two years had been trying to talk in order to understand it. Because we tried to do the job properly. And, you know, we've found it very difficult when all we get is answers and we haven't been allowed to know the derivation of your figures and you being prepared to go through our figures and to understand where the differences are, because, if you had, we wouldn't be here discussing, actually, these figures.

233. MR SMART: I wasn't part of the discussions. I can only comment that I believe that we had, you obviously don't have that view and I can't really comment any further on that.

234. MS WHARF: Okay. Thank you.

235. CHAIR: Mr Strachan? Is there anything else?

236. MR STRACHAN QC (DfT): No. The latest document you were handing – the Beckton tunnel, Mr Smart, those behind me have confirmed, but, I don't know if you have a view on this, that the averages of 83 metres per week are taken from when the tunnel boring machine was active from July 2012 to December 2013, excluding the time it took to set up the tunnel boring machine through the shaft. So, this is boring time. Sorry, to use that expression. Boring time, from which there's a hard average derived across the various figures. Does that reflect your understanding?

237. MR SMART: It does. But, I was faced with this committee and I am on record, so, I wouldn't want to say something that I wasn't too sure about, without caveating it, but, what I would say is that it just shows that even with. Yes. It is my understanding.

238. CHAIR: Okay. Thank you. Another witness?

239. MR MOULD QC (DfT): Could I ask Mr Miller briefly to come in, if I may?

240. CHAIR: Thank you, Mr Smart. Good afternoon.

241. MR MOULD QC (DfT): Mr Miller, you gave evidence in response to the Chiltern Councils and their associates on 15 July at paragraphs 133 to 314 of the morning transcript. That sets out the detail of your evidence in relation to the comparative environmental performance of the various options that are being considered by the committee. But just very briefly, if you would, sum up in a few sentences what

has been our response during the gestation of the project till now to the effects of building this railway through the Chilterns?

242. MR MILLER: I think it's important to just remind everyone that transiting through the Chilterns has been on our minds since the earliest days of the development of High Speed 2. So, we've kept, way back in 2010, 2011 when we were doing the route 'optioneering' work in consultation, we endeavoured to keep to the route low in the landscape; that followed the decision-making that was taken on High Speed 1 in the North Downs Area of Outstanding Natural Beauty, where the route passed, the Channel Tunnel Rail Link passed through that landscape. So, we took that on board and put that into our thinking for the design development.

243. At the time, we had much less tunnel in the Chilterns. That was largely an engineering response, I suppose. We had a tunnel portal just north of Amersham, on a slightly different horizontal alignment. But, when we went into consultation, we had green tunnels at South Heath and Wendover. So, there's a number of cuttings, and we also had the viaducts at Wendover Dean and Small Dean. Through time that changed and we listened to consultation and we responded, in the 2012 decisions and next steps, following consultation, extended the tunnels. There was a length in tunnel on a different horizontal alignment to avoid chalk fissures in the ground which put us up to Mantle's Wood, the portal at Mantle's Wood, where we are now. Lengthen tunnel at South Heath to take in the community effects. And lengthen tunnel at Wendover to take in the community effects there. I think it's fair to say that through the community forum work, I think you've heard a little bit about that this week, that, although there has been disagreement with various parties about a variety of issues, we have continued to look at the measures and the benefits that arise from tunnelling through the Chilterns. And I think that shows a continued effort to try and provide some additional protection in the Chilterns where that is practicable.

244. Of course, then we produced the bill design and during that time we also prepared plans for additional mitigation and compensation measures and for environment; that goes to thinking through the management of materials on the site, whether we are going to put it in false cuttings, planting, barriers, and that sort of thing. And just recently, we've been looking at the aspects of design in the scheme. And I think last week I explained to you that it each stage, as we're getting more and more detailed, we're

applying more detailed policies and practice. So, we applied a code of construction practice, we're getting our design measures sorted out for the vision for the Chilterns, and we've set out landscape plans. And what I said last week was that those landscape plans are in outline. And I explained that there are measured, backstop measures, within the bill, that set up a planning regime, Schedule 16 of the bill, and detailed matters have come forward in due course and we've set out an idea of the vision of that mitigation in a document which follows on from the landscape design approach statement that we talked about in the Colne Valley. So, there's been a lot going on.

245. And what I would say is that with the bill design, the environmental mitigation, environmental considerations, is inherent within our thinking. It's inherent within our designs. And where we our now is examining the potential tunnel options which others have put forward to us.

246. MR MOULD QC (DfT): The document you've just referred to was a document that the committee has seen on two or three occasions over the course of the hearings. And I've put it up on the screen again. And, as you explained last week, it shows some flexibility, it assumes some flexibility, within the red line, and the possibility that there may be room for agreement as it moves through its detailed design stage. Do you remember that?

247. MR MILLER: Yes. We've heard some evidence from the Chilterns Conservation Board about their concerns here. And, in my response, what we're saying through this document is, there is more to come. That, in my mind, relates back, directly back, to the environmental minimum requirements. That's, to remind everyone, that's the undertaking that the Secretary of State has given before Parliament and this committee that the environmental effects of the scheme will be no greater than that reported in the environmental statement.

248. And the second rule of the game is to consider those adverse effects, which are still residual to the scheme and to seek to further reduce those. And so, you can see our policies being developed. Noise, for example, is a good one. Where we are looking at lowest adverse effect level, and we continue to investigate means in the detailed design, or we will continue to seek a means in the detailed design, to further reduce the noise effects. And we've explained that to the committee, I think Mr Thornleigh-Taylor has

explained that, as well. And further, in here, I've given some evidence to try and give some additional shape to the pretty much two dimensional drawings that we have in the CTO6 drawings in the environmental statement, which try and describe the environmental mitigation that we think is appropriate to address the effects. What this does is really give a better indication of what that might actually look like, rather than that two dimensional plan.

249. MR MOULD QC (DfT): Which is one point I'd like you to deal with before we turn to focus specifically on today, and that is the suggestion in closing submissions yesterday evening that this document implied a need for substantial additional expenditure over and above that which had been included within the budget for the mitigated bill railway. Is that actually correct?

250. MR MILLER: No. What this is describing is the mitigation and the compensation within our plan; what comes into the red line outline of the bill drawings that have been submitted to accompany the draft legislation. So, it's all within and it's all been costed in the cost build up.

251. MR MOULD QC (DfT): Now, we move then briefly to today's petition, which is seeking an extension of the tunnel from Mantle's Wood westwards. The key perspective that has emerged, I think, from the proceedings that we've had hitherto on proposals for extending the Chiltern tunnel to whatever westerly point has been proposed, is the need to consider the additional cost of what is proposed relative to the additional environmental benefits that would result from spending that money. Yes?

252. MR MILLER: That's right. And that's always been the case when we've looked at the tunnelling options over the last few years.

253. MR MOULD QC (DfT): So, what I would like you to do, please, is just to take this in two stages. Assume that we bore beyond Mantle's Wood, and the next point that is being considered, debated, in the material that is before the committee today, is at a point which broadly coincides with the currently proposed western portal of the South Heath green tunnel. Now, we know that the expenditure that we estimate that we would need to make in order to bore the tunnel boring machines to that point is, broadly speaking, an additional 25 million pounds. What environmental gain do you get for that money?

254. MR MILLER: I think I would draw the committee's attention to the day we went out on the site visit, and we walked through Mantle's Wood, and it's clear that there is a benefit to Mantle's Wood. We would avoid it. We would also avoid the mitigation and compensation measures that we have provided in the bill scheme. So, that certainly natural ancient woodland would be saved as a result. And there is a bit of further woodland just in the Hyde End area, as well, that would be saved. As we get into Hyde End, I think we heard about, again, once again, the listed buildings along Hyde Lane that we all saw. Those would be recovered from the scheme, I suppose. And they wouldn't be affected. They wouldn't have their settings affected and what direct affects we have, that would be avoided.

255. Clearly, there are the views resulting from the higher ground from the dry valleys and looking across at the long valley of the River Misbourne, and I think the petitioners have said today that in their diagram that there are footpaths and roads. And we have no quarrel with that. There will be benefits accruing as a result. The effect at South Heath, we believe remains broadly the same, Although, I understand the effects would be different during construction. It's a different construction technique. And it's less intrusive, I suppose, in the sense that we don't have to cut the ground out and then put the ground back over, a top of a tunnelled way.

256. I think there is a little bit of a difference at the northern portal. Whilst it's in a similar sort of position to that which the northern portal is on the cut and cover scheme, the route would be lower in bored tunnel. You have to get a certain amount of coverage, as I understand it, above the bored tunnels. So, going north from that tunnel portal, you'll get a railway which is a further seven metres deep into the ground. And you'll remember that I described the way that the railway was in a cutting, in the, sort of, middle ground between the lower part of the long valley, the A413 Misbourne, to the higher Potter Row kind of area. That route, which is just on the plateau, kind of, edge. So, we're tucked in there. We would be further tucked into the landscape going further north there. So, right within those dry valleys which are perpendicular to the main valley across the Chilterns in this area. So, seven metres down.

257. Now, we haven't done it full analysis on it, but, my take on that would be that going along, and just beyond, Potter Row, that you would have further noise attenuation. And because you're so much further down, you'd have a lot more visual attenuation.

But, it's a little bit more of a gain over what you have already with the bill scheme. So, that's what you get with the, I suppose, the cheapest and I guess the shortest of the tunnel extensions that we've put forward here today.

258. MR MOULD QC (DfT): Just a couple of slides. One on the screen in front of us, P7416(1), four areas of ancient woodland directly affected by the bill scheme. I think on the basis of the evidence you've just given, three of those would cease to be affected?

259. MR MILLER: Yes. Sorry, you reminded me, Sibley's Copse would actually benefit from that bored tunnel. And we went to the rear of that properties and we met several people there, when we did the visit. So, that would be retained.

260. MR MOULD QC (DfT): And just thinking forward, Jones Hill Wood lies beyond the northern portal of the C5 scheme, doesn't it?

261. MR MILLER: Yes. That's right. Once you get into the portal of an additional tunnel, then the effects are pretty much the same as the bill scheme, with the exception of the note I've just made, that you're further down for a greater distance and I think that you would, that would provide a further noise benefit for those properties just on the higher ground at Potters Row.

262. SIR PETER BOTTOMLEY: Just to assist us, I've got failing eyesight. Could someone please put their finger on where the green tunnel is? Is it just north of Sibley's Copse?

263. MR MILLER: There. I mean, you can see. If you blew it up a bit.

264. SIR PETER BOTTOMLEY: It's just north of the Copse?

265. MR MILLER: Yes. You can just see. Yes. You can just see the dotted line. Can you see that?

266. SIR PETER BOTTOMLEY: Yes.

267. MR MILLER: So, that's about it.

268. SIR PETER BOTTOMLEY: And that's the green tunnel?

269. MR MILLER: Yes. This shorter tunnel, which we've put forward, which is the,

sort of, lowest cost associated with it, would come out at that point, albeit, that the vertical alignment would be lower, a further seven metres lower.

270. SIR PETER BOTTOMLEY: Going through, it would go underneath the Copse or would it go through it?

271. MR MILLER: Go underneath the Copse.

272. SIR PETER BOTTOMLEY: In construction, would you lose the Copse?

273. MR MILLER: No. I don't think so.

274. SIR PETER BOTTOMLEY: You can't go beyond it?

275. MR MILLER: No. Because you're a full, I think you are at least a full tunnel diameter above the top of the diameter of the bored tunnel. So, you've got a double depth.

276. SIR PETER BOTTOMLEY: So, the shortest contemplated tunnel would save virtually all the ancient woodland?

277. MR MILLER: Yes. It would nick, Jones Hill Wood, you don't get any benefit from. No.

278. SIR PETER BOTTOMLEY: No.

279. MR MOULD QC (DfT): Yes, and the C5 tunnel wouldn't change that?

280. MR MILLER: Yes.

281. MR MOULD QC (DfT): Can we just turn to P7433(1)? Just to see what the noise position is. Under the bill scheme. For Potter Row. So, we have the −

282. MR MILLER: I think it is the next drawing.

283. MR MOULD QC (DfT): That's the one. So, if we assume that the tunnel is coming out of the bore at the point where we can see the portal, the area that's just broadly where the arrow's pointing. We can see the spread of noise within the lower contour. And the properties on Potter Row, of course, Potter Row is running along the

eastern side of the trace here, isn't it?

284. MR MILLER: Yes.

285. MR MOULD QC (DfT): And what you say, we haven't done the detailed work, but what would you expect to see through the effect of the railway coming up from the portal at a lower point in the landscape here?

286. MR MILLER: A seven metre drop of the vertical alignment here, it will tail out as you go further north. But, the benefit, as I understand it, is about seven metres where you are at the tunnel portal. You're that much lower in the landscape. So, you might have a slightly wider cutting, or you might have to come to some sort of retained cutting, I'm not quite sure, with that sort of depth. But, the wheel rail interface, where the main noise is coming from, that is going to be much lower and down in the ground. And so what I would expect is that these contours, the yellow contours, and even the slightly red contour, would come in on this diagram. So, that would start bringing that away from Potters Row. This is the road up here, which is on that plateau, as others have described it.

287. MR MOULD QC (DfT): And then if we turn to P7433(2), 7433(2)? Just to show the, here is the lower contour itself. And you can see that the number of properties shown as experiencing adverse changes in noise along Potter Row, again, we haven't done the detailed work, but, any thoughts on what we might expect?

288. MR MILLER: Well, again, I think that contour would come in, because you're dropping the railway down, almost the whole depth of a train, plus some. So, even including the electrical pantograph, you've got that whole depth once again down in the ground. So, I would expect that sort of lozenge that you have with the lowest adverse effect level, that grey lozenge there, to shrink and be much closer in to the railway edge.

289. MR MOULD QC (DfT): And then if we just move forward then to consider what the position would be with the C5. With C5, on our estimate, you spend approximately another 50 million pounds, on top of the 25.

290. MR MILLER: Yes.

291. MR MOULD QC (DfT): And you get the railway from the northern portal of the

green tunnel at South Heath. You get it along to Leather Lane. So, you can see here, here's the northern portal, the green tunnel, and the railway moves along to Leather Lane, which is here.

292. MR MILLER: Yes.

293. MR MOULD QC (DfT): What are your thoughts on, what is the further environmental gain that you say would accrue from that?

294. MR MILLER: I think, we're just talking about the noise, I think you would clearly remove the noise issue entirely here by continuing that bored tunnel. What I'm not sure of exactly what you would get just beyond. You're probably, you're bound to be a bit lower there, so, you might get something a bit lower going further north. But, you will probably simplify the road rearrangements here because you're not having to deal with those and I think that it's pretty obvious that you'd gain some land back, because you're boring underneath it. And I think you avoid a demolition at Mulberry, springs to mind, as a demolition, just in here, I think. That would be recovered as a result of that swing.

295. MR MOULD QC (DfT): Anything else you think that would be a significant change for the better in terms of the environmental?

296. MR MILLER: No. I mean I think you get, you're gaining all of the time when you start bringing these tunnels forward. And the noise you get from the shorter one at Potters Row, the noise obviously goes away. But, I think it's a marginal kind of thing that's going on there. A marginal increase in benefits, I suppose. But, clearly you get a bit of land back there. And you do simplify things a bit.

297. MR MOULD QC (DfT): And then, just to complete the picture, if we turn to P7425(3)? We know that by moving the portal to the end of the AONB, we spend possibly up to 485 million, possibly as low as 250 million, depending on whose estimate you take. With the Leather Lane, if we assume C5, do you expect to see any significant change in the railway at this point? Would we still have the Wendover Dean viaduct with C5?

298. MR MILLER: I suspect the vertical alignment would have probably, although it's

lower, it will probably have got back on to a similar alignment here. I suppose the quirk of the railway alignments is that we've got to look at how we get over features and get under features and cut across the ground where ever we can. And so we're going to have to cross over the Wendover Dean here. This is the dry valley that we all looked at from Kings Ash that day. But, also the alignment just further north, we've got to keep going along to get up and over the A413 and The Chiltern Railway. So, you might play tunes on the vertical alignment, but I think that I would have to leave it at that. Unless any of the engineers say that we can do otherwise. I don't think that you'll see a great deal of change in that northern part of the alignment here.

299. MR MOULD QC (DfT): And so to get a change there, you would go back to the case for the full tunnel. And we know from the evidence we've heard, that which works as the cheapest and the best, in environmental terms, of the full tunnel through the Chiltern options, which is the CRAG option, but, in the view here, instead of seeing the viaduct, 500 metres long, with its embankments, you'd see a 900 metre long intervention gap?

300. SIR PETER BOTTOMLEY: 900 metre long?

301. MR MOULD QC (DfT): A 900 metre long intervention gap.

302. MR MILLER: On the tunnel scheme, yes. That feature would, well, not quite the bottom of the valley there, but it would certainly be a structure, a more ground borne structure in the landscape there.

303. MR MOULD QC (DfT): We know that because CRAG made clear that their tunnel assumes the same horizontal alignment as the bill scheme. And we know that this is the location −

304. SIR PETER BOTTOMLEY: You don't have a three tunnel bore?

305. MR MOULD QC (DfT): If we had the three tunnel bore, yes.

306. SIR PETER BOTTOMLEY: With a three tunnel bore, you don't need the intervention gap?

307. MR MOULD QC (DfT): You don't need the intervention gap. No. And you

explained, I think it was £1 billion. We shouldn't lose sight of the fact that of course with the full tunnel you do avoid the residual noise effects on the church and the school at Wendover. But, the committee heard our proposals in relation to that last week, I think.

308. MR MILLER: Yes, that's right. But, our response to that is that we think there are other things to do in conventional mitigation, barriers and that sort of thing, that will have a bearing on that. And again, that goes back to the policy which is to try and reduce the noise effects. And in those instances, they are sensitive community features and we continue with that work.

309. MR MOULD QC (DfT): There's just one other thing, there was a point raised earlier this morning about so called peak noise in South Heath. I wonder if we can just deal with that, I'll deal with that through you, Mr Miller. A1238(26). The petitioners had shown a noise contour, peak noise contour, based on, they said, on the figures in the environmental statement. If we just turn, please, to R1310(11)? And we've got here on this, I've got four pages which show the measured assessment of existing noise in properties in and around South Heath. And you can see, if you start about half way down the page, you get beyond Frith Hill, you've got Sibley's Rise, Kings Lane, and then you've got a property in Potter Row at the bottom. And you can see that the existing peak noise, which is in the column that I'm now showing you, the range is sort of 70, 89, 70, 67, 62, 66. They're all above 60. If you go to next page, 12? Again, we see that properties in Potter Row, existing peak noise is in the high sixties. There's one up at 80. A couple at seventies. A couple at 57. And if we go to the next page, just to complete the picture, some properties in South Heath. Again, the highest you can see, in the middle of the page, we're in the sixties and the low seventies.

310. SIR PETER BOTTOMLEY: We're in the what?

311. MR MOULD QC (DfT): Sixties and low seventies.

312. SIR PETER BOTTOMLEY: The average went past 90 something, didn't it?

313. MR MOULD QC (DfT): That's at Hyde End. Yes. That's on the Chesham Road, just by Annie Bailey's, I think. And then if you go down the page −

314. MR MILLER: The Chesham Road, there's no doubt that you'll get very high, that you'll get the highest of the peak noise levels in this location.

315. MR MOULD QC (DfT): Yes.

316. MR MILLER: I don't think there's any argument about that.

317. MR MOULD QC (DfT): There's a sense of the range of measured peak noise in and around South Heath. So, if we just go back to the contour, which is A1238(26)? How does that contour compare to the existing peak noise environment in and around South Heath?

318. MR MILLER: Well, if you took the railway out, you could probably come up with a similar sort of contour. It may be something slightly different, but, it would follow perhaps where the roads are. And, it's a function of the sort of noises that happen in everyone's environment, even in areas of outstanding natural beauty. These sorts of peak noise events take place. So, I mean, we've always tried to avoid producing a max contour. Yes, you can do it. But, what value is there in it, when these sorts of things take place anyway? You could draw all sorts of contours, is my feeling. Our measure, ultimately, is to look at the LOAEL and SOAELs, as we've been describing, and to think about that, and to think about what a person's response is to noise and whether that's going to affect their sleep or affect them during the day and into the evening, that sort of thing. And we set out our policies on that basis.

319. MR MOULD QC (DfT): Thank you very much.

320. CHAIR: Thank you. Mr Griffiths?

321. MR GRIFFITHS: Who's going to go first?

322. MS WHARF: Yes, could I just go first? Could we just put back up the table that, I'm sorry, I don't know the number of it, that you had with all the properties in Frith Hill and Potter Row. Sorry.

323. MR MOULD QC (DfT): Oh, yes. It was R1310(11). R1310(11). No. 131. That's extraordinary.

324. MS WHARF: It's the one there.

325. MR MOULD QC (DfT): It is R1310(11).

326. MS WHARF: Well, I could probably just ask the question from it, Mr. Miller will know.

327. MR MILLER: So let's have a go, shall we?

328. MS WHARF: Sorry?

329. MR MILLER: Let's have a go.

330. MS WHARF: Right. Ah, there we are. We have it. The column before the highest night time, could you tell us what that column is?

331. MR MILLER: That's probably the highest individual event that's been measured in a night time period.

332. MS WHARF: Yes. That was the column that I think Mr Mould I was referring to.

333. MR MILLER: That's right.

334. MS WHARF: Yes. What is the column before it? The arithmetic average at the night time.

335. MR MILLER: As I understand it, there are a number of measurements taking place. And I think that what this is trying to do, it's not trying to do the total energy, which is the AQ, as I understand it. But, what it is trying to do, is take a number of events over that measurement period, on that basis, the LA max 5 minute, and it's sort of adjusts it. So, it recognises, I think what it's doing is it's trying to recognise that every now and then you get a very high noise level. But, every now and then, you are likely to get more peak noise levels at perhaps a lower level. So, it's a bit of an adjustment, I think.

336. MS WHARF: Right. It appears that that bit of an adjustment is actually the column that gets moved into the other document that shows the LA max.

337. MR MILLER: Yes. It may well do. Yes.

338. MS WHARF: Because I checked the figures.

339. MR MILLER: Okay.

340. MS WHARF: And it is the figures for the 'bit of adjustment' column, which is the one that's put into your other, there's a suite of tables. And this one comes out of the baseline report, and there's an operational report. And the point of me asking this, it was because the LA max in the operational report is the one that we used on our slide 27 to show what it was people would be suffering by comparison to the background level compared to HS 2.

341. MR MILLER: Yes.

342. MS WHARF: So, it wasn't that one called highest night time which is put into the operational tables. Why is that, if you're saying that this one is sort of a bit weird, a bit of an adjusted one?

343. MR MOULD QC (DfT): Well, it's not right.

344. MS WHARF: Oh.

345. MR MOULD QC (DfT): Sorry. I think, if I can just put up P7534-2? Mr. Thornleigh-Taylor has dealt with this in evidence, so, I think I can just remind people of what he said. And here is an example of a table of predictions. I think Mrs Wharf that the table that you're talking about is the third from the left?

346. MS WHARF: And then the sixth.

347. MR MOULD QC (DfT): Well, the one, No, the one that, the comparative, is between the table that has the arrow on it at the moment, because that is the table that represents an individual train pass by. And so that is not an arithmetical average. That is the closest point of comparison with the existing noise, LA max table, that I took Mr. Miller to a few moments ago. That is comparing apples with apples.

348. MS WHARF: Perhaps we could just do a note on it?

349. MR MILLER: And that table now which we have on the 'do nothing', that is an arithmetic average. That is taking five minute intervals during the course of the period and averaging out the individual noise events. So, you may have four and a half minutes of silence and then you have a couple of noisy events and that will be represented in

that.

350. MR GRIFFITHS: In which column?

351. MR MOULD QC (DfT): If there's a need to look into this in more detail, I'm sure it can be done when we hear from the Chiltern District Council?

352. MS WHARF: Okay. Could I then just turn, the other thing I wanted to turn to was the SIFT, which we provided at A1257. And this SIFT had in it both option B and option D, when it was done. And option D was the one to Leather Lane and option B was the one to the end of the green tunnel at South Heath. The first point I'd like to go to is on page 3. Under costs. It's page 3, next page. Could you just tell me the cost that it's got a written down against option B? Which is the green tunnel one, sorry, which is the one to the end of the South Heath green tunnel.

353. MR MILLER: Additional? Circa 37.4 million.

354. MS WHARF: Yes. I just wanted to make the point that the cost has gone down for that, whereas it's gone up for option D, which is in the end column there, which was at Leather Lane.

355. MR MILLER: Okay.

356. MS WHARF: If we continue further down, and go on to page 5, you gave us a map a little earlier about where the ancient woodlands where.

357. MR MILLER: Yes.

358. MS WHARF: Could you just take us to the bottom of page 5, under option B, and identify what it says about the northern portal, if it were at, well, it's actually the farm where some of us visited on the trip.

359. MR MILLER: Sorry, I've lost my place.

360. MS WHARF: And it talks about

361. MR MILLER: We're here for column B, sorry.

362. MS WHARF: Sorry, it says the loss of, are you on? Sorry.

363. MR MILLER: Yes. 'Loss of parts of Jenkins Wood, an ancient woodlands, is also possible.' Yes.

364. MS WHARF: Yes. So, actually, we might be saving certain ancient woodlands, but, we would be probably creating a problem with another ancient woodland?

365. MR MILLER: Um.

366. MS WHARF: That wasn't actually on your map when you showed the impact a little while ago. There was no mention of Jenkins Wood.

367. MR MILLER: Sorry. You're right. Yes. You are right.

368. MS WHARF: Thank you. And if we could go a little bit further on, if we go to page 7 of the SIFT? Where we are into noise. And if we can go to, right at the bottom, again. Sorry. It's always at the bottom. And it talks about, under 'operational noise', who would be affected, or which noise impacts would be avoided. And what it says under the one under option B, can we just look at what it says there?

369. MR MILLER: Sorry. On this, it says through the section, 'residual impacts along Potters Row may', I guess it says something else. I wouldn't want to say.

370. MS WHARF: Yes, well, the first it's the bit, sorry, well, the first bit, it just says, in contrast to Leather Lane, It says how 'Operational noise impacts in the vicinity of Hyde Lane would be avoided,' under option B it says, whereas, across in option D, it makes clear also Potter Row would be avoided.

371. MR MILLER: Yes. Okay. I think I did say that.

372. MS WHARF: Yes. Sorry. The bit you were reading out before, yes, says that Potter Row may still be affected.

373. MR MILLER: Yes. Sorry. I'm on the wrong point, here. Yes. You are right. I think I did say that in my description of the options.

374. MS WHARF: Yes. Okay. Thank you.

375. MR MILLER: Thank you.

376. MR GRIFFITHS: Mr. Miller, in the way you've presented your evidence, you're almost seem to be saying, let's get on and do C6. I shouldn't put words into your mouth.

377. MR MILLER: No.

378. MR GRIFFITHS: I withdraw that. But, my question is this. You've covered the environmental impacts. I'm not sure whether you were here this morning, but, have you done an assessment of the community impacts?

379. MR GRIFFITHS: We have.

380. MR MILLER: For C6?

381. MR GRIFFITHS: Only if it's in these tables. I'm sorry. I thought you were talking about the environmental statement. The environmental statement, we definitely have. We would have only provided a community assessment in these tables, through the assessment categories.

382. MR GRIFFITHS: Okay. But, the reason that I say that is that all of the Reaper groups have said, 'well, actually, we want C5. We don't want C6'. And you said, I think, when you're covered the environmental, that, it doesn't do a lot for South Heath. You know, the construction is clearly coming out, but in the operating phase, the tunnel portal is at the same place. It doesn't do a lot. You've made that point that it could be deeper.

383. MR MILLER: No. Sorry. The point I made was as that the green tunnel at South Heath, it was put in there to protect South Heath. I know others have a different view about that. But, with a longer bored tunnel, I see that the effects are in operation the same. So, there's not much. Perhaps I should explain that. Or correct myself, perhaps. That there's not much in it when it comes to the operation, when you take it to the end of that northern tunnel portal. I see that there is potential for some gains there by dropping the alignment, when you are in the bored tunnel situation and I've highlighted that.

384. MR GRIFFITHS: Yes. The reason that I'm asking the question about the community impacts, the whole issue of blight, and the health issues and the concerns

that people have, are also probably not really helped by this option. That's the point that I'm trying to make. And it sounds like, so, I don't think we can find it in the SIFT. It sounds like an evaluation hasn't been made.

385. MR MILLER: Well, that's an assessment that you're making. The SIFTs, they're designed to bring forward information on a comparative basis, comparing apples with apples. And that's useful in the sense that you get a sense of what one option gives compared to another option. And I suppose my presentation is that the shorter tunnel, a shorter bore tunnel, gives you a fair amount of the benefit. If you extend it a little bit further, yes, you do get some additional benefit, but, it's almost like a diminishing return. That's what I perceive that assessment to be. But, the facts are here, in front of you, and that's there plain, before you and the committee to see. And so, I do expect you to challenge that. And put your view across. In much the same way as you put forward your evidence, and others have put forward their evidence this morning, that you have other concerns. And that's part of the challenge of this process.

386. MR GRIFFITHS: Yes. I think my point that I'm very happy to be corrected is that we heard from Simon Hook and Beverley Manton on the community issues that are impacted. They don't believe that this does much for them. And my point is that I don't think the SIFT has it included. But, I'm happy to be corrected, if someone could find it. We can't find it.

387. MR MILLER: Well, the information is there. And the other petitioners who've come forward have put their views across. And that will need to be taking into account as part of this process. That's the ongoing environmental assessment process. And we're well within that within this committee. So, I expect that to be coming forward and to challenge us. And, if there are different views, then they should be heard.

388. CHAIR: When we visited Mantles Wood, and we talked to lots of people there, they were quite keen for us to move the railway underneath the wood. You're saying you wouldn't be interested in us doing that at all?

389. MR GRIFFITHS: No. I'm saying that it doesn't do, it's perceived, that it doesn't do a lot of Potter Row and South Heath. The blight issue is linked to where the portal is. So, filling in the gap, certainly deals with that end of the community that we're representing. But, the fact that the portal, the green tunnel portal and the bore tunnel

portal, is in the same place, then the blight, which is actually, we may not agree on how to value it, but, it's actually causing a lot of the community impacts. Because, people aren't, you know, the house next door to mine, the family moved to Cornwall a year ago, the house is just falling apart. It was actually deemed to be sold. You know, the 'Sold' sign came up. And on the day of your visit, which is not you, at all, on the day of your visit, the 'For Sale' sign went up. The people had heard about HS2. And it's, you know, the concern for Potter Row and South Heath is, as Bev and Simon said today, we've just seen the community die. And it's a case of whether that's included in the evaluation, because just sort of saying, 'yes, this is a short tunnel, we can save whatever it is, we dispute the 50, because of some of the points that there is. But, just for the sake of it's a bit cheaper, let's do it.' When, in fact, that's not really helping the communities.

390. MR MILLER: I don't think that's really what we're trying to do. I think what we're trying to examine is to see what value do you get from a tunnel. I'm not sort of suggesting that there aren't other issues, other people have and want to bring to bear to this debate. But, in looking at the tunnel, in this sort of sifting way, you can see that you can get so far with an additional number of benefits. If you go further, we contend that's going to cost you're quite a lot more money. And in that analysis, we think that you only gain a certain amount. We disagree on that, in the sense that you say that you gain more from the community perspective. And I think that those two issues need to be weighed in the balance, as you've brought that forward.

391. CHAIR: The other point is we, throughout Warwickshire and other parts, people were saying can you drop the line? And sometimes it was possible, sometimes it wasn't. But, dropping the line six metres actually will make quite a material difference, even without a tunnel. You're not going to get away from some of the blight issues. They are going to be, I'm afraid, all the way up the line. But, there might well be a bigger gain than you could expect. Any more questions, Mr Griffiths?

392. MR GRIFFITHS: No. Thank you very much.

393. CHAIR: Mr. Mould?

394. MR MOULD QC (DfT): I have no more questions. Thank you. No.