.

338. THE CHAIR: Shall I come to –
339. MR WIGGIN: What do you mean by that exactly?

340. MS CLUTTON: What did I mean by that?

341. MR WIGGIN: Yes.

342. MS CLUTTON: So if you had obstructions underground that you’ve got–

343. MR WIGGIN: We’ve got the map of the plan here. I called it out earlier. What did you mean? Which ones?

344. MS CLUTTON: What I mean is that at the moment undergrounding hasn’t been assessed from the National Grid’s perspective in relation to option five. It hasn’t yet been able to satisfy itself that additional land wouldn’t be required for undergrounding.

345. MR WHITFIELD: So there may be a need for an AP3 if you map this because of additional land you feel you need because of the various physical –

346. MS CLUTTON: Potentially.

347. MR WHITFIELD: Potentially, yes.

348. THE CHAIR: Can we hear from the promoter at this stage? Then we’ll allow you to come back as petitioner at the end. Is that acceptable?

349. MS CLUTTON: Absolutely.

350. MR STRACHAN QC (DfT): Can I just address that question immediately while it’s fresh in everyone’s mind?

351. THE CHAIR: You have the floor.

352. MR STRACHAN QC (DfT): The undergrounding option has been assessed by HS2 using certain assumptions. They’re not based on detailed ground investigations for example. But we made some assumptions to assist the Committee. Even on those assumptions we are identifying, you can put it up on P1175(21), there would be the need for additional land for the undergrounding. That principally relates to additional mitigation required because of the areas that would be disturbed. Much greater areas of land disturbance would occur with the undergrounding, albeit of course there are some
other positives, but it would require additional land. Our current understanding is, leaving aside National Grid’s assessment of it, an additional provision or additional land from an additional provision would be required.

353. Can I just pick up on a few other points? The national policy requirement is referred to on this slide. The national policy statements EN-1 and EN-5, they’re actually policy statements that come from, I think, the Department for Energy rather than the Department Housing, Communities and Local Government. It’s still the Government but it’s just a different arm of it. They’re national policy statements which obviously apply to development consent orders, which is one way of promoting overhead lines and underground lines.

354. MS CLUTTON: And also where relevant ordinary town and country planning applications too.

355. MR STRACHAN QC (DfT): Absolutely. And to be accurate, it’s not limited to protected landscapes where you might have to go underground. Obviously one other area is densely populated areas, as identified on this slide. So the national policy statement has a number of criteria. They’re not rules of course; they’re guidance. These are the factors which play into that.

356. What I was going to put up on screen for you, a hangover from the last petitioner but I hope they’re of assistance, are the environmental statement photomontages. There are three viewpoints. The first, going on your screen now, is a view southeast from Newlands Lane. At the bottom of the page you’ll see the viewpoint is marked. Can you zoom into the bottom of the page? This is taken, therefore from a place called Newlands. It’s on a footpath on Newlands Lane. If you zoom out again you can see the before and after views of the pylons and the pylon views.

357. THE CHAIR: Do we have a winter view as well with less foliage? The worst case scenario?

358. MR STRACHAN QC (DfT): Yes, I think that these are all summer views. I’m not sure we have winter views. I’ll check and see if there are winter views. If I can take you to the next one, 00502031? If you look at the bottom drawing you can see it’s near Bromley Wood so it’s looking back down the connection. If you zoom out again you
can see, again a summer view, at the top and the pylon run in the bottom.

359. MRS MURRAY: Approximately what distance is that from the grid supply point?

360. MR STRACHAN QC (DfT): The grid supply point is some distance away. I think the next one is closer to the grid supply point. I can show you.

361. THE CHAIR: Have we got a distance?

362. MR STRACHAN QC (DfT): Yes, if we go back, that one is 570 metres away. The one before, if we go back, was 180 metres away. They’re taken, generally speaking, from public footpaths or where there’s public access. That’s why the viewpoints are where they are. If you go to the third viewpoint, which is closer to the connection point, again the diagram at the bottom tells you this is 106 metres away. You can see, the top view is the existing 400KV line near Parkgate.

363. Then in the photograph below, the substation that is required to connect is obviously behind the trees. So they’re planted and after year 15 growth. Then you can see the wires. If you come over, across to the right, you can see the pylon taking the lines down towards HS2. That’s one of the corner pylons I think that Mrs Murray was referring to earlier.

364. MR WHITFIELD: So from the substation to the track would be just a single pylon run but going the other way into the substation would be the dual pylon run carrying the three?

365. MR STRACHAN QC (DfT): From the substation down to Newlands Lane is the double pylon run.

366. MR WHITFIELD: Is the double pylon, yes.

367. MR STRACHAN QC (DfT): Here, I think the connection occurs – I think it’s maybe underground at this point. It comes straight off the pylon.

368. THE CHAIR: That’s a bit of hangover from the last petitioner’s questions. Nothing more of substance in terms of National Grid?
369. MR STRACHAN QC (DfT): I would like Mr Miller just to explain, if you want some further assistance on why the route of option five, I think the Committee asked for what you’ll see on site but also the selection of the route and compliance with the Holford Rules. If you’re happy to take that as part of our exhibits...

370. THE CHAIR: Let’s do that. There will be more opportunities to have Mr Smart giving evidence other than today so I’m inclined not to do that today. Sheryll, then Martin.

371. MRS MURRAY: I didn’t have an answer about when the railway is going to be operational, if it was just within the daytime.

372. MR STRACHAN QC (DfT): I think it runs until 23.00. Trains are running until 23.00

373. MR SMART: But power is still required for maintenance trains. We don’t switch the power off.

374. MRS MURRAY: So when does it start again?

375. THE CHAIR: Sorry, what I don’t want to do is call a witness behind you. Can we have some definitive information on this? Let’s not go into it now. I sense we haven’t got the level of information we need. If you can get the facts for next time, perhaps we can have that. Martin, did you have a question?

376. MR WHITFIELD: Yes. My question is really for Mr Sandy. So with regard to undergrounding, it’s clearly not National Grid’s first choice of what to do in this situation for the reasons that you’ve set out, but actually there’s no engineering problem. There is a land take problem at the moment, but there’s no real engineering problems that would prevent it occurring here. Actually, the big question floats down to cost.

377. MR SANDY: So you’re absolutely right, there’s no fundamental engineering problem. However, it is a considerably more complex way of building. You’re absolutely right. It adds to cost. It potentially adds risk to programme but fundamental engineering reasons for the surveys we’ve done so far and the work we’ve done so far, there aren’t.
378. MR WHITFIELD: Yes, there’s nothing. Just to follow on, you’d confirm the finding of HS2’s environmental comparison table, that long-term environmentally underground is better than overground? That short-term, obviously because you’re having to dig it out, there’s clearly an impact on the environment.

379. MR SANDY: I mean, I can’t speak to HS2’s environmental policy.

380. MR WHITFIELD: No, I’m not asking you to. I mean, you did say, obviously because undergrounding is used in environmentally sensitive areas, there is presumably less of a long-term impact environmentally than there would be with pylons or they would use pylons?

381. MR SANDY: Absolutely. The environmental impact is really in the construction of.

382. MR WHITFIELD: And, I know you haven’t had a chance to look at it but there’s also a similar engineering one. But again, you’ve said there are engineering problems, but they’re not insurmountable.

383. MR SANDY: In terms of undergrounding?


385. MR SANDY: Based on the survey work that we’ve done so far?

386. MR WHITFIELD: That you’ve done so far.

387. MR SANDY: Yes.


389. MR WIGGIN: I’ve just detected a reluctance to go for undergrounding from Mr Sandy. Is that right?

390. MR SANDY: I’m sorry?

391. MR WIGGIN: Are you reluctant to agree to undergrounding?

392. MR SANDY: At the end of the day it would be for HS2 to instruct us as to which
option they would want. If this was a National Grid asset there would be no requirement for us to underground because it’s not a designated area, but whether this is an underground or overhead line is down to HS2.

393. MR WIGGIN: And how much have they asked you about what your optimum solution to their requirements would be?

394. MR SANDY: So we fed into the detailed Parkgate requirement in the addendum. We’ve been fairly well involved in that. Some of my team have fed into methodologies. We’ve answered questions around how we might we do it and that sort of stuff. So we have had an involvement in it.

395. MR WIGGIN: And yet you still hadn’t seen their plan for an underground line?

396. MR SANDY: Hadn’t seen their plan for an underground line. So the plan at the moment is only overhead line.

397. MR WHITFIELD: There’s problems with the crossing.

398. MR WIGGIN: But there is an underground plan. I alluded to it much earlier, wrongly, as it turned out, with the pylons.

399. MR STRACHAN QC (DfT): No, the underground reports, the addendum report compares an undergrounded version of option five with an overground version, which is I think what Mr Sandy was referring to that National Grid had fed into.

400. MR WIGGIN: But you hadn’t shared that with him.

401. THE CHAIR: I think what you’re saying is the preferred plan is to put in pylons and the plan to do that is more fully developed because it was your preferred plan. Rather than that which we’re probing you on, which is the underground plan, which is insufficiently planned because it was not the preferred option. Is that correct?

402. MR STRACHAN QC (DfT): That is correct. What we have done with the addendum report, because people raised the question of undergrounding, is identify at a relatively comparatively less detailed analysis of what the key challenges would be with undergrounding, the interactions, the consequential engineering versus environmental changes and, of course, the costs.
THE CHAIR: That’s great. Sheryl?

MRS MURRAY: Yes, just very quickly, you were obviously not aware that the railway wasn’t going to have trains running on it 24/7, am I correct? That information had never been imparted to you.

MR SANDY: It had never been imparted explicitly in conversations that I’d had. However, as Mr Smart alluded to, power isn’t turned off overnight. There are operational complexities in turning power on and off.

MRS MURRAY: When they talked about railway safety and working within a working railway, very clearly, if there are no trains running it makes that a little bit different.

MR SANDY: I think Mr Smart alluded to that there were other trains running. Maintenance trains, I think he referred to.

MRS MURRAY: That is within the gift of HS2.

MR STRACHAN QC (DfT): I–

THE CHAIR: Sorry, Sheryl, you’ve got the floor. You carry on.

MRS MURRAY: Thank you. That would be within – if you had to go and do some maintenance or some checks, very clearly, HS2 could stop those maintenance trains which aren’t going to be running 24/7 or 12/12 through the night. For that very reason you would be able to do so safely within a non-working railway over a period of time through the night.

MR SANDY: I mean, we’d be subject to HS2’s rules and their operational requirements of that. It wouldn’t be our asset. It’s not our land. So we’d be subject to whatever requirements they put in place.

MRS MURRAY: Thank you. I wouldn’t expect you to make any assumptions but I think I’ve made my point. Thank you very much.

MR STRACHAN QC (DfT): Well all I was going to say is Mr Smart is here to help you with that. If he could take a seat beside me he can answer that question for
you, if that’s convenient?

415. THE CHAIR: We’re trying to make progress.

416. MRS MURRAY: I think I made the point, really.

417. THE CHAIR: She made the point. It was a point she wanted to make. It wasn’t an enquiry that needs further exploration. Does that end the promoter’s points?

418. MR STRACHAN QC (DfT): Yes, I’m parking Mr Miller’s explanation of the selection of option five at your request.

419. THE CHAIR: Excellent. Fine. Anything else?

420. MS CLUTTON: Nothing further from us, no. Thank you.

421. THE CHAIR: That’s great. It would be convenient to take a five-minute break. We will see the next petitioner at 6.00. We don’t anticipate a second sitting today so we’ll run this session slightly longer, but we won’t meet again at 7.00.

*Sitting suspended*

*On resuming –*

422. THE CHAIR: Welcome Angela Brown. Over to you.

**Submissions by Ms Brown**

423. MS BROWN: Thank you. Do you mind if I just have a quick drink of water?

424. THE CHAIR: Have a quick drink of water. Sorry, I didn’t mean to rush you.

425. MS BROWN: That’s okay.

426. THE CHAIR: We get very used to these things and we get very transactional. I get very transactional and forget this is quite a strange environment for most people. Feel at ease, sip away at water and pause as you need to, to make your best case, and then we can do the best job we can.

427. MS BROWN: Thank you very much, members of the Committee and my learned
friends. My name is Angela Brown. Do I need to say the petition number that I’m –

428. THE CHAIR: No, just talk through in normal language what you don’t like, what you want to happen.

429. MS BROWN: Okay. If I give you a little bit of background. I live at South Hill Farm and I don’t know if we’ve got a map up.

430. MR STRACHAN QC (DfT): There is one up there. Is that helpful?

431. MS BROWN: I think that’s the best one. I think that’s the one I was going to refer to, because I have a feeling that the one I submitted which was exhibit 1, which equates to –

432. THE CHAIR: If you call out the name of the exhibit and a reference that will come up.

433. MS BROWN: A437(2) doesn’t assist so I was thinking to move straight on to the following one, which is A437(3), which does because what I was trying to indicate within that was actually the corridor that we were shown at the village hall when we had our meeting.

434. If I can just rewind a little bit to let you know who I am and what I am? I’m the joint owner of South Hill Farm with my mother. My mother is aged 90 and she’s lived there for 65 years and I was born there. My daughter and son-in-law also live at the farm. It isn’t a very big holding I will say from the outset. I’m not as fortunate as my neighbours. They’ve got hundreds of acres and, little old me, I’m stuck with 10. I believe some people have gardens that are of that size. But that’s irrelevant. We are a small holding. We’ve been there for a considerable number of years and as I stated in my petition, which I don’t intend to repeat, it has proved its challenges over the years. I know that we had, and I’m grateful for, an undertaking that there will not be compulsory purchase in parts of the land and especially the smaller strip of lands which runs down the side – because the take from there would be the equivalent of taking 100 acres of somebody else.

435. THE CHAIR: Can you just go through – because it’s an odd-shaped parcel – explain where the farmhouse is and what’s on that land?
436. MR WHITFIELD: It may be helpful if we look at P123(2), which is a slightly more detailed version of what we’ve just looked at.

437. MS BROWN: I think that is the one I was going to refer to in a minute, but I’m quite happy to jump ahead with that. I can tell you the history of it. It is quite fascinating. It started off as a very small strip of land and the other pieces of land were purchased by ancestors and that’s how it ended up. I don’t think I will bore you with that. In actual fact, sticking with that because I don’t want to spend too much time going on about everything, save to say that as you can see there are going to be two pylons that cross the land with the proposal at the moment, which I have to say I am fully opposed to option five. I do state my claim that I think option five isn’t the better option. And I have heard a lot of information today which tended to then make me – I might be repetitive – but I would like to make a few points, if that’s alright with the Committee?

438. Right. So these two pylons – the largest tract of land is the bigger parcel that you can see there. The pylons coming through at that point – as I understood it – those pylons are going to be approximately 30 metres apart. We are going to have the constraints of, one, the pylons which are going to be closer to the boundary between me and my neighbour, Mr Hill. And they’re going to be difficult to negotiate around where they are currently. You’re not going to be able to farm underneath them because it’s not possible to do that. So the land take is going to be – in my humble submission – a huge amount from our perspective, coupled with the wires which will obviously provide their own challenges. Whilst they’re up a height –

439. MR WIGGIN: What do you farm at the moment? Livestock?

440. MS BROWN: We do livestock, yes, but if we wanted to do anything else – any diversification is going to be hampered. Future plans have just sort of – now it looks as if they’ll go out the window, which is what we would need to do to make this anything like a profitable – it will never be self-supporting, 100% profitable on its own. It will need diversification and has done over the years. But the situation as it stands, at the moment, even with livestock, this is going to impair.

441. MR WIGGIN: Have they told you what the wayleave would give you in terms of income from these two pylons?
442. MS BROWN: There's been no indication of how much in terms of wayleave we will receive. In terms of disturbance, how much we will receive – in actual fact that was one of – just a point I didn't want to labour on, but I did want to mention, is that when I saw these first plans in Abbots Bromley Village Hall, that corridor went straight over the top of my house and it looked as if we wouldn't be able to live there. Now that has moved. When we asked whether or not that was the permanent corridor we were told at the meeting in Abbots Bromley Village Hall that that was more or less it. It was going to go straight over the top. So from my perspective it has caused already –

443. THE CHAIR: Sheryll's got a question as well.

444. MRS MURRAY: Just one – you mentioned plans for diversification. Had you decided how you were going to diversify? Could you give us any idea?

445. MS BROWN: We were thinking of setting up a garden centre there, with the tranquil nature of the area, that was a selling point – and all the rest of it. With power lines going over the top, whether it will impact – I would strongly suggest it will do. That would be run alongside with having the organically farmed animals.

446. MRS MURRAY: So it's an organic farm?

447. MS BROWN: Yes. We have not used any chemicals on the land for the last 45, 50 years.

448. MRS MURRAY: Thank you.

449. MS BROWN: The other thing – this map, unfortunately it has moved in the position that it is going along because when we are shown A437(5), we're shown parallel power lines that are at Kings Bromley. It was said that it's Lichfield but it isn't. It's in between Kings Bromley and Lichfield. It's more Kings Bromley than Lichfield. It's Shaw Lane. And as you can see, the distance between those pylons alone, that would definitely be half of the field more or less would be rendered sterile, in my humble submission.

450. Then to support my arguments for where the pylons should go over, at A437(6) – I don't know if you can show A437(7) at the same time? Is it possible to do that?
451. THE CHAIR: Let’s flip backwards – let’s not do that, let’s go to the next one and then come back.

452. MS BROWN: As you can see there, that gives you a slight indication of the mature oak trees that are going to have to be felled to come straight across, so both sides of the road there is. But lower down in the lane, there are no oak trees. It is an anomaly. There is an avenue of trees outside of my holding, going up the lane, going up towards Gillian’s Hoar Farm, and coming down the lane, down to the bottom to Bentilee Park Farm, there are trees down there. There are some gaps but they’re not big enough for the supposed land take that they are proposing. But going up the lane, there are trees where they are missing. Going through there, you wouldn’t have such a huge impact on the already established trees. Now I’m aware that my learned friend has already said in the previous petitions that there’s going to be a mitigation but my argument would be how can you mitigate for the age of some of these trees? And what is worse is when we – sorry to keep flipping backward and forward – there is a plan which shows it going right the way up, which is the petitioners’ plan, going right the way up to its final destination. I do apologise. A lot of these – when we were served with the evidence it was very difficult for them to get the act together to get –

453. MR WHITFIELD: Sorry, Ms Brown, if we could look again at P123(2)? I’m just trying to position the photograph that you’ve taken.

454. MS BROWN: Yeah, sorry.

455. MR WHITFIELD: Glass Lane comes down and then goes across the top of your land. Is that photograph where we see those pylons crossing there or is it further up Glass Lane where they cross a second time?

456. MS BROWN: If you look – sorry, yes, if you’re looking at – I’m on the petitioners’ plans now –

457. MR WHITFIELD: Yes, sorry.

458. MS BROWN: I do apologise.

459. MR WHITFIELD: It’s just the roads on it.
460. MS BROWN: If we look at A437(4) – I can tell you exactly where those photographs show. When you look at the actual pylons, when I was looking at the potential corridor, which is the one before it, which is A437(3), if you look at the far right, as you’re looking at the picture now, if you look to right, on the edge where that pink line is demonstrated – that is where that picture was taken.

461. MR WHITFIELD: Oh, I see, yes.

462. MS BROWN: It was my understanding that’s where the pylons were going. Yes, you are correct in what you say now, that the pylons will be going a bit further down, but there are still oak trees there.

463. MR WHITFIELD: That’s what I was going to ask.

464. MS BROWN: You are going to come through oak trees on to the lane at that point.

465. MR WHITFIELD: Where they’ve chosen to cross Glass Lane is not, from the point of view of the oak trees, the most sensible place to have done it.

466. MS BROWN: No. No, definitely not.

467. MR WHITFIELD: Thank you.

468. MS BROWN: If they’d have gone further down, into the dip at Hoar Cross, they’d have been fine.

469. MR WHITFIELD: They’d have missed them.

470. MS BROWN: But unfortunately it just doesn’t end there because when you then go up to the lane to Bentilee Cottage, what you find there is that at the back of Bentilee Cottage, which is a bit higher up – I think you’re probably better off looking at – no you’re not –

471. THE CHAIR: Would it be helpful to hear from the promoter and then give you some leniency to come back if there’s any additional points? Is that acceptable?

472. MS BROWN: I’m quite happy with that.
473. MR WHITFIELD: Before we leave then, on this map, if you see at the end of the run-off of your property, there’s a pink part, which is part of the AP2 purchase, and that’s going to be used to offset some of the existing woodland, I think, habitat creation. I’m wondering what’s there at the moment?

474. MS BROWN: All of that land there is grassland.

475. MR WHITFIELD: It’s grassland at the moment.

476. MS BROWN: Yes, it is. And my neighbour, the Yates’, they farm livestock.

477. MR WHITFIELD: On that land?

478. MS BROWN: So on that particular piece. What I suppose I can’t understand is why you would take a piece of land like that. It bites into the centre of a field. It looks nothing there but when you are on the ground, there are better places to put that habitat.

479. MR WHITFIELD: A question I will pose with Mr Strachan, don’t worry about that.

480. THE CHAIR: Let’s hear from HS2 at this juncture. The baton has passed. Mr Strachan?

**Response by Mr Strachan**

481. MR STRACHAN QC (DfT): If you want to hear from anyone else behind me, you’ll let me know, but I’ll just explain in outline. P123(2) on your screens now shows the construction land that is required. It is an assumed construction corridor which is much wider than the construction corridor will actually be, as you’ve heard from Mr Smart. The reason why the pink is wider is to allow for in the detailed design flexibility as to where the pylons will ultimately be located so that you have sufficient space within the corridor to – in the detailed design – site your pylons in the optimum location. That is why the construction corridor is of its size.

482. Turning to the particular concern about the trees, in fact if I show you slide P123(4), the indicative location of the pylons – you can imagine what we’re looking at – to date have been put in the best location on current information to avoid taking mature trees. And that would certainly be the intention in relation to Glass Lane. There is of
course the opportunity in the detailed design with what is called the ‘micro-siting’ of the pylons to avoid particularly valuable trees or indeed trees altogether. Again that is very much something that is part of the detailed design process. Consequently – I know of course Ms Brown is concerned about those oak trees – but the intention would be in the detailed design to avoid those sorts of trees wherever reasonably practicable. That means we would try and do it.

483. THE CHAIR: It is good to have that assurance on the records in relation to this specific case as well as the generality.

484. MR STRACHAN QC (Dft): Yes.

485. MR WHITFIELD: Can I ask – sorry Mr Strachan – even though they don’t form – I know that we had the huge definitions about what a ‘veteran’ tree was – you are talking about the oak trees that sit on Glass Lane. HS2 will seek to avoid or absolutely minimise damage to them?

486. MR STRACHAN QC (Dft): Yes. We’ve got three definitions here actually. ‘Particular mature trees’ in the first line, then we’ve got ‘ancient’ and ‘veteran’ trees. Obviously there is a greater level of protection given to ancient and veteran trees. But certainly the intention would be to try and avoid mature trees or trees of the sort that have been pointed out. I will see whether we can reflect –

487. THE CHAIR: Would that have been what Mr Mould would have said, ‘Make reasonable endeavours to avoid the trees’?

488. MR STRACHAN QC (Dft): That is the language that would ultimately be reflected in an assurance, which satisfies honour amongst lawyers who desire –

489. THE CHAIR: I think that was a formula we were very helpful with. So if you are using that formula, that will be good. I think there’s some nods from behind that might give you reassurance.

490. MR STRACHAN QC (Dft): Well that is reassuring from my perspective.

491. MR WHITFIELD: Can I ask? the value of these wayleaves?

492. MR STRACHAN QC (Dft): Yes. Can I just deal with the habitat mitigation? We
have in the original design shown in the plans, we were planning to take a small section of Ms Brown’s holding for habitat mitigation. We have provided her with an assurance which is on P123(5)(1). There are two parts to this assurance. The first is – can I deal with them together? The first relates to the location of the pylons – and because these are indicative locations only, we have given an assurance that we will, as you can see – or the National Grid will consult Ms Brown on those locations and have regard to her concerns of where they should be located in the final design.

493. The second, over the page, the next page, relates to that mitigation land, which we’ve managed to exclude from the scheme so that Ms Brown’s concern about that particular parcel is now reflected by an assurance that we won’t exercise the compulsory purchase powers over it. I think I should just point out, because the nature of the construction corridor is so – 200 metres effectively – to deal with the possibility of where it might be located in the detailed design – the mitigation has, on a worst case basis to comply with environmental statement obligations, assumed the mitigation that would be required were you to site the pylons anywhere within that. So it’s very precautionary but needs to balance that degree of flexibility. I know that gives rise to concerns from petitioners but ultimately it’s intended to give that flexibility in the detailed design for where the pylons go. We will try and locate them obviously to suit all the respective interests. You have already heard about pylons, livestock and I am not going to repeat any of that.

494. THE CHAIR: Can we look at cost? The Committee are particularly interested in the revenues associated with having these pylons on property.

495. MR STRACHAN QC (Dft): Yes. There is a wayleave revenue. I don’t have the figure with me, I’m afraid, to tell you what they are at the moment. We can try and provide that information to the Committee because it’s obviously of some interest. They’re not large sums of money, put it that way.

496. THE CHAIR: It would be very helpful to have that first thing tomorrow morning to put into context other petitioners. So no need for it today, it is not something we would want a note from longer-term, maybe just a quick reply tomorrow would be helpful.

497. MR STRACHAN QC (Dft): Yes.
498. THE CHAIR: And may I ask another question? Is there any particular additional provision made, given this is such a small holding? It’s materially different in terms of its impact at 10 acres than if it was 100. Is there anything that you do specially given that additional impact?

499. MR STRACHAN QC (Dft): The things we have done to date are first of all removing the mitigation – albeit it’s very small, we realise it has a disproportionate impact on Ms Brown so we’ve taken that out. In relation to the pylons, the idea is that the detailed design – we’ll liaise with Ms Brown as to where, if they need to be on her land, the best location is for her. There isn’t anything additional beyond that as things stand.

500. MR WHITFIELD: Can I ask then whether an assurance is being given to any of her neighbours, that the pylons won’t be on their land? Looking at the pink corridor, it’s quite possible that the line could avoid Ms Brown’s line entirely unless some assurance has been given in supplement elsewhere.

501. MR STRACHAN QC (Dft): No. I don’t believe – if I’ve got this wrong, then I’ll be told.

502. MR WHITFIELD: Shaking and nodding going on behind.

503. MR STRACHAN QC (Dft): But I don’t believe we’ve given assurances to others that there won’t be pylons on their land within that corridor. They’re indicative locations. We have given the similar assurance that we’ve given to Ms Brown about speaking to the affected landowners about the location of the pylons. Of course there is a balance to be struck between getting the pylons to the right location in one field, then they’ve got to be a certain distance in order to get the line at the right height. So there is a detailed design work which requires balancing those interests. But in answer to your question, I don’t believe we’ve committed in a way which prevents that.

504. THE CHAIR: Bill?

505. MR WIGGIN: Ms Brown, I’ve got one point for you, which is that we’ve discussed earlier today the thought of putting cables underground, but that would be even more detrimental to your plans for a garden centre, wouldn’t it?
506. MS BROWN: Well, no, because I could work around that. It’s the visual impact that I worry about and when I’ve got pylons – if the undergrounding goes ahead, I can work around that. That wouldn’t be a problem.

507. MR WIGGIN: But you’re not allowed to put much on top of them. That’s the trouble.

508. MS BROWN: No, no, I appreciate it would only be able to be grassland that could be placed there. I’m opposed to the overhead pylons. I’ve seen all the pictures and I have to say – and I’ve seen the mock-up pictures that have been done – that isn’t what it’s going to look like. It is going to stand out like a sore thumb, summer and winter, because of the nature of the land. We’ve been shown pictures that are up at Hoar Cross against the hedges where the existing pylon is one pylon and it goes down to the Meynell Ingram Arms. You see it on the regular. But where you are going to see it coming from Newlands Lane, coming right the way through – because I have spoken to lots of my neighbours – and I would say that if you went hedge hopping you’d get me into a lot of trouble because my neighbours wouldn’t be very happy because they similarly don’t want them either.

509. But undergrounding was the general consensus amongst us because of the visual impact. It is going to be huge. When they did the Blythe – for the river – when they had to put an extra water supply in from the Trent, what they did there was they dug it underground. It took five years to do. I appreciate electric and water are two different things, but there was a visual impact, yes. The ground was disturbed, yes – for five years. Now you cannot tell that they have put that pipework in. It would be the same with the undergrounding of the electric cables. Predominantly in the area it is grassland. There are a few arable farmers. In actual fact, when you cross over from me and you go on to the other side of Glass Lane, you are going on to an arable farm for a short distance, and then you’re going back to grassland. It’s predominantly – all the way from Newlands, right the way along – it is grassland and so would not impact everybody as much as the pylons will.

510. So my submission is that it should be undergrounded. There is no reason why it shouldn’t be undergrounded. But having looked and listened to everybody today – and I was very heartened by the fact that the Committee have picked up on a lot of the things
that I wanted to say about the fact in relation to the other options – my, if you like – and I am not going to take your time up – but my most forcible argument to you was going to be in relation to option four because option four is Kings Bromley. At Kings Bromley they are already going to be hugely disrupted. Kings Bromley, Handsacre and Colton – all of those areas are very closely connected. Across the fields, they’re closer. Option four did seem to be the best. I know that what one of my friends – I believe one of the witnesses said that in relation to option four, ‘We’ll have to put a new substation up’. Well, I kept thinking, ‘Well, option five, you’re going to have to put a new substation, because there isn’t one’. And that’s going to have to be in the woodlands.

511. THE CHAIR: Okay. Thank you. Mr Strachan, before I ask you if you have any concluding comments, when you come back on costs tomorrow – sorry, revenue on an ongoing basis – could you perhaps take us through any disruption costs because presumably there’ll be some degree of compensation whether there’s a building of a pylon or building of the trench and the undergrounding of the cable? It would be useful to be sighted as to that, particularly in relation to smaller holdings.

512. MR STRACHAN QC (Dft): Yes, I will do that. Tomorrow is when you’d like it, so that’s fine.

513. THE CHAIR: Only because it will put into context other petitioners as well. I’m not trying to make life difficult.

514. MR STRACHAN QC (Dft): No, no, it’s fine.

515. THE CHAIR: Just making it easier overall for the process.

516. MR STRACHAN QC (Dft): I understand.

517. THE CHAIR: If there’s a real good reason why that is not accessible to the Committee first thing I’m not going to hold you to that. If you say, ‘Doing it tomorrow afternoon rather than tomorrow morning will get you much better information’, I’m very relaxed in regards to that, but hopefully it should be relatively simple. I think Sheryll wants to come in.

518. MRS MURRAY: No, that’s fine.
519. THE CHAIR: I misunderstood. Mr Strachan, any remaining comment?

520. MR STRACHAN QC (Dft): Obviously we have differences of view about the effects of undergrounding and overgrounding. You’ve heard a little bit about that. I’d just point out that for example the effects on oak trees and crossings of Glass Lane are far more serious for undergrounding because you need that 65 metre swathe and that is when you do need to take considerable amounts of vegetation. Hence why we talked about needing additional land for mitigation planting. It has its corresponding problems.

521. THE CHAIR: Sheryl?

522. MRS MURRAY: I do have – surely you can use the same sort of equipment that you would use to go under a river to go under a road and ancient oak trees?

523. MR STRACHAN QC (Dft): You can but then if you do that – we’ve identified where we do make those assumptions – if you do that, you then need the construction compounds on each side for the directional drilling for the cables. So you need larger construction compounds either side of the road. And now we’re into areas not my expertise, but I understand there are problems in drilling through roots of trees which may affect them. That is one of the difficulties –

524. MRS MURRAY: Or you could move it to an area where there aren’t any trees, a bit further down the road. Mr Miller is nodding behind you.

525. MR STRACHAN QC (Dft): You can do that, yes. You then need to take –

526. THE CHAIR: Sorry. I started this by referring to people who were elsewhere. I apologise for doing it the first time but I ask for people not to do it again because we may misunderstand or misinterpret the body language of the people in the audience, however well qualified they are.

527. MR STRACHAN QC (Dft): In principle, yes, of course you can change your route but then you affect someone else’s land with different requirements. So the balance then shifts.

528. MRS MURRAY: Can’t you just put it underneath it? I’ve made my point again.

529. THE CHAIR: Okay. Thank you very much. Does that conclude your comments?
530. MR STRACHAN QC (Dft): No, no, unless I can help you further.

531. THE CHAIR: There's opportunities in generality for the promoter to come back tomorrow but this is your - anything that you feel you haven't covered that you want to cover?

532. MS BROWN: I was just really in relation to the construction traffic regardless of what it is - underground, overground or wherever it goes - is those are all very narrow lanes that they are, all the way from the Newlands through to - there's only one stretch of road, which is a B road, and all the rest are these very minor roads and it is going to create its own hazards. One question I would have liked to have asked was in relation to that, because we don't get our lanes repaired, we have lots of potholes that we all bounce over on a daily basis. They're obviously going to make it much worse, if you've got construction traffic coming down. Is there any proposal or assurances from HS2 in relation to the repairs of those?

533. THE CHAIR: I think, rather than cover those now, I'll ask HS2 to write to you. In AP1, we went through in quite some detail around construction traffic, mitigation against the obvious problems that are very real and what they could do about that. Perhaps if I can ask them, rather than instruct them, to send that guidance with any particular commentary around the roads in relation to this? So something in the generality and something specific - I think there's -

534. MR STRACHAN QC (Dft): I'll add that. I've got also the trees reassurance or the assurance in relation to design on my list.

535. THE CHAIR: Excellent.

536. MR STRACHAN QC (Dft): That will happily be one letter.

537. THE CHAIR: Thank you very much.

538. MS BROWN: Can I just mention one thing?

539. THE CHAIR: Yes, certainly.

540. MS BROWN: You have asked - and I think that it's probably a point you ought to be aware of - is with regards to wayleave, if it's anything like the domestic supply at
the moment. I have no worries about telling you about how much I already receive. I have two wooden pylons on my land. I have a 25-year wayleave agreement with Npower, I think it is. It might be National Grid. They pay us £1,500 for that. They’ve only just done that as what they used to do was knock a few pence off our electric bill every year.

541. THE CHAIR: That’s per year?

542. MS BROWN: Then that is it. I don’t anticipate that National Grid are going to pay much more than that. So I think the wayleave aspect is in –

543. THE CHAIR: We’ll find out a bit more about that tomorrow. And I ask the clerk of the Committee to send you a copy of the transcript tomorrow so you obviously don’t have to get it.

544. MS BROWN: Well now I know you’re live I’m going to be watching you.

545. MR STRACHAN QC (Dfl): Just to avoid – I think £1,500 is probably for the 25 years rather than per year.

546. MS BROWN: No, no, yes, sorry. It is for the 25 years. It isn’t per year.

547. THE CHAIR: Thank you very much. That makes it clearer. I thought you were being a little churlish.

548. MS BROWN: I didn’t want you thinking we were making money.

549. THE CHAIR: On that error, well corrected, thank you very much to counsel. We meet again at 9.30 tomorrow morning.