MINUTES OF ORAL EVIDENCE
taken before the
HIGH SPEED RAIL BILL COMMITTEE
on the
HIGH SPEED RAIL (WEST MIDLANDS – CREWE) BILL

Tuesday 26 March 2019 (Morning)
In Committee Room 5

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

IN ATTENDANCE:
James Strachan QC, Counsel, Department for Transport

WITNESS:
Tim Smart, Chief Engineer, HS2 Ltd

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1. THE CHAIR: Welcome back. We look forward to hearing more about additional provision 2. Mr Strachan.

2. MR STRACHAN QC (DfT): Thank you very much. I’m going to hand straight over to Mr Smart.


Evidence of Mr Smart

4. MR SMART: Well, good morning, Chair, good morning, Committee. So, I’m going to take you through this presentation on some of the things you can expect to see in the additional provision and the supplementary environmental statement. So, I hope the Committee will be encouraged that we’ve been working very hard since we last broke, out on the route, meeting with local communities and stakeholders, a number of line of route events, line of route newsletters, a large number of meetings with parish councils and local landowners, and that has resulted in a further 160 assurances which we’ve given in order to try and accommodate some of the requirements and wishes of those that are affected by this additional provision and the supplementary environmental statement.

5. Most of the changes that are in this AP and SES are to do with requests from yourselves, that you’ve asked us to go away and sort out, and also to petitioners themselves, and then there are a number of more minor changes to do with utilities and highway works that have come out of a more detailed understanding of what we’re doing in discussions with the utility companies and the highway authorities and, of course, probably the most major change to utilities, which I will come on to, is the traction power supply. So, these are the key changes that I want to take you through this morning and, as I say, these are a combination of both things necessary for the AP2 but also for the supplementary environmental statement.

6. So, the first change, I’m going to drive this the right way, is Handsacre Junction. Now, Handsacre Junction, the Committee will recall, is in the Phase One Act and connects HS2 to the West Coast Main Line at Handsacre which is just shown on the schematic. There has been a change in the arrangements for how we make the
connection, and I think we’ll be visiting this on the site visit, where we now connect to the West Coast Main Line on the slow lines rather than fast lines of the railway. This is much less disruptive to the railway. It also happily gives us a better solution in terms of costs and so therefore it is the best thing to do. However, there are some changes to land take which are connected with how we make the connection here and I’ll take you to the next slide and you can see the railway, and this is the area where we’re having some additional land to accommodate, and a slightly longer viaduct which is the Harvey’s Rough viaduct. So, that is the change that you will be hearing about in the petitions.

7. MR WIGGIN: But you’ve moved HS2 from being on the fast tracks to the slow tracks.

8. MR SMART: To where we connect, sir, yes.

9. MR WIGGIN: How do you get it to speed up again or will it go slowly when it does this?

10. MR SMART: I’ll come on to what happens at Crewe but we can then cross over on to the fast lines further up the line but it’s just a better connection for us. But we will be constrained in terms of the speed when we’re on the West Coast Main Line anyway because it is a slower railway.

11. MR MARTIN: Sorry, Mr Smart, for the avoidance of doubt, this is simply for the spur going to Stafford, so these trains would be slowing down in the run up to the Stafford station in any case, would they?

12. MR SMART: They would and these will be the classic compatible trains which, of course, do travel on to the national rail network anyway. It’s not our captive service which will be a bigger train.

13. THE CHAIR: Okay, thanks, carry on. Thank you.

14. MR SMART: So, the next change is to do with the traction power supply. Now the Committee will recall that you heard previously about a connection from Rugeley to our railway at Newlands Lane which is shown here as option 1 and that is in the hybrid Bill. However, after we entered into what was known as the grid connection
arrangements with National Grid – that’s when they look at how much power they have to deal with not just us but all the other users and potential users of power in this area – it became clear that there was not enough power, not resilient enough to provide power in the area for our railway and other users. The grid look at what they call security and quality of supply as part of the transmission licence and they identified that we would need to reinforce the power supply at Rugeley by connecting in a 270 kilovolt electrical supply, which would have to come from one of the options shown here and, actually, when you look at the intricacies of getting these routes through, the only option would be to come from option 2 which is shown here, which is a nearly eight kilometre run and it does go close to the communities of Longdon and Armitage. It has to cross the River Trent. So, in looking at all of that, the better option is connecting to a substation at Parkgate and then come in with a 132 kilovolt supply into the Newlands auto transformer feeder station, which is in the place that it always has been. So, this is a substantial change from the original arrangements, driven by power issues in the area.

15. MR WIGGIN: Just before you leave this slide, where it says King’s Bromley at the bottom, there is a blue 400 kilovolt line which doesn’t have an option on it that takes you to Rugeley.

16. MR SMART: Yes, that was another option; effectively it’s this one here I think, Mr Wiggin, you’re referring to.

17. MR WIGGIN: That’s correct, yes.

18. MR SMART: That’s not labelled here but that was part of one of the routes we did look at and the favoured options were shown on here in terms of the best route through when you look at the ground.

19. MR WIGGIN: But is that an existing supply?

20. MR SMART: Sorry, that’s the existing supply and this is the reinforced supply.

21. MR WIGGIN: But why don’t you run the reinforced supply along with the existing supply?

22. MR SMART: Well there’s issues with earthing, what’s known as electromagnetic conductivity and insulation, so this has to be done in terms of the grid’s requirements so
these are the options, the only feasible options that we could look at.

23. MR WIGGIN: And the last question is: why don’t you run it along the railway line?

24. MR SMART: Again, there are issues with doing that in terms of how we traverse a lot of the route here because we’ve got the Trent as well. So, in terms of coming in on, if you like, what is the most unobstructed route without adding cost, this route here, there was a cost of around about £130 million to put that in so we’ve come in on what we believe to be the best solution in terms of balancing cost, environment and the requirements of the railway.

25. MRS MURRAY: And that’s a new supply.

26. MR SMART: That is a new supply line.

27. MRS MURRAY: Don’t all existing supplies have the adequate earthing wire that goes along – you’ve got the conductors and then you have an earth wire that goes along the top?

28. MR SMART: Yes.

29. MRS MURRAY: So, what are the earthing problems you’re talking about?

30. MR SMART: Well, they just have to be considered because there’s a spatial arrangement which the grid requires. I’m not saying that you can’t engineer a solution but, in terms of the options we’ve looked at, the best solution in terms of getting the balance of effects, power, cost and how we make that connection through was on this, what is shown as option 5 which is a 32 kilovolt rather than bring in a reinforcing 275 kilovolt. So, the problem is to do with, if you like, the resilience at Rugeley which is being changed in terms of its use for the grid.

31. MR WIGGIN: Sorry, can I finish my question because I was interrupted?

32. THE CHAIR: Yes.

33. MR WIGGIN: You have told us that you can’t do option – the one between 2 and 3 because option 2 can’t run on the parallel but then option 4 runs along the existing
circuit so it’s not consistent with what you were saying. I’m sure there’s a reason.

34. MR SMART: Option 4 was not found to be viable.

35. MR WIGGIN: ‘Why?’ is what I was really asking.

36. MR SMART: That is to do with creating the connection. Well, first of all there’s the length of it through the countryside, so that’s a very long length to take.

37. MR WIGGIN: It’s already there.

38. MR SMART: No, that option isn’t.

39. MR WIGGIN: The blue line next to it is already there, isn’t it?

40. MR WHITFIELD: No.

41. MR WIGGIN: That’s option 3.

42. MR SMART: Yes.

43. MR WIGGIN: Okay, I’m happy now, thank you.

44. MR STRACHAN QC (DfT): Just to let the Committee know, there is a report called the Parkgate report which gives further technical detail, which we’ll make sure you have copies of.

45. MR WIGGIN: That was my query, thank you.

46. MR SMART: And I think, no doubt, you will be hearing more about this in the Committee and, as Mr Strachan has said, there are reports that are published on this.

47. THE CHAIR: Sorry, Sandy, did you still want to come in?

48. MR MARTIN: Well, yes, Chair. At the expense of sounding very stupid indeed, I’m going to sort of have a pot shot at the elephant in the room, which is, first of all, can you remind us why option 1 is not viable?

49. MR SMART: Yes. Option 1, so the grid, in order to have the resilience of the supply, you actually need three connections so that, if the grid experienced problems in
distributing power to other customers and users in this area and supply the railway and need to take out a circuit for maintenance, there wouldn’t be sufficient resilience in that section alone, so we would need to reinforce that and, because of the amount of power that is required there, we’d have to reinforce it with either a 400 kilovolt or 275 kilovolt line so that you’ve got three circuits in and that one would be effectively what we’ve shown, if we didn’t come from Parkgate, that would be this option 2 in green that we’ve shown here and that’s almost just short of eight kilometres, that section there.

50. MR MARTIN: Right, right, okay.

51. MR SMART: And then you then have to do what was already in the first part of the – already in the hybrid Bill – which is that section. So, it makes this quite a long section of power.

52. MR MARTIN: So, these options are not mutually exclusive. You’re actually looking for more than one option.

53. MR SMART: We looked at a number of options to work out –

54. MR MARTIN: No, no, no, I’m sorry Mr Smart. Sorry, I misrepresented what I meant. You are expecting us to perm two or three from six here, are you?

55. MR SMART: No, no. What I’m asking is that we believe and the additional provision has this route from Parkgate shown in orange along here.

56. MR MARTIN: Right, so why is that more resilient than option 1? I’m sorry, I really don’t understand where you’re coming from at all on this.

57. MR SMART: So, option 1 only has two circuits effectively and we need to get –

58. MR MARTIN: Two?

59. MR SMART: Two electrical circuits or ways of feeding Rugeley and we need to get another circuit.

60. MR MARTIN: Feeding Rugeley? You’re feeding the railway, you’re not feeding Rugeley.

61. MR SMART: Yes, but Rugeley does provide power to others, not just the railway,
so it needs to be able to switch power between providing users in the area and our railway and, to do that, the grid need to reinforce the amount of power they have at that point.

62. MR WIGGIN: And what were the price differences?

63. MR SMART: Well the price, I’m talking approximate cost, Mr Wiggin, this route through here would be potentially about somewhere in the order of £30 million more than our current scheme which was doing this. But if we were to add this section in, this is about £130 million, that green, and so this is a more cost-effective route. Not only is it – it actually is the much shorter route.

64. MRS MURRAY: Can you remind me why you need the third bit?

65. MR MARTIN: I’m sorry, Chair.

66. THE CHAIR: Sorry. Sheryll, there’s lots and lots of questions and I’ve got lots of questions as well.

67. MR MARTIN: Can I pursue my line of questioning until I understand what’s going on because I really do not understand what’s going on?

68. THE CHAIR: Yes, let’s do it that way and then we’ll come to others.

69. MR MARTIN: Please, in words of one syllable for somebody who is not an electrical engineer, can you explain to me why a connection from Parkgate to Newlands Lane ATFS is going to be more resilient than a connection from Rugeley to Newlands Lane ATFS? Because if you’re not having option 1 and option 5, I can’t see why option 5 is necessarily better than option 1.

70. MR SMART: Simply, there’s not enough power at Rugeley. There’s not enough circuits into Rugeley to provide the power to our railway and allow the grid the options to switch between other users when they need to if they have to take some outages for maintenance. So, there’s not enough power.

71. MR MARTIN: So, there’s more power available at Parkgate than there is at Rugeley.
72. MR SMART: Yes, because we can take three circuits in and I don’t know how the grid distribute across their wider distribution but they do not have the problem at Parkgate which they have at Rugeley.

73. MR MARTIN: Okay, okay, so in which case, was Newlands Lane ATFS originally planned to be at that spot, because there was the assumption that you were going to connect from Rugeley?

74. MR SMART: That’s correct, yes.

75. MR MARTIN: Right, so if you are not going to be connecting from Rugeley, why is Newlands Lane ATFS remaining at that spot? Would it not make more sense to put the ATFS at King’s Bromley so that you didn’t have to run a great long cable from somewhere far away from where there was enough power?

76. MR SMART: So, the nearest auto transformer station that we have is at Burton Green which is about 100 kilometres south and so when you – I’m going to have to get slightly technical here, but when you have different feeder points, you have to have a neutral section between them and, in order to maximise the power, you want to space out auto transformer feeder stations to maximise the power along the route. Also, you have to connect the auto transformer feeder station to the grid supply so there is effectively switchgear, which the grid come to, and then we take what will be three 132 kilovolt cables into the auto transformer station. So, moving the auto transformer station is suboptimal. By reducing the length of feed, you would have to have a neutral section and that would play into, well, where is your next auto transformer feeder station, north of the route, because roughly they are about 100 kilometres so they have to feed in both ways.

77. MR MARTIN: And if you’ve got 100 kilometres between them, I can’t see where three or four kilometres one way or the other is going to make much difference.

78. MR SMART: Well, it would then mean that you would have to take three cables a couple of kilometres to go from where the grid comes to, to the auto transformer feeder station, which means you’ve got more cables somewhere along the route. So, it’s much better, and also you get what’s known as system losses in terms of energy, so it is much better to have the auto transformer feeder station as close as possible to your grid supply.
point from a railway efficiency point of view.

79. MR MARTIN: This is my final question.

80. THE CHAIR: Carry on.

81. MR MARTIN: Did you seriously consider and do any work on the possibility of a feeder station near to King’s Bromley?

82. MR SMART: Well, if we went down to King’s Bromley, we would then have to take probably – well, simply, yes, because we looked at the whole power in the area of how could we get the best power, most resilient power, to the railway by looking at a number of options and, as we went through the sift process, what’s shown on here are the options that were potentially viable. They’ve all got various disadvantages but, in terms of the balance of issues that we are looking at in terms of effects on the environment, power to the railway, cost and efficiency of the railway, if we couldn’t use Rugeley without reinforcing the route along here, this was the best option.

83. THE CHAIR: Can we have a map of slightly larger scale to put this into perspective, because we’re talking around issues that now aren’t on the map? Sorry, not to zoom in, the opposite. We need a new map that’s larger if possible. Does anyone else want to come in? Martin?

84. MR WHITFIELD: Just seeing this King’s Bromley point, given that the existing electrical network crosses HS2 route just to the left of Ashby Sitch, the cost of producing or building a substation dedicated to HS2 and then an ATFS point, is that far, far in excess of all of the economic things that you’ve talked about today? Because it seems to me that you would then have a dedicated access to a hardened electrical supply which would be exclusively for HS2 but sacrifice X kilometres in your hundred each way.

85. MR SMART: We did consider a number of options but then you get too far from Crewe, which is one of the issues we’re looking at. So, I’m trying to understand, Mr Whitfield, on here where you are.

86. MR WHITFIELD: Sorry, if you come down to where the A515, the blue line is the existing electrical network, isn’t it, that you’re coming off – to the north east of
King’s Bromley. Am I right there?

87. MR SMART: Yes, I think the key point here is of course that this is all part of the national electrical transmission system so we are in the hands of what we now colloquially call ‘the grid’. But in terms of where –

88. MR WHITFIELD: Yes, it is.

89. MR SMART: So, it’s not just a question of where there is power, they need to switch in and out and move power around so if, for example, they have an outage or there’s maintenance, they need to understand they’ve got sufficient resilience in their supply to supply us and the other customers.

90. MR WHITFIELD: Yes, sorry, I’m probably asking this in a convoluted – I recognise that about the grid but, actually, it’s the same grid platform that you’re taking the power to enhance Rugeley and give it its protection.

91. MR SMART: Right.

92. MR WHITFIELD: I’m just wondering why it wasn’t considered, or it probably was, but why it wasn’t taken forward, just drawing the power from much closer to HS2’s line where it crosses the grid anyway near Ashby Sitch. I mean, yes, I agree you would have to build a substation; yes, I agree you would have to move the ATFS but whether or not that’s not a simpler provision to save kilometres of additional cable.

93. MR SMART: To put it here?

94. MR WHITFIELD: Yes.

95. MR SMART: But you would still, I think, you would still need to reinforce that and the question is where do you do that from because the circuits go off into what I colloquially call ‘grid land’ so this was examined with National – in fact National Grid do the work for us as part of the connection agreement, so they would have looked at the options of how they can, if you like, balance their supply with our demands and this one was the best option that we’ve come to in working very closely with them. So, there is a report published and no doubt there will be further discussion on this point.

96. MR WHITFIELD: Okay.
97. THE CHAIR: Can I take you back to the money? I think you said the original option was £130 million. Is that correct, give or take?

98. MR SMART: Well, that’s the approximate cost of this sort of line here, yes. In fact, I think it might be more than that.

99. THE CHAIR: Right, and then the option 5 is going to be £30 million cheaper or more expensive.

100. MR SMART: This was going to be about – I’m talking order of costs obviously.

101. THE CHAIR: Yes, absolutely.

102. MR SMART: But this route, I think the original route from Rugeley we had costed at around about £92 million to make that connection and this route is going to cost, I think, in the order of about £30 million more. So, we’re up at £120 million. But this, of course, would have been £92 million plus £130 million, or £160 million I think this line was, so that would have been well over £200 million. Well, as now, we’re in the order of –

103. MR WIGGIN: It’s still a lot of money.

104. THE CHAIR: Yes. And the price for option 5 assumes pylons?

105. MR SMART: It does.

106. THE CHAIR: And what would the additional cost be if the lines were buried or is that even technically possible?

107. MR SMART: It is technically possible, but it adds several tens of millions of pounds, and the policy of the grid is not to underground cables unless you’re in an AONB or a national park. Additionally, the disturbance to the ground is quite a lot because you have to take quite a wide swathe of land and dig it up and then bury the cables so there’s a temporary disturbance to farmland across all of that section and it is more expensive. It’s not grid policy to do that if you’re not in an AONB or –

108. THE CHAIR: We may already have it in papers coming to us. Can we have some of these numbers in absolute – because we’re switching in and out of absolute numbers
and relative numbers and different options – just so that we’ve got them laid out for our consideration?

109. MR SMART: Absolutely. When you – and I’m sure you will be hearing a petition on this – there will be all of that information in the normal way, sir.

110. THE CHAIR: I think what I’m asking for is it separately because there will be some holistic things that I would prefer to deal with early and get a grip on rather than do it through whoever comes along first as a petitioner.

111. MR SMART: Okay, right.

112. MR STRACHAN QC (DfT): We’ll provide, in summary form, the costs of the different options and also an indication of the difference between the cost of undergrounding and overhead lines for what is in the additional provision.

113. THE CHAIR: And presumably we’ll have petitioners that are asking for that so the detail would then be teased out. So, is that why you’re pushing me not to get too engaged now?

114. MR STRACHAN QC (DfT): I know there is a petition or there are petitions seeking the undergrounding of that link and so you will be hearing that. And so, we will be providing you with at least HS2’s costings of that but, if it helps, I can do that in summary form fairly soon.

115. THE CHAIR: I think that would be very helpful. Do we want to move on from electricity? Bill?

116. MR WIGGIN: Can I just ask one last question, which is that everything you’ve just described is what you’re going to do when you build the railway and I would love to know why you can’t run your electricity alongside your railway or above it or under it because you’re doing all the earthworks; you get the electricity where you want it.

117. MR SMART: We do actually run cables along the railway so you’re right, and some of that is to do with express feed, which is where you have to take additional power down the line because there is a paucity of power in this area. I mean this is, I think it’s fair to say, it’s not just us that have a problem in this area; the grid has a
problem generally in terms of the availability of power here.

118. MR WIGGIN: Because it must be cheaper to run it along the railway. You own the land; you don’t have to do anything extra.

119. MR SMART: But we still have to get the power to the railway. So, I take the point if we could move Newlands auto transformer feeder station. That has connotations on the railway, but we’ve still got to get from the place that the grid say they have sufficient power to our railway which would be this: if we move Newlands, we have to somehow then –

120. MR WIGGIN: Well, just leave it where it is but just run wire –

121. THE CHAIR: Is Rugeley closing, the power station?

122. MR SMART: Effectively, yes. I think it is certainly not going to be used in the way – it’s been reduced, I think, is my understanding.

123. MR STRACHAN QC (DfT): The power station, as I understand it, the main power station is closed. There is a substation there and there are proposals for redevelopment, which I think you may have heard about last time around. There were petitions against what was in the hybrid Bill in terms of what you heard last time and so this additional provision does also deal with those petitions, albeit then it introduces different petitions from the other side.

124. THE CHAIR: Right. Forgive me, I don’t really understand what a substation is. Does that generate electricity or is it just a transformer?

125. MR SMART: So, it’s just transformers and switchgear that allow distribution. It’s not the main generation point.

126. THE CHAIR: So, there is no generation now at Rugeley?

127. MR SMART: No, it’s a substation, if you like, so it’s where a lot of the circuits come to and then can be onwardly distributed across the national network or in fact the local network if it’s one of the DNOs.

128. THE CHAIR: Sheryll?
129. MRS MURRAY: So, if I’m correct, the National Grid determine where you source your electricity from, yes?

130. MR SMART: Yes, you have to get what is known as a grid connection licence.

131. MRS MURRAY: And so you have to fit in with the National Grid of cables or transformers and you’re taking feeds off those; that’s why you aren’t able to run it along the railway. Am I correct?

132. MR SMART: Right.

133. MRS MURRAY: Because if you did run a transformer along the railway, then you would have to allow access to National Grid because it would be their infrastructure.

134. MR SMART: Well, from the stepdown transformers which convert it to our side of the railway, it would be us, but I think the point is, Mrs Murray, that you’ve got to get to wherever we have that transformer and that has to go back to the point that the grid says they have sufficient resilience of supply. So, whichever way you cut it, at some point you’ve got to have that core supply back to the grid and even if you run it along the railway, you’ve got to come off the railway and get to that point. So, the question I think is –

135. MRS MURRAY: And if everybody turns their kettles on, this is very simplified, if everybody turns their kettles on and you used option 1, it could have the effect that the power supply to the railway would reduce?

136. MR SMART: Well, I think that’s probably quite an extreme example but, yes, it is that, especially if they have to take out – they do have to do maintenance on transformers so that reduces the power. So, you could find that there is, if you like, a real problem with meeting all their peak demands with our railway there and giving our railway the resilience it needs.

137. MRS MURRAY: Thank you.

138. THE CHAIR: I’m conscious it is a big issue but we’ve taken half an hour. Is the Committee happy to make some progress on the basis we are going to come back to this in detail?
139. MRS MURRAY: Yes.

140. THE CHAIR: Sandy, you’ve got a question first.

141. MR MARTIN: Chair, I would be happy. However, I think an explanatory note, I mean a serious explanatory note, demonstrating why it is impossible to take power directly at King’s Bromley for the railway and why it is impossible to take power via Rugeley substation, would be very helpful. Both of those look like possible options which haven’t been explored and so it would be very useful to see whether or not they have been explored and why they are not possible.

142. THE CHAIR: The Committee saw this as perhaps the biggest issue of AP2 that we’ve not seen before.

143. MR MARTIN: Yes.

144. THE CHAIR: There are other significant issues that are coming back to us so we’re keen to engage in a lot more detail.

145. MR MARTIN: And if we could have that before our visit it would be very helpful.

146. MR SMART: Yes, I completely understand that, sir.

147. THE CHAIR: If we could have that early next week.

148. MR SMART: I mean as Mr Strachan’s already identified, we have a report we’ve issued but we can certainly make a specific note which would probably be slightly easier for you to get to grips with.

149. MR WIGGIN: Can I just ask one more thing? I think we all accept options 2, 3 and 4 are probably of no use but you haven’t given us a huge amount of choice with option 5 and I suspect that in your brilliance you will have looked at 6 and 7 and 8, which we haven’t, which you’ve already ruled out. But if all of these aren’t acceptable, what will you do?

150. MR SMART: Right.

151. MR WIGGINS: Is that a fair thing to –
152. MR SMART: I think if none of these were acceptable we’d have a serious problem.

153. MR WIGGIN: We’re always having serious problems but we somehow, thanks to your brilliance, manage to find a way round them, and I think that piece of the jigsaw puzzle would be useful if it did exist, because then we can price that in and judge accordingly.

154. MR SMART: That’s noted.

155. THE CHAIR: Let’s leave that hanging and come back to it at another juncture. Let’s move to Common Lane. Thank you very much.

156. MR SMART: Right. So, Common Lane, sir. So Common Lane was responding to a petitioner’s request, I believe it to be Staffordshire County Council, that we do not effectively stop up Common Lane but that we actually include it and keep it open and so that is reinstated in the AP and you can see that shown on here.

157. THE CHAIR: Right, I’ve got you.

158. MR SMART: So that is now back in. I’ll now move to the next slide.

159. THE CHAIR: Sorry, as you go through these it would be useful if you could tell us which are controversial, i.e. which we have a lot of petitions against.

160. MR SMART: Yes, if I just go back then.

161. THE CHAIR: Because some of these will be solving problems and others will be solving problems but creating a different set.

162. MR SMART: So, this I believe solves a problem in that Common Lane is now not stopped up and it’s kept open. So, I think in here the issue now for us, and there’s some discussion on this, is how long, what’s the timing and duration of getting that road in before the final permanent position? Because there will be some temporary arrangements where that won’t be there so I think that’s what any petitioner will probably –

163. MR STRACHAN QC (DfT): There are petitions on opening Common Lane
during the construction period and the period for which it has to be closed during the construction. So, you will be hearing some petitions about that particular point as compared with the permanent solution which now addresses what was previously asked for. So, you’ll be focusing on the question of what happens during construction. I hope that helps.

164. MR SMART: Again, if I can move to Moreton House Farm. There’s a couple of things I’ll mention on this slide. First, at the request of the home owner, the property owner of Moreton House Farm, we’ve purchased that farm and now that we’ve done that, we do not need to have a rather expensive retaining wall to try and minimise the effect of the cutting which is what was shown on the hybrid Bill so we will be able to just actually have a more open cutting now because we own that property. Also, adjacent to Moreton House Farm is Moreton House which is actually the site of Mayfield School, a special school, so we’ve been able to deal –

165. MR WIGGIN: Did you buy that as well?

166. MR SMART: Yes, we have and so if I go to the next slide, we’ve now moved what is that part of Mayfield School down to near Blithbury so that the two parts of the school are now co-located. So, we’ve moved them from position A to position B so the school no longer has a split operation.

167. MR WIGGIN: And are they happy about that?

168. MR SMART: I believe they are.

169. MR STRACHAN QC (DfT): Just to be clear, I think when you say we already bought it, I think, I believe that the final process of agreement is still under negotiation but the additional provision takes the land necessary for the relocation of the school. So, I’m hopeful that by the time you get to the petitions that that will be sorted.

170. MR WIGGIN: It would be helpful to know that the school is happy to move, which I suspect it is.

171. MR STRACHAN QC (DfT): I believe they are happy to move, yes. That’s why we’ve pursued it.
172. MR WIGGIN: So why would anyone petition it, if the school’s happy and the sellers are?

173. MR STRACHAN QC (DfT): I don’t know. I’ll need to check whether they have petitioned but I know that –

174. MR WIGGIN: Get them checking and let us know. That would be really helpful.

175. THE CHAIR: Absolutely.

176. MR SMART: Yes, just to reinforce it, what I’m going through here are the changes. I’m not absolutely sure that everything would be petitioned on but I’m just explaining some of the changes.

177. MR WIGGIN: There probably isn’t.

178. MR SMART: So, the next change, the Committee I’m sure will recall Ingestre Golf Club where we disturb the golf course and you required that this was preserved as a community asset, and I’m happy to report that we have managed to acquire some land from a willing seller which is shown in blue here and we were able to retain the clubhouse here. So, we are now able to effectively retain, in the long term, this as a community asset.

179. MR WIGGIN: Are they happy?

180. MR STRACHAN QC (DfT): Can I just inform you on two things? The Priory Group is the relevant petitioner for the school. They did submit a petition because we haven’t finally concluded the legal agreement but I’m hopeful that that will be resolved before you have to deal with it. Ingestre Golf Club have petitioned. They still wish to pursue total relocation as compared with this option which is what we have proposed by way of response to the time that they were last heard but that is an issue between the parties.

181. MR WIGGIN: That’s very helpful, thank you.

182. THE CHAIR: Sandy?

183. MR MARTIN: Yes, I’m not a golf player. However, looking at this, it looks as if
the blue area and the pink area are both part of an existing 18-green golf club.

184. MR STRACHAN QC (DfT): We’ve given an illustrative design for the additional holes in blue so underneath that is actually what’s shown in the environmental statement as an illustrative plan of what can be achieved. In fact, we are continuing discussions with the golf course because they may want to design their own holes but we’ve shown how we can accommodate them.

185. MR MARTIN: So, the holes that are lost are the ones below the yellow line which are not marked at all?

186. MR SMART: Yes, these are the holes that are retained, and this is the provision for the new holes.

187. MR WIGGIN: Just in terms of land mass, is the bit that we can’t see about the same size as the bit that we can? Because this isn’t a terribly helpful slide.

188. MR SMART: You mean this section compared to that section?

189. MR WIGGIN: No, because the pinkie bit is existing. It’s the bit below.

190. MR MARTIN: It’s the bit that’s lost. We haven’t seen the bit that’s lost.

191. MR STRACHAN QC (DfT): I’ll see if I can find out the precise measurements.

192. THE CHAIR: Let’s move on, and we’ll see a wider slide when we come back. Great. Staffordshire Showground.

193. MR SMART: Yes. So, Staffordshire Showground, the issue here was providing replacement car parking for the showground and we have now done that in the area which you can see here in pink. Now, this area here was previously used as replacement parking. This area here wasn’t. So, we are in discussions. We’re also taking some land over here for other reasons and so I think it’s fair to say that there are still some discussions amongst the stakeholder landowners around here as to what the best solution is which could be dealt with outside of the AP.

194. MR WIGGIN: Very sensible.

195. MR SMART: But this is what is contained within the AP and I think it’s fair to
say that there have been some discussions ongoing to resolve it for the best interests of the parties.

196. MR STRACHAN QC (DfT): So, there is a petition, again, from the affected landowner. We are hoping, again, to try and come up with a solution which satisfies everyone.

197. MR WIGGIN: Thank you very much.

198. MR SMART: So, the Committee will recall Yarlet School and we were directed to provide a solution for the school which we have now done. This arrangement, so I think there was discussion about a roundabout, but that was not a favoured solution because, one is there’s quite a lot of disruption in putting in a roundabout; secondly, it is an obstruction to the free flow of traffic on the road when indeed the school entrance is only used at certain times of the day and not in school holidays; and, in fact, the roundabout would have required taking land on the other side of the road. So, we have engineered what we believe is a sensible solution where we’ve preserved the entrance to the school and you can do a left in and you can do a right in so it preserves direction both ways, and I think the highway authority did not find favour with a roundabout solution but I think this serves the same thing.

199. MR STRACHAN QC (DfT): That is the subject of a petition from Yarlet School who are proposing, as I understand it, a different junction arrangement but this is the one that we’ve arrived at in discussion with the highway authority.

200. THE CHAIR: Very good. Jeremy Lefroy, I think, is the Member of Parliament. He had quite strong views when he gave evidence on this issue. It might be worth making him available, either as a witness at that point. He’s not petitioned –

201. MRS MURRAY: He has petitioned.

202. THE CHAIR: Sorry, well, in which case we’re sorted. Thank you very much.

203. MR SMART: Right. The Committee again will recall Tittensor Road roundabout. You asked us to put in a roundabout at this location and we have now included that and so this is now the layout that you will see in the AP2 plan which incorporates the roundabout.
204. Then the Committee will recall the discussions around the tunnelling at Whitmore Heath and by moving the southern portal, as I think you heard during the petition hearings, we have been able to preserve the current alignment of the A53, which means that more extensive roadworks are now not required and therefore the disruption that that would cause to the A53, so this is now covered in the AP2. That is a win-win.

205. Now this is a very, very – it looks like a plate of spaghetti, but I think this does show you the intensity of railway infrastructure around Crewe. So, what I’m going to briefly do is just explain to you what is happening at Crewe just so you’re aware. So, first of all, over here on the left hand side of the slide, the pink area, sorry, I’ve got it there, we need to connect HS2. We used to connect HS2 on different lines as we’re coming into Crewe on the west side and we now need to connect to the central lines so that is some railway work of putting in some turnouts and some switches and crossings totally on the railway which allow that to happen. Then, as we come in to Crewe, the HS2 trains are longer so we need to extend platform 5 so there’s some work within Crewe station to extend platform 5 and also the blue line running from the top to the bottom is the Shrewsbury line which is the Manchester to Cardiff service.

206. Now, because of the HS2 trains that are now in the mix of this intensive railway infrastructure, the Shrewsbury line takes a different route through Crewe station so we need to create a new platform for that service and that happens over here on that side of the station. So, this is really all railway works within this intensive rail infrastructure that is Crewe and then this, as the slide shows you, on the platform 5 extension for HS2, that is where the platform would be extended so it’s a little extension to allow our services in there.

207. MR WHITFIELD: Sorry, can I just ask on the previous slide, the blue dots, is that tunnel up? Over? Under? Through? Cutting across? So, the Shrewsbury line to the right-hand side of the blue dots.

208. MR SMART: It is an existing tunnel.

209. MR WHITFIELD: So, that’s the existing tunnel.

210. MR SMART: Yes, so it’s an existing tunnel and it’s just on existing infrastructure but it just takes a slightly different route through what is Network Rail territory.
211. MR WHITFIELD: Yes.

212. THE CHAIR: Mr Smart, back to you.

213. MR SMART: Yes. So, this slide, we do have some local placement sites for excavated material and this slide is showing the community area 2 which is a college in Yarlet. Now, in accordance with the Government and our own sustainability policy for inert excavated material, in order to, one, not fill up landfill space with what is inert excavated earth, and, two, keep traffic off the roads, we have taken the opportunity to have some local placement sites. So, these are just shown in green along the route here. Now, the idea here is of course some of this will be effectively landscape mitigation, some of it will help with noise mitigation and some of it is basically just doing a local repprofiling of the land which is returned to agricultural state in the way that it normally would do. It might be at a slightly different elevation. As I say, the prime aim is the sustainable use of this material, rather than fill landfill sites and have wagons on the road when you don’t need to. So, it is done sensitively and obviously it’s also where we can do this in a local arrangement. So, you wouldn’t do this where you’ve got to do a lot of haulage but this just highlights the approach we’ve taken in this one location.

214. THE CHAIR: When you say ‘inert material’, are we talking rocks? Soil? Clay? What does inert mean?

215. MR SMART: We have got rock up in this area so we’ve got – well, it’s Mercia mudstone but it’s very weak rock so it’s a very weak sedimentary rock but we’ve also got soil. So, it would be a mix but it would actually be, we do our topsoil stripping and reinstatement in accordance with Defra guidelines so it would be done in a way that the land use would be retained at the end, if it wasn’t purely for landscape reasons or noise mitigation but it was going to be returned for agricultural use.

216. THE CHAIR: And have we got petitions on this?

217. MR STRACHAN QC (DfT): It’s fair to say you do have petitions about the local placement areas that are shown. This is just community area 2. There are other ones in the other community areas and you will undoubtedly have some petitions.

218. THE CHAIR: Excellent, so we don’t need to go into detail now. That’s very
219. MR SMART: Okay. Now, I did mention that we have a number of changes that would be in the supplementary environmental statement. These are to do with understanding in more detail what utility companies want and some of them are highway modifications. Now, I’m just going to talk about one issue that’s shown on – this slide gives you an example of some of those changes. I’m just going to take the Committee through one, which is the one shown here, which is the TBM routes. So, we do need to get power to the tunnel boring machine which will bore at Madeley and Whitmore Heath, which needs power in itself, so we have to connect to what would here be the domestic supplier that distribute from the grid. So, we need to put more power to the railway line. Again, this is symptomatic of the power issues.

220. This shows the route we would take for Whitmore. All of this would be in verge or road and it’s power cables in the ground. So, this takes the power from the railway over to Barlaston and I think the Committee will recall discussions on the tunnel and we would hope that we might not need to do this, but it does depend on the type of tunnel boring machine that we ultimately use and the final detailed power requirements of the railway. So, we have to have this in because, without this, we’d be completely banjaxed if we didn’t have it. We may well need it but we would like to work on the detail to perhaps not have to do it but, as I said, this would all be like utility works in the road and verges, and the same applies for the Madeley TBM where we come actually from a local substation over in Newcastle under Lyme.

221. MR WIGGIN: And when the tunnel boring is finished it just stays there?

222. MR SMART: Well, yes, it would because if we’re going to have to do this, we may as well power some of the ancillary M&E work in the tunnel because it would be a bit of a waste to put all this in and then not use it.

223. MR WIGGIN: M&E is what?

224. MR SMART: I’m sorry, sir?

225. THE CHAIR: M&E.

226. MR SMART: Sorry, mechanical and electrical. So, in the tunnels you have fans,
pumps, lighting, so they all take power and, if we’re going to put this in, we would use this as a power source as well as the temporary use for the tunnel boring machines but the long-term use of the mechanical and electrical live safety equipment that’s in the tunnels.

227. And I think this is my final slide, which is just really to note that we have in the supplementary environmental statement taken the opportunity to lower the King’s Bromley and River Trent viaduct, which is part of the ongoing detailed design or improved schematic design, as we move into details, so we’re looking to lower these viaducts now, understanding more about the engineering solution, in the order of three metres. And sir, and the Committee, that brings me to the end unless, do you want to go back to ask a question on that? That’s the end of my presentation, sir.

228. THE CHAIR: So, is the intention that there is not an AP3, this is the final additional provision but is there anything we need to be cautious about? Clearly, if there’s a need for an additional provision over and above this there is a need and that will have to happen, but is there anything we should do to just be cautious as we go through AP2 that we don’t create a need for an additional provision, an additional additional provision, or at least we do it in a knowing way? Are there any risks?

229. MR STRACHAN QC (DfT): Certainly, there are changes which, if required by the Select Committee would require, in principle, an additional provision and therefore the same process of consultation and then petitions on the additional provision in the event of it having a different effect on someone else. What we can do is if petitioners petitioning against AP2 are proposing changes which from our perspective would require an additional provision if you were to accept them, we can flag that up to you as we go along so that you can be aware that that is something that would require one or not.

230. Certain things, of course, may not require additional provisions. If they are changes which are within land for which we already take, we have powers over, then certain changes can be accommodated potentially without an additional provision. They must sometimes require supplementary environmental statement material if they have a significant effect but what we can try and do is at least flag up to the Committee as we go through any petitions which are heard, where those changes take you into that
territory so that you’re aware of them. Parkgate would be clearly an example that you’ve already discussed. If the AP2 route were unacceptable and one had to find a different route then, clearly, you’re talking about a lot of additional land that is unlikely to be within the scope of the powers but, as I said, is that going to be satisfactory if we flag them up as we go along and that at least alerts you to that possibility?

231. THE CHAIR: Thank you. I mean, not on that subject but let’s move on. Anything else?

232. MR STRACHAN QC (DfT): Can I just say we’re having slight difficulties with connecting to the Wi-Fi? So there was an outstanding piece of information about industry golf course land replacement. Is the Committee content for me to come back to you on that?

233. THE CHAIR: No, we’re happy for you to come back on that when we look at it in substance so there’s no inconvenience to the Committee because of the Wi-Fi.

234. MR STRACHAN QC (DfT): Thank you, that’s very helpful.

235. THE CHAIR: We’ll try to get that sorted. It’s the first day.

236. MR WIGGIN: Lack of power.

237. THE CHAIR: Martin?

238. MR WHITFIELD: I was just going to mention as much for the record anyway, between our last sitting and now, there’s been certain publicity about reducing the cost of HS2 and I just wondered whether any of the proposals that are being considered would materially affect some of the petitions that we’ve already heard, whether there was a change in design materials that might affect those, whether we can have an assurance that that is, or ideally is not, the case.

239. MR SMART: Well, some of the things that we’ve shown in this presentation do increase cost but I think the Committee’s view, for example adding a roundabout, the Committee’s view would be that would be a cost that would be well spent.

240. MR WHITFIELD: I was thinking more on a more global scale of the actual running costs.

242. MR WHITFIELD: I know there’s been discussion about ballast and slab under the rails, just to receive an assurance that previous views and opinions that we’ve expressed on petitions will not have materially changed because of those considerations.

243. MR SMART: No.

244. THE CHAIR: So, the changes don’t affect the acoustics?

245. MR SMART: In terms of the changes that the Committee have asked for? No.

246. THE CHAIR: No, that’s not what we’re referring to. Martin, do you want to say?

247. MR WHITFIELD: There was a discussion of replacing the concrete base underneath the rail line with ballast, and I know from press reports and other things that some people have said that that’s going to be a material difference to the running of the line and it’s just to receive reassurances that that’s not the case or, indeed, may in fact reduce things like noise, vibration –

248. MR SMART: It would reduce them. That would have a beneficial impact on noise. It brings in other demands of how you maintain the railway and the whole-life costs of the railway but in terms of how that’s dealt with, I don’t think anything the Committee has done –

249. THE CHAIR: Can we just have a note on that in terms of the technical side? It was a concern that things had changed and we didn’t know the impact so it would be good to just have a note so that we can put that one to bed. Sheryll?

250. MRS MURRAY: On that same subject, I think if I remember rightly there was something about speed as well.

251. MR SMART: Yes, well in terms of ballast or slab, speed is really not an issue. So, what drives the choice of ballast or slab is actually the tonnage that one was to run over the particular track form and ballast does struggle with heavier tonnage because you have to do what’s known as tamping to restore the level and every time you tamp, you tend to degrade the ballast itself because you get dust and particles which means that you then have to start cleaning the ballast or replacing the ballast and that all then
plays into the whole life cost and indeed maintenance time on the railway. So, there’s no doubt that slab is better for overall maintenance because it doesn’t need that type of attention. There’s also a dynamic that says if Phase One of the railway has slab and you’re adding on some other track form, you have to think about that’s a different form of maintenance so you would need other plant to maintain it. So, there are a number of issues that come into play when looking at the track form for a particular railway but the prime reason is tonnage. Speed does have an effect in terms of you can get the ballast, what is known as ballast movement with speed. It does depend on the characteristics of the rolling stock and it’s not really a major driver in terms of where you decide to go between ballast and slab. That is really all about tonnage that’s travelling over a section of the railway and the amount of maintenance you would need to do on ballast to keep the track geometry at the right point.

252. MRS MURRAY: Thank you.

253. MR STRACHAN QC (DfT): I understood the Committee’s request for a note to answer the general point that if there are changes under discussion, whether or not they were to affect the Committee’s consideration of petitions. Sir, we will come back to you with a note on that.

254. MR WHITFIELD: Thank you.

255. THE CHAIR: Thank you. Any further questions from the Committee? Mr Smart, Mr Strachan, anything further to say before I close the meeting?

256. MR STRACHAN QC (DfT): Just to confirm we’ll provide a form of report or summary of the Parkgate proposals and potential costs and to do that before you go out on your site visit because I understand you would like to have that before you see it.

257. THE CHAIR: Yes, if we can have it early next week, that would be very convenient for the Committee. Thank you very much.