MINUTES OF ORAL EVIDENCE

taken before the

HIGH SPEED RAIL BILL COMMITTEE

on the

HIGH SPEED RAIL (WEST MIDLANDS – CREWE) BILL

Wednesday 25 April 2018 (Afternoon)

In Committee Room 5

PRESENT:

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

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IN ATTENDANCE:

Timothy Mould QC, Lead Counsel, Department for Transport
Timothy Corner, Counsel, Stone Town Council and Chebsey Parish Council

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WITNESSES:

Gordon Wilkinson and Trevor Parkin (Stone and Chebsey Councils)
Tim Smart, Chief Engineer, HS2 Ltd

IN PUBLIC SESSION

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(At 2.00 p.m.)

Stone Town Council and Chebsey Parish Council

Evidence of Mr Wilkinson

1. THE CHAIR: Mr Corner, I think we're in your hands again.

2. MR CORNER: Sir, thank you very much indeed. We're back, if we may, to Mr Wilkinson, and I just asked him some questions about the geometry of the Yarnfield Lane A34 junction.

3. THE CHAIR: Sorry did you say geometry or geology?

4. MR CORNER: I hoped I said geometry.

5. THE CHAIR: I just didn't hear.

6. MR CORNER: My fault. I hope I can generally be heard when – otherwise I'll keep my voice up.

7. THE CHAIR: Yes.

8. MR CORNER: I do realise the acoustics aren't ideal, so I'm sorry about that. I want not to turn to junction analysis please in relation to the Yarnfield Lane A34 junction, Mr Wilkinson, and in your evidence, you criticise the junction analysis to begin with, in terms of the assessment of the baseline traffic, in other words the traffic before the addition of HS2's traffic; is that right?

9. MR WILKINSON: Yes, yes, it is.

10. MR CORNER: So tell us what your point is.

11. MR WILKINSON: I don't know if Committee are aware that HS2's analysis was in three scenarios, a 2016 status quo, 2023 with growth and committed development, and 2023 plus HS2 traffic. There are three scenarios, that's the analysis. The baseline 2016 carried out by HS2, looking at the computer printout, I was very critical of that assessment, as was the Staffordshire County Council.

12. They showed very low flows for 2016 which didn't really relate to what I know happens at the end of my lane. To that end, I don't have privy information as to how they've analysed that within the computer but I took a spot count two days in a row to have a look at what I thought was coming out of Yarnfield Lane. I notice in the committed development, they hadn't allowed for the 250 houses which are now completed and are coming out of Yarnfield Lane, so I though the flows would be low. My observations showed 30-40% difference and the Staffordshire County Council raised issue with the base count which they thought was taken while there was road works on the A34 for roundabout construction further along, which reduced it to one lane. So they were concerned and they asked for a new survey; I haven't had the results of that.

13. But certainly, it looked like there was definitely issues with that data. The County Council also, in discussions with their officers, identified that they'd used optimistic geometry; they'd assumed that three cars could align side by side, in other words, six vehicles could be stood at the stop line at any one time, which will assist egress from the Yarnfield Lane, and turned out to be wrong, it's only one vehicle. So a max of two vehicles could sit at the stop line. So they gave very optimistic analysis, to say the least.

14. MR CORNER: Are we going a little fast? I don't know. I'm aware of the time.

15. THE CHAIR: No, no. I was just frowning slightly because I'd got the points on Yarnfield Lane and I was unclear whether you were repeating yourself or about to come to a different point. That's why I was looking perplexed. Is it a different point or is it repetition? Either is fine; I'm not being desperately oppressive about shutting you down.

16. MR CORNER: I don't think it's repetition, with respect, because we started off talking about the geometry of the junction and we now come onto the assessment of base line traffic which the witness is dealing with at the moment, and then I'm going to ask him about the traffic estimated by HS2, so that's the direction of travel if you like.

17. THE CHAIR: Okay.

18. MR CORNER: I was just wondering, perhaps wrongly, if Mr Wilkinson was going a little fast.

19. THE CHAIR: No, no, you can speed up.

20. MR CORNER: That's fine; that's fine.

21. MR WILKINSON: Despite the fact that we think it shouldn't be a priority junction, they've modelled it as a priority junction and said everything's fine. The County Council disputes that and I dispute it anyway, even if it was to be priority junction.

22. MR CORNER: So, baseline traffic, you think they've got wrong?

23. MR WILKINSON: Yes, they showed the 2023 with HS2 traffic as 87 PCUs – that's passenger car units. In actual fact – shall I explain passenger car units?

24. THE CHAIR: No, no, you've explained the acronym.

25. MR WILKINSON: There were 87 vehicles, but not 87 PCUs, so that's 22 HGVs. It should have been 109 PCUs, so they're 25% under, so they are underestimating the impact on that junction.

26. MR CORNER: So you criticise their assessment of the base line traffic, and you also have just criticised their assessment of the traffic that HS2 will add?

27. MR WILKINSON: In 2023, yes.

28. MR CORNER: Okay. Anything else to say about this junction?

29. MR WILKINSON: Yes. Now we're coming onto junction analysis. All the way through the HS2 transport assessment, they've analysed individual junctions with no reference to upstream or downstream junctions. This isn't what I call a traffic impact assessment where there is impact and you look at it, this has just been, for want of better words, a desktop exercise looking at individual junctions without any reference to the implications of other junctions may have on it, and particularly for Yarnfield Lane, you'll see at the next junction why I'm concerned they haven't done this.

30. MR CORNER: So what are the, as it were, the cumulative impacts that you're concerned about? In other words, if you get overcapacity at one junction, what are you saying is the effect elsewhere that they haven't looked at?

31. MR WILKINSON: If you, as we'll see at Walton island, if you suddenly reach a 200 car queue, you're not going to sit in that very long before you think, 'Tomorrow, I'm not going to do that'. You're going to go elsewhere. It's called rat run in to find a better route. And that has a phenomenal impact and there's no reference to that at all in the HS2's assessment.

32. MR CORNER: So, the conclusion on this first junction, the Yarnfield Lane A34 junction, are you content that that junction is going to work satisfactorily with HS2's traffic?

33. MR WILKINSON: No, it certainly won't. The queuing lengths on the A34 will turn right in, observations show that at times there are nine vehicles already queuing here in the evening morning peaks, certainly in the evening peak. There's a queue of nine vehicles there without HS2 now. That realises that there's three or four cars sitting in the outside lane about to get rear ended, so it's not a safe junction now and it wouldn't be with HS2 traffic.

34. MR CORNER: All right, okay, thank you.

35. THE CHAIR: Just one question on that, so clearly, your assertion throughout this is there are problems here and HS2, in your view, have not done the right background work?

36. MR WILKINSON: No.

37. THE CHAIR: We're looking at Stone and this particular lane at the moment, but is this an exceptional error, and traffic management by HS2, in your opinion, has been good elsewhere?

38. MR WILKINSON: Yes it is, because –

39. THE CHAIR: Or whether they've been – I'm trying to avoid the words equally sloppy, because it's pre-determining something that might not be fact – but is this the same type of quality of traffic survey…?

40. MR WILKINSON: Yes. If you're doing a traffic transport analysis, you take a count, and you also take queue counts, and then you put it in the computer in basic terms

and you see what you get out at the status quo. If the queue lengths on the ground aren't what is predicted in the actual computer, you then have to recalibrate and go back, something's wrong here, 'I've either got the wrong flow data, I've got the wrong geometry, something is wrong'.

41. Once you've got it calibrated, you can then move forward to assessing future years with some form of reliability and they've not done that at all, in my opinion, there are no queue surveys that resemble anything that's on the ground.

42. THE CHAIR: And do you use the same methodology for the long term position, i.e. post construction as the process for analysing just for that shorter period, even though it might be several years, of construction is it the same level of traffic, so the same methodology, or different methodologies?

43. MR WILKINSON: It would be the same methodology, if it was a planning application, you would be looking for some hence years growth. This is clearly focusing on this junction for four to five years, whilst this construction's around; I can only comment on the figures in front of me. The analysis is only for the three scenarios. I have no details of –

44. THE CHAIR: We're now going to look at other junctions as well so I can pick up some themes as well.

45. MR CORNER: Yes.

46. THE CHAIR: We may or may not generalise to be on the area that we're currently considering.

47. MR WILKINSON: Sure. Sure, sure.

48. THE CHAIR: That's helpful.

49. MR CORNER: Certainly. So that's all on the Yarnfield Lane A34 junction. Can we go to Walton island, please? And I think we can look at a slide to show us where it is.

50. MR WILKINSON: Not just yet.

51. MR CORNER: Pardon?

52. MR WILKINSON: Not just yet.

53. MR CORNER: We can't. All right. Sorry. I'll shut up.

54. THE CHAIR: What was a better question have asked?

55. MR WILKINSON: Well no, it's just I know the way the slides go, really. But the A34 Walton island, as I showed quite early on, it's about halfway along, the A34. It's a key junction. It's the A34/A520. The A520 serves the blue area of Stowe that we saw on the first plans we had and it also takes you up towards Leek. The Eccleshall Road off the roundabout, there's direct access to the construction sites around Yarlet. It's the main access to Walton residential area and the main access via Pirehill Lane to the priory – Walton Priory Middle School. Very busy junction. The county council have already said this junction is at capacity with not a lot of mitigation available. Again, I looked at the 2016 flows. They showed queues that are probably about half what is experienced.

56. MR CORNER: Which junction are we talking about now?

57. MR WILKINSON: Walton – sorry, the Walton island.

58. MR CORNER: So we've come to Walton island.

59. MR WILKINSON: Yes, we have, yes.

60. MR WIGGIN: Right, okay. Right, good.

61. MR WILKINSON: So, I'll get to the slide in a minute.

62. MR WIGGIN: Okay.

63. THE CHAIR: Yes, it helps if we move on in slides.

64. MR WILKINSON: Yes, yes. Yes.

65. THE CHAIR: I think Mr Corner was right in retrospect.

66. MR WILKINSON: Like I say, I have no way of looking at how they've actually

analysed the data, but the queue lines are certainly way below what we've got at the moment.

67. MR CORNER: Are we talking – so this – I want to start – Walton island – we've got the slides. Which slides are we looking at?

68. MR WILKINSON: I'm about to show you a slide of a count, which makes – yes.

69. MR CORNER: All right. Slide 6, I think.

70. MR WILKINSON: Yes. We'll go to that.

71. MR CORNER: Slide 6. We start with baseline traffic.

72. MR WILKINSON: Yes. So the 2016 –

73. MR CORNER: Baseline traffic.

74. MR WILKINSON: – flows seem very low and the recent plan application for Land Rover – Jaguar Land Rover just down the road at 851 junction submitted a count to do with something slightly different in 2070 which showed a 2010 count at this junction which showed it to be way above the 2016 flows. You can't see very easily there, but on the south-bound A34 approach, that cumulative flow there is about 1,373 and the 2016 that HS2 uses, about 1,234. And to put it in context, the 2010 figures used by the consultant then equates to the 2023 figures that they're predicting for this junction. So, way below what is expected there, which would correlate to why they were getting figures that are showing at present the junction is just about in capacity when it's clearly over capacity.

75. MR CORNER: Right.

76. MR WILKINSON: Okay?

77. MR CORNER: So that's the baseline.

78. MR WILKINSON: Yes.

79. MR CORNER: Can we move then –

80. MR WILKINSON: We can.

81. MR CORNER: We're still with the Walton junction. And can we move then to the predicted situation with HS2 Stratford?

82. MR WILKINSON: Yes. Okay.

83. MR CORNER: I think that takes us to slides 7 and 8.

84. MR WILKINSON: So this shows the blue, green and red for the three different scenarios. They predict a 24-car queue in 2060 – sorry, 24-PCU queue in 2060. That would be about half what is actually expected now. Now these are mean max queues. They are not the maximum queue. They are a queue that could be, the quote the OSCADY programs that these are worked off, computer program – it could be up to twice that amount. But it's an average mean max queue. So it's 204 vehicles. It's currently 24. That's about nine times more than it is now. If that was the case, these queues would be certainly back towards Yarnfield Lane and that's when I was sort of talking about the inference.

85. THE CHAIR: Sandy's got a question.

86. MR MARTIN: Sorry.

87. MR WILKINSON: Yes.

88. MR MARTIN: Are these your estimates rather than HS2's?

89. MR WILKINSON: No, no. These are HS2's estimates.

90. MR MARTIN: These are HS2's estimates.

91. MR WILKINSON: Yes, absolutely. Everything here is HS2's – for their three scenarios that you see.

92. MR CORNER: I think what we're looking at now, if I can just help in relation to that question, Mr Wilkinson, is we're looking at HS2's predictive situation –

93. MR WILKINSON: Yes.

94. MR CORNER: – but with HS2's – on the basis of HS2's baseline traffic assessment, which you have said is wrong.

95. MR WILKINSON: Yes. Yes, that's right.

96. THE CHAIR: I think Sheryll's got a question. I may have one after her.

97. MR WILKINSON: Oh, yes. Sure.

98. MRS MURRAY: Just very quickly, would improvements to that island make a difference? I'm thinking perhaps in terms of –

99. MR WILKINSON: Yes.

100. MRS MURRAY: – traffic lights –

101. MR WILKINSON: No –

102. MRS MURRAY: – or something like that.

103. MR WILKINSON: Traffic signals could spread the delay only maybe a little bit more succinctly. The county council have already said that they can't improve that juncture, that there's no mitigation they think will work with the balance of flows. If you were to offset some of the delays elsewhere, you may be able to reduce it, but the county council fear that there's no mitigation that will work there. So the point I'm trying to make from previously is that if you now have a queue of this sort of magnitude, it would be starting – could be anything back here, people either start to run through Yarnfield Lane, which isn't advised for that junction now or Trent Road to go through the town centre of Newcastle Street into the gyratory of Stowe to try and reach the A30, the A51 or whatever.

104. THE CHAIR: So how long – so 24 cars, 139,204. I'm struggling to understand what that means driving along that road. How long would you be waiting in the queue?

105. MR WILKINSON: I haven't got the delays. I haven't got the computer delays. I would say if you're in a 204-car queue with a move-up rate – very difficult to say, really. I would say that would be a good 30-minute queue.

106. THE CHAIR: Because I'd give it a best guess – really?

107. MR WILKINSON: It could be. Yes.

108. THE CHAIR: Right. I was going to take that as an extreme position that was obviously not right.

109. MR WILKINSON: But just a guesstimate, because I do know that people sit there.

110. THE CHAIR: But certainly more than 15 minutes.

111. MR WILKINSON: I would think so, yes. Yes.

112. THE CHAIR: Okay.

113. MR WILKINSON: It's a queue that would certainly make me think about rat running. Is that a better description?

114. THE CHAIR: Yes. I think descriptions in time taken might be more helpful to the Committee just going forward. It's not a criticism. Just in terms of getting our heads around what it means.

115. MR WILKINSON: The computer programme can show the vehicle delay. Delay per vehicle and certainly the overall delay per hour going through that junction per hour. I'm not privy to that information.

116. MR CORNER: All right.

117. MR WILKINSON: Yes.

118. MR CORNER: So – thank you. So that's the morning peak. That was slide 7 and I think if we look at the PM peak, that's slide 8, isn't it?

119. MR WILKINSON: Yes. Okay. Now, again – we'll stick with this slide for quite a while. Again, the flows there seem to be quite low on the A34. This – in the Staffordshire area, like a lot of places, there aren't any rise and falls in the preceding hour. It's what we call flatline. It's just continually demand for that junction. And a queue of about 85 is probably two-thirds of what would be expected there on any given day from about quarter past 4 onwards. But the interesting thing here is – that I want to really talk about is the 109-car queue on the Pirehill Lane because, as I mentioned a bit

earlier –

120. MR CORNER: Is that actually on Pirehill Lane?

121. MR WILKINSON: Sorry, on Eccleshall Road.

122. MR CORNER: Pirehill Lane comes up into Eccleshall Road.

123. MR WILKINSON: Yes. These are both – Eccleshall Road and Pirehill Road are both construction routes and this is a priority junction and we have 109-car queue. Again, the 109-car queue would start to promote rat running that would either be via Yarnfield Lane or even further afield going north through Swynnerton to try and get to the A34, depending on their destinations. But certainly, that sort of queue would trigger definite rat running, which would have an implication on the other local part of the network.

124. MR CORNER: And that again is on the basis of what you're saying is an underestimate of baseline –

125. MR WILKINSON: Yes.

126. MR CORNER: – flows.

127. MR WILKINSON: It is, yes. Definitely.

128. MR CORNER: So you would say the queues would be larger.

129. MR WILKINSON: Yes.

130. MR CORNER: All right.

131. MR WILKINSON: So if we move on to Pirehill Lane junction with Eccleshall Road –

132. MR CORNER: Yes. There's no different slide for that because we can see it on this slide.

133. MR WILKINSON: Yes.

134. MR CORNER: So what do you want to say about that?

135. MR WILKINSON: The issue here is that in HS2's analysis of this junction, in the morning peak they estimate that the vehicle queue will go from seven on the side road to about 20, which is okay. It's still quite a delay. But in the evening, they imply there's a two-car queue in Pirehill Lane. No problem whatsoever, analysed in isolation. But if somebody had actually looked up the road and seen this 109-car queue, they would realise you're not getting out of Pirehill Lane. And this is the point I'm making. There's been no correlation between an upside and downstream junction in this analysis. It isn't an impact analysis whatsoever. It's just 20 junctions in CA3 area and look at them in total isolation without joining up the congestion problems. And you've got a serious problem.

136. So you've misled the people of Pirehill Lane. It's a residential road. It's got 240 construction vehicles a day going up and down it. A lot of vulnerable road users. This doesn't look like – that they've been painted the correct picture.

137. MR CORNER: All right. So – thank you. That's all on that junction, I think. We move on to the next junction. And the next junction that we have is the A34/A51 Stone bypass and Brooms Road junction.

138. MR WILKINSON: Yes, yes. We move down to that.

139. MR CORNER: We move down to that and I think, sir, we're looking at slide 9.

140. MR WILKINSON: Yes.

141. MR CORNER: So, beginning, have the – again, my usual question: have the baseline flows been accurately assessed?

142. MR WILKINSON: Well, no. When I referred to the traffic assessment done for the plan application in Brooms – the Brooms Business Park for Jaguar Land Rover, they refer to this count. And again, the flows that have been used by HS2 for 2023 equate to what was happening there at the other end of this junction, this count here in 2010. So –

143. MR CORNER: It might be obvious, but what does that mean? If BWB are finding flows in 2010 that HS2 are saying will be the baseline flows in 2023, what's your conclusion?

144. MR WILKINSON: Well they've – whatever flow data they've used, it's not representative of what's there now. The actual junction itself has been a problem for many years, even when I was working with the county council. We actually provided three lanes out of the business park to try and alleviate the crew – the queues in the PM peak, which they show I think a three-car queue, which is not representative at all. The county council yet again have said to, 'Go away and revise your capacity calculations. You're not showing what is there on the ground at all.' But notwithstanding that they show in the AM peak, which is the major queue that's created on the A51, it goes from eight to 116, it actually at least doubles what they think's going to be happening in 2023, without HS2 traffic. And again, you don't – it doesn't take much to realise that the Lichfield Road here that takes you into Stowe town centre is going to be primed for rat running into the town centre, morning peak, vulnerable road user conflict. Doesn't look good at all.

145. MR CORNER: Yes, I was going to ask you: does it matter if there's rat running into the town centre?

146. MR WILKINSON: It does, particularly in the morning peak.

147. MR CORNER: Why?

148. MR WILKINSON: Well, a) that is quite congested anyway. It's not analysed by HS2 at all. A lot of things going on, lots of schools in that area, a lot of traffic trying to get into and out of – or towards the A34. That would be quite congested, particularly if it's trying to compete with stuff that's coming from the north, from Walton island or beyond the Yarnfield Lane further up the A34 trying to get through this log jam.

149. MR CORNER: Okay. Good. Thank you very much. Now, that I think concludes what you want to say about these junctions that I mentioned in opening. Is that right?

150. MR WILKINSON: Yes.

151. MR MARTIN: Can I ask a question about the junctions generically?

152. MR WILKINSON: Yes, sure.

153. MR MARTIN: But this one is a good example. You've got 53 peak for 2023 without HS2 being built.

154. MR WILKINSON: Yes.

155. MR MARTIN: And on the previous one you had a 67 peak queue which would take you back behind Pirehill Lane without HS2 being built.

156. MR WILKINSON: Yes.

157. MR MARTIN: And on the previous one, you had 139 queue on the A34 and that's in 2023 without HS2 being built.

158. MR WILKINSON: I'm not – yes.

159. MR MARTIN: So that if somebody was proceeding down the A34 in a car, it would take you probably over an hour to get through these three junctions if these predictions for 2023 go ahead, even if HS2 is not going to be built. So, what I'm trying to get to is that it seems to me that the predictions for the creation of additional traffic between now, which is actually fairly modest at the moment – eight is a very modest sum –

160. MR WILKINSON: Yes.

161. MR MARTIN: – and 2023 seem to be predicated on the idea that the number of vehicles is going to expand between now and 2023 to such an extent that if it were to do so, everybody who drove would spend most of their lives sat in a car behind the wheel going nowhere.

162. MR WILKINSON: I think the point you've got to realise is that all these junctions are almost at capacity now.

163. MR MARTIN: But my point, sir, is that this is a prediction based on people continuing to do things in a way that they have done up until now and traffic continuing to expand in a way that it has done up until now without any adjustment for rational, logical choice as a result of the consequences of their actions. If a prediction had been made, for instance, for London traffic, based on the increase in London traffic between 1920 and 1950, then nobody in London would do anything other than sitting behind a

steering wheel. But people haven't done that because clearly, nobody wants to live a life which involves spending their entire lives sat behind a steering wheel. So, I mean, I can't see how actually any of these predictions are going to come true anyway because if – even if HS2 is not built, the increase in queuing at every junction in your part of the world is going to be so severe that nobody's going to drive anywhere.

164. MR WILKINSON: Well there's two issues. One is the 2023 is 1% per year increase. Now going back to Walton island, they haven't allowed for the fact that 500 houses are being built on Eccleshall Road within about 500 metres of that junction. That hasn't been plugged in. So there's at least 500 trips. It's going to happen.

165. MR MARTIN: Indeed. But I mean, your contention is that none of the – HS2's planning does not make allowances for the queuing that is going to have to take place on the roads. And the point I'm making is that nobody seems to have made allowances for the queuing that's going to have to take place on your roads, whether HS2 is built or not. The problem here is not HS2. The problem is the behaviour of the British public and the lack of good roads.

166. MR WILKINSON: I take your point, but the point here is that HS2's traffic represents 100% increase in the queue that will be there in 2023 for a small amount of – well, the traffic input – unfortunately, capacity goes linear to a point and then it goes exponentially vertically. And the point is that their queues with their traffic compounds a problem that is, I would say, tolerable, but now will become totally intolerable.

167. THE CHAIR: Sheryll's got a question, I think.

168. MRS MURRAY: Yes, I do. You've mentioned that this road was the responsibility of the local highway authority.

169. MR WILKINSON: Yes.

170. MRS MURRAY: And you mentioned 500 more houses. Is that a planning consent?

171. MR WILKINSON: Yes. They're actually constructing it as we speak.

172. MRS MURRAY: Okay. So, when that planning consent was awarded there must

have been – it must have been acceptable that that extra traffic – the impact on this junction was acceptable. I'm just going to focus, as Mr Martin did, on the increase in traffic. The local highway authority must have accepted that these junctions were able to cope with that excess pressure or they would have plans in their local highway plan to make adjustments, because councils formulate plans in order to mitigate in the future. Correct me if I'm wrong, because obviously you worked for the county council.

173. MR WILKINSON: Yes.

174. MRS MURRAY: So, correct me if I'm wrong, but if these weren't acceptable, this increase in traffic, regardless of the HS2, then it must have been in the local authority's local transport plan.

175. MR WILKINSON: Do you want to go back a slide, please?

176. MR CORNER: You might want to go back a slide.

177. MR WILKINSON: Yes, please, because that's where this –

178. MR CORNER: Can we go back then? I think that's slide 7 and 8.

179. MR WILKINSON: Yes, the Walton Hill development will be here, right alongside the new proposed marshalling/shunting yards for HS2. It'll be a good selling point. But it had been built in there as we speak. The county council, as I am aware, took a £200,000 contribution off the developer with the idea they were going to try and flair that approach. If you can see the radius there I'm talking about, trying to get I think another lane at the stop line.

180. MRS MURRAY: Okay.

181. MR WILKINSON: Unfortunately –

182. MRS MURRAY: So there are already improvements –

183. MR WILKINSON: Well, just – if I could just carry on.

184. MRS MURRAY: Okay.

185. MR WILKINSON: Unfortunately, they forgot to realise that you can't actually do

that radius improvement because it's over a subway. So, nothing's going to happen there and that is why they've taken a stance of no mitigation cane be done and they took the money and departed.

186. MR CORNER: So the planning permission's been granted, is that right, but the mitigation that was in prospect, they thought, isn't going to happen? Is that right?

187. MRS MURRAY: But that wouldn't be the responsibility or wouldn't be down to HS2. That's down to the local authority's planning process.

188. MR WILKINSON: Absolutely.

189. MRS MURRAY: Yes.

190. MR WILKINSON: I must agree to that.

191. MRS MURRAY: Thank you.

192. MR WILKINSON: But I still make the point that the figures – HS2 still manages to double the queue on all of those approaches, more or less.

193. MR CORNER: Right. Right. Thank you very much. Can we move on, unless there are further questions?

194. MR WILKINSON: Yes.

195. MR CORNER: Okay. So, my next heading, but you've already dealt with some of this, is access and safety issues regarding servicing the railhead compound.

196. MR WILKINSON: Yes.

197. MR CORNER: I was going to ask you about the width of Yarnfield Lane as now and as widened and about the overbridge. You've dealt with that, I think. But I haven't asked you and I want you to deal with, please, because you deal with this in your evidence, the safety issues that you say will arise in relation to the access to the site from Yarnfield Lane.

198. MR WILKINSON: Yes, well there's various things. The – as I mentioned earlier, the widening of Yarnfield Lane will have to be at least 6.75.

199. THE CHAIR: I think we're repeating ourselves. We went through some accident numbers as well as width. So could you be more specific in your question to draw out the precise extra information that you're wanting to solicit as opposed to repeating?

200. MR CORNER: I can try. I'm asking you to deal –

201. THE CHAIR: But we went through all the detail. We did all the width.

202. MR CORNER: I know.

203. THE CHAIR: We went through the accidents, which were quite compelling evidence.

204. MR WILKINSON: Yes, that's fine. That's not the point. Yes, that's not the point.

205. THE CHAIR: And we've no need to repeat it again. So if there's something more, more forensic in your questioning, please.

206. MR WILKINSON: It's all about access and safety. The access – quickly, very quickly: to widen the road to six metres or 6.5 along the whole length would require shuttle working, there'd be delays quite a lot, so HGV access until the motorway slips will be compounded. That's what I'll say about that. When we move on to the actual vehicle access –

207. MR CORNER: That's what I wanted to ask him.

208. MR WILKINSON: Yes. Can we move to another slide?

209. MR CORNER: Are we looking at slide 12?

210. MR WILKINSON: Yes, slide 12. It may be worth just showing – I think it was 43.1 again. Just to –

211. MR WIGGIN: Right. 43.1, could we have a look at. Thank you.

212. MR WILKINSON: Yes. Just so we get a better idea. As I mentioned earlier, when this is – now, when the actual IMB-R is operational, we come along with the new realigned Yarnfield Lane, over the new bridge and then immediately we come off the

bridge, we go down a ramp into a underpass or tunnel. But about halfway down or just less than halfway down the ramp, we now have the main access egress, the motorway and into the compound of the actual railhead. Yes?

213. MR WIGGIN: Yes.

214. MR WILKINSON: There's really grave concerns. I can't think of a worse spot to put a junction for a railhead. You're going to be coming over and then looking down and that's sort of compounded by the fact that I requested a document on the departures from standard of HS2, which were received late on Thursday evening, bit late for my evidence, which shows about 60 departures from standard, and at this particular point, they're showing a substandard visibility splay to the left. I've got the document here. And certainly, I would think the safe stopping distance coming over the brow and dropping down and suddenly being met by a vehicle trying to come out of there would be not favourably looked at in a safety audit. I can't say fail a safety audit, because you don't fail them. People make recommendations.

215. More worryingly, if you're coming from the other direction, coming from the east, you go under an underpass into the open again then under again – don't know when the tunnel becomes an underpass – and soon as you hit that ramp there, you could have a stationery vehicle waiting to turn right into that junction, and that's the last thing you want at 50 to 60 mile an hour. I think it will fail. A lot of departures from standard. It just seems the wrong place at all. In addition to which, we have no details to how wide the road is going to be, but HS2 state that with this alignment, they better equal or better the geometry. Well I think if you're a pedestrian that's got to walk under there or even a cyclist, you'd be quite concerned because if there's no footways, full visibility's limited, I'd be very worried. I would think – sorry.

216. MR CORNER: So in your view, then, dealing with the specific point of the access to the site from Yarnfield Lane, acceptably safe or not? -

217. MR WILKINSON: I would say no and it couldn't be in a worse position.

218. MR CORNER: Right. Should we look at slide 13 before we depart from this point?

219. MR WILKINSON: Yes.

220. MR CORNER: Your slide 13.

221. MR WILKINSON: Oh, yes. This is a sort of equivalent position that you'd be exiting. This is the existing ramp on Yarnfield Lane about 50 metres down the same sort of thing. The forward sight visibility, just regardless of the fact that I don't think you'll be able to see it because of the embankments and the fact that you're coming up on a grade just gives you an idea of the sort of thing we're talking about. And certainly – okay.

222. MR CORNER: Good. Thank you very much. That's all I wanted to ask you about that. And I want to move on then now, new topic, please. I said I'd deal with Aldersey's Rough – the Aldersey's Rough alternative. And so I think that for this purpose we should be looking at slides 14 and 15, and in due course, 16 and onwards.

223. MR WILKINSON: Yes.

224. MR CORNER: But for the moment I think we're on slides 14 and 15. And using those slides, I want to ask you what your view is about – well, what you understand to be the access and egress solutions from the M6 that HS2 is proposing, what's your view about them and what alternative you are proposing.

225. MR WILKINSON: HS2 suggested three access/egress points. We'll just look at the north-bound ones. They show this new access road here and this – oh, sorry, egress road and a new access road there. Now the real concern for me is with this – in safety terms is its proximity to where the new or the existing egress point is. You will get confusion. You certainly could get the wrong vehicles entering there without the right signage, but it is doable. But I would – you'd have to go further back so that people had a clear understanding as to which one was which with signing whatever, but I wouldn't want to do that particularly. Even more so with the safety issues far higher here where HS2 suggests that we – the north-bound access would just be almost at the end – well, even if it was at the end of the taper, for the joining from the existing service area you get a real conflict problem there. That just wouldn't – I don't think – that definitely wouldn't pass a safety audit.

226. So, they're not the best and they're certainly the most expensive. Certainly in terms of safety and confusion, I wouldn't go for either of those. And there's similar – there's a similar instance on the south-bound carriageway, but we'll stay with this for now.

227. MR CORNER: Well, okay. So, is it necessary to do that? In other words, are you proposing an alternative?

228. MR WILKINSON: Well, on the basis of trying – the other little point about that there: if you were going to build into the – that side road there, you'd have to end up interrupting the motorway flow while you linked in and joined in, so you'd take a lane out on the M6, which is not a good idea anyway. More confusion and more delay. So I took the option that I think the safest option is to bring the vehicles in as they would normally into the lorry park and then you have various options. The best cheap and quickest option would be to just follow round the circulatory and then utilise the highway – this is the highway depot of the maintenance depot for the motorway. So you would come in. There is a barrier there, but you could certainly come in there and access out onto Three Mile Lane. We have a photograph later on to show that. And then down – a bit of localised widening I guess you'd do and then into wherever the actual suggested access was.

229. But there's various options. You could come through here. The vehicle speeds are about 10, 15 mile an hour, punch straight through – this is all level topography – just punch through there. There are no parking – vehicles do park here, but they shouldn't and then you could come along and join there and/or again – there again is another easy access point, but you would probably have to make sure that these illegally-parked vehicles don't park there.

230. MR CORNER: So, in other words, do – we're dealing with north-bound at the moment. We'll deal with south-bound in a minute.

231. MR WILKINSON: Yes.

232. MR CORNER: Do we need to construct new slip roads off the M6 –

233. MR WILKINSON: No, I don't think so.

234. MR CORNER: – in order to access an IMB-R?

235. MR WILKINSON: No. In terms of safety and reduction in flow due to lane closures, no, I wouldn't recommend that.

236. MR CORNER: Right. Right. Okay. And we go on to south-bound then, please. Sorry, yes.

237. MR MARTIN: Can I ask Mr Wilkinson a question at this point?

238. MR CORNER: Yes. Sure.

239. MR MARTIN: You say, Mr Wilkinson, that people are not meant to park there, but they do.

240. MR WILKINSON: Yes.

241. MR MARTIN: As a highways engineer, I hope you would agree with me that 99% of the time, if people can do something, they will do it, whether they're –

242. MR WILKINSON: Yes.

243. MR MARTIN: – meant to or not. What is going to stop people from using this as an unofficial junction from the M6?

244. MR WILKINSON: An unofficial – well, because –

245. MR MARTIN: If I lived in the vicinity and I was a car driver, I would use it as an unofficial junction off the M6.

246. MR WILKINSON: Well, this would be a man barrier or rise-and-fall barrier, put one in to facilitate that. There is one at the – you may disagree, but there is one there now to stop that very thing happening at the highway depot. Yes, you'd either put a banksman on it or shut it at night or have a rise and fall barrier.

247. MR CORNER: Okay? So, alternatives to a new slip road for north-bound, what about south-bound? That's a new slide, I think.

248. MR WILKINSON: Yes, new slide, please. 15, is it?

249. MR CORNER: 15, yes.

250. MR WILKINSON: Yes, again, HS2's idea is to come off before the actual egress slips for the service area. Quite a high bank there to do, but it could be brought through.

251. MR CORNER: Their idea is SE3.

252. MR WILKINSON: Sorry, SE3. Sorry, sorry. SE3.

253. MR CORNER: So a new slip.

254. MR WILKINSON: Yes, a new slip there. Again, my thoughts are that you would just bring them safely into the lorry park. You could either come through here and through there and up the rear service access and then across the bridge and into the Three Mile Lane.

255. MR CORNER: Right. So, again, here, is a new slip required as HS2, sorry, have shown or not?

256. MR WILKINSON: I wouldn't recommend that and I think that is – because of the slow movement of vehicles, that's quite capable of being done without too much impact on the lorry park.

257. MR CORNER: Right. And what – broadly, what kind of impact does the construction of new slips have on the cost? If construction of new slips were required to provide a railhead/IMB-R at Aldersey's Rough, what effect would that have on the cost? Well put it another way: if you don't have to construct slip roads to get to the Aldersey's Rough facility, does that increase the costs or make them go down?

258. MR WILKINSON: Yes, reduces the cost dramatically.

259. MR CORNER: Dramatically.

260. MR WILKINSON: Yes, which is represented in the HS2 SIFT analysis.

261. MR CORNER: Right. Okay. Thank you very much. Right. Thank you very much. Are there any other advantages from this transport, specifically vehicle transport point of view you want to talk about of using Aldersey's Rough?

262. MR WILKINSON: Yes. I think that the other certain advantage is that wherever this HS2 traffic, construction traffic comes off onto Three Mile Lane, the actual conflict with the current flows on Three Mile Lane are vastly far less than they've experienced conflicting with the Yarnfield Lane traffic. This –

263. MR CORNER: Why?

264. MR WILKINSON: Because there's only about – well, sorry, 30 to 80 vehicles. I've done two counts, two days and most of the traffic is some of the staff that utilise to try and get into the – to work at the actual service area.

265. MR CORNER: So it carries less traffic.

266. MR WILKINSON: Far less traffic, yes. Far less in – there's no villages – there's only a village at Keele, but for highly underutilised section of road.

267. MR CORNER: And is an overbridge needed if we –

268. MR WILKINSON: No overbridge required whatsoever compared to the Stone one, so –

269. MR CORNER: Right.

270. MR WILKINSON: – dramatic savings in costs.

271. MR CORNER: Okay. Thank you very much. So I'm moving now to a new topic, if I may. Construction at Stone if the railhead/IMB-R isn't built.

272. MR WILKINSON: Yes.

273. MR CORNER: In other words, you still need to build a railway along the alignment of course. So, I just want you to deal with that issue, please –

274. MR WILKINSON: Okay.

275. MR CORNER: – from the point of view of transport that you're talking about.

276. MR WILKINSON: Well if the – we can go to the next line, I think, when you're ready.

277. MR CORNER: Can we? Right. Okay.

278. MR WILKINSON: Oh, sorry. Yes. That was the rear access from the highways depot onto Three Mile Lane, which I think is suitably adequate.

279. MR CORNER: Okay.

280. MR WILKINSON: Okay. So, if we go to the scenario of Stone without the railhead –

281. MR CORNER: Yes.

282. MR WILKINSON: – we have far less compounds, far less structures, no overbridges to build and hopefully no M6 slip roads, certainly far less work to do. So the actual HGV traffic now is considerably less. So the question – HS2 have said that we will need exactly the same M6 slip roads as they're going to propose for Stone railhead.

283. MR CORNER: So the question is: do we? Are they right?

284. MR WILKINSON: The answer is: categorically, no, we don't. Because as we speak, M6 smart widening 13 to 15 is in the process of constructing – not – they don't call it emergency slip roads. They're called maintenance turn-round facilities. And I've just sort of tried to sketch the idea before we have some actual drawings, but basically, at the moment, the embankment comes down there. The inside lane – can you just see, that's where the emergency access is on the north-bound part of –

285. MR CORNER: On 17?

286. MR WILKINSON: Yes. On the – yes.

287. MR CORNER: Yes.

288. MR WILKINSON: That's where – now currently, with a three-lane running, emergency vehicles or maintenance vehicles would come along in the hard shoulder, decelerate in that, and then go in to – and use the hard shoulder to accelerate back into lane 1 of three. But clearly, when they've got four lanes running now, there is no hard shoulder. So, HS2 propose to – because we've got these embankments behind the

bridge piers, they propose to construct a running lane behind these piers, retaining wall for that embankment –

289. MR CORNER: This is Highways England, is it?

290. MR WILKINSON: Highways England, yes.

291. MR CORNER: Yes. I think we might have said something else.

292. MR WILKINSON: Highways England.

293. MRS MURRAY: You said HS2.

294. MR WILKINSON: Oh, sorry. Thank you. HS2 – yes, so this will then be the way that – let's just show another drawing – the next slide please, 18? Yes. Thank you. These are the actual drawings for the construction of the smart motorway. Here's the existing Yarnfield Lane bridge and we have deceleration lanes and acceleration lanes for both approaches. We don't have to build a new bridge. We don't have to provide new slip roads, which will demolish all this work that smart motorway is doing. We don't have to delay traffic, delay closures to create the new slip roads that HS2 will have to need, to construct theirs.

295. MR CORNER: So, you say then, in the absence of constructing the railhead/IMB-R at Stone, construction traffic for the railway line will be able to use what Highways England is now going to construct in any event. Is that right?

296. MR WILKINSON: Yes. So, coming back to HS2's SIFT analysis, they've said that the costs of providing their slip roads would be the same for us. And that's clearly not the case. We don't need those new constructions at all and no aborted work whatsoever.

297. MR CORNER: Okay, thank you.

298. MR WILKINSON: The next slide shows a bit of an attempt – before we got these drawings – show slide 19 please? That shows what's going to happen before we got the drawings.

299. MR CORNER: Diagrammatic drawing.

300. MR WILKINSON: Yes, diagrammatic.

301. MR CORNER: Alright, okay, thank you. Did you want to say anything about access to the Eccleshall Road, the B5026 compounds, in the event the railhead and IMB-R are built?

302. MR WILKINSON: The whole purpose of this – before we go to Eccleshall Road – we've got far less traffic now wishing to access the Stone area for the embankments and the viaduct. I see no reason therefore that we need to widen Yarnfield Lane. These are there at day 1. Not 15 months later. They're here at day 1 of the construction thing. There is no need whatsoever to widen and decimate Yarnfield Lane and its rural environment because everything can be brought in here. I know HS2 have referred to local deliveries. Well, I don't know of any local delivery in Stone. It will either be coming from the north, which will go via 15, or it will come from Stafford, via junction 14. There is no need to decimate Yarnfield Lane whatsoever.

303. MR CORNER: Okay. Thank you very much. The last questions I have for you are really slightly more generally about the benefits of using Aldersey's Rough rather than Stone, as you see it from a transport view. So, you say there are benefits in your proof. What are they? Is that – I've lost my place. I've lost my speaking notes. Would you mind if we just take one moment?

304. MR WILKINSON: Yes. So, in terms of the benefit at Aldersey's Rough, we avoid congestion and unsafe movements on Yarnfield Lane and all the A34 junctions. Far less – yes, we recognise we have a network that's at capacity – it's going to be certainly way over capacity creating rat running that's not advisable to anybody.

305. MR CORNER: Sorry to interrupt. Should we have a slide in front of us while you're saying this? I'm looking at slide 20.

306. MR WILKINSON: We can do but it's just talking about Stone, really.

307. MR CORNER: Alright.

308. MR WILKINSON: We avoid redundant aborted smart motorway work – we have to lose –

309. MR CORNER: Just remind us what that's about? What is this point?

310. MR WILKINSON: The smart motorway is going to strengthen Yarnfield Lane bridge and provide these new maintenance slip roads. The new strengthened bridge will be demolished while we provide the new line, motorway over bridge. Some of the maintenance slip roads there will be demolished quite considerably. And not only the actual demolition work but it's all the associated lane closures to the M6, overnight closures of M6 while you demolish and provide the new bridge as well. They won't happen at the same time. So, quite a lot of considerable delays to the M6 with this that wouldn't be associated – and I don't see anywhere in the SIFT report where anybody's allowed for the economic impact of closing the motorway and/or lane closures.

311. MR CORNER: Right. Just to be clear, this smart motorway widening, what is it and who's doing it?

312. MR WILKINSON: Highways England. It's to be completed in 2022, which would overlap by a year but we know talking to Highways England, these slip roads will be in for the start of the contract for 2021.

313. MR CORNER: So, you're saying, are you, that the smart motorway works would be rendered aborted by construction of a railhead and IMB-R at Stone?

314. MR WILKINSON: Yes.

315. MR CORNER: Right.

316. MR WILKINSON: Certainly, on the northbound side – I'm sure they're aware – these drawings were trying to mitigate that as much as possible but the north – sorry – the southbound side, that's totally obliterated everything that smart motorway will be doing.

317. MR CORNER: Okay – yes, carry on.

318. MR WILKINSON: Yes. And another actual benefit of Aldersey's Rough is the possibility of assisting traffic that is going through the junction 15. If we just go to the next slide – might help – just on this one here – you can see everything of the construction routes more or less and the A53, A51, A34, the 529, the 5182, all converge

around junction 15. And whilst every effort is made, I realise, to push as much traffic on to the strategic network sometimes there's a price to be paid for that. And I think Aldersey's Rough can do that, if I show the situation created at junction 15.

319. MR CORNER: Yes – just show us the situation that would be created with the Stone proposal at 15 there. You've got some slides on that, haven't you?

320. MR WILKINSON: Well, just go to the next slide, just to–

321. MR CORNER: Alright, yes. The next slide, number 21.

322. MR WILKINSON: Thank you. Yes, this is HS2's – from one of their community plan drawings. This shows the impacts of the main flows. So, here's junction – what we call junction 15 interchange. It's a combination of three junctions. The A500 carries a massive amount of traffic – around about 6,000 PCUs a day into that interchange. That's predominantly about 2,500 lorries plus construction traffic. A massive amount of traffic will be going through that junction, as a consequence of servicing all the main compounds in CA3 and CA4 area. So, this is where I come back to this whole idea of looking at junctions in isolation. If we look at junction 15 interchange? The next slide please.

323. MR CORNER: Number 22. Yes.

324. MR WILKINSON: Yes, this is the M6 interchange at junction 15. It comprises of three junctions. One is the actual signals of the two. There's the northbound slip and the southbound slips and, as I said, a signals here. They then move forward into what we call a Hanchurch island. And then we have the third junction, which we call the Eddie Stobart junction, because it's actually a five armed. This area is Eddie Stobart's main trans-shipment depot. So, we have three junctions there. And the high majority of traffic servicing and Whitmore and Madeley comes along the A500, through Newcastle Road and then dissipates down the 5182. A major – it's a massive amount. There's about – at this junction alone – from the 519 and here there's about 1,800 HGVs a day entering this junction. And this junction is quite critical to how it performs. So, again HS2 have decided to look at three junctions in isolation. And the first one is the set of signals. Bearing in mind that Highways England have tried to get this junction as part of the smart motorways system because it's been so over capacity for 20 years that I

know. But they've failed to get the land. But anyway. Let's have a look at the next slide please.

325. MR CORNER: 23 – a closer look.

326. MR WILKINSON: HS2 – Sorry?

327. THE CHAIR: Why have they failed to get the land? What's the problem?

328. MR WILKINSON: You'd have to ask them.

329. THE CHAIR: It's not known. You're not being –

330. MR WILKINSON: No. Well –

331. THE CHAIR: Not knowing, I understand. Being inscrutable, I'm less tolerant of.

332. MR WILKINSON: Well, it's Department of Transport. I worked with them in the mid-90s looking at a new junction 15 that was further down here. They had all sorts of topographical problems. But we were looking at it as far back as 20 years ago. But it's certainly a problem. However –

333. THE CHAIR: But it's not a money problem?

334. MR WILKINSON: I think there's a lot of logistic problems with this area. The levels are pretty frightening.

335. THE CHAIR: Thank you.

336. MR WILKINSON: But anyway, HS2 assess that in 2016, there are no queues at this junction on certainly the northbound exits and only four – which is quite surprising because the county council officers have had at least two meetings that I know of complaining about the queues on the slip road. And I don't know anybody I've spoken to – emergency services, Eddie Stobart – are all concerned the fact this junction is at capacity. But not according to HS2.

337. MR CORNER: Do you think HS2's figures are – are they realistic?

338. MR WILKINSON: Well, the interesting thing – if you look at that analysis for

this junction here, they quote a 2012 figure but they are SATURN model figures. And they don't correlate – if you look at this – whatever arrives on this approach and this approach must arrive at that approach. But there are at least 500 vehicles different in one of the peaks alone.

339. MR CORNER: Does that make sense?

340. MR WILKINSON: It makes no sense whatsoever. But what it does mean is they're certainly vastly underestimating what is actually queueing on these slip roads.

341. MR CORNER: Okay.

342. MR WILKINSON: So, on this particular junction – isolation – everything's fine, everything's fine, no problems whatsoever. Let's move on to the next junction?

343. MR CORNER: It's slide 24?

344. MR WILKINSON: Thank you. Now here, despite – the flows are a lot higher here and the queues start to look a little bit more interesting. The distance between the signals here and the give way there – well, it's three lanes. It will accommodate about 48 to 50 vehicles. So, by 2023 we're getting congestion that's just about tolerable. I can say that word correctly. Queues coming down from Newcastle to – the 519 comes directly from Newcastle town centre. That has gone up – that's a bit more realistic a queue, I'd have to say – by 80, 2023. It then doubles with HS2 traffic. The flow on the A500 AM and PM goes from 1,730, gets at 22 and 85. That can be depending on what's happening in the motorway quite along. But then it just goes off the scale with HS2 traffic, and not surprising when you put in the equivalent of 6,000 PCUs – two way flow on the A500. So, then we go down to the next – oh, certainly on this approach as well, we've got coming from the Eddie Stobart junction – this goes from three, which is just totally unrepresentative of the queue there. This again will store about 50 vehicles in either direction. It goes to 94 and 114.

345. MR CORNER: On HS2's analysis?

346. MR WILKINSON: On HS2's analysis. And that would be a queue that would be – well, we'll see the implications of the queues. But in isolation, you'd certainly be worried about this in isolation at this junction by 2023, with HS2's traffic. If go to the

final junction –

347. MR CORNER: Slide 25?

348. MR WILKINSON: Yes, thank you, please.

349. MR CORNER: Please? Thank you.

350. MR WILKINSON: And again, the queues on the A5182 coming from Baldwins Gate and the Whitmore tunnels. It goes from 10 to 41, worst case scenario there. And then it more than nearly quadruples to 150. These are the important queues though. We've got 25, 31 and it goes to 93 and 242. Now, remembering that you can store 50 vehicles in there. So, you can imagine what 93 but particularly what a 242 car queue. And I am concerned that just nobody from the county council or anywhere has actually raised this junction to the attention of HS2 or complained about it because it's just off the scale. This side road here is always the poor relation because there are five junctions here, five accesses I should say. The 519, that again quadruples and more. So, just to put that into some sort of picture for you. Now, this is all in isolation. The A500 assessment appears 10 pages away from the junction 15 slip roads. I don't know if that's just coincidence. But if they'd been on the same page, you might have been able to put two and two together. But the result of this is as follows. Next slide please

351. MR CORNER: 26.

352. MR WILKINSON: And there we have the queues on the basis that two thirds arise from the south. And this is on their queue lengths, which I think are far underestimate the problem. We've got queuing back almost to the end of the slip roads. I can see why Highways England want to try and extend that at this current time. The queues just then go off the scale. At this junction here, there's 93. Well, there's only one place those vehicles are going, and just sitting in that roundabout. And just as an aside, remembering you that the A34 is sacrosanct of the county council. A 37 car queue at this signalised roundabout, which they failed to model with a set of signals there – goes to 391 car queue.

353. THE CHAIR: I think Sheryll's got a question.

354. MRS MURRAY: Yes. Is this for a specific peak time?

355. MR WILKINSON: I would think – well, I have no flow profiles except what I've seen very recently but certainly –

356. MR CORNER: This is the AM.

357. MRS MURRAY: The AM?

358. MR CORNER: Yes.

359. MRS MURRAY: And what time AM?

360. MR WILKINSON: Eight until nine. It would be modelled a quarter to eight until a quarter past nine in the computer programmes.

361. MRS MURRAY: Thank you.

362. MR WILKINSON: But this is consistently almost at capacity most mornings now. So, these are on the optimistic side. I don't ever use this term but I will here and it's gridlock. It is an emotional term. But the actual professional view of that is it's gridlocked because they're queueing back into that. And the majority that's causing the problem is this A500 through to A5182 to Whitmore and to Madeley.

363. MR CORNER: Do you want to talk about PM?

364. MR WILKINSON: Yes, PM as well.

365. MR CORNER: Which is the next slide, last slide, number 27. Just to be clear, what hours is the PM peak?

366. MR WILKINSON: Five until six but it's modelled a quarter to five to quarter past six. We now have a queue here that are trying to get out of Stoke and Newcastle and the queues, you can see for yourselves. But the queues in here just mean this is absolutely gridlocked – both directions. The emergency services, commuters, lorries, HS2 compound traffic – although it's getting towards the end of the day there – will all be just trying to avoid this junction. And the point I'm trying to make here is if we go back to – three slides back – I'm just trying to think which the slide is now – 20 please. Slide 20? Oh, sorry. I touched the mouse. Okay.

367. MR CORNER: Number 20.

368. MR WILKINSON: Yes. Okay. So, at the moment, the Whitmore tunnel traffic comes along here. That's got to go through that junction. And I think somebody mentioned earlier about a new tunnel being built there. If that was to create even more traffic on there, then I hate to think what would happen at this junction.

369. MR CORNER: Is that what people refer to as the longer, deeper tunnel?

370. MR WILKINSON: I think that's what they do but if it's going to create even more spoil that is to be going out on this route then I can't even begin to comprehend the impact that would have. But certainly, at the moment at Madeley haul vehicles come all the way through Woore, down through the A51, along there, all the way around. And this obviously again, massive traffic through that junction. If we had Aldersey's Rough, we could use haul routes that would take it up and then via the Keele services. That alone – coming from Madeley end – that would reduce that by a quarter of the haul distance if nothing else. But certainly, it would relieve some pressure on one of the junctions within the interchange and have a massive extra benefit over and above, comparing the two.

371. MR CORNER: So, the benefit for Aldersey's Rough is impact on junction 15, is that right?

372. MR WILKINSON: Absolutely, which appears to be the elephant in the room that nobody wants to talk about, certainly, the county council. But this is a serious, serious problem. Eddie Stobart are – talking to their regional manager – he was really concerned about what they were going to do if they can't get access and everything's just stuck there.

373. MR CORNER: Okay. Thank you very much indeed, Mr Wilkinson. Those are all the questions I have for you. Thank you.

374. THE CHAIR: Thank you. Is that it? Okay.

375. MR CORNER: That's it.

376. THE CHAIR: Your next witness then.

377. MR CORNER: Thank you.

378. THE CHAIR: I'm not trying to rush you before you've even started but just for our own planning, I've got no idea whether this is a 10 minute witness, a 30 minute witness, a 40 minute witness?

379. MR CORNER: Sir, it's certainly not 10 minutes. There's quite a lot to cover with Mr Parkin in fact. He's got to cover the Aldersey's Rough point and the layout that we have put forward and also, the comparison between Stone and Aldersey's Rough from an engineering and an environmental point of view. So, there is quite a bit to cover.

380. THE CHAIR: We're talking?

381. MR CORNER: I'm sorry, I shouldn't ask you a question.

382. THE CHAIR: No, how long are you going –

383. MR CORNER: I think it will be an hour possibly, yes, I do.

384. THE CHAIR: Right. Mr Mould, how long do you think your response is likely to be? I'm conscious of times.

385. MR MOULD QC (DfT): Well, I'm not planning to respond to every point

386. THE CHAIR: Yes, quite.

387. MR MOULD QC (DfT): At the moment, I anticipate asking Mr Smart to deal with a few main points. At the moment, it might take half an hour for him to do that. But obviously, there may be more points coming up from this next witness. The alternative is that we can –

388. THE CHAIR: I think that fits us within our timescale, doesn't it?

389. MR MOULD QC (DfT): Okay.

390. THE CHAIR: Okay.

Evidence of Mr Parkin

391. MR CORNER: Thank you very much. Sir, if I can just have one moment to sort out my copy of the slides? It's Mr Parkin and you've had two documents. You've put

in a proof and also a review of the SIFT analysis which I want to ask you about in due course and some slides, which have the prefix A43 – A43. So, to begin with please, if you wouldn't mind, please give me your name?

392. MR PARKIN: I'm Trevor Parkin.

393. MR CORNER: And qualifications?

394. MR PARKIN: I'm a chartered mining engineer. I have spent 14 years in the mining industry – five of which was in the deep mining industry and 10 years in the surface mining industry in the UK. I've been an environmental consultant for 22 years dealing with major planning applications and EIA.

395. MR CORNER: Right. Okay. Good. Thank you very much. Now, I want to ask you about the location of Stone and Aldersey's Rough in terms of future maintenance of the line. That's the first topic. Then I will ask you about comparison between Stone and Aldersey's Rough but with as a preliminary you taking the Committee to our layout – to the layout that you're putting forward for the Aldersey's Rough maintenance head and IMB-R. So, let's being, please, can we with the first topic – location of Stone and Aldersey's Rough. So, tell me will you about the relative locations of Stone and Aldersey's Rough so far as future maintenance is concerned. What do you say about that?

396. MR PARKIN: If you could go to slide 3 please? Okay. This is a plan which was produced by HS2. We've adapted it slightly. This is in the F3 information paper produced by HS2. And what you can see on this plan is it shows the whole of the HS2 railway. The red line is Phase One from London to Birmingham and terminates on the border with Phase Two at a place called Fradley. These numbers that you see against the names of these locations are the distances from London. So, in the case of Fradley, it's 188 kilometres from London. Can you see that? It's not probably the clearest of plans. So, Fradley – I can use the mouse here, can't I? So, Fradley is there. And that's on the border between Phase One and Phase Two. Phase 2A is the blue line which runs from Fradley up to Basford, at Crewe. And Phase 2B, which is the Phase Two, the north-west, goes from Basford to a place called Hough Green. This is one of the changes that we made to this plan. Hough Green is the junction at 277.4 kilometres north. And at that point the HS2 Phase 2B railway splits to go to Manchester Piccadilly

or to Golborne junction. We've got the Stone IMB-R location, which is at 221 kilometres, and just to the north of that we've got the Aldersey's Rough at 234 kilometres. So, there's 13 kilometres between the two locations.

397. MR CORNER: Right, so?

398. MR WIGGIN: Quite.

399. MR PARKIN: Well, if you go to the next slide?

400. MR CORNER: Even barristers can ask short questions sometimes.

401. MR PARKIN: What I've done here is I've taken the – if you look on the left hand side of this table, you've got the various locations which I've just shown on the plan. The phase in which they are located is the next column. The third column is those changes which I've referred to and the distances from London. And then the relative distance – actually it says 'Stone/AR' there. It's actually just from Stone but you can add or subtract 13 kilometres to the numbers. So, if you take the position of Stone IMB-R, it's 13 kilometres to Aldersey's Rough. But if you go to Manchester Piccadilly, it's 84 kilometres. If you go to the Delta junction, which is on Phase One –

402. THE CHAIR: Sorry. I'm struggling. I'm taking in all this information and I still haven't got to the sense. So, where's the point?

403. MR PARKIN: The point is –

404. THE CHAIR: Perhaps give the point and then give the evidence –

405. MR PARKIN: Okay, the basic point –

406. THE CHAIR: Otherwise, it's just seeming totally irrelevant; that seems pointless. I'm sure it's not but can we get to the conclusion?

407. MR PARKIN: No, it's very important because it's about the relative distance of maintenance that you have to do from either Stone or Aldersey's Rough to the end of their maintenance sections.

408. MR CORNER: One of HS2's contentions is that Stone is more centrally located for maintaining the line, Mr Parkin. So, what I'm after is –

409. THE CHAIR: There's not much in it.

410. MR WIGGIN: There's 13 kilometres.

411. THE CHAIR: There's not much in it. That's the point. That's the simple one.

412. MR CORNER: a) That's true but it's not the whole point. And b) what do you say? Which is actually better located for maintaining this line once it's up and running?

413. MR PARKIN: The SIFT analysis went into quite a lot of detail as to what was wrong with Aldersey's Rough and what was right about Stone. And one of the issues that it said was that Aldersey's Rough would potentially need some maintenance loops at a place called Pipe Ridware in order to function. And the reason for that is because they said they needed a minimum maintenance window of three hours. You can see from the columns on the right hand side of this table that actually the time taken between Stone or Aldersey's Rough to either end of the railway means that from Aldersey's Rough you can get to the northern end, most northern extreme at Manchester Piccadilly in three hours 35 minutes and it can get to the Delta junction, which is actually on Phase One in exactly the same timescale. Whereas if you look at Stone, it has a greater maintenance window at Delta junction because it's closer but it actually only manages three hours 20 minutes at the northern end. And HS2's minimum requirement is three hours.

414. So, the first point is that actually Aldersey's Rough is more centrally located and can get to both ends of the railway in the same amount of time.

415. MR CORNER: Right. So, it's better in that regard. Next, in their SIFT analysis HS2 said that if Aldersey's Rough is to be provided we need maintenance loops at Pipe Ridware. Is that right?

416. MR PARKIN: No, it's not.

417. MR CORNER: Right. And I don't know whether you can remember this. I think I can. Can you remember what the cost was going to be? How much did that add to the cost differential?

418. MR PARKIN: Well, in the SIFT analysis they had an option 9.5 which was with

Pipe Ridware and without Pipe Ridware and there was a quite confused commentary in the SIFT analysis. But the differences took the – it was about £40 million.

419. MR CORNER: £40 million?

420. MR PARKIN: If you have Pipe Ridware.

421. MR CORNER: Right. So, if Pipe Ridware isn't required, as you say it isn't, that knocks off £40 million off the –

422. MR PARKIN: Off the headline costs.

423. MR CORNER: Alright. Okay. Right. Thank you.

424. MR PARKIN: If we go to the next one?

425. MR CORNER: Yes. So, we can move on I think. And you've got this next slide, which is slide 5 –

426. MR PARKIN: The purpose of this is to reinforce the point about the relative location of Aldersey's Rough to Stone. Aldersey's Rough is further north and because the northern section of the railway is going to be mostly ballast track, it's actually got more maintenance to the north than there is to the south. So, having a maintenance base at Aldersey's Rough is additionally advantageous over Stone because of that factor. And the percentages in the column on Aldersey's Rough on the right hand side, you can see that if we use Delta junction – which I will say again, is on Phase One – as the southern maintenance limit of both of these IMB-Rs, you can see that actually the percentage of actual railway – not just the distances – because on the northern end you've got the Golborne section as well as the Manchester Piccadilly section – but actually you've got 50% of the railway accessible from Aldersey's Rough. Whereas if you look at the equivalent figures for Stone, you've got 58.9 versus 41.1. So, it's not only inaccurate to say that Stone is better located in the middle of the railway, it's actually fundamentally wrong.

427. MR CORNER: And you say it's the other way round?

428. MR PARKIN: It is absolutely the other way around.

429. MR CORNER: Good. Thank you very much. We can move on then, please. And I want to come to my next heading, which is comparing Stone and Aldersey's Rough and your response to the SIFT analysis. And so, my first point is – and you've put up slide 6 quite rightly – is the Aldersey's Rough option that HS2 has assessed or used for the purpose of its assessment an appropriate one?

430. MR PARKIN: No, it isn't. And I start by referring to this drawing, which we produced in January 2017 when we first approached HS2 with this idea. This design is now superseded but the important thing that comes out of it is that Aldersey's Rough is well connected to both the Keele services here and both of the railways but also more importantly – and we'll come back to this – it's very well screened from the local settlements of Madeley – which is over in the west here – to Madeley Park Wood, which you can probably pick up in the south – and Keele, which is off the plan in the north – none of which will be able to see the operations at Aldersey's Rough.

431. MR CORNER: So, that was your initial proposal. And I think if we look at the next slide we see what HS2 assessed, do we not?

432. MR PARKIN: I'm not going to use this plan because it's actually just focussed in on the junction. We have a more zoomed out one. This is also not our plan. This is also, sorry, not the HS2 plan. This is our version of what potentially could be done. I think if we can turn to a plan which –

433. MR MOULD QC (DfT): Sorry. Could I just check: that's your proposition we just saw there, was it?

434. MR PARKIN: Not totally, no. I'll come back to that plan if I may? Can we go to the Aldersey's Rough drawing which is part of the HS2 pack?

435. MR CORNER: Right. I've got P43(1) in front of me. Is that the one?

436. MR CORNER: It's one of HS2's, sir.

437. MR PARKIN: So, this is HS2's design, Aldersey's Rough.

438. MR CORNER: Yes.

439. MR PARKIN: And there are a number of important things which we consider

make this a sub-optimal design compared to what could be achieved.

440. MR CORNER: So, tell us about those.

441. MR PARKIN: So, my colleague, Gordon Wilkinson has already been through the situation at Keele services and you're aware that we believe that the design we can have at Keele services is a great improvement. We also believe that the access which would be into Aldersey's Rough which – if I can find that. That's that point there on HS2's drawing. We would have it much further north. What we have asked HS2 for is the design drawings of this, when we met them. This is their fifth iteration of the design that we had in mind. Unfortunately, they've not provided those to us. But we believe on the basis of what we can see from this design that there are a number of changes which would not only make it a more optimum design, we would save some of the costs that they've built into their SIFT analysis. I don't know if I can zoom in slightly on this plan? Is that possible?

442. MR CORNER: I don't know.

443. MR PARKIN: Can we?

444. MR CORNER: Yes.

445. MR PARKIN: Thank you. That's fine. That's fine. So, at the moment, what you'll see is that they've got the – sorry – I'm fiddling with the –

446. MR CORNER: On my screen, we've zoomed in.

447. MR PARKIN: Yes, we have zoomed in.

448. MR MOULD QC (DfT): You want to go to the next slide because it's a zoom in, in event. So, P43(2) might be better for you.

449. MR PARKIN: Thank you, sir.

450. MR CORNER: P43(2).

451. MR PARKIN: Yes, that's fine. So, HS2 have arranged the railhead main area here in this, like a golf club head and they've put the railway sidings at the northern end and they've put the infrastructure at the southern end. We believe that could be

optimised by effectively flipping those over. That would lower railway sidings by several metres which do away with having such a high embankment through this zone here. And one of the points that HS2 has made about the overhead power line – and they haven't actually confirmed this – they're not sure but they're suggesting and then they've costed into their SIFT analysis that you need to spend a lot of money on an overhead power diversion. We believe that could be optimised as well. If you come further down –

452. MR CORNER: Just before we leave that, when you say 'optimised' do you believe that diversion of the overhead power line will be necessary or not?

453. MR PARKIN: We need to look at the details of the drawings and the levels but we believe that if you lowered that line by a couple of metres you can certainly avoid any need to divert that. But as I said before, they haven't confirmed that it needs diverting and yet they've included the cost for it. On the section through here, where the railway comes further south, you can see it's on an embankment. And then when it curls around on to the HS2 line, they've got a couple of crossovers which are so arranged that they need a much longer head shunt to go down to the far end of the railway. And this takes them into Whitmore Wood. And one of the issues they've made about Whitmore Wood is that it affects further ancient woodland. They've also said they need a higher retaining wall, up to 25 metres. And again, we think with an optimisation of the design – and we don't have the drawings so it's difficult for us to do so – but optimisation of the design you can value engineer these elements out of the scheme and save money.

454. On the other points of this design, at the moment HS2's design – which I think my colleague Trevor Gould touched on earlier – is to – the southern spur here connects to a head shunt on the old stub railway line of the Market Drayton line. This not only prevents you going straight into the railhead, which is what we think would be the optimum idea, but actually means that they have to affect a much greater section of old railway line. They've had to lower it by two metres. Or they're saying they have to remove and rebuild the Manor Road bridge. And we believe that the design – which I shall show you in a second – that we have for that could avoid that.

455. There's also flood protection measures because they've put the spur in the flood

plain. And when I come to talk about the environmental impacts, they have made a big point on the fact that this is going to be a major flood risk problem and they've scored it a major worsening against Stone.

456. And then finally, in terms of the connection on to the northbound West Coast Main Line here, they plan to upgrade the existing Madeley chord, which again involves using the head shunt and they need flood protection measures for that. Whereas our proposal – which my colleague, Mr Gould, went into – would come across this corner and would avoid the need for the head shunt as well.

457. So, we believe with working together with HS2 we could have come up with a version 9.6 or 9.7 which would have optimised the design of Aldersey's Rough and we'd have ended with a completely different scenario than the one we have today.

458. MR MOULD QC (DfT): I wonder if I might just point out – because it is important by way of context. This design is –

459. THE CHAIR: Sorry. Are you happy for Mr Mould to intervene now? It's my decision whether you intervene now or not.

460. MR MOULD QC (DfT): Sorry. Then, I won't. I won't

461. THE CHAIR: I was offering it for Mr Corner, which he didn't look desperately happy with your interruption. And I did say that I'd try to give him a clear pitch.

462. MR CORNER: Sir, my face is too mobile, I'm afraid. I wish I had a more poker face. No. Sir, it's entirely in your hands. You're the judge.

463. THE CHAIR: Carry on, please.

464. MR CORNER: Shall we just carry on? Yes. Okay. Thank you. So, Mr Parkin, you've told us about the things that could be better in the Aldersey's Rough railhead/IMB-R. Are you going to show us now slide 8?

465. MR PARKIN: I've probably covered those points. If we go to slide 8 we can at least see the optimal design that we have –

466. MR CORNER: Well, I think that's what we should do. So, why don't we do

that? Take us through it.

467. MR PARKIN: Our proposal here would be to take this spur line further up the contour, so out of the flood plain, and then turn it around so that we can make a direct connection into Aldersey's Rough. My colleague, as I mentioned earlier, Mr Gould has made the point about the advantages of being able to get in and out of the railhead more quickly. And this makes all of the works along this section of the old railway line redundant, which is what HS2 our proposing. We also wouldn't need to use that spur there – which I've just said – which is the existing spur. But we'd create a new spur, which would enable again direct access in and out of the railhead. I mentioned Whitmore Wood. This is Whitmore Wood here. At the moment there is about 1,200, 1,300 metres to get down to the northern end of the tunnel which goes through Whitmore Wood and we reckon that we can reduce the length of that head shunt on to HS2's line either if it stays on the northern side by changing the crossovers. But there is possibly the alternative of running the line underneath the viaduct at the River Lee – you'd have to make some adjustments to the design at the River Lee viaduct – and actually connect on to the southern side of the HS2 line, which would do away with the need for even the crossovers. And you'd have direct access on to the northbound slow lines.

468. We think that there are lots of changes that can be made to this to reduce the cost and to value engineer it. It's very difficult for us as a group to be able to do that when we don't have the design plans, which we have been refused access to.

469. MR CORNER: Alright, okay. Thank you very much. I want to come on now please to what I call engineering and construction feasibility. And I want you to deal with the comparative engineering and construction feasibility please by speaking to the table that you produce at slide 9. Slide 9.

470. MR PARKIN: This is a table that we've produced.

471. MR CORNER: Yes.

472. MR PARKIN: But it takes the information which is in the SIFT report, in the table which is the engineering matrix. The way that the matrix that HS2 produced worked – and I've tried to keep it simple because the colours can be quite confusing –

but basically the judgment HS2 has made is in relation to whether Aldersey's Rough is an improvement or a worsening against the baseline situation, which is the Stone railhead. So, you can look immediately down the left hand column and HS2 has scored Aldersey's Rough either a minor or a moderate or a major worsening. And probably the best that we manage is a neutral result according to their scoring system.

473. We have undertaken our own scoring system and we have come up with a completely opposite view to HS2. And I would like to take you through why I've come to those conclusions.

474. MR CORNER: I think you should, yes please?

475. THE CHAIR: It's not the parish council for Aldersey's Rough, is it?

476. MR PARKIN: No, it's our group.

477. THE CHAIR: I appreciate that. Have there been any discussions locally? If the Committee did find this was an alternative, it would be an additional provision, and there would be a whole new set of people with a whole new set of objections – both local, personal – the full remit. I'm wanting to get a feel for whether you've had any discussions with them – at various points we've touched on issues and advantages – and getting a feel for what –

478. MR PARKIN: We have tried.

479. THE CHAIR: – it would look like if you put in another column.

480. MR PARKIN: No. First of all, the column refers to Stone town and Chebsey parish. So, that's our judgment in this context. But to answer the question you've just asked, the group have approached both the Whitmore and Madeley groups because, as you probably have appreciated, both Aldersey's Rough and the longer, deeper tunnel – our propositions are mutually exclusive because the tunnel would go underneath Madeley chord junction and therefore you couldn't have Aldersey's Rough.

481. MR CORNER: You might need to keep your voice up a bit.

482. MR PARKIN: Sorry. Can you hear me?

483. THE CHAIR: I can, yes.

484. MR PARKIN: Sorry. I'll speak up a bit louder. But as my colleague, Gordon Wilkinson has said, because we believe that Aldersey's Rough offers really tangible benefits to the people of Whitmore and Baldwins Gate as well as Madeley because Aldersey's Rough can take some of the traffic pressures away from their construction areas, we approached them to give them a presentation of our thoughts. Unfortunately, we were refused them to speak to them because they saw us a being a threat to their longer, deeper tunnel proposition. I tried to say, 'Information is better than nothing' but they did not want to talk to us.

485. THE CHAIR: Okay.

486. MR CORNER: Right. Okay. Thank you very much. Thank you for the question.

487. THE CHAIR: Get back in.

488. MR PARKIN: Okay. So, coming back to the score here, you see that on the bisecting, existing roads – if we take the first point here – HS2 has scored that there is a neutral difference between the two sites. And as Gordon Wilkinson has already pointed out, the Stone railhead bisects both Yarnfield Lane and Eccleshall Road. It also bisects the Norton Bridge to Stone railway, whereas Aldersey's Rough doesn't bisect any road whatsoever. We can make access onto a short section of Three Mile Lane and then access straight into Keele services. How they manage to score that a neutral in that context is beyond me, to be honest.

489. MR CORNER: Just pausing there. On your plans, the length of Three Mile Lane that would be affected by traffic to get to Aldersey's Rough is what?

490. MR PARKIN: We think it will be less than 500 metres in total.

491. MR CORNER: In total? Okay. Thank you very much.

492. MR PARKIN: Between the northern side of the motorway, where would make access from the southbound connections to where we think the access should be on Three Mile Lane to gain access to Aldersey's Rough.

493. MR CORNER: And just compare that with the length of Yarnfield Lane that's affected by Stone?

494. MR PARKIN: Well, as my colleague Gordon Wilkinson said, for the first 15 months – it was nine, now 15 – you've got the full section between the railhead compounds and the A34 affected. In fact, that continues beyond that date, if you look at the histogram which was placed up earlier. But then beyond that point, 50% of all of the HGV traffic accessing HS2 from the M6 must cross the bridge of Yarnfield Lane – either the existing one or the new one – in order to access the northbound carriageway. And the distance between the Yarnfield north embankment satellite compound junction and the M6 connection on the northbound is 900 metres.

495. MR CORNER: Thank you very much. Can we go on to the next comparator, please, the next factor, disruption to highways?

496. MR PARKIN: Well it's a subset really of what I've just said. According to HS2, they say there's a minor worsening by having the railhead at Aldersey's Rough compared to Stone.

497. MR CORNER: What do you say?

498. MR PARKIN: Well, there is virtually no disruption of Three Mile Lane and yet there is total devastation of Yarnfield Lane for a period of four years. So, I say it's a major improvement by moving to Aldersey's Rough.

499. MR CORNER: Okay. I'm sorry, sir? Oh. Access to site?

500. MR PARKIN: Again, it's another point which Gordon Wilkinson made. He demonstrated that the access to the site, particularly in terms of when it was an IMB-R, was a sub-standard access in a cutting, which he considered was unsafe. Even the temporary access points involve putting new roundabouts and diverting the lane. The lane is diverted at Yarnfield for 1.2 kilometres. It has to have a new motorway overbridge. It has to go into a cutting. It won't be the same road ever again. And how that compares with actually using a short stretch of Three Mile Lane which needs a couple of new junctions to be constructed, again, I can't see how they can score that a moderate worsening for Aldersey's Rough. For me, it has to be at least a moderate

improvement.

501. MR CORNER: Alright, okay, so hence your green colour?

502. MR PARKIN: Yes.

503. MR CORNER: Yes. Right. Water and flood risk, please?

504. MR PARKIN: On water and flood risk, as I mentioned HS2 has a proposal to put a new spur of the West Coast Main Line, which they've put in the flood plain and actually goes the wrong way, up the old stub railway line. And they also plan to bring into action again the existing Madeley chord, which they say needs flood improvements. On the basis of those two, they've scored it a major worsening against Stone. Let's just think about what happens at Stone – and I'm happy to go to a plan at this point –

505. MR CORNER: Shall we do that? Which plan? I turn now to my default option is A43(1).

506. MR PARKIN: Well, I think it might be useful if you don't mind to go to a figure which has again been produced by HS2 in its evidence, which is P42(4)?

507. MR CORNER: Yes. Thank you.

508. MR PARKIN: Now, this plan has never seen by us before. And it's a very interesting plan and we're very grateful to now see it because it shows what the Stone area would look like without the railhead. And in this context in terms of flood risk, you can see – and I'll pick it up here – the Filly Brook is a meandering water course which wends its way through the site and heads down towards Stone. Now, in the plan that's shown here – which is what will happen without the railhead – you will quite clearly see that water course – they will have a viaduct – they still call it the Filly Brook viaduct – which is 210 metres long, which is between two embankments and will mean that the Filly Brook is hardly disturbed. If we can now go to the position which is the current plan of HS2 with the railhead, which I think we can either go back to the first plan in my proof? That will probably be the easiest.

509. MR CORNER: A43(1).

510. MR PARKIN: This shows the construction scenario. But effectively the Filly

Brook has to be diverted around the edge of this embankment. Perhaps if you can just enlarge the scale slightly for me? It's diverted. Now, this is the plan. I'll just point this out – this is the plan before HS2 submitted its supplementary environmental statement, Additional Provision design – at construction. And the Filly Brook is diverted around the edge of the major railhead structure, which is sitting on a 12-metre high embankment in the flood plain of the Filly Brook. This whole structure is fill in the flood plain. And in the original design they had a bridge here, which was called the Filly Brook west underbridge, and they had a 449 metre long viaduct, which was called the Filly Brook viaduct. They've subsequently replaced this design. Now that design, by the way, that includes a lot of structures inside the flood plain. If you now look at the new design – and again it would be probably best to look at one of the new HS2 drawings.

511. MR CORNER: One of the HS2 plans. What are we looking at? P42(2) perhaps? Or P42(1)?

512. MR PARKIN: This one is still the old design. We need one which shows the new design. Now, I appreciate that the SIFT analysis was put together before this new design was produced. But for the purpose of showing you the first plan, the construction plan, was that they've got massive structures inside the Filly Brook flood plain, even with the existing design. If we now – that's still the old design.

513. MR CORNER: I'm not sure that we've got a picture of –

514. MR PARKIN: We have.

515. MR CORNER: – the design produced at the end of March.

516. MR PARKIN: If we go to P44(1) please? This is the change to the design. Can I mess with the –

517. MR CORNER: P44(1).

518. MR PARKIN: You'll now see that the 449 metre long viaduct over the Filly Brook and the Norton Bridge railway has now been replaced by an 80 metre long viaduct and 385 meters more of embankment. And the small Filly Brook West bridge, which was down here, has also been replaced by an embankment. So, not only do we

have large embankments and structures before in the Filly Brook valley, which is a flood plain, we've not got even more structures of that type. And they've had to culvert the Filly Brook. You can see it appearing there. They culvert it under here. The culvert underneath that embankment alone is 95 metres long and under this embankment is 80 metres long. So, if we can go back to my table, Mr Corner?

519. MR CORNER: Yes. Let's do that.

520. MR PARKIN: So, if you look at my table, according to HS2 there's a major worsening in terms of water and flood risk for putting one additional two metre high embankment in the flood plain of the River Lee and putting some flood defences – both of which we don't think are required – whereas putting massive embankments in the flood plain of the Filly Brook is of no consequence. So, I have to conclude that instead of there being a major water or flood risk or a worsening for Aldersey's Rough, I have to say it must be a least a moderate and probably a major improvement.

521. MR CORNER: Right. Okay. Good. Thank you very much. Moving on – utilities.

522. MR PARKIN: Yes. In terms of utilities, we've touched on the 132 KV line. And as I mentioned earlier, HS2 has even admitted – and I will give you the reference if you will like – in paragraph 8.2.14 of the SIFT that they don't even know whether the 132 KV overhead line diversion is required. Yet they have costed £18.9 million into the difference to the costs for utility diversions, the majority of which, I suspect, are related this overhead line. As I've said before, if we could look at the design and we could optimise the design, we think there's a very good chance that we can actually remove any need for any diversion of that overhead line. But it's not even clear it's needed in the first place.

523. THE CHAIR: This is the second time you've mentioned documents that you'd like but you've haven't got.

524. MR PARKIN: It's the same document.

525. THE CHAIR: I appreciate that. But what – it's one document, is it? It's a named document, not a whole raft of sources?

526. MR PARKIN: No, we don't know what – HS2 has done option 9.5 design and as part of that design, I would expect to have long sections along the railway line and levels. I would expect to have full cost assessment of all of the component parts. And I would expect to have a complete cost assessment of all the component parts of the Stone railhead, which has ended up with them concluding that it's going to cost a lot more money to build Aldersey's Rough. We have never seen that detail. We asked for that detail when we had the SIFT review presented to us in November and it was refused to us. And without that information we can't validate the conclusions which are made in the SIFT analysis. I would also expect – and this is very, very important – that of a project of this scale – and if I was advising a client who was doing an environmental impact assessment for a project of this scale, that they should provide a full transport logistics profile. And what that should be is every HGV of every type. They should predict when it's going to arrive and what it's carrying and which route it needs to use. And I think if we had that document, I think we would also be in a far better place of understanding how they've calculated the number of HGV movements that they're proposing at Stone and how many HGV movements that they're apparently saying we need at Aldersey's Rough.

527. THE CHAIR: That's very helpful. Perhaps Mr Mould, when you do your concluding remarks, you can outline what documents that aren't available to the public, what shouldn't be available to the public and what, if any, can be made public that isn't currently public.

528. MR CORNER: Thank you. Sir, thank you. Do you want to say anything else about utilities or do we move on?

529. MR PARKIN: Not particularly, no.

530. MR CORNER: Right. Next, slide 9, structures, please? Again, if my defective colour vision is accurate, they are saying a major disadvantage for Aldersey's Rough. What do you say?

531. MR PARKIN: Well, again, I just can't fathom how you could possibly conclude that. I have a list of all the structures in the SIFT review. And I'll just find the paragraph reference.

532. MR CORNER: It's at –

533. MR PARKIN: 3.1.20, is it? Yes, it's 3.1.20.

534. MR CORNER: Yes, it is.

535. MR PARKIN: And I think when you looked at the – maybe if we can go back to the first slide of my proof and I'll point them out to people in graphic terms.

536. MR CORNER: Yes.

537. MR PARKIN: And again, if we can blow this slide up a little bit, it would be quite handy.

538. MR CORNER: So, bearing in mind, this is the previous design, things have moved on, but we can still use it –

539. MR PARKIN: But they've increased the embankments and – that's the main change. But I would argue that without the – if you move the railhead and the IMB-R to Aldersey's Rough, there are lots of features on this plan which are no longer required and therefore effectively are substantial costs savings because there's lots of big structures which they require here. The first one I've got on the list on 3.1.20 is the realignment of Yarnfield Lane itself, which is a 1.2 kilometre realignment from Moss Lane in the south here – Gordon showed you this – right up to this point where it merges back into Yarnfield Lane. That is a structure. Building a road and a roundabout and new overbridges over the M6 is a structure. Gordon has also referred to the fact that we don't' need the M6 southbound and northbound on-slips which HS2's planning to do and effectively reverse the smart motorway works. The Yarnfield Lane IMB-R underbridge – so there is a bridge structure at this point here that allows them to carry the railhead and the IMB-R at something like eight to 10 metres above the level of the lane. You don't need that structure. The sidings that connect to the Norton Bridge railway line here – you don't need those structures. The reception tracks which go all the way along – if we can just zoom slightly out again, please? A little bit more?

540. MR CORNER: Is that right?

541. MR PARKIN: Slightly more. Slightly more. Okay. It actually goes all the way

down here to the head shunt end. There is a large amount of railway required to actually make the connection into the railhead structure itself. The railhead is – I've done a – it's a bit of a quick calculation because I'm used to doing a lot of 'muck shift' calculations in my career –

542. MR CORNER: 'Muck shifting'?

543. MR PARKIN: Muck shifting. This is about moving earth –

544. MR CORNER: Moving earth.

545. MR PARKIN: – earthworks from one place to another. I estimate that they're going to have to excavate something – well, HS2 have told us – 1.6 million cubic metres of material and that – and I'll show this on another plan in a minute – but that – there's a cutting area up here – and all of these railways are in cutting. The HS2 railway is much wider than it will otherwise be because you've got a head shunt in a cutting. So, all that material – they're claiming 90% of it's going to be re-used – and actually filled into these areas here or made into the embankments for the railway. They're all structures which are being produced because you have a railhead here.

546. MR CORNER: Do they know, are they able to say with any degree of certainty that they will in fact be able to re-use all that earth?

547. MR PARKIN: Well, HS2's position at a national level is that they say that the whole assumption for the railway – this is the whole of HS2 – is that in excess of 90% of the material that they excavate will be recycled on site and used in embankments. I have to say I am concerned about that number because if I was building an embankment taking a railway which is travelling at 360 kilometres an hour, I would make sure my embankments were made of pretty good stuff. And I'm not sure that they know that at the moment. There's no site investigation of the ground conditions at Stone that we are aware of. But if somebody tells me that's the case, then we'd like to see the details. In fact, I understand that Phase One, which is the London to Birmingham section, there is site investigation going on at the moment. But we haven't heard how much of that material is being able to be re-used. But I would expect HS2 to use the intelligence from that information to design its railway for Phase 2A and 2B and review its assumptions. And if I can just say, HS2 says that 128 million tonnes of material will be

excavated along the whole railway, if only 1% of that can't be re-used – 1% more – that's 1.28 million tonnes, which is another 128,000 HGV movements. And if you look at it in terms of Stone, Stone – if they're saying 1.6 million is the amount that's going to be excavated – then, you do the same calculation – it's 16,000 –

548. MR CORNER: If 1% –

549. MR PARKIN: Thank you – cubic metres, which is effectively another 1,600 trucks for every 1% you've got wrong, in each direction. So, these things are very, very important in terms of what the environmental effects will be of this railway. And it's very important on the purposes of what my colleague Gordon Wilkinson said in terms of about the HGVs that are going to be travelling on the road.

550. And I'll just say one more final point. HS2 has conceded in its supplementary environmental statement that it will have to bring more HGVs into the site in order to first of all build those new embankments which I talked about, which replaced the viaduct, and also because they're raising the level of the railway by 0.9 metres as part of that application. Now, they haven't said how many HGVs. And all they've said is, 'They're going on the M6'. Well, anything that goes on the M6, 50% of it goes on Yarnfield Lane. So, none of this is transparent. We have no idea what these numbers are. And we will be asking, as the parish councils, we will be asking for this information as part of a further petition that we'll be putting in before the end of this week.

551. THE CHAIR: Sandy?

552. MR MARTIN: Yes, I think there's a fairly fundamental lack of understanding, I think, from my point of view on this, is that you've have spoken at length – or various of your witnesses, Mr Corner, have spoken at length about Yarnfield Lane – but once the M6 access is constructed for the Stone railhead and you say 50% of it will be on Yarnfield Lane. You mean 50% of it will be on the bridge over the M6 on Yarnfield Lane?

553. MR PARKIN: Yes.

554. MR MARTIN: That's the only part of the Yarnfield Lane that will be used, isn't

it?

555. MR PARKIN: Well, it's not quite, is it? It's that point there where they merge.

556. MR MARTIN: Yes.

557. MR PARKIN: They either have to go on the existing bridge or they go on the new bridge. Whatever – they're sharing that bridge with the public –

558. MR MARTIN: But, but –

559. MR PARKIN: If I can just finish

560. MR MARTIN: Yes, sorry.

561. MR PARKIN: – and they will be travelling 900 metres either into that point there where they can access into either this compound, which is called the Yarnfield north compound, or the compound over here, which is the M6 satellite compound – viaduct compound, or they'll be going into the transfer node. Now, they might be going into the transfer node at that point. We're not sure. I think they probably will at that point, which is about 600 metres. But that is 600 or 900 metres which you have to share with everybody else who uses Yarnfield Lane.

562. MR MARTIN: Yes – but Mr Parkin, I just wanted to clear up what you meant by Yarnfield Lane. You're talking about the section of Yarnfield Lane within the Stone railhead development?

563. MR PARKIN: Yes, I am.

564. MR MARTIN: Right. So, all of that will have been rebuilt by HS2 anyway – to whichever specification is necessary?

565. MR PARKIN: It would have been rebuilt but the public – I will have to use that lane along with their HGVs, as will my colleagues –

566. MR MARTIN: Yes, no, I get that. I was just worried because I was worried about whether or not it was going to be the rest of Yarnfield Lane that we were concerned about. It isn't. It's this bit here that you're talking about.

567. MR PARKIN: Yes, but if you read what' said in the supplementary environmental statement – and I haven't got the quote here – but it says, 'Well, it's going on the M6. It's not a problem.' Well, it is a problem. It's a very big problem.

568. MR CORNER: And just to pursue that, if Mr Martin, if that's the end of the questions? That portion of Yarnfield Lane that will be rebuilt or changed, do we know that it's going to be of a specification that will accommodate the traffic that's going to go on it?

569. MR PARKIN: Well, I know that my colleague Gordon Wilkinson has exchanged several emails with HS2 over the last two weeks and he's been trying to ascertain what is going to be the width of Yarnfield Lane. And he's been eventually told it will be six metres. And I think as he gave evidence earlier on, six metres is not sufficient. And if they build a new overbridge over the M6 which is no wider than the existing overbridge over the M6, what's the point of doing it?

570. MR CORNER: So, structures we're on. You've told us –

571. MR PARKIN: Well, I haven't finished on the structures because there's the Stone Retaining Wall 1, which is a retaining wall which sits between – if I can pick it out? Maybe if you can zoom in again for me?

572. MR MARTIN: We've got to balance that against re-building the railway, though, that takes us to Aldersey's Rough.

573. MR PARKIN: Oh, yes. I'm not saying we don't. And I'll come to that in a moment. But this is a question of whether – you've got these structures at Stone. We've got these structures at Aldersey's Rough. Now, at the moment, they're saying, 'Aldersey's Rough, worse'. And I'm saying that all of these structures which have to be built to build a railhead here which you won't need when you don't build a railhead here – they're far greater than at that's proposed at Aldersey's Rough and will be a lot more expensive.

574. So, there's a retaining wall between those two railways there, which is called the Stone Retaining Wall 1. The Norton Bridge to Stone railway overbridge – well, this is a very important point here. If I can describe what the Norton Bridge railway looks like?

At this point, it's sitting on an embankment which is two to three meters high. Above it is overhead catenary which sits six metres above the tracks. So, in order to for HS2 to either cross it here – which is where the Main Line is – or here – which is their connection into the railhead – they've got to have a pretty big structure to get over it. And this bridge here is not finished until March 2023, two and a quarter years after they start operations on this site. And that is the only means whereby they can get from the southern side of the site to the northern side of the site to make access to their construction compounds. Now, in muck shifting terms, that is a massive problem. It's an expensive thing to construct. And so, if you don't have that railway there, you'd have to build that embankment just as a haul road. And for that they have possessions on the Norton Bridge railway line to actually enable them to build it. So, that is another structure. And if I can go finally to –

575. THE CHAIR: Mr Corner, in terms of timing, when I asked you whether it was 10 minutes, 20 minutes or 30 minutes, you said it would be 60 minutes.

576. MR CORNER: I know.

577. THE CHAIR: You've got nine minutes of that time left.

578. MR PARKIN: Okay.

579. MR CORNER: Thank you very much. That's very –

580. THE CHAIR: That's just to make sure. I mean, I'm not going to pull you up bang on nine minutes but I'm conscious we do want to –

581. MR CORNER: We need to keep an eye on it.

582. THE CHAIR: – consider Mr Mould and we are intending meeting in private, having got a good overview.

583. MR PARKIN: Can I just make one more point on this?

584. MR CORNER: Thank you, sir.

585. THE CHAIR: The time is in Mr Corner's hands because I don't know what else is coming.

586. MR CORNER: We're going to have to race, Mr Parkin.

587. MR PARKIN: Okay. I will move on.

588. MR CORNER: Yes.

589. MR PARKIN: I want to make one more point about this in terms of structures. The diversion of Eccleshall Road is 50 metres offset from its current position and it's got a 150 metre long bridge in order to get over not only the HS2 main line which is in a cutting but also in the head shunt, which is in a cutting. You get rid of the head shunt, you reduce the length of that bridge 40%, 60 metres. So, if you had all of those structures – if we can go back to my slide, please, which has got the table?

590. MR CORNER: Yes, number 9.

591. MR PARKIN: How it can be a major worsening for Aldersey's Rough against Stone compared to moderate to major improvement, which is my prediction, well I think I've proved the case that it's much, much improved. And that will be reflected in –

592. MR CORNER: We're going to move on, Mr Parkin.

593. MR PARKIN: Okay.

594. MR CORNER: Next one, complexity of construction – is there anything else to say about that?

595. MR PARKIN: I have a plan on this. If we quickly show it?

596. MR CORNER: Alright. Go on, show us your plan.

597. MR WIGGIN: Costs is the one I'm particularly keen on.

598. MR CORNER: Yes. I am too. And I want to preserve some time for costs. And I also, sir, need to –

599. MR PARKIN: Slide 2, please?

600. MR CORNER: I also need to ask Mr Parkin to deal with some environmental matters, as well.

601. MR PARKIN: Okay. So, I'll quickly cover this. I said to you just a minute ago, I've shown this in summary form about cut and fill. When you do an earthworks operation, cut and fill is the optimum thing you should be looking at. An ideal situation is that you should be a balance between the two. And the point I want to make here is how important that barrier is there, which is Norton Bridge railway. And the cut areas are the yellow areas and the fill areas are the green areas. And you've got this movement across the – not only Eccleshall Road and Yarnfield Lane but you've got this crossing all the time of the Norton Bridge railway. That is a very complex process. It's going to cause – if they are delayed in any of the component parts of those structures that I've just referred to, the programme will be delayed. And that will add cost.

602. MR CORNER: Okay, programme? I think probably –

603. MR PARKIN: Go back to my previous slide, can we?

604. MR CORNER: Yes, slide 9.

605. MR PARKIN: Programme – HS2 have said it's neutral. I say actually in terms of complexity of construction, Stone is so complex to construct with all of the roads they have to cross, that it's a major, major improvement for Aldersey's Rough.

606. MR CORNER: Now, deal with costs.

607. MR PARKIN: Ah ha, okay.

608. MR CORNER: We have some material from HS2 on.

609. MR PARKIN: Yes, if we go to HS2's slide on this. This is first time we've seen any comparative costs between – apart from the headline figure which HS2 gave in the SIFT.

610. MRS MURRAY: Which number?

611. MR CORNER: Here we are. It's P41(17). P41(17).

612. MR PARKIN: As I said, we'd not seen these costs before and we don't have any breakdown to substantiate them and I think we need to see that breakdown. But if we just start from the top? Civil engineering – HS2's admitting that it's actually £11.3

million less to build Aldersey's Rough in terms of civil engineering, excluding earthworks. I think that number should be greater, but we haven't got the details so we don't know. We would expect the depots and stabling to be similar although if you look in the brackets it says, 'including earthworks'. The earthwork situation is much more complex Stone than it is at Aldersey's Rough. If they've used a unit rate per cubic metre, haven't taken into the account the complexity of the transportation – which I think they will have at Stone compared to Aldersey's Rough – I would expect to see a much greater differential. Railway systems, I think they've increased the costs at our end because they've included some of these design elements which we don't think we need. The indirect cost is quite a fascinating number because if you flip on to the next slide – 18 – in the fourth bullet point it says, 'Indirect costs include HS2 corporate costs, project management, design, development and insurances and they are calculated on a percentage basis'. Percentage of what? At that point in the table – if you can go back to 17 – Aldersey's Rough is clearly cheaper. So how come we've been landed with an extra £6.8 million? They come to a sub-total and then I'm particularly concerned about what happens next. You don't get any numbers for Stone. You just get this differential and you've got no way of knowing what the differential's based on. We're told there's an extra £1.2 million worth of property costs. There are plans which HS2's produced. I don't know whether you have time to go into them, Mr Corner? They show lots of land which we don't think we'll need. So, we think that number will fall away.

613. MR CORNER: Let's leave it like that rather than take the time going to the plan.

614. MR PARKIN: Aldersey's Rough, structures and roadworks and associated possession costs – we've suddenly been landed a £33 million addition. Why are they not in the civil engineering costs or the depot costs above? And what is that £33 million? I've just explained Aldersey's Rough has got a very limited amount of structures to be built, where Stone's got a huge number of structures to be built. So, where has that £33 million come from?

615. MR CORNER: Just before you move on, have you access to the information which would enable you to find out what the answer to the question you've just posed is?

616. MR PARKIN: No.

617. MR CORNER: You don't know? Alright.

618. MR PARKING: We would need a spreadsheet which would be like a bill of quantities of all the key elements to do so.

619. MR CORNER: Okay, so carry on. Thank you.

620. MR PARKIN: The next one, utility diversions, I've mentioned before. They've got £18.9 million loaded against Aldersey's Rough which I think will be dominated by the need – according to HS2 – for a 132 KV overhead power line diversion, which I dispute, on the basis of it being needed. And if it is needed, I think the design of a single tower to raise the wire wouldn't get anywhere close to £18.9 million. But regardless of that, we need the details associated with that. And then we've got an efficiency adjustment which is £9.8 million in benefit to Aldersey's Rough. And if we go to slide 18 again? It says, 'The efficiency adjustment represents expected opportunity cost savings associated with the direct and indirect costs'. So, how come, with all of what they've loaded in against Aldersey's Rough we can suddenly save £9.8 million on Aldersey's Rough? None of this makes sense. And if I can make one final point about this? On the previous point on the diversions, there was a second point in there – was it that one? No, sorry. It was in relation to the associated possession – sorry, if you go back to slide 18? That's where it is.

621. MR CORNER: Associated possession costs. And there's a –

622. MR PARKIN: Yes, if you notice, on the third bullet point, it says, 'Civil engineering costs include bridges, viaducts and other structures, roads and utility diversions'. So, if they're in the civil engineering costs, how come we've got an extra £18.9 million loaded against us on utility diversions? None of this cost analysis stands up to scrutiny on the basis the information provided. And it is my view that if we had an ability to scrutinise this information in more detail, Aldersey's Rough would be a substantially cheaper project to build than Stone.

623. MR CORNER: Thank you very much. Lastly, if I may? Relatively concisely, I promise.

624. THE CHAIR: I mean the time is up so lastly and very concisely, that would be

great.

625. MR CORNER: Thank you.

626. THE CHAIR: Just to be clear, my interpretation of that is two minutes.

627. MR CORNER: Right. Okay. Environmental –

628. THE CHAIR: You've got two minutes. I'm just conscious of not –

629. MR CORNER: Of course. Quite right. Mr Parkin, environmental, slide 11, you've set out your case on this in your proof of evidence and in your summary. I wonder if I dare ask as to show the page in your material which deals with this? It's A41(7). A41(7). And it's table 3.2 and it runs for the rest of A41(7) over to page A41(8). And then you've got an overall rating at the end on A41(9).

630. MR PARKIN: Yes.

631. MR CORNER: You've set out your score in just over a page. I don't want to take your time now –

632. MR PARKIN: I'll just say this point – I won't go into detail on this because I know we haven't got time. I think you can look at the table and read it in your own time. But I would say this. I've been doing environmental impact assessment, managing major environmental impact assessments for 23 years at my current employer and before that at my previous employer as well. And I have therefore have a pretty good feel for all of the environmental subjects and I do not recognise the conclusions drawn by HS2 whatsoever in terms of these things. And I'll just pick out one example: community integrity. I mean, community integrity – as we've seen, there is virtually no one living in the vicinity of Aldersey's Rough. And yet, we have a population of 2,200 in Yarnfield; we have a very major conference facility at Yarnfield Park; we have a community football – regionally important community football ground. We have all of the people of Stone affected by this – the people who use Eccleshall Road. Under any measure, building a railhead in a place which Jeremy Lefroy described – and Jeremy Lefroy by the way, MP for Stafford, lives at Keele – has described it as one of the most remote places in Staffordshire, right next to the motorway and the West Coast Main Line – how that can possibly score a worsening against Stone, I just find completely

unbelievable.

633. MR CORNER: Let's leave it there. Thank you very much for your patience.

634. THE CHAIR: Thank you. Thank you for your time. Thank you, Mr Parkin. Thank you, Mr Corner. Do we need a two minute break?

635. MR MARTIN: If we're finishing at 4.30, Chair, we can't take a two minute break?

636. THE CHAIR: We're finishing at 4.55 although Mr Wiggin has to go at 4.30 for 10 minutes to do some other business at the House. Press on then?

637. MR MARTIN: Yes, press on.

638. THE CHAIR: I think we're going take – we'll be back in three minutes at two minutes past four, a wee comfort break.

639. MR CORNER: Thank you very much.

640. THE CHAIR: Yes. Order, order. We'll be back at 13 minutes past.

Sitting suspended

On resuming –

641. THE CHAIR: Order, order. Mr Mould?

Evidence of Mr Smart

642. MR MOULD QC (DfT): Mr Smart, can we please start with P41(4)? I should say, sir, there is an awful lot of detail that has been presented to you during the course of the day. There's been some extremely serious criticisms of HS2's work. Someone listening in might think that the body of men and women who sit behind me and those back at the office are to a very large degree incompetent. But I should say straight away, I entirely refute those criticisms. They are – save for one point that I will now make – they are in my submission, incorrect. If you would like us – when you've heard from Mr Smart you may feel that you don't need to hear any more about the detail. If you do want to hear more about the detail, I can undertake to produce a note –

643. THE CHAIR: Thank you very much.

644. MR MOULD QC (DfT): – which will respond – once we've seen the transcripts – and we can deal with the points. But I wanted to make that point clear right from the start. The one qualification that I will make is this. The cost schedule which you have just seen is not ideal in its presentation. You will have seen that it is presented in the same way as we presented the costs in relation to the long tunnel, the single-tunnel scheme the other day. We need to review it and to decide if how better to present our facts. That seems to me to be clear.

645. THE CHAIR: How quickly are you proposing to do that?

646. MR MOULD QC (DfT): Well, I'm not going to be able to do it overnight. But I will try and get on to that tomorrow and get something to you. It's a layout point as much as anything.

647. THE CHAIR: Sheryll?

648. MRS MURRAY: Can I just ask Mr Mould, the costings, the total costings are the same, are they? It's just the way the figures have been presented?

649. MR MOULD QC (DfT): Yes, I can show you. I'll do this very quickly, if I may? If you turn to our 247?

650. MR CORNER: Which one is 247?

651. MR MOULD QC (DfT): It's the SIFT report.

652. MR CORNER: Oh, yes.

653. MR MOULD QC (DfT): This is the SIFT report that was provided to the petitioners last November.

654. MR CORNER: Yes.

655. MR MOULD QC (DfT): That's right. And you'll see that there a figure of plus £38 million was said to be the comparative increase in costs for the civil engineering elements of the Aldersley Rough option. This is without maintenance loops. We make that point clear. We're not asserting to you that there is a need for maintenance loops at

Pipe Ridware. So, that point can be pushed out of the account completely straight away. Plus three for the railway systems, making a total of £41 million. Now, the cost schedule that you have, if you work through it, you will find that the relevant numbers resolve down to £38.2 million. It is the same number but it is presented in a rather different way. We have also – in the cost schedule that you've just been shown by Mr Corner and his witness – we've also made an assessment, an estimate of the costs for the items that are shown at this stage – last November – uncosted at 8.7.4. But I can provide an annotated – what I can do for you and I can do this very quickly – I can do this so that you have it tomorrow – I can provide you with an annotated version of the cost schedule that has been provided to you in the exhibits just explaining how those numbers resolve – how they resolve down to the figures that are shown on the P number.

656. THE CHAIR: Okay. Yes. Move on.

657. MR MOULD QC (DfT): That's all I want to say about costs at this stage.

658. THE CHAIR: Thank you.

659. MR MOULD QC (DfT): Can we go back please to P41(4)? Mr Smart, I have the slide in front of us. Can you please just summarise to the Committee what, in your judgment are the key advantages of the Stone railhead? Before you do that, can you just confirm for me, what is your particular experience in managing rail maintenance facilities?

660. MR SMART: For five years I was a director in charge of rail maintenance on High Speed One. The track engineer with me on High Speed One is part of my team. Before that for five years plus I was chief engineer in charge of southern region. So, I had the operational responsibility for the infrastructure and maintenance of every line that terminates at Waterloo, Victoria, London Bridge, Charing Cross and Cannon Street

661. MR MOULD QC (DfT): Speaking with the benefit of that experience, please, what in your judgment are the key advantages as a construction railhead of the Stone location?

662. MR SMART: First of all, there's ease of connection because you're not

connecting into the West Coast Main Line, which is the busiest intercity route in Europe, which is one of the reasons we're building High Speed 2. Secondly, there is capacity there. The petitioner correctly said that there are three passenger trains an hour. It is a freight route. Freight isn't currently operating on there and therefore between 11 at night and six in the morning, we have an open railway to feed our railway. Irrespective of the numbers of trains that we need, there's a good capacity. If I could give you a rough parallel, Beechbrook Farm railhead on High Speed One fed all of the High Speed 109 kilometres and it was connected to the Ashford and Maidstone line. It gives you a rough comparison.

663. MR MOULD QC (DfT): And we're here of course we're dealing with the construction phase between the years 2021, 2022 and 2026.

664. MR SMART: That's correct.

665. MR MOULD QC (DfT): Can you help me, what is your estimate of the likely throughput of supply trains into the construction railhead during that five year period? Per day.

666. MR SMART: Per day – in order for us to build the Phase 2A, we are talking about one to two a week – sorry – to build it, we're talking potentially for up to seven. But what I should say is seven trains a day does not occur every day because you've only got so much capacity in the railhead. So, to build it we would come in at a maximum of seven. If we do have more – if we have a slab on Phase 2A, but for Phase 2B, there's a possibility of ballast for a certain section. And that's where we would derive the seven per day from. It's unlikely we would need that number. It's the worst case, but you don't need that every day because you've only got so much capacity in the railhead. And there's easily capacity to feed that.

667. MR MARTIN: Sorry, chair, can I just ask Mr Smart to confirm the point for me? I understand what you're saying is that you're having seven trains a day using a line which is not currently used for passengers anyway in order to access the site?

668. MR SMART: When it is used as the railhead for construction, sir, yes.

669. MR MARTIN: Yes. And so, there would be no disruption to passengers on that

line at all?

670. MR SMART: No.

671. MR MARTIN: Thank you.

672. MR MOULD QC (DfT): If that line were brought into use for passenger services – and I think a figure of three per hour was mentioned earlier – would the level of use that you've just mentioned during construction – okay – before HS2 comes into operation in 2027 on this section of the railway – would the level of use that you've just mentioned – I think you gave a figure of seven –

673. MR SMART: Yes.

674. MR MOULD QC (DfT): Would that cause disruption if we assume passenger services on the Norton Bridge railway of around three per hour?

675. MR SMART: No, it wouldn't.

676. MR MOULD QC (DfT): Why is that?

677. MR SMART: We've got the night window and there's also plenty of capacity between trains. At only three an hour, you can still thread freight trains through, as they do all over the network on what's called queue paths. And as I've already said, that seven per day is a maximum at the peak of construction. And it may be you can manage it by having lesser number over a slightly longer period of time. So, it's just a maximum that we would assess at any day that we would need. But probably we would need a lot less than that because if you have seven trains per day coming in with ballast or whatever it is, you wouldn't have physical capacity to store it all in the railhead. So, you just need to feed them as you can sort of, if you will, a just in time delivery – enough to keep a stockpile and to use it.

678. MR MOULD QC (DfT): Can you just deal with the second point on the screen, please? What is the significance of that point in so far as the Stone location is concerned?

679. MR SMART: Well, the second point is the reduced construction programme. It's because the – the petitioners have mentioned the use of Aldersley Rough facility as a

maintenance depot once the line's open. But of course, when the depot is used as a railhead for construction it is better to have that at a midpoint because you can go south to do fit out and north to do fit out. And where it is located – Aldersley Rough is located, which is north of our first of the twin tunnels, you've got some hard spots along the route where construction could take longer and therefore the ability to travel up and down the route to fit out the railway could be impeded by significant civil engineering works.

680. MR MOULD QC (DfT): So, that's the location between the two tunnels?

681. MR SMART: Between Whitmore and Madeley, yes.

682. MR MOULD QC (DfT): I see. Yes. Okay. Can we then please turn from that slide to P45(1)? I'm so sorry. I don't mean that. Can we turn from that slide to A43(8)? This is the petitioners' variation on the Aldersley Rough proposal that was published as part of our appraisal back in November last year. Yes?

683. MR SMART: Yes. This is not our interpretation of how we would make Aldersley Rough.

684. MR MOULD QC (DfT): This is the petitioner's slides?

685. MR SMART: Yes.

686. MR MOULD QC (DfT): And we see that a key difference here is, as was explained I think by the last witness, is that the petitioners have assumed a chord connecting during the construction phase of the railhead and during the operational phase of the maintenance depot connecting the depot on to the West Coast Main Line. Do you see that chord?

687. MR SMART: Yes, I do.

688. MR MOULD QC (DfT): During the construction phase, if we work on the basis that the number of trains that would need to get in and out of the railhead during construction was comparable you gave for Stone – that is to say seven a day?

689. MR SMART: Yes.

690. MR MOULD QC (DfT): The West Coast Main Line at that point consists of four tracks, doesn't it?

691. MR SMART: It does.

692. MR MOULD QC (DfT): And a chord which is going – placed in that location – would that go on to the slow lines or the fast lines?

693. MR SMART: Those chords would go onto the fast lines.

694. MR MOULD QC (DfT): And how busy are the fast lines in the West Coast Main Line in this location?

695. MR SMART: They are very busy.

696. MR MOULD QC (DfT): Before HS2 comes into operation.

697. MR SMART: They are very busy. Network Rail wouldn't allow us to operate on their fast lines which would mean we would have to do a ladder – more work – to then cross from where we could get on to the fast lines on to the slow lines, which is even more cost, more possessions. And I would doubt Network Rail would let us connect in their fast lines, even if we were going to get across on to the slow lines.

698. MR MOULD QC (DfT): Do you consider, please, the comment on this – give the Committee your view as to whether or not a construction railhead needing to accommodate the in and out movement of up to seven supply trains a day on to the West Coast Main Line via such a chord as we see there, whether you think that is a realistic proposition?

699. MR SMART: It's not a realistic possibility because the chord would have to be longer because the turnouts – the points if you will, Chairman, have to be located on a certain gradient, a very low gradient, and the speed. So, that chord would have to be a lot longer than shown by the petitioners. And there's a seven metre fall across there. Irrespective of Network Rail being able to let us do that – which they wouldn't – there'd still have to be a much greater construction than the petitioner shows.

700. MR MOULD QC (DfT): Just help me with this, if that is right, I assume from that you can't support –

701. MR SMART: I can't support that.

702. MR MOULD QC (DfT): – this as a construction railhead? What is the inescapable consequence in terms of construction HS2 whilst taking advantage of rail based delivery in operation?

703. MR SMART: Well, without that, we would be restricted as to how we would access the depot for our fit out, which is our most critical period for being able to connect our depot to the national rail network. So, we would have to implement what is our interpretation of the scheme, which is to have a northern connection on the Madeley chord.

704. MR MOULD QC (DfT): If you're right, and the scenario is that this is not an acceptable location for a construction railhead, what's the consequence for that in terms of whether it is an acceptable location of a maintenance base?

705. MR SMART: Well, the acceptable location for a maintenance base – we have still got a lot more infrastructure to put in. I don't know how much time we've got, but there are some restrictions about how we would be able to enter that depot because we'd have to go up the old railway. And there are some limitations on the switches and crossings in this area which means that we'd have to do another head shunt to move around in the depot. We've got head shunts on our depot as well but there'd be an additional head shunt here. So, it is sub-optimal as a maintenance depot irrespective of its sub-optimality as a railhead.

706. MR MOULD QC (DfT): Can we just put up then, please, P45(1)? That's the petitioner's proposition. Let's just look at the option that we published and explained to the petitioners last November.

707. MR SMART: Yes.

708. MR MOULD QC (DfT): And we can see the key difference between the proposition we were looking at is that there's no chord joining the railhead during construction and the maintenance base during operation, taking trains to and from the depot via the West Coast Main Line fast lines?

709. MR SMART: That's correct.

710. MR MOULD QC (DfT): But there is the reinstatement of a length of the out of use railway – which is being pointed out now – and then a chord and then a reinstatement of the Madeley chord at this point – that's being pointed out now. What's the purpose of that part of our option please, Mr Smart?

711. MR SMART: The Madeley chord?

712. MR MOULD QC (DfT): Yes.

713. MR SMART: The Madeley chord is to allow us to bring trains from the north, which would travel down here into a head shunt and then into the depot. That head shunt also serves trains coming from the south – this is because they're on the slow lines – the same, into that head shunt and then into the depot. Now, we wouldn't have to do the head shunts in that way if we had a siding on what is a much more or a less busy railway, which is the railway that we're proposing to use.

714. MR MOULD QC (DfT): Are you talking about Stone?

715. MR SMART: I'm talking about Stone – rather than of course, this is all on the West Coast Main Line.

716. MR MOULD QC (DfT): Right. That's our – now Mr – I forget his name, the final witness –

717. MR SMART: Parkin.

718. MR MOULD QC (DfT): Parkin – I do apologise – Mr Parkin suggested, asserted, that this design was work in progress and that there should be opportunities to improve upon it. Yes? On that particular point, that is to say getting access during construction in particular but also in operation – getting access from the depot on to the West Coast Main Line – are you able to say whether you think there is any realistic improvement that is likely to come forward over what we see on this screen in front of us?

719. MR SMART: No. This would be the scheme that we would have to implement.

720. MR MOULD QC (DfT): Thank you. And why, whilst we're here, why is it necessary to have this chord in the south eastern quadrant which as Mr Parkin rightly said cuts into Whitmore Wood and also requires a deeper retaining wall at that section

of the road? What is the need for that?

721. MR SMART: That is to access our railway when it is operating as its maintenance base. That is our way on to our railway. To go south, we can go straight via our switches and crossings across and south. But to go north, we would have to come into the head shunt here – which was referred to by Mr Gould – and then go north. And you've got to remember, the falls across this whole section of where we'll be accessing the depot and coming out are about 17 metres. So, there's quite a lot of engineering that would have to be done. I take the point the petitioners made about Stone. But, you know, there's a lot that has to enable this to operate in its railhead and depot mode.

722. MR MOULD QC (DfT): Thank you. Now, if we can come back please –

723. MR MARTIN: Chair?

724. THE CHAIR: Sandy?

725. MR MARTIN: On this map, the two things that did occur to me – first of all, the crossing of the Stoke to Market Drayton railway over the West Coast Main Line is not actually perpendicular. So, any possible chord between West Coast Main Line and Stoke to Market Drayton on the north side in order to have a reasonable radius would have to be further out from the junction than on one of the – you see what I'm saying. Yes?

726. MR SMART: Yes.

727. MR MARTIN: You're doing a turn of more than 90 degrees. So, it would be, in fact, it's more than 270 degrees. And the second point is presumably the bridge, if you were going to do this, you would need to rebuild the bridge over the West Coast Main Line before you could build the depot in which the materials for re-building the bridge were going to be put.

728. MR SMART: We'd have to rebuild that bridge and two-track it, and that is if you look at our costs, we've included the possession cost in our costs for doing that. If you look at the note, what isn't in our costs is the possession cost necessarily to make the connections on to the West Coast Main Line because that is a major cost in terms of the

signalling or possessions for signalling alterations and for clearly the turnouts that would be required. And furthermore, the petitioners' alternative scheme from what I can see of it – although it's not a worked up scheme – our connection does not interfere with any of the signalling, masts and gantries. From what I can see of the petitioner's slide where they – in order to get around this head shunt – do a much wider curve that comes out around and up would have more of an impact on the signalling of the West Coast Main Line and coming off in the way we've shown. So, in the round, I'm saying this is completely sub-optimal but if you have to make it work, this is the sort of scheme you would have to do.

729. MR MARTIN: Yes.

730. MR MOULD QC (DfT): Can we please put up A35(7)? This is the paragraph from Mr Gould's statement which provides the assumption that he has made which leads him to conclude that the operation of a maintenance base at Stone would create undesirable disruption of passenger services including the hourly HS2 service to Stoke and Macclesfield that is planned to run from 2027.

731. MR SMART: Yes.

732. MR MOULD QC (DfT): Yes? Now just look at 4.4.7 please? The assumption on which he bases that criticism is this. He assumes that the operational – the maintenance base from 2027 onwards, forever more, would require at least three trains per night to supply HS2's maintenance needs.

733. MR SMART: Yes.

734. MR MOULD QC (DfT): Is that correct?

735. MR SMART: No. It might be correct in Mr Gould's mind. But certainly not correct in terms of how you would maintain the railway. Once we've got the depot open we have two works trains per night going out to work on the line from our depot. After that it becomes a question of, what do you need to bring in to our depot in order to maintain our railway? Now, once you've constructed the railway there's not a lot you need to do to bring in to maintain it. Now, the things that come in are the long things like long welded rail and ballast. It is not clear whether we are going to have ballast on

Phase 2B or not.

736. MR MOULD QC (DfT): Assume that you are.

737. MR SMART: And assuming that we are, then we would have to bring in ballast trains during construction. And I've talked about the seven-train pass per day, which we can easily accommodate. Now, if you had ballast to maintain, then simply you are doing tamping – which is – the ballast gets saggy and sinks – and tampers go out and they re-settle the line back to the right level. Now, tampers on HS1, we only tamped once a year. We may well – it's not totally clear – but we may well have our own tampers bought for HS2 purposes, in which case, they don't need to be brought in for the railway. They will already be on it based at our depots. So, then we would need to bring in potentially the high ballast output train that was talked about and the petitioners said we couldn't get in – of course we can. Would we design a railway that we can't maintain? But that is not a regular occurrence. HS1 have not had to replace their ballast yet. They are planning to do so over the coming years. But once a high output ballast train comes in, you can bring it. It's in once. And then it's a matter of how you feed it and how you use it. So, there's not a high use of coming off the national rail network into a maintenance depot for the maintenance purposes.

738. THE CHAIR: Sheryll?

739. MRS MURRAY: How long has HS1 been in place? How many years, remind me?

740. MR SMART: HS1, section 1, which was the first 70 kilometres, was opened in 2003 and the full line, which is mostly the tunnel section and then through to St Pancras, was opened in 2007.

741. MRS MURRAY: So, the oldest parts you haven't need to replace the ballast – it's been in place for 25 years? No, 15.

742. MR SMART: Fifteen.

743. MR SMART: Now, there was talk about, 'Well, you don't need to do anything for the first short period of time'. That is what is meant. Once the ballast is in place – and I have to emphasise, we may not have the ballast on Phase 2B – but we allow that

option. So, again, this is not a regular occurrence. You only do tamping and ballast replacement in what's known as a campaign a couple of times a year etc. So, although we allow for the maximum number which might happen in a short period of time, this is not going to be two or three movements every night recurrence. You might have a month in the year where you have two or three trains coming; you might not have anything for six months. So, that is how that works.

744. MR MOULD QC (DfT): What I want to know Mr Smart, if you've finished on that point –

745. MR SMART: Yes.

746. MR MOULD QC (DfT): – is just before we move on to traffic – is in summary, can you say please whether or not you think that one train a night for as long as HS2 – the Y network is in operation – is one train a night a robust and conservative assumption or not?

747. MR SMART: It's a very robust and conservative assumption – even with Phase 2B on ballast, we wouldn't have one train per night every night.

748. MR MOULD QC (DfT): Right. Thank you.

749. THE CHAIR: Bill's got a quick question.

750. MR WIGGIN: Yes, I'm just curious as to why we didn't know about them been taken apart when they arrive, these trains?

751. MR SMART: I believe because the high output ballast train has a front end which it kind of takes out ballast and then the stone – and then replaces it. So, the front end has lots of machinery that has to take it out from between the sleepers and the track. And then, you have new ballast behind it, which then has to be taken along the train and placed in. So, that's why it's – it's potentially the longest piece of kit that you are going to need to use on a ballasted railway, when you do ballast replacement.

752. MR WIGGIN: Okay. But when you park it, as I understand it, that's when you have to take it to pieces, is it?

753. MR SMART: You can just split it in two, quite simply.

754. MR WIGGIN: Just?

755. MR SMART: Well –

756. MR WIGGIN: It's probably not that easy.

757. MR SMART: It decouples. Yes. So, the ballast train section – it's made up of a number of different wagons, it's not like one long, solid –

758. MR WIGGIN: No, but you then have to come to the front and move it to the back?

759. MR SMART: Yes. But you do all that at the depot before you go. Once it's out, it's operating as one train.

760. MR WIGGIN: Okay. Thank you.

761. MRS MURRAY: Just to reassure me, when I come up from Cornwall by train I pass some of the maintenance wagons at various stages and they're not always coupled together. I'm thinking of perhaps Taunton, is it, or Westbury, where you don't actually see them altogether. So, it's quite normal for them to be de-coupled.

762. MR SMART: Absolutely. Absolutely.

763. MRS MURRAY: Thank you.

764. MR MOULD QC (DfT): Thank you. Can we move on please to traffic? And can we put up the histogram, P41(10), please? Mr Smart, the first point is, this is showing our prediction of HGV construction traffic using Yarnfield Lane and passing towards the junction of Yarnfield Lane and the A34 I think?

765. MR SMART: Correct, yes.

766. MR MOULD QC (DfT): And can we just be clear, we can see that the highest peaks of construction traffic predicted on that stretch of the road, which is the stretch that Mr Wilkinson was particularly concerned with, they occur in Phase One?

767. MR SMART: Yes.

768. MR MOULD QC (DfT): Do they relate to any particular activity, please?

769. MR SMART: Yes, this highest peak is when we're creating the M6 slips. And these other peaks relate to the construction activity that happened before the M6 slips are open. So, they're setting up sites and starting construction. But the highest peak is building the slips.

770. MR MOULD QC (DfT): What is the purpose of a railhead, please, for construction? What does it do in relation to road traffic?

771. MR SMART: You mean a road head or a railhead?

772. MR MOULD QC (DfT): Railhead.

773. MR SMART: A railhead – well, at our railhead – the railhead in terms of traffic means that we can bring in material on the road to the railhead and then if we need to take it out by rail we can.

774. MR MOULD QC (DfT): So, it's designed to provide for rail based deliveries rather than road based facilities?

775. MR SMART: A railhead is, yes.

776. MR MOULD QC (DfT): Right. Now, in other words, what you told the Committee is you have to construct the slip roads?

777. MR SMART: Yes.

778. MR MOULD QC (DfT): The purpose of those slip roads is what?

779. MR SMART: The purpose of those slip roads is to take our general – at Stone, this is – you've got to remember the key thing is we're going to have traffic on those slips irrespective of where we have the depot – whether it's Stone or Aldersley Rough. We need to get a lot of earthworks up and down the trace to build the cuttings and then use that if we can in embankments. You heard the petitioners say we're trying to use as much as we can on the railway. Now, in order to do that, we need to move material around. And sometimes we might have to take it – we use the best roads possible. So, we're using the M6 slips at Stone in order to get our haul roads to Stone and then get on

to the M6 via these specially constructed slips rather than use other roads. It is a way in which we can mitigate the traffic impact.

780. MR MOULD QC (DfT): Can we just at P42(3) please? The slip roads – what you've just said – the slip roads whilst in operation provide a direct access for HS2 muck wagons to get on and off the motorway, is that right?

781. MR SMART: Yes, that's right.

782. MR MOULD QC (DfT): Can we just say, you've said there's going to be a haul road along the route of the railway, yes?

783. MR SMART: Correct.

784. MR MOULD QC (DfT): Just spot the slip roads. Yes?

785. MR SMART: Yes

786. MR MOULD QC (DfT): And the haul road is what, going southwards or northwards?

787. MR SMART: The haul roads are coming this way and also can cross across. But there's a number of haul roads coming through here.

788. MR MOULD QC (DfT): Are they coming from all points of the compass or not?

789. MR SMART: Yes, they're coming from this way – well, we heard about the earth moving in here and that goes locally to fill in there, but they're coming most from this way and some local ones that way.

790. MR MOULD QC (DfT): Right. If we didn't have the slip roads, where would those lorries go?

791. MR SMART: Well, they'd have to find another way onto the M6.

792. MR MOULD QC (DfT): Right. And what would that mean?

793. MR SMART: Well, that would mean we would have to be looking at junction 15 or somewhere, or we'd have to use Yarnfield Lane.

794. MR MOULD QC (DfT): Right. So, in the absence of the Stone railhead, do we need the slip roads or not? If you imagine the Stone railhead has gone up to Aldersley Rough?

795. MR SMART: Yes, we need it.

796. MR MOULD QC (DfT): Right, okay. Can we turn please to A40 (17). These are the new emergency, they're called now, but I can't remember what term he used, but these are the slips which now exist at this point and will be retained following the smart motorway and he said it was coming into operation in a couple of years' time?

797. MR SMART: Yes, yes.

798. MR MOULD QC (DfT): And he suggested that they might be used by HS2's muck wagons in the event that we shifted the railhead up to Aldersley Rough. Is that a realistic proposition?

799. MR SMART: Well, our understanding is that the Highways Agency will not let us use those.

800. MR MOULD QC (DfT): Why won't they let us use them?

801. MR SMART: I would imagine it's because of the siting and the fact that we'd have a lot of HGVs that would be coming out onto the road. It's different when you're using emergency access which is very occasional, but we'd have HGVs coming out of there more frequently. If we could use them, there is a possibility we could use these for our works and not have to build the M6 slips where they are.

802. MR MOULD QC (DfT): You anticipated my next question. Had they been available to us, would we have needed to build new slip roads?

803. MR SMART: Could we use these, we would not need to build our M6 slips that's shown on the previous slide.

804. MR MOULD QC (DfT): So just to wrap this point up, whether we have the railhead at Stone or the railhead at Aldersley Rough, will we need to bring traffic down Yarnfield Lane in order to construct slip roads?

805. MR SMART: If we can't use these, yes we would.

806. MR MOULD QC (DfT): Right. Thank you very much. Can we then turn please to –

807. THE CHAIR: Can I just check you're going to finish in the next two or three minutes to give Mr Corner two or three minutes at the end to wrap up for us to be able to finish at 4.55 because we're meeting at five o'clock in private? That's a question to Mr Mould.

808. MR MOULD QC (DfT): Well, I will stop within three minutes; I won't have finished by then but I will stop within three minutes. It's really a question for you, as to whether you feel there are mattes that you need to hear from, from me, in order to enable you to discuss the merits of this petition. If there aren't, if you feel you've got a fairly clear idea of where you're doing already, then obviously, I don't need to say any more.

809. THE CHAIR: I'm pretty clear of the case of the petitioners.

810. MR MOULD QC (DfT): Are you clear about our response to it?

811. THE CHAIR: As clear as I need to be at this juncture and I don't think I'd be any clearer if I listened to another hour, let alone 10 minutes.

812. MR MARTIN: Chair, there are issues that I would actually like to know about.

813. THE CHAIR: Would you like to suspend and then we'll come back, and then rather than meeting in private, we can consider deliberations in public? It's perfectly acceptable?

814. MR MARTIN: Yes.

815. THE CHAIR: We'll do – with petitioners, Mr Corner and Mr Mould, we'll take a bit more time and continue in public. Is that acceptable?

816. MR MOULD QC (DfT): Absolutely.

817. THE CHAIR: How much time are you looking for and I will come to you and Mr Corner and ask, and I'm going to be strict with time because otherwise it just goes on

and on and on.

818. MR MOULD QC (DfT): Well yes if I try and wrap up within 10 minutes.

819. THE CHAIR: Great, so you've got until five o'clock. Mr Corner, how long will you take to wrap up? Ten minutes?

820. MR CORNER: So I'll take as long as you give me, and that's a serious answer. I recognise you've had a long day and I understand that. I was just going to ask; there are a lot of points, or a number of points being raised now in evidence, very quickly, which are about my witness's evidence, they weren't put to my witnesses, and I am just wondering, rather than take up your time now, would it be possible for the petitioners to put in a short written response to the points that have been made? Otherwise we really – they weren't put to my witnesses and my witnesses haven't had the opportunity to deal with these.

821. THE CHAIR: Originally we were going to meet in private to consider some of these issues straight away. Whilst we can meet in private and talk about them in generality, it may make sense to give you both until Monday when we next sit, to provide us with some more information so we can consider everything as issues of cost from Mr Mould, from yourself, Mr Corner, you're saying there's a number of other issues. That feels better, and giving Mr Mould now until five o'clock, which is 11 minutes, not 10, giving yourself 10 and then allowing you to write to us with any remaining points in time for our next meeting.

822. MR CORNER: Thank you.

823. THE CHAIR: I'm going to do that then. Mr Mould, over to you. You've got your 10 minutes now.

824. MR WIGGIN: Shall we ask you some questions to keep you going or do you want to go through your spiel?

825. MR MOULD QC (DfT): No I think I know where I'm going, thank you. Mr Smart, can we please just remind ourselves of one or two other points that Mr Wilkinson raised; the first was, he said that he was concerned about the suitability of Yarnfield Lane to accommodate heavy goods vehicles and construction traffic.

826. MR SMART: Yes.

827. MR MOULD QC (DfT): We know that Staffordshire is the local highway authority for that road; what is your understanding of their position, do they oppose the location of the railhead at Stone on the grounds that that particular construction route is unsatisfactory?

828. MR SMART: Not to my knowledge, and as maybe the petitioners are aware, we are looking to do widening of that Yarnfield Lane down to access our site. We are looking to widen it to six metres, and also include passing bays, and what I would say, and I understand Mr Wilkinson's raised some concerns, but anything we do on the highways has to be with the approval of the Highways Authority and that includes road safety audits, so we can't do anything that would be considered unsafe by the Highways Authority or indeed would not pass to acceptable level, any road safety order.

829. MR MOULD QC (DfT): The Committee will be aware, I'm sure, that amongst the many points that Staffordshire County Council as highway authority have raised in their petition, is the need for some improvement to the junction of the A34 in Yarnfield Lane and they suggest that signalisation would be an appropriate improvement. What's the project's position in terms of its consideration of that?

830. MR SMART: As we have always done, but working with the highways authorities, if there are schemes that can be put forward which improve the road, we implement them. Can I just say that looking at the queuing situation that's been put forward, it is not in the interests of HS2 to have any of our vehicles standing in queues because it delays our programme, it costs and we can, and we looked at AM peaks flows and things, and therefore we can, as far as possible, organise some of our key movements to not coincide with some of the busier times. It's not in our interests having our construction wagons sitting in traffic.

831. MR MOULD QC (DfT): Mr Wilkinson said that he had criticisms of the traffic impact assessment.

832. MR SMART: Yes.

833. MR MOULD QC (DfT): The surveys that had been carried out, the base flows

and so forth and so on. Do you know whether Staffordshire County Council as local highway authority have raised, in their petition, the complaint that our traffic impact assessment is not fit for purpose?

834. MR SMART: No, I don't believe they have.

835. MR MOULD QC (DfT): Thank you very much. And if we look in the environmental statement, volume 3, give the Committee the references in writing, do we find reference to the performance of the highway through Stone during the period when HS2 construction traffic will run from it?

836. MR SMART: Yes, we do.

837. MR MOULD QC (DfT): And does it identify a number of significant adverse effects, corresponding broadly to the concerns that Mr Wilkinson has raised?

838. MR SMART: Yes.

839. MR MOULD QC (DfT): Thank you.

840. MR MARTIN: Chair, before we move on from that point, just very briefly, Mr Smart; if the Stone facility were not built, would that make a material difference to the traffic impact of the HS2 construction on the A34?

841. MR SMART: It's a very good question Mr Martin. The only real difference it would make is we would not need to have the traffic that actually builds the depot building and the depot itself, and that is a relatively insignificant amount of traffic compared to the fact that we're using that as our key way of accessing the best road available to us, which is the M6.

842. MR MARTIN: So the vast majority of the local additional traffic, as a result of HS2, would be there anyway, whether the Stone facility were built?

843. MR SMART: Absolutely right.

844. MR MARTIN: Thank you.

845. MR MOULD QC (DfT): Just to wrap that point up, I've put the histogram back up because that, Mr Smart help us, does that give us a broad overview, allowing for the

fact that we know that the peaks there are associated with constructing the slips, does that give us a broad overview of the duration and scale of the construction traffic needing to set up the railhead?

846. MR SMART: That does, and I'm sure it is not lost on the Committee that the sooner we can get the M6 slips in, the better it is for alleviating any traffic issues and we are working and talking to Staffordshire about how we can achieve that.

847. MR MOULD QC (DfT): Right. Now, my final series of points, I hope, if we can put up the SIFT report, it's R2. So you asked me some questions about what information was available. This is a report that was published in full in November of last year, Mr Smart?

848. MR SMART: Yes.

849. MR MOULD QC (DfT): And if we turn please, to R2 (5). Well see that it included a number of appendices, and so you see appendix G, Aldersley Rough railhead, IMB-R layout?

850. MR SMART: Yes.

851. MR MOULD QC (DfT): Do you see CH62 maintenance aspects of Phase 2A railhead, IMB-R SIFT?

852. MR SMART: Yes.

853. MR MOULD QC (DfT): And do you see appendix I, Aldersley Rough, Design Integration Process?

854. MR SMART: Yes.

855. MR MOULD QC (DfT): Can we please turn to R2(115)? Appendix G. How does this compare to the Aldersley Rough proposition that is shown in our exhibits before the Committee? Has it changed significantly since last time?

856. MR SMART: No it hasn't.

857. MR MOULD QC (DfT): Right, thank you. Turning to R2(117). We see the maintenance aspects document. Can we turn please to R2(121). You see 111, 'A

strategic SIFT is to be undertaken to compare three potential locations for maintenance'?

858. MR SMART: Yes.

859. MR MOULD QC (DfT): And if we turn to R2 (122), 1.3.131, can you please just identify the three potential locations that were there, sifted.

860. MR SMART: Stone, Aldersley Rough and Crewe Basford Hall.

861. MR MOULD QC (DfT): Thank you. And can you turn then please to R2 (143). A technical note on the Aldersley Rough railhead and maintenance depot proposition. If we turn to 146. You see the design requirements are set out and I haven't got time, obviously, to go through this in detail. R2(149), option 5; is this part of a process of seeking to optimise that proposition in order to provide the petitioners with the best chance, as it were, to persuade that this is the right place –

862. MR SMART: Yes, exactly what we did, yes.

863. MR MOULD QC (DfT): And that section, has that – and no doubt other functions to it at some point?

864. MR SMART: Yes.

865. MR MOULD QC (DfT): Right okay. And then if we turn back finally to R6. You see 115, 'These assessments were undertaken with the available design information at that point in time. As the design has been continuously progressing through this time, it's considered pertinent to retest the optimum selection based on the latest base line design, which is the one submitted for the hybrid Bill, CP3 design'.

866. MR SMART: Correct.

867. MR MOULD QC (DfT): I won't trouble the Committee with the detail of the report, they will have seen already that it tests a number of options, including option A95*, the railhead and the Aldersley Rough, without the maintenance loops against Stone as the base case. Mr Smart, complaint that no further work has been done in relation to this report from the witnesses, could you comment please, finally, to the Committee, given the conclusions that this report drew about the comparative

performance as a railhead during construction and a maintenance place during operation of Aldersley Rough against Stone, is it your view that any further work was required and if so, what was it?

868. MR SMART: Well there isn't any further work required on what we've done, because we have enough to understand how we can make connections and how we will operate it.

869. MR MOULD QC (DfT): Thank you

870. THE CHAIR: Thank you very much Mr Smart, thank you Mr Mould. I've taken advice from the clerk and actually, if there are further bits of information, if you could provide them by the close of business, Monday, that gives us enough time to consider them on various other timescales, if you could that in writing to the clerk. Mr Corner, you do have your 10 minutes. I will cut you off after 10 minutes, so the time is for you to balance and use and it will be your error if I end up having to cut you off, not mine, out of rudeness.

Submissions by Mr Corner

871. MR CORNER: Yes. Very well, sir, thank you very much. If I may, we will largely put any points that we have to make in relation to today's hearing and in response to the evidence that's just been given, in writing, because there plainly isn't time now. I take it that you will expect that our written material will include any response we have to what we've just heard, and that's very kind of you.

872. But if I could just, in my own brief closing, just go back to the summary I put in at the beginning and just see where we're up to. First, we said, a railhead, IMB-R at Stone will restrict Staffordshire's ability to connect into the national rail network and the basis of that is capacity constraints at Stone. The fact is, we haven't heard any satisfactory evidence to show that Stone will have sufficient night time capacity.

873. What has been said, and we may come back to this in what we say in writing on Monday, what has been said is, it'll be one vehicle, it'll be one train per night. But on the basis of what is that, we ask rhetorically, and also we know that the loading that this line will have to take is very substantial and more than has been taken before, so how

can they know.

874. So, we say, the best answer is to go for Aldersey's Rough where there nobody alleges that there is any such capacity constraint at night for the IMB-R, go for that. When you know that the consequence of the Stone IMB-R, having insufficient capacity, is very likely loss of really important services, for example to Stafford; that really matters. So that's all I want to say on that.

875. Secondly, traffic points; the unacceptable traffic problems. In my submission, Mr Wilkinson's evidence if uncontested, it's undisputed on those matters. It's plain that there will be very, very serious traffic congestion problems on the road networks surrounding the Stone facility. We don't know the extent to which Staffordshire County Council has really considered the points he was making because what he says in his evidence, and it's not been challenged, is that HS2's assessments have been simply wrong in point after point after point. That's all I say about that.

876. Then, in relation to Aldersey's Rough, we know that Aldersey's Rough is more centrally located for Phases 2A and 2B, that's a major advantage, that's not been contested in what we've just heard. We know that provision of Aldersey's Rough will involve reactivating part of the old line into Newcastle. That's got to be a good thing because it's a potential catalyst for reconnection.

877. There's obviously debate about the particular design of the railhead and IMB-R that would go at Aldersey's Rough and we'll have to respond to what's been said just now in writing. But none of that goes to the principle of whether it's feasible and reasonable and appropriate to put the facility at Aldersey's Rough. It's simply a debate about the details of exactly what is provided.

878. And finally, cost. If I may so suggest, the petitioners' evidence on cost has been wholly inadequate. We know that they said in the SIFT report, it's at paragraph 442 from memory, that the Pipe Ridware maintenance loops were required, if Aldersey's Rough were chosen. That's £40 million. Today, we know that they're no longer saying that. And in relation to the rest of their cost claims that Aldersey's Rough would cost £38 million more, we've no detail at all. There's nothing that we can assess; how can that possibly be satisfactory?

879. Thank you very much indeed. So in light of all those points, we suggest that proper consideration hasn't been given to Aldersey's Rough, but it should be the preferred alternative.

880. THE CHAIR: Thank you very much, and thank you for a really helpful summary which pulled together the number of items.

881. MR CORNER: You're welcome.

882. THE CHAIR: Thank you very much. I would ask you to leave the Committee room relatively promptly because we are going to sit in private, but thank you very much.

883. MR CORNER: Thank you all for you attention.