



Environmental Audit Committee

Oral evidence: [HS2 and the environment](#), HC 1076

Tuesday 18 March 2014

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Written evidence from witnesses:

[Stop HS2](#),

[HS2 Action Alliance](#),

[Campaign to Protect Rural England](#),

[Woodland Trust](#),

[CLA](#),

[Natural England](#),

[Environment Agency](#),

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Members present: Joan Walley (Chair), Peter Aldous, Katy Clark, Mark Lazarowicz, Caroline Lucas, Dr Matthew Offord, Mrs Caroline Spelman, Mr Mark Spencer, Dr Alan Whitehead

Questions 1–98

Witnesses: **Joe Rukin**, Campaign Manager, Stop HS2, **Councillor Nick Rose**, 51m, **Emma Crane**, Campaigns Director, HS2 Action Alliance, and **Jim Steer**, Director, Greengauge 21, gave evidence.

Q1 Chair: I think it would be helpful for the purposes of our session if I explain that I have almost lost my voice but, given the importance of the inquiry that we are commencing today, I can assure you that you are in good hands with my Committee members and we will get through all the questions that we wish to put. I think it is also important to point out at the outset that it is not for our Committee to look at whether there should or should not be HS2; our function is to look at the role of Parliament and the role of environmental sustainability in all of this. With that briefest of introductions, I will hand you over to my colleague Dr Alan Whitehead.

Dr Whitehead: Thank you very much, Chair. I have not lost my voice, so that is very helpful in this respect. To start with, could I ask the panel generally what you consider, in the context of what you heard about the remit of our inquiry, might be the main environmental advantages and disadvantages of the proposed HS2 scheme? I suspect you may have some views either side of the advantages and disadvantages but perhaps you could just set out where you think that balance lies.

Emma Crane: I think one of the reasons that HS2 is so environmentally damaging is because of the fact that it is such high speed. That has determined, to a great extent, the route that has been chosen. If it were to go at a lesser speed, it could have gone on another route. It is important to remember that very high speed produces much higher carbon emissions, so I think that is a major factor, and also you can't use existing transport corridors either. The environmental damage to the countryside is much greater because of this choice of high speed.

Joe Rukin: High speed rail would be better put as ultra high speed rail. The entire design has been predicated by a 250 miles an hour design speed being plucked out of the air. They are now saying the trains all run at 225 miles. HS1 and Eurostar maxes out at 186 miles, which has allowed it to do bends. HS2 has been designed for 250 miles an hour and it makes it far more disruptive to the natural environment and communities because it can't go round sensitive sites, whether that is woodland or habitat or even flood plains, and of course communities themselves. As Emma said, one of the main problems is the carbon footprint that it will leave. HS2 Ltd have said it will be broadly carbon neutral but the problem is that the amount of electricity you need goes up exponentially with speed and as a result you will be using about three times the amount of energy. In reality, you will see carbon emissions increase because even when they say it could be broadly carbon neutral, they completely ignore all the embedded carbon from constructing the line and, of course, the associated road works and tailbacks and so on that will happen as a result of construction.

Cllr Rose: I entirely agree. I know we are not discussing the route itself but if one looks at it there are peculiarities in the route that could have been so easily avoided if the speed had been more circumspect. There is very little to be gained by the speed itself. That has brought about its own impact on our communities where in some instances it just charges and ploughs through villages, which could have been avoided if it had followed an existing transport corridor. I think that is an extremely important point.

Jim Steer: To answer your question, I think carbon savings remain evident from the analysis in the environmental statement, at least at the operational phase. They are obviously offset by the carbon embedded in the construction of the project. These calculations are quite difficult but certainly what the environmental statement suggests is that over what you would expect would be the life of the infrastructure, which is of course a very long time, even then the carbon benefits from operation outweigh the disbenefits embedded in construction. That simply arises from the fact that rail is a less carbon intensive mode of transport and some diversion from other modes are brought about by it.

The second thing I think it does, which is very helpful in broader sustainability terms, is it gives an accessibility stimulus to cities. Rail can do that. The alternative, if it was conceived to be an alternative—building more roads—tends to do the opposite and encourages development in the urban periphery and so on, as we are all familiar with.

If I may just comment on the question of speed, the analysis we have prepared and published a year and a half ago shows that there is an impact of speed on the carbon and energy question but it is not as great as perhaps people make out or have implied. Reducing the top speed from 360 kilometres an hour to 300 kilometres an hour, which is the Channel Tunnel rail link speed, reduces the energy consumption by 19% and the overall carbon impact is significantly less than that. Indeed that figure, which I could find if I had a minute, is in the environmental statement. I believe it is around 7%.

Q2 Dr Whitehead: Mr Steer, you have mentioned the environmental statement itself and I think you mentioned some particular issues of setting the carbon savings in the environmental statement against other factors. What does the panel think about the possible major shortcomings or otherwise of the environmental statement? Do you think it is a satisfactory statement of the environmental circumstances, bearing in mind what has been said about the pluses or minuses, or are there, in your view, particular shortcomings with it?

Emma Crane: I think there are many shortcomings with the environmental statement. Touching on carbon, and to add to what Mr Steer said, it has been widely accepted that HS2 is not a carbon saving project. The forecasting figures that HS2 Ltd uses forecast 120 years into the future and that is the way that they can conclude that there is a broadly negative carbon footprint. However, standard practice in the DfT is to forecast 60 years ahead and if you were to do that it would be a different picture. The aeroplane and the car were not even invented 120 years ago, so how can we look forward 120 years and be able to predict what the carbon emissions will be like at that point? I think it is giving quite a skewed picture. The carbon emissions from construction are pretty appalling and they should be taken into consideration and not just the carbon emissions on operation. Even then you are relying hugely on the predicted passenger numbers and they have been broadly overstated, in our view.

Q3 Chair: Could I come in and ask about the passenger numbers and the reliability of the passenger numbers that are available?

Emma Crane: For one thing, the passenger numbers that have been given in HS2's business case are relying on a huge increase in business passengers. If you look at the evidence that is available it shows that business travel is not increasing by huge amounts. That is probably largely due to changes in technology and the way people use technology instead of meetings. The other thing is that the passenger projections rely on, to a large degree, a modal shift and a lot of the modal shift is from less polluting forms of transport. I think it is projected that 95% of the predicted passengers will be new journeys or transfers from existing rail. There is a very tiny proportion predicted to transfer from air or car. It is 1% from air and 4% from car. You are relying on this huge number of new journeys, which does not seem to fit with reducing the carbon footprint.

Joe Rukin: When you look at passenger numbers, there are two different aspects to consider. One is in relation to the carbon footprint. For example, in working out the carbon footprint with HS2, HS2 Ltd have assumed 100% occupancy of their trains but with cars they have assumed 30% occupancy just to fiddle these figures. What you have seen from the start is grossly inflated passenger forecasts. What happened in the latest business case was they were forced to bring the number of passengers down but because the benefit cost ratio would come down even below where it is, they decided to up the proportion of

business users so that they could show more benefits. The entire business case is predicated on the issue of speed. They are saying now that speed is completely irrelevant, but it determines everything because you saying that all time on trains is wasted, therefore if you go more quickly you have saved money for the economy, effectively. That goes back significantly to the passenger forecasts because obviously you are multiplying those numbers by the number of passengers who are forecast.

In terms of the reliability of the environmental statement, it is simply not fit for purpose at all in any shape or form. It is contradictory. There are surveys, for example, that have not been done or are missing, many of the surveys are incomplete because they were done at the wrong time of year and so on. This is a theme going throughout HS2 like Blackpool through a stick of rock in that everything seems to have been rushed through and therefore done inadequately to meet unrealistic parliamentary timetables.

Q4 Mrs Spelman: Could I briefly come back on the question of passenger numbers? The Chairman is slightly impaired in being able to speak, but we are both West Midlands MPs and the West Midlands cities have seen a very significant increase in rail travel in the last decade. If you take a city like Coventry, there is a 30% increase in rail travel over the last 10 years. Are you saying that that has plateaued?

Emma Crane: The latest figures are for long distance inter-city rail, which is what HS2 is intended to be. It is not intended to assist commuter or suburban train lines. People simply will not be able to get on it because it is between four cities. It is not stopping all the way up and down.

Q5 Mrs Spelman: Would you expect the trend of increased inter-city rail travel from the West Midlands cities to plateau or increase?

Emma Crane: The figures show that inter-city, so that is between cities long distance, is plateauing. It is going up for commuter and short suburban journeys but not for the longer journeys. That is from Network Rail's own figures. They were released during judicial review proceedings.

Q6 Mrs Spelman: It would be interesting how we define commuting. If the journey comes down to 31 minutes from Birmingham International to Euston, would we consider that commuting?

Emma Crane: The figures for the West Coast Main Line usage show that it is running at 52% capacity at peak times at the moment, so there is plenty of capacity for people who want to go up and down.

Q7 Mrs Spelman: The pinch point is the particular route, isn't it?

Emma Crane: There are other ways you could solve the pinch points that have much less severe environmental consequences, I would add, because that is what this Committee is here to look at.

Q8 Mrs Spelman: But you think it is going to plateau?

Emma Crane: That is what the figures seem to be suggesting for the longer distance. I am not a rail expert but from what I have seen from the figures it seems to be increasing for commuters into all the main cities. It is not just cities affected by HS2; it is all round the country.

Joe Rukin: The Office of Rail Regulation figures show that the increase in long distance journeys has been consistently dropping for the last four years. When you are talking about the West Midlands, the pressure on the West Coast Main Line is between Coventry and Wolverhampton. HS2 is going to do little or nothing to solve that because you are taking a very few trains off the existing lines, putting them on to high speed rail, and of course if you cut the inter-city train from, say, Birmingham New Street to Euston, you are reducing connectivity between Coventry and Birmingham anyway. One of the things that HS2 Ltd keep saying is that HS2 will free up capacity, but freeing up capacity by definition means losing the trains you already have. For cities like Coventry, Wolverhampton and Stafford or places like Wilmslow, Stockport, Warrington, it will mean a reduction in services because if you are taking, say, Birmingham to London off the West Coast Main Line and putting it on high speed rail, you can't, for example, justify three trains an hour from Coventry to London, which is the service that they currently have.

Jim Steer: May I just come back to the demand point? I am afraid I disagree with Ms Crane and Joe Rukin on this. The evidence is that long distance demand and commuting demand have both been growing at around 5% per annum. It is true to say that the figures over the last year for all categories of rail have been lower than that, but if you look back over the last 10 or 15 years, there has been a variation of around 5% per annum. I think it would be highly dangerous to presume that the fact that over the last year it has been less than that trend is indicative of what would lie ahead and would seem to be a very unlikely position.

My contention is that the demand forecasts for HS2 are quite conservative. I say that because the assumed annual growth rate going ahead is roundly half of what that trend has been. I know this sounds an awful long way in the future but it is extremely important that for appraisals of economic benefits and also of environmental effects, carbon effects, it is assumed that whatever that growth rate is—and it is roundly 2.5% in the HS2 Ltd current forecasts—it stops completely in 2036 and after that there is assumed to be no growth in anything. That seems to us to be an assumption that I think we can all understand in the sense of, “Well, the future is uncertain so what do we know?” but on the other hand it can't be the most likely outcome, for two reasons. First, there has been a relatively low annual growth rate compared with the trends of the last 10 or 15 years and, secondly, it is assumed that even that low growth rate ends, that the demand figures are cautious and therefore the carbon figures are cautious as well.

Q9 Mr Spencer: Just going to your point about Coventry losing its three trains per hour, could it be argued that that would then free up the capacity of the West Coast Main Line for freight, which would reduce HGVs on the M40 going up and down, north and south, and would reduce the carbon footprint of the transport network overall?

Joe Rukin: You don't really release that many paths. It is quite odd that we are now getting this argument that we need HS2 for freight. We need more capacity for freight on the railways so we are building a railway line that won't carry any freight, which seems a

little bizarre, but you are not freeing enough paths to make a significant impact in the rail usage of freight.

Emma Crane: There is no evidence to support the claim that freight would move off the roads on to rail. It is stated in the environmental statement that that is what would happen but there is nothing there to back up how that would happen, why it would happen. As Mr Rukin says, there are not a huge amount of freight paths that are actually freed up by HS2 on the West Coast Main Line.

Q10 Dr Whitehead: A final general question. Given that the Government has an aim of no net biodiversity loss, to what extent do you think that is reflected in the environmental statement? Is it a reasonable go at looking at that, setting aside the issues of passenger transport and numbers and so on, in terms of biodiversity around the route?

Joe Rukin: I think the best way of describing the commitment to no net loss is that it is an aspiration in the environmental statement and there is no evidence of how that would be achieved.

Jim Steer: I don't really have a comment on the environmental statement in that regard, but we can look at the experience with HS1, and indeed with the Channel Tunnel, which established a major biodiversity site as a consequence of the problem of what do we do with the spoil from the tunnel and HS1. There is an experience there and I put it in my evidence. So we have something to look as to what can be done, but I would accept that there is a question, no doubt for this Committee, about how to ensure it happens.

Joe Rukin: I think it is completely unreasonable to compare HS1 and HS2 because HS1 followed existing transport corridors. Going at 186 miles an hour allowed it do so and therefore in terms of no net loss they have been able to create buffers between HS1 and the M2 and between HS1 and the M20. That has actually helped in terms of the biodiversity aspect, but HS2 does not do that because it does not create those buffer zones. It simply destroys the habits and the woodlands that we currently have.

Q11 Mr Spencer: I wanted to turn to the construction phase and the carbon footprint of the construction phase of the line. How can we minimise the carbon impact of that construction phase?

Jim Steer: The short answer is you would not build so many tunnels and so much structure and you would not have made the environmental mitigation measures for non-carbon reasons that have already been made, for instance reducing the general height of the track a little bit, which obviously mitigates both noise and environmental impact. You could argue you would like to do that further for other environmental mitigation reasons but it would have the effect of increasing the construction content and therefore the carbon content. It is difficult to see how it would be further reduced other than by the adoption of absolute best practices in the construction industry, which is obviously alive to the accusations that it is a carbon intensive industry. HS2 is a major project. I would see it as an opportunity to put into place absolute best practice in carbon minimisation in every aspect of what they do.

Joe Rukin: I don't believe it will be possible to reduce the carbon footprint of construction, but by constructing HS2 in a different way, such as putting it at a lower

speed, you could reduce the carbon footprint from operation, which I think should still be considered.

Q12 Mr Spencer: Where is the trade-off? Is that the trade-off, that if you build a line that is slower, you can put in less mitigation for those environmental impacts for people that live nearby?

Joe Rukin: It is not a question of putting in less mitigation in terms of the people who live nearby. It is a question of needing less mitigation because you are doing less damage in the first place.

Jim Steer: There is one counter to that, if I may. If it is the proposition—if I understood correctly what you were saying earlier—that a slower speed enables you to negotiate round things that you feel the current alignment could have avoided, then of course the line is longer. If you are also keeping all the same mitigation measures, you have more construction to do. A wiggly line is basically longer. That is another little countervailing issue to think about.

Emma Crane: I think there is no easy solution to this problem, but mitigation should not be sacrificed. One of the things that comes out of the environmental statement is that often it states what the environmental impacts are but it does not always say how best to mitigate and what is actually going to be put in place. This project does deserve the highest levels of environmental mitigation and I don't think that those are in place at the moment. That is a severe failing of the ES that needs to be addressed by Parliament.

Joe Rukin: Of course with the agenda from Sir David Higgins and the Department for Transport to cut costs, it is quite clear, from our perspective, that the very first thing that will go out the window is environmental mitigation, especially when you don't have detailed design and you don't really have costing for it yet either.

Cllr Rose: Going back a bit to the environmental statement, we have slightly strayed off the subject in one or two ways. There is an issue here that the environmental statement tends to read in parts like a sales brochure and it was never intended to be such. We expected a more objective and scientific document and not one that was misleading. Let me give you a very quick example. HS2 will be taking out 4,800 hectares of agricultural land but they express this in the ES as 0.07 of the total amount of agricultural land available and that this is going to reduce to 0.03 because some of it will only be needed temporarily. This is breathtakingly disingenuous. It does not reflect the colossal impact on some of the community. There is a huge impact here, there is nothing here, and there is another huge impact here. That does not come across in the environmental statement, which I think it should.

Q13 Katy Clark: All the evidence is that rail as far as diversion from flights, and the evidence from elsewhere where they have High Speed 2, has led to a modal shift from people using rail rather flights. Is your argument that you think there would be more environmental benefits if High Speed was going further, say to Scotland? Would you say that that has greater environmental benefits that are easier to quantify?

Emma Crane: There might be greater environmental benefits but just looking at the modal shift from air, HS2's own figures state that they reckon that the percentage of passengers who would use HS2 who will shift from air is 1%, so it is a very tiny proportion. Even supposing it was extended to Scotland, it is still going to be a tiny proportion. Just putting

it into perspective from a carbon perspective, domestic aviation makes up only 1% of the UK's total carbon emissions. Even if HS2 were to wipe out every single domestic flight—which it never could because you have flights to the Channel Islands, Aberdeen, all over the UK—it is only ever going to achieve a small minimal reduction in the UK's overall carbon emissions caused by domestic aviation. I think it is a little bit of a red herring to say that HS2 is needed because of the shift from domestic aviation when you look at the actual figures.

Joe Rukin: You have to remember that the original forecast for modal shift from air was 6% and it has been revised down three times and now stands at 1%. The only realistic prospect that you had of significant modal shift to air would have been if you had been able to get on a train at, say, Manchester and get off in Madrid, which of course now you won't be able to do because the HS1 link has been cancelled. That was potentially the only way that you were going to increase aviation modal shift. The reality is anyway that if you had reduced the number of domestic flights or short intercontinental flights then those flight slots would have been taken up by bigger planes going greater distances.

Jim Steer: The proportion of people, as has been said, that are assumed to transfer from air is very low at 1%. We think that is another area of extreme caution. That 1% diversion gives rise to, in the environmental statement, between 2.2 tonnes and 2.8 million tonnes of carbon dioxide equivalent savings. It is a very significant part of the carbon benefit of the project. Even with a very cautious assumption, which as Mr Rukin quite rightly says has been reduced, there is a significant carbon benefit and that is because short distance air travel is very substantially more carbon intensive than rail, including in that high speed rail. The big market is, of course, south-east England, London and central rail to Scotland. That is an area where you can expect there to be a shift from phase 1—it is not very much in the current forecasts—and it will continue to rise as the speed is further improved to make rail more competitive with air. It is a big travel market and it is capable of being reduced, so it is a key environmental factor, in my view.

Q14 Mrs Spelman: There has been criticism of the way in which High Speed 2 Ltd have involved local stakeholders in their decision making. For example, landowners were not invited to discussions about how their land might be affected by the transport infrastructure. How could that consultation mechanism on the environmental impact statement have been made more effective, in your view?

Joe Rukin: If HS2 Ltd paid any attention to anything that anyone from any community had said over the three years previous to that it would have been more effective. Quite simply, communities along the route have had community forum meetings—20-odd people from representatives of about a mile and a half, two miles, and so on—for two years and smaller groups, representing individual towns or villages, plus a couple of councillors in some cases, have had bilateral meetings where they have gone over very detailed mitigation proposals over a number of years. Every single one of those proposals has been turned down, including instances where HS2 Ltd have admitted that what the community proposed is cheaper and more environmentally friendly. They have simply ignored everything that the community have had to say over that period.

Q15 Mrs Spelman: Do you think the elected representatives at local government could have played a more significant role in helping their local communities engage in proactive consultation, following the example of Kent County Council and others?

Joe Rukin: I can't speak for councils outside my area, but I know that where I live in Warwickshire the county council, the district council and the town council have been very involved in trying to help us with HS2, in consulting with the local population and representatives from action groups, parish councils and so on. We have had regular meetings. I am pretty sure the same thing has happened in Buckinghamshire. There have been some areas, notably Solihull Metropolitan District Council, where that has not necessarily happened to the same degree, but generally speaking the councils have done everything that I would think was expected of them and also incurred their own costs in doing so. I am sure Councillor Rose will have more to say on this.

Mrs Spelman: Just for the record, Madam Chairman, if you don't mind, since Solihull is my local authority, meetings are arranged every four weeks, open to the community, on the environmental statement negotiations on High Speed 2. I think we do need to set the record straight on that. I am happy to take another point of view.

Cllr Rose: Can I come in on that particular point as an elected representative? A number of my members who attended the community forum consultation on behalf of my council, which is Chiltern District Council, found the process to be absolutely frustrating and completely pointless because of a complete lack of honesty and lack of integrity on the part of the HS2 people that they were talking to. For example, they would be told half truths and towards the end of the meeting a carefully timed announcement would be made just as people were going home. In my view, the community forums have been nothing short of a cynical charade because they served no public purpose in trying to disseminate information. It was just, "This is what we are going to do".

As an elected representative, I also sat on the planning forum, which is on a slightly different basis, and we met, alongside a number of other local authority representatives, with HS2, and the process was quite similar. They told us absolutely nothing. It was like a *Brave New World*, "This is how it is going to be, like it or not. This is what we are going to do. We are not actually interested in doing anything or absorbing any of the suggestions that you have said because it is all written in stone. This is what we are going to do". We found the process to be pretty much completely sterile.

Q16 Mrs Spelman: Do you think that in dealing with environmental impacts that there is a need for a dispute resolution mechanism? A dispute resolution mechanism exists in relation to property and land through recourse to the Land Tribunal but there is at present no dispute resolution mechanism with regard to environmental impacts. Does anyone have a view on that that?

Cllr Rose: There is no dispute resolution mechanism, as you rightly say. We did suggest this at one point. It was quite clear HS2 just were not interested. They didn't want disputes to be resolved because they just wanted to do it the way they wanted to do it and they were completely deaf to alternative suggestions.

Mrs Spelman: But in relation to environmental impacts?

Cllr Rose: Yes, in relation to environmental issues.

Jim Steer: It is obviously disappointing to hear this kind of experience. The observation I would make is that the alignment has changed. It was published four years ago. It has been changed in ways that are clearly designed to reduce its environmental impact. How that has happened I couldn't know or comment, but what I would say in answer—

Cllr Rose: You weren't there.

Jim Steer: That is why I say I can't comment.

Cllr Rose: There is no evidence whatever that the changes that HS2 did embody had anything to do with what Jim Steer is suggesting. They brought in some very late changes. One change they brought in was to have extensive soil dumping in the Chilterns, which was quite extraordinary. That came in at a very late stage. My belief is they knew perfectly well all along that they intended to do that and they just kept it out of the public gaze because they knew there would be a rumpus when they announced it. Of course there was, but by that time it was much too late to do anything about it.

Joe Rukin: I would reiterate that and say that where the alignment has changed almost exclusively has been because HS2 Ltd have made monumental errors in their original designs.

In terms of the dispute resolution mechanism, absolutely. The Hybrid Bill as it stands gives HS2 Ltd shockingly widespread powers. The local authority can rule that something should happen in terms of mitigation and it only will happen if HS2 Ltd agree. We have the get-out clauses in the environmental statement saying mitigation will happen wherever it is reasonably practicable and does not put up the cost too much, and this is quite dangerous. The local authority is probably the best place to do this, but someone needs to be able to ensure that mitigation that is necessary is actually carried out and not removed as a cost-cutting measure.

Q17 Mrs Spelman: Assuming the scheme does go ahead, one of the most important provisions that you would want to see in the Hybrid Bill would be a dispute resolution mechanism. Are there any others?

Cllr Rose: Yes, but that has to be genuine. It has to be two-way engagement, not just one-sided.

Mrs Spelman: Absolutely. Are there any other environmental provisions? It is important for us as a Select Committee to hear from you because obviously this is an opportunity to say what you would wish to see in the Bill.

Cllr Rose: Clearly there is going to be a requirement, particularly with the code of construction practice and beyond, for some form of overseeing of what HS2 is doing. At the moment, far too much is being left to subcontractors to do their own thing. Indeed, one of your questions relates to this aspect. I think that would be very suitably dealt with by local authorities because they have experience and a background of environmental considerations and dealing with that kind of dispute resolution that occurs throughout our districts daily. Our professional officers are that much removed from the political wing, so to speak, so therefore it is going to be an objective arrangement.

Joe Rukin: Additionally, any mitigation that is put in place has to be assessed to make sure that it has worked, which there is not provision for at the moment, things like, for

example, plantings and so on that have to be maintained. HS2 Ltd must bear the cost of the maintenance of all those environmental mitigation measures.

Emma Crane: There is nothing in the environmental statement to provide for a situation where the effects are actually worse than what is stated in the environmental statement. A lot of the time we are not given the baseline figures so it is very difficult to carry out any kind of independent overview of whether they are accurate or not. Also for environmental decisions, because we are not being given all the figures—and we have asked for them and HS2 Ltd just don't provide them—it makes it very difficult to assess how they have come to that conclusion and whether they really have taken the environmental issues into account. It seems often that they are making a decision based on cost and just discounting all the environmental impacts.

Q18 Chair: I am going to try to ask you a question. Before we leave the issue of consultation, do you have any comments on the recommendations in Sir David Higgins' report yesterday in respect of any consultation that has already taken place and the implications of that for the changes to the route?

Joe Rukin: He seems to have completely thrown due process out of the window, hasn't he? We have had the phase 2 consultation. It is not due to report until the end of the year. He has completely pre-empted it, saying that things will be quicker, in terms of getting to Crewe when obviously there was a lobby at Stoke and all those sorts of things.

Chair: And St Pancras.

Joe Rukin: Yes, absolutely. That has happened with the phase 1 consultation, which has already reported back, and the Hybrid Bill before Parliament will have to now be amended to remove that, I suspect.

Jim Steer: For the record, Sir David Higgins made very clear in the statement yesterday that he was not in any way seeking to pre-empt the due process that the Department for Transport has to go through in looking at all the consultation responses. He made that extremely clear. Indeed, the question was raised—you mentioned Stoke—specifically about that at his meeting yesterday and he said—

Joe Rukin: I am terribly sorry but if he wished not to pre-empt the consultation then he should have kept his mouth shut. He has most definitely pre-empted the consultation.

Jim Steer: Well, fine. One thing that I think is very helpful to one particular environmental question is that two of the potential constraints that have been argued by those most concerned about rail freight arising from HS2, namely to increase the amount of additional provision for freight, would be addressed by taking it out, as he has proposed. I believe the Government is accepting and has withdrawn the HS1-HS2 link, which is a link that gets shared with freight and therefore was one of the areas of weakness of that particular scheme. There is also the proposition that there should be an acceleration of the scheme northwards from Lichfield to Crewe. That happens to be a part of the network that is fairly constrained and until that is complete or something else is done, there is a limit on the amount of rail freight that could be added to the network with HS2. So I think that is very helpful in terms of ensuring that the environmental impact benefit of increased freight use can be achieved.

Joe Rukin: I think what Sir David Higgins did yesterday was basically say, “We don’t really want due process. We want things sped up”. He specifically said that politicians should not spend so much time discussing it, so effectively telling you not to have this meeting for phase 2, in my opinion. But basically what you are looking at is a process so far that has been rushed and it has been very sketchy. The only way that you can speed this project up really is by cutting more corners. We are very worried that in the rush to get things done quicker, that won’t actually save any money, of course, because saving money by doing things quicker, based on cutting out inflation, only works if you have included inflation in your original costings, so more corners will be cut in the future.

Emma Crane: Can I add on the consultation point that we believe that the UK has not complied with its obligations under the Aarhus Convention, which is a convention that the UK has signed up to to ensure that effective environmental decision making is taken when projects of this sort go ahead. The consultation process over HS2 has been totally appalling and has not complied with the public participation obligations in the Aarhus Convention. The public are being consulted when decisions have effectively already been taken. As we have seen yesterday, Mr Higgins just changes the plans after it has been consulted on and people are given no proper opportunity to come back on that. Instead, the public are left to rely on the Hybrid Bill process, which is deeply unfair in terms of public participation. We believe it is wholly inadequate.

Q19 Dr Offord: In considering that the HS2 project actually goes ahead, what kind of environmental monitoring and subsequent enforcement would you like to see?

Emma Crane: I think it has to be independent. As we have said before, it is to have the councils involved and to have people appointed who work for the councils who will ensure that the mitigation is done up to the required standard. If it is not, they will have enforcement abilities and the contractors will have to stop work and ensure that the correct mitigation is put in place. If things like noise, as an example—I know we are not looking at it on this Committee—turn out to be worse in reality then further mitigation has to be put in place, but it has to be somebody independent and there has to be a proper process. The draft code of construction practice at the moment is just littered with “so far as is reasonably practicable” but it is not giving ample protection to communities.

The other thing that needs to happen is that the way that decisions are taken needs to be more transparent. We have talked about it today. There are lots of occasions where different community groups have come up with alternatives that are much better environmentally and are either cost neutral or cost possibly a little bit more, and they are just being dismissed out of hand. It is almost being said that the environmental considerations should be dismissed and we are looking at it purely on costs, but there is a cost to destroying the environment and that does not seem to be being factored in here.

Joe Rukin: The greater danger with that of course—take the noise example but any other mitigation provisions could apply here—is that if you don’t get it right when you are building HS2 and you have to then go back and retrofit, the costs associated with putting those additional measures in will be far greater. That is exactly what happened in Germany where they completely underestimated noise, as an example, and then they had to go back and put noise barriers in, which would have been far cheaper if they had done it when they were constructing the whole project altogether.

Q20 Dr Offord: My second question is who do you think should be responsible for that?

Cllr Rose: Without doubt I think the local councils are ideally placed to do this. They have the structure and appropriate arrangements to put this sort of thing in place.

Q21 Chair: Do they have the funds?

Cllr Rose: HS2 will pay, of course. No, the councils don't have the funds and therefore they are going to need a degree of funding from somewhere. They can't get it from the ratepayers. Why should the ratepayers pay in order to make sure that HS2 does its job properly? That would be wholly unreasonable.

Q22 Dr Offord: That takes us nicely on to my final question, which is what financial environmental safeguards would you like to see in the Hybrid Bill that would address both the issue of noise and the issue of enforcement?

Cllr Rose: I would be looking to see that there was adequate remuneration for the work that local councils do. Not a profit; we are not seeking to make money out of it. We just want to recover the time that our EHOs spend on this sort of work to ensure that it is not a burden on the ratepayers. Why should it be?

Q23 Dr Offord: Without putting words into Mr Rukin's mouth, you mentioned the example of Germany with the sound boards. How would you like to see such issues addressed in the hybrid Bill?

Joe Rukin: The difficulty is that you have the environmental statement that is not really proposing mitigation measures. I would suggest that potentially you have to go back to some of the community-based proposals that were made. In reality, that is what is going to happen when it comes to petitioning. The communities that put forward proposals that were completely ignored by HS2 Ltd in terms of mitigation will see the Committee as the opportunity of a right of appeal on those projects. It is really sad that we have got to this stage and mitigation has not been taken seriously. I don't think it is possible to get it ready for amendment on Second Reading. I think it will have to happen at Committee stage and obviously communities are preparing to petition on the basis of the proposals that they have been working up for two or three years in many cases.

Q24 Mr Spencer: Just to go back to Councillor Rose, presumably your ratepayers would pay for monitoring of a road network or a wind turbine or a public house that was causing a noise nuisance next to them. Why is HS2 different?

Cllr Rose: The noise is being generated locally by an operation that is being controlled locally. There is a world of difference between a public house that is issuing too much noise or too much smell or whatever. That is not comparable to HS2 which is completely unaccountable to the local authority.

Joe Rukin: In the case of the pub, the council will be taking in business rates, so it will be of benefit to the local economy whereas HS2 will not be.

Q25 Mr Spencer: What about monitoring nitrogen dioxide, which you are responsible for as a local authority?

Cllr Rose: In some instances, yes.

Mr Spencer: Presumably you are picking up the tab for that.

Cllr Rose: Yes.

Mr Spencer: Why is that different from HS2? Obviously that is caused by the road network where you pay no rates.

Cllr Rose: We do environmental monitoring because there is a risk to public health and a risk to our residents. Sorry, I can't quite see your point.

Q26 Mr Spencer: You are saying that HS2 will have to pay for the monitoring of the noise levels. What I am saying to you is that currently you are doing nitrogen dioxide testing that is affecting your residents but you are picking up the tab for that.

Cllr Rose: Yes, because the environmental monitoring that we are doing locally in part of a town or part of a city is something that we have control over. In other words, we are monitoring it with a view to changing it or with a view to bringing in changes.

Joe Rukin: Not to go back to noise again but, for example, there have been a lot of fences put up along the M6. That is the responsibility of the Highways Agency and they pay for them. That is how I suppose it should be treated, HS2 Ltd akin to the Highways Agency. The real problem is that if the complete responsibility for mitigation and environmental protection is left to HS2 Ltd without any power of enforcement, we simply do not believe it will happen.

Chair: I am going to bring this session to a close. I thank all of you for making sure that we could conduct this session without my having to intervene with no voice. Thank you all very much indeed. I invite the second panel to come and take their places, please.

Examination of Witnesses

Witnesses: **Ralph Smyth**, Senior Transport Campaigner, Campaign to Protect Rural England, **Richard Barnes**, Conservation Adviser, Woodland Trust, and **Henry Robinson**, President, Country Land and Business Association, gave evidence.

Q27 Chair: I would like to welcome all three of you. I think you are aware that I have lost my voice and we will manage accordingly. Mr Spencer wishes to come in very briefly and also Mr Aldous.

Mr Spencer: Could I declare that I am a member of the CLA, Chair, just for the Committee.

Q28 Peter Aldous: I think I should do the same. The Government have come out with the objective that their aim is that, "There should be no net loss in biodiversity at the route-wide level". Could we dissect and have a look at that objective for a minute? Are you happy with the objective of there being no net loss in biodiversity terms? Is that ambitious enough?

Henry Robinson: Do you want me to start? I am very happy to. The Government has said that it wants to be the first Government that sees an improvement in the environment, so it is not consistent with that. We would say that no net loss is a laudable aim but it could do better. The questions, of course, are how you get there, who delivers it, where the land is

and who pays for the maintenance of it? Those are the much larger questions that will lead into your getting to no or even minor net loss.

Q29 Peter Aldous: So you think it could have been achievable with a little bit of ambition and foresight?

Henry Robinson: There is not much ambition in it. That is certainly true.

Richard Barnes: I would add to that that the idea could be that the Government could have gone for net gain. A couple of issues we have with the environmental statement is that there is no adequate baseline. There is a lot of missing information, omissions and inaccuracies in their information, so it would be very difficult to assess that in the first place to say what the baseline is.

Ralph Smyth: We would say it is concerning the lack of integration between HS2 and wider policy. The National Planning Policy Framework talks about seeking environmental goals simultaneously and jointly with economic and social ones. The environmental statement seems to be about trying to minimise environmental harm rather than seek any environmental opportunities. There is a massive lost opportunity there that hopefully the Government can correct on Second Reading.

Q30 Peter Aldous: What do you think are those opportunities they should be seeking and striving for?

Ralph Smyth: You have heard quite a lot about carbon in the previous session and we certainly agree that there is a need to seek carbon benefits from HS2, but many of those benefits would be secured by complementary changes to road and air policy. What we have not heard much about is land take. In the news this week there has been the garden city at Ebbsfleet by HS1 and proposals for a new station on a greenfield site with associated housing at Crewe. We say that HS2 should be part of a bigger strategy to try to maximise use of brownfield land and reduce land take by car parking and roads, but unfortunately it is not being planned in a joined-up fashion.

Richard Barnes: I would also add that in terms of the no net loss suggestion, if there are irreplaceable habitats such as ancient woodland that are being lost already, you can't have a no net loss or net gain if you are taking out ancient woodland and other irreplaceable habitats such as that.

Henry Robinson: The real problem, and I don't want to be a stuck record on this throughout the proceedings, is that if you are then taking the land for an environmental gain by compulsory purchase there is a natural and severe injustice in that.

Q31 Peter Aldous: If we move on to the second part of the statement, it says no net loss in biodiversity at the route-wide level. Should one be judging the objective at a route-wide level or should one be looking at smaller local sections of a line in making that assessment?

Henry Robinson: If you do it at a route-wide level, what you get is a series of large and largely arbitrary compulsory purchases where you are going to put your compensatory habitat. The problem with not engaging at local level is you do not engage the local landowners to provide what they can provide better than anybody else for you in terms of the environmental gains that you want.

Ralph Smyth: I think one should seek benefits, net gain, both at the route-wide level and at the local level. The question is, what do you use as a unit? The offsetting metric talks about biodiversity units. What exactly are they? There is a detailed discussion in appendix 5 in the ES but that is still very arbitrary. I think you need to look at the national scale and also at the local landscape scale or the local habitat. You have to check all these different levels rather than think you can do it at one or the other.

Richard Barnes: In terms of the balance between the route-wide and the local, I would agree that there needs to be a bit of both. You need to be able to take into account the whole route-wide losses and gains to assess that, but also there is a natural justice in that if something is lost to a local community they should have the benefit provided or a compensation provided at that stage as well. I am not sure if there are further questions about biodiversity offsetting—

Peter Aldous: There may well be.

Richard Barnes: I will leave that then.

Q32 Peter Aldous: When it comes to monitoring and auditing whether there has been no net loss, who should be doing that work? Any views?

Richard Barnes: Perhaps this is a situation where some of the statutory agencies come in, such as Natural England who you will be hearing evidence from later. One of the issues we have found is that in the drawing up of the environmental statement there has been selective use of information, for instance from the local record centres that could have provided data. I know Warwickshire County Council have had to do their own assessment because they found their data was better than HS2's. Even though all the information went into the environmental statement, it did not come out. It could be a combination of Natural England working with local record centres and local wildlife groups.

Ralph Smyth: I think it is very important we look at the recommendations of this month's second report of the Natural Capital Committee. That emphasises, as one of its four principles, the importance of collaboration. To agree with Richard, for collaboration you need to be sharing data and one opportunity of HS2 is that it could be getting a huge amount of data of a cross-section across the countryside, but unfortunately we have not always been able to get that data in a timely fashion. It has taken two and a half months to get GIS data from the environmental statement, for example, which was too late for us to be able to use it in our response. One recommendation the Committee could call for is much better, timely release of data from HS2 so that there is in equality of arms, a bit more fairness.

Henry Robinson: I would echo that. Farmers and landowners are perfectly used to having environmental concerns monitored and it has been done by Natural England so far.

Q33 Peter Aldous: Finally, a question I think you did touch upon. Do you think there is sufficient evidence or sufficient information to establish that baseline against which any monitoring will be done?

Richard Barnes: Our analysis of the environmental statement does not show that. We found that more than half of the woodlands have not been surveyed and the information provided through the Ecology Technical Group is that that is as bad, if not worse, for other habitats. For a start the baseline information is not there. There are lots of inaccuracies in

terms of some of the woodland sizes, for instance. Even in the same community forum area report, they have been given different labels for woodlands and different sizes of woodlands that are going to be lost. We have found it is not up to scratch at the moment.

Q34 Peter Aldous: Why is that, do you think? Surely setting on a map the size of a woodland is a fairly straightforward exercise, or not.

Richard Barnes: We are at a loss to explain that. That is one of the issues we have taken up. When we have gone through the environmental statement we have found that there are more woodlands directly affected than indicated by HS2. We found 27. We have also found 21 indirectly affected and another 22 woodlands that may be ancient and we are getting that clarified by Natural England. I am not sure why those inaccuracies are there.

Ralph Smyth: One concern we have is the lack of noise data about maximum noise. At the moment it is averaged out and that is not very realistic when you have a period of silence then a train rushing past, particularly in open areas of countryside where you can hopefully hear birdsong and little also. Having an averaged-out sound is not really very helpful to people to understand what the impact of HS2 would be and how much it should be reduced.

Henry Robinson: It is hard for me to explain why HS2's data are not accurate. The baseline evidence is partly because they have not approached and have not been engaged with the landowner regularly enough or frequently enough or in enough detail from a very early stage.

Q35 Peter Aldous: Do you think we are still at a stage now that this could be rectified?

Henry Robinson: I would like to think so.

Ralph Smyth: Given the Secretary of State has accepted there will not be time to pass this Bill until 2016, that gives us two years. So I would say there is plenty of time for it to be rectified.

Q36 Chair: Can I ask on that, if my voice will allow me, how you think that can be rectified through the mechanism of the Hybrid Bill in terms of the advice and expertise and resources that will be available to advise Parliament about those issues?

Richard Barnes: We learned yesterday, after a meeting with one of the Transport Ministers, that HS2 will be doing further survey work for some species during the next field season.

Chair: Which species?

Richard Barnes: I think you would have to ask HS2 that in a couple of weeks, unless they can say from the floor. We think they need to go further than that, including some of the woodlands and other habitats that have not yet been surveyed. One of our recommendations is that the environmental statement should be modified to reflect any updated information and to correct the omissions and inaccuracies that we and other groups have highlighted. One of the ways to do that could be to produce an addendum that rectifies those issues and contains the missing information and the clarified information if that is easier to achieve in the Bill process. I would agree with Ralph that there should be the time to do that if the projected parliamentary time is in two years.

Q37 Chair: Would you agree with the Wildlife Trust in Staffordshire that that should extend to other than legally protected mammals? At the moment it seems that only legally protected mammals are part of the assessment that has been done.

Richard Barnes: Yes. We found that more than half of the habitats have not been surveyed, so it should extend to more habitat surveys. I agree with Henry that there needs to be more work with the landowners to gain access to the land and collaboration in order to get those surveys done.

Ralph Smyth: I think my one concern is that, given the size and difficulty of navigating the environmental statement as it is, if there are addendums—and there surely will be—you will have to have two separate volumes and try to pick between the two. That will be difficult for specialists let alone the public.

Q38 Dr Whitehead: Mr Barnes, the moment of talking about biodiversity offsetting is upon us. What I particularly wanted to find out a little more about is the fact that the principles of the metrics they are setting out in the environmental statement are somewhat different from those that DEFRA have set out in their biodiversity and environment Green Paper. The environmental statement on HS2 states, “The metric has the potential to produce an iterative mechanism to review changes in the balance of ecological loss versus compensation associated with the proposed scheme”. It appears to suggest that you learn as you go along and then you replace as you go along, whereas the Green Paper talks about the question of complexity of habitats and linking of habitats and looking at the whole ecosystem network as you go. It is clear that one is an adapted version of the other. Do you think the difference in approach is potentially better or potentially worse than the Green Paper approach?

Richard Barnes: I think it is a little premature for HS2 to come out with modifying the biodiversity offsetting metrics before the Government have had time to respond to either your Committee’s recommendations or the completion of the six pilot projects that are due at the end of this month. I have heard today that DEFRA are now saying their response will be in the summer. They have announced it at the biodiversity offsetting conference by the Chartered Institute of Ecology and Environmental Management today, so I have just learned that this morning. It seems to be getting further and further away. For HS2 to come up with a metric in advance of all the detailed consultation, including yours, is a little premature. One of the issues the Woodland Trust has is that in the Government metrics ancient woodland is clearly outside biodiversity offsetting. You can’t offset for the loss of an irreplaceable habitat. The way HS2 is dealing with it is quite unique.

Henry Robinson: We would say that HS2’s version of biodiversity offsetting is substantially worse than the DEFRA one. There are a series of hypothetical multipliers and I can give you one example. The balance between land taken for environmental against land left in farming is that if you take a stretch of 200 metres in length by 4 metres wide of field margin, under the HS2 multiplier for their offsetting that 0.08 of hectare of land will come out at 1.3 hectares. It is a remarkable increase but that is the level of extra land take. If that land take was being taken and paid for then that would be one thing but to have it then compulsorily purchased off valuable agricultural land is quite another.

Q39 Dr Whitehead: Are there any areas of the HS2 metric that you would like particularly to see changed? A line is taking new land over a lengthy period. Would it be possible to amend it to be in line with what the Green Paper says?

Henry Robinson: I think one thing that could be changed is a recognition that the creation of a new habitat could in fact be better than what you have already. The example for that would be if you have taken a piece of permanent pasture and replaced it with a flower-enhanced meadow that might be a better habitat than you had before.

Ralph Smyth: Could I come in there a moment? Two particular concerns for CPRE are hedgerows and verges of lanes, two very much iconic parts of the English countryside. The way the DEFRA and HS2 metrics seem to assess those is simply in terms of their total area. Verges and hedges are key for connectivity of wildlife. Imagine if you assessed the connectivity between the north and London of HS2 by simply how big an area the railway took. That would be clearly ridiculous, but similarly the same principle is being used to look at the biodiversity value of hedges and countryside verges. That cannot be right.

Q40 Mrs Spelman: Surely the natural ecosystem assessment tool should be used to establish a true natural capital of those wildlife corridors in keeping with what the White Paper said about the value of such land. It is over and above the metric that is proposed here. Surely it should be applied to such sensitive green space.

Ralph Smyth: It should, but unfortunately the technical appendix seems to give transport corridors the same value whatever they are, whether it is a motorway or a country lane. Of course there are some fantastic schemes planting wildflowers along motorway verges but that does not necessarily mean they are as great for all different species as a country lane.

Q41 Dr Whitehead: I take it from what you are saying that as it stands at the moment you would consider the supposed iterative process would not be capable of delivering that qualitative offsetting without other mechanisms being added that would enable that to happen. Do you think that is an impossible way of proceeding in terms of what has been put forward?

Ralph Smyth: I think there is scope to change it. The problem with the timetable is that we have not had the results from the pilots yet. In trying to rush ahead with the Bill—even 2016 is quite a tight timetable given the scale of this—is it going to be possible to learn from the pilots, discuss them and then feed that into the Bill or will things have proceeded too far by then?

Q42 Dr Whitehead: We already have the note on the environmental statement that 89 local wildlife sites will be affected and in 61 of those the result will have a significant adverse impact on the very integrity of the site. Bearing that in mind, what would your view be of how any mitigation hierarchy then might be properly applied, particularly as two thirds of those sites will have their fundamental integrity compromised?

Richard Barnes: One of the issues is that HS2 have not fully published their methodology or calculations yet. They promised us, the ES states, they would make this available to relevant parties but this has not yet happened. On some of those circumstances of these sites they have not gone in and assessed the actual sites so they cannot state what the damage will be and what the mitigation or compensation for any residual damage will be.

One of the constraints also is that it is being put in the construction boundary and the laudable aims of the White Paper in terms of the connectivity and the wider landscape scale resilience cannot be done if you are looking just at the red line construction

boundary. That also then squeezes the compensation land on to sites of high grade value that again we would not want to be seeing. It is about looking at the wider landscape connectivity and I think that opportunity has been missed.

Henry Robinson: The whole point about that part of the consultation is it has not been consulted on, it is untried, untested and, frankly, it is not at all clear.

Q43 Chair: It is quite damning.

Henry Robinson: Yes. It was meant to be, Madam Chairman.

Ralph Smyth: One problem with the mitigation hierarchy is it is very difficult to see whether HS2 has reasonably been unable to avoid or mitigate damage, because they have often said, “That is too expensive to make the change”, a point made in the previous session. CPRE has requested that they disclose the cost of all the amendments they have refused on cost grounds but we were told disclosing that would be manifestly unreasonable and not in the public interest. The cost of them having to go through their files would have been about £4,000. Perhaps the Committee could make a request of HS2 Ltd that it discloses the cost, because I would submit that is in the public interest to know where they have said, “We can’t protect the environment because of cost reasons”.

Richard Barnes: Similarly, with option appraisals for some of the more major impacts where there have been suggestions for alternatives, such as the Chilterns Tunnel, that would save one third of the ancient woodland threatened along the route, all we have been told is there are engineering reasons why it cannot happen, but there is not the detail. We have been told we will get that detail but that should have been in the environmental statement where there was an option appraisal of the different scenarios and the relative pros and cons of those scenarios evaluated and the reason for the decision they have come up with stated.

Q44 Mrs Spelman: The environmental statement appears to make a distinction between mitigation and compensation for residual biodiversity loss and offsetting enhancements. Do you think the environmental statement is sufficiently clear about the differences between these and how each of them should be used?

Richard Barnes: Unfortunately we do not think it is particularly clear and it is also differing between different CFA reports, the individual reports on the areas. Sometimes they blur the lines between mitigation and compensation and we found when going through each of the area reports that they differ. It is clear there are different authors for each of those so there is not consistency across the report. Yes, the idea is that you mitigate. You avoid or reduce harm and then you try to compensate. One of the tools for compensation is offsetting. It is not the only one. From our perspective at the Woodland Trust you cannot offset ancient woodland, so we would want to avoid damage. That is the only option we can see for those, and that is why for things such as the Chilterns Tunnel that has not been considered and we have not seen the evaluation of why that has not been considered.

Q45 Mrs Spelman: You made a very good illustration there that the differentiation between like-for-like compensation is simply not possible in some of the lost green space and the alternative of dissimilar compensation. What measures should be put in place for like-for-like replacement where it is possible?

Richard Barnes: I think that should be incorporated in there and, again, using the Natural Environment White Paper's principles of looking for maximising the use of the surrounding landscape and certainly not just in the narrow corridor. One of the principles of biodiversity offsetting is that you do like-for-like and you do not destroy an area of wetland and create a grassland as a result. You should try to compensate in a like manner.

Mrs Spelman: Absolutely. I am sure that we would have a view—

Henry Robinson: The CLA has been very supportive of the concept and the principle behind biodiversity offsetting for a very long time. Two of the other extremely influential groups, Dieter Helm at the Natural Capital Committee, Ian Cheshire at the Ecosystem Market Task Force, have also had it very high on their list of good things to look at, but neither of them were looking at it being paid for by compulsory purchase of land. That is the bit that is frankly iniquitous in the whole process. If there was a long-term income for the landowner for providing the environmental goods that are required, then that would be understandable. But to take a parcel of land and compulsory purchase it from him and then not even be in the state where you have to then pass it back to him if it is taken under temporary work is—I can't find a better word than iniquitous.

Ralph Smyth: I think there are problems such as that the Law Commission has produced a report on environmental covenants but they are not likely to come in to be able to be used until, I would say, 2016 if things move quickly. There is a legal tool missing and that means some delivery problems.

Richard Barnes: Just two further points. One of the issues is that the environmental statement often does not consider the timeframe between the destruction of a habitat and the compensation maturing, for want of a better word. For instance, the bat report that has been commissioned and the evidence from the Bat Conservation Trust just shows that in the case of woodland-dependent species such as Bechstein's bat you will lose them. The damage will be irreparable and they will have nowhere to go for 15 to 20 years. That is an example of where the temporal aspects are not taken into account.

I would also agree with Ralph about the conservation covenants. There is no mechanism identified in the environmental statement. I think it was covered in the previous session as well about the management, monitoring and what to do if things do not go exactly to plan. What intervention would be necessary and therefore what funding would there be for that in terms of a mitigation fund beyond the construction phase of HS2?

Q46 Mrs Spelman: You have anticipated almost one of our later questions there, but you have made clear who you think should be made responsible. Would you like to say who you think should be responsible for managing these new offset sites and to make sure the delivery is genuinely of the environmental value we would expect through the process?

Richard Barnes: I think the sites would need management plans and a commitment to funding of that management, including any intervention and the monitoring. Other mechanisms where we have seen this happen is with a large endowment fund that allows the interest from that to be used to do the maintenance and monitoring and any intervention, but obviously there is a cost allied to that. In terms of an organisation, we are not suggesting any particular organisation but there need to be criteria that whichever organisation does undertake that has a legal and financially binding commitment to do the work that has been laid out.

Ralph Smyth: Going back to High Speed 1 and the Channel Tunnel rail link, having looked at CPRE's archives we complained, alongside the Kent Wildlife Trust, that there is money provided for only about 10 or 12 years after opening to maintain environmental features. We would say the time should be funding for 120 years, the lifetime of the infrastructure. Who knows what will happen during that time. Perhaps another form of disease will wipe out certain tree species. There needs to be enough money to keep those environmental features working for the life of the project.

Q47 Dr Offord: Do you think that ancient woodlands should be included within the compensation metric?

Richard Barnes: The difficulty is whether ancient woodland is in or out of biodiversity offsetting. We are clear that you can't offset, so if you take that principle that the DEFRA paper has said, and your own report concluded the same thing, in the event of there being residual damage to ancient woodland, what do you do about that? The paper suggests a bespoke scheme. We are suggesting any bespoke scheme should use the highest possible metrics as a starting point for any compensation and that, again, it uses—I am sorry to keep talking about it—what we call the Lawton principles of connectivity at the landscape scale. That is the only way if there is any residual damage. Again, we would hope there was as little damage as possible by other measures such as the Chiltern Tunnel changes to a route that avoids the ancient woodland.

Henry Robinson: You cannot replace ancient woodland but if you are going to plant what you hope one day will become ancient woodland, the important thing is to talk to the landowner first so that you can put it in the right place and not just put it down the corridor where you happen to have compulsorily purchased the land. There may be much better and more sensible places to put it to make better environmental connections, to improve the whole process and also, if the landowner is bought into this stage it may well be he is the person who does the maintenance on it. The environmental statement is worryingly silent on who does the maintenance of any woodland planted, and you do not need me to tell you that trees unmaintained will not end up with the wood you desire.

Q48 Dr Offord: You mentioned, Mr Barnes, starting at the highest environmental level. How do you feel about the metric of awarding woodland a metric of eight?

Richard Barnes: One of the proposals I have seen that has been put into a calculation by Warwickshire in one of the pilots is giving a figure of 10 for that, to try to do that. Again, it is such a difficult one for us because we always want to avoid the loss of ancient woodland in the first place as it is irreplaceable, despite what you are saying in terms of tree planting. It is all about the residual damage. We would expect, to use the words of the report, a bespoke scheme, using the highest metrics and the bespoke scheme to follow the Lawton principles.

Ralph Smyth: I agree with that. Ancient woodland and historic hedges are almost cultural heritage and biodiversity combined. That is why, were you to demolish a listed building and simply produce a replica, it would not be the same. Similarly, if you demolish an ancient woodland or a historic hedge and plant some new trees, it is not the same. I think that is the important point.

Q49 Dr Offord: During the process of HS1 there was the loss of some ancient woodland. The soil was relocated elsewhere. That is an example of something that happened and could possibly happen in the example of HS2. Are there any other conditions that existed then that you think should be replicated through the HS2 scheme?

Richard Barnes: Unfortunately, we have been trying to find out information about the HS1 scheme. Probably the example you have been using is Biggins Wood and there is five years of monitoring data on that and then there is nothing more. We have tried four Freedom of Information requests. The first one was lost. The second one we were told was too expensive and another one said to go and speak to HS1 but they are not Freedom of Information-able so we have not yet been able to find that information. We are still trying to get that information from them because there is no monitoring.

Q50 Chair: When would you expect to have that information?

Richard Barnes: Apparently HS1 should have it, or the body that has taken on the responsibility after that, but we have not been able to find that data. In all the research reports we have seen, and we produced a report about translocation of soil—it was a research report on all the scientific papers that we had seen; that came out last January and again I can make it available to the Committee—we did not find any successful examples of translocation. What you are doing usually is translocating the soil and some of the flora associated, typically the bulbs such as bluebells. The very best you get is the bluebells will come up and some of the flora associated with it but you lose all of the assemblage of bacteria and fungi in the soil that is one of the things that make ancient woodland what it is, an incredibly diverse soil micro-ecosystem.

Chair: We would welcome that information.

Richard Barnes: Thank you. I will make a note of it.

Q51 Mrs Spelman: Do you not think this is an opportunity to establish something in statute about a hierarchy of dealing with woodland? The environmental statement is reacting to what is in the way of a set of railway tracks. Do you not think this is an opportunity, rather like a waste hierarchy, to establish that, if at all possible, you do not destroy ancient woodland? If you absolutely have to destroy ancient woodland there are clear and challenging metrics in place to make sure as much of the natural capital is retained and that if you cannot do that you fall back to planting new woodland but in line with very clear Lawton principles and so on. We are lacking a hierarchical system to plan infrastructure against in this country in relation to woodland.

Richard Barnes: I think I would agree with that. Even ancient woodland unfortunately is seen as a relatively easy option. People get building conservation so if it was to go through, say, St Paul's, if you were to take it all apart and then pile the bricks, the windows, the copper in a field somewhere, that would not be St Paul's. That is what you are doing with soil translocation or woodland translocation. You are losing it. People get building conservation. I do not think they quite get things like habitat such as ancient woodland. Yes, it would be useful to say that.

The Government's policy is no net loss. It is in *Keepers of time: a statement of policy for England's Ancient and Native Woodland* and unfortunately we keep seeing that is not happening. We were hoping for HS2 to be a world class project, because the Woodland Trust is not against sustainable or high speed transport. It is just that on this occasion we

are finding it is destroying a lot of ancient woodland. As you say, there is not the hierarchy and commitment to that no net loss.

Ralph Smyth: About statute, the problem here is the NPPF. Surprise, surprise CPRE saying that. Also more recently the National Network's national policy statement talks about and mentions the hierarchy but then has a test of, "Does the need for a project clearly outweigh the harm to the national environment?" Unfortunately, because of the emphasis given on jobs and economic growth, the reality in most cases is that the need for transport infrastructure is deemed to outweigh the benefits of woodland and other natural features. What I would say needs changing are the test in the NPPF and also more recently the National Network's NPS.

Q52 Mrs Spelman: Finally, taking up one of the points that Henry Robinson made about not so much woodland but just the natural capital of the land that has to be taken, do you think that the ambition could be raised from no net loss to net gain if the offsetting could be done in a place presently of very poor natural capital, let us say a contaminated river valley like the River Tame, rather than a cosmetic option of planting trees close to the line, near the railway line but is in essence land of good agricultural value? Do you think that needs to be looked at?

Henry Robinson: I would like to think that was achievable. It would only be achievable if you approached the landowner and worked with him at the start and it would avoid the need to compulsory purchase his land in the first place. Yes, it is achievable. That would be one of the great gains of engaging with the landowners.

Ralph Smyth: We would support a landscape scale conservation, particularly in some locations such as Twyford in Buckinghamshire where the combination of the infrastructure depot, the east-west rail and HS2 means that a landscape scale solution is going to be needed.

Dr Whitehead: I am afraid we have run out of time for our discussion, but thank you very much to the panel for attending and for your evidence this afternoon. We now have to call our third panel, please, for their evidence this afternoon.

Examination of Witnesses

Witnesses: **Rob Cooke**, Land Use Director, Natural England and **Roy Stokes**, HS2 Project Manager, Environment Agency, gave evidence.

Q53 Chair: I am going to hand straight over to Peter Aldous.

Peter Aldous: Thank you very much. As High Speed2 has been developed, and obviously you have had a role on the environmental protections, are you happy that your representations and recommendations have been taken on board?

Rob Cooke: We have been closely involved in the dialogue so far. We have certainly input considerably. I believe they have, yes.

Q54 Peter Aldous: You see a continuing role for Natural England as the Hybrid Bill moves forward. Is that right?

Rob Cooke: Indeed, both in terms of working with HS2 and also in terms of statutory adviser to Government.

Q55 Peter Aldous: Mr Stokes, your own experience?

Roy Stokes: Yes, very much so. We have been involved with HS2 since 2009, so we have been very close to the project throughout its development and still remain so.

Q56 Peter Aldous: What have been both your experiences as to the balance between environmental considerations and concerns and the economic rationale? Has the economic case taken priority or not?

Roy Stokes: Not in my experience, no. In my experience the environmental side has always been foremost to us and we have been able to instigate many changes in the last four years to the development of the scheme. There has never been a question round cost or what that might do and might not do. I think it is important to note that environment enhancement does not necessarily mean greater cost in many instances. It is either cheaper or at least the same as.

Q57 Peter Aldous: Have there been instances where you have made changes to get that environmental enhancement?

Roy Stokes: Yes, and there has been some difficult conversations in bringing some of those ideas around but we are very clear—

Q58 Peter Aldous: You won through in the end, I take it?

Roy Stokes: I would like to think so but I guess the evidence of that will be as and when the scheme is built. It has certainly been our remit from our board to make sure this is a project that hits all the environmental buttons in terms of what our remit is as an organisation.

Q59 Peter Aldous: Mr Cooke?

Rob Cooke: Very similar. We have given our advice on the basis of environmental impact and we have been in discussion with HS2 around options that might mitigate that environmental impact or avoid it.

Q60 Peter Aldous: Do you feel the environmental statement adequately applies the mitigation hierarchy?

Roy Stokes: I will ask Rob to answer that first.

Rob Cooke: From the previous witnesses we heard quite a lot about some of the challenges around ancient woodland. The environmental statement sets out the laudable aim of no net loss. It talks through avoidance mitigation and—

Q61 Peter Aldous: Do you think it could have gone further than no net loss? Is no net loss lacking ambition, perhaps?

Rob Cooke: No net loss is a laudable ambition. Environmental gain would have been an even more laudable ambition.

Roy Stokes: My view is that what we have in front of us is the worst possible case, so I think that is probably quite a good starting point so things can only get better from here on in. In terms of the Environment Agency and our responsibility around the Water

Framework Directive, we are very comfortable that what has been done and what has been proposed so far is all that can be done. Also I am pleased to say that process will stay live as well right throughout the project, so throughout the detailed design we will have the opportunity to continue to influence and to make sure the Water Framework Directive is not compromised.

Q62 Peter Aldous: Taking that point on, Mr Stokes, both your organisations are going to have ongoing work in monitoring and enforcing environmental aspects of HS2. Have you begun to work out how much that is going to cost?

Roy Stokes: We have not done any detailed work in terms of cost. The good thing about a project such as this is the fact that it is a national infrastructure project. We know what is coming. We have been talking with HS2 all the way through this process so we understand what the programme of work is. We are able now to build that into our own plans and because of the nature of the project we will be able to streamline some of the processes and obviously learn from other projects. We are already starting to work out how we will build that into our day job, if you like.

Q63 Peter Aldous: You are happy that there will not be any financial restrictions in your doing the job as you want to do it?

Roy Stokes: There will be some financial costs as are associated with the permitting and consenting part of our business, but that to us is the day job.

Rob Cooke: If there are additional work areas that we are required to undertake as a result of this proposal we would expect to operate that on a full cost recovery basis.

Q64 Peter Aldous: Are you both happy in being able to do this job right through to completion and that there will not be any financial constraints? For instance, will the funding be ring-fenced at all?

Rob Cooke: You ask, "Am I happy?" I cannot give that assurance now because we do not have that assurance.

Q65 Peter Aldous: You are seeking that assurance?

Rob Cooke: Yes. We would be, certainly.

Q66 Peter Aldous: You have not yet sought it but you will be?

Rob Cooke: We would be, yes.

Q67 Chair: How would you expect to get that assurance?

Rob Cooke: Through discussions with HS2 Ltd or the delivery body.

Q68 Chair: You do not have it yet?

Rob Cooke: We do not know what the costs are yet.

Q69 Peter Aldous: When is that particular bit of work, working out and setting those costs, going to be carried out?

Rob Cooke: We have given our comments on the environmental statement. There is some further work to be done in terms of taking account of those comments. There is then the parliamentary process. We do not yet know exactly what the compensation requirements are going to be, how they are going to be laid out. Until we see that we will not be able to advise on what the monitoring requirements and enforcement requirements might be. I

should say it might not necessarily fall to Natural England. We heard earlier from the local authority who thinks they may well have a role and I think that is right.

Q70 Peter Aldous: Do you think this is a role best carried out by Natural England?

Rob Cooke: There are many bodies who could carry out the roles. The monitoring you obviously need appropriate specialists and experts to do, some of whom may be in Natural England but certainly not exclusively within Natural England. By definition, only Natural England can undertake statutory roles, as we have. Other bodies may be able to help us do that, provide advice and so forth.

Q71 Peter Aldous: Do you think the process would be better if you were working with those other bodies or carrying on building on the work you have already done?

Rob Cooke: No, I think it would be better because other parties will have a stake in the outcome.

Q72 Peter Aldous: You think there is a partnership that they might work for?

Rob Cooke: Yes.

Q73 Chair: Can I ask if you see Natural England providing that expertise to Parliament?

Rob Cooke: Yes. If Parliament requests it then Natural England, as a statutory adviser, will give that advice.

Q74 Chair: Parliament would have to request it?

Rob Cooke: I do not know exactly how it would work. Presumably Parliament would request it of DEFRA who would turn to their statutory advisers.

Q75 Chair: Are you aware of the procedure for that?

Rob Cooke: No, but I can find out and come back to you.

Chair: That would be very helpful.

Q76 Dr Offord: How well do you believe that the environmental statement sets out the impacts of HS2?

Rob Cooke: We think it goes a long way in setting them out. We have heard earlier this afternoon of some of the areas that still need to be looked at and we think there are some areas that do need further work.

Q77 Dr Offord: Which areas are you thinking of?

Rob Cooke: Ancient woodland in particular. Part of that has been because HS2 has not had access to all the land so neither they, and as a consequence we, know what is there. Certainly there seems to be some discrepancy in the figures around ancient woodlands. We have heard the evidence from the Woodland Trust that is not consistent with what is published in HS2. There needs to be a further look at some of those woods to clarify whether or not they are ancient woodlands and so forth.

Q78 Dr Offord: I asked some questions of the first panel about regulations being enforced. How do you see your role, from the perspective of your two organisations, in enforcing those?

Rob Cooke: We have a statutory role that we are required to enforce irrespective of the circumstances, so we would take any necessary enforcement action as we would anywhere else. We would be reliant on data provision evidence before assessing whether or not the enforcement action was necessary. We might have a role in assessing the success or otherwise of compensatory habitat provision, has it worked or not, but in terms of pure enforcement we would deliver our role there in the same way as we would deliver it elsewhere.

Roy Stokes: The same with us. It is business as usual, so pollution, flooding and waste management. It is all day job really.

Q79 Dr Offord: We have certainly seen this afternoon that the views of some, I believe, will probably not be satisfied with that and they would like to go further, an organisation, be it a local authority or yourselves. What recourse will they have in a situation where they feel that something has occurred that is not part of the scheme or should not have occurred as part of the scheme?

Roy Stokes: Do you want to give a specific example of—

Q80 Dr Offord: Not as such, no. As I said, one of our speakers from the first panel this afternoon felt very aggrieved about certain parts of the environmental statement and he felt that issues around noise had not been taken into account. So what recourse would someone like that have?

Roy Stokes: The same rules apply with this project as would with any other. I am guessing now you are taking the point that when the scheme is complete and it is operational and then something did not quite turn out how it was proposed to. Then the same form of recourse would be open as is now. To use an example, if there was pollution of a watercourse or whatever as a result of the operation of the rail system, we would investigate that in the same way that we would investigate any water pollution across the country for whatever reason it might be.

Q81 Dr Offord: Would you like to see any safeguards within the Hybrid Bill to ensure that you were not put in a situation where you could not act in the event of a complaint or indeed of a situation?

Roy Stokes: I do not think in the way that the Bill has been produced that we would be in that position anyway.

Q82 Dr Offord: That is great. Finally, to you, Mr Stokes, you made a written submission and you noted that some UK environmental legislation would be disapplied for the purposes of the Hybrid Bill and then replaced with protective provisions within the Bill itself. Can you elaborate on the reasoning behind this procedure and how does this arrangement affect environmental monitoring and enforcement of High Speed 2?

Roy Stokes: It is a procedure that is brought in simply to streamline the whole process. What it does not do is take away any of the legislation that is already in force but, as I say, it is a way of lining up those applications and the consents, so it is a clear line of sight and gives some certainty to the project that will be dealt with within certain timelines. So you will not get a consent application, for example, getting lost in the long grass and delaying the project, but it does not take away any of the powers that we have or any of the legislation that we have. From our point of view, it is not a problem so if a structure is to be built across a watercourse then the same rules apply as they do today.

Q83 Dr Offord: So you purely sought to supply some and not some, simply on the basis of making this work?

Roy Stokes: Yes. It should be noted as well that this is not new. This has been used on Crossrail and on HS1. It was used on the Olympic project as well, so it is just a way of gathering together all of the information and feeding it through in a job lot, rather than it being dribs and drabs and people not being able to then necessarily manage that very well. So it is about securing efficiencies throughout the whole process.

Dr Offord: Thank you. That is very useful.

Q84 Mrs Spelman: DEFRA has developed a scoring system for its offsetting pilots but HS2 has chosen a different metric for assessing its biodiversity offsetting. What is your view of the adequacy of the proposed HS2 approach and is it going to be fit for purpose?

Rob Cooke: It is a good question clearly.

Mrs Spelman: It is a start.

Rob Cooke: I was looking through the metrics this morning and I was thinking to myself, "I need to go into a darkened room with a pencil and work some of it out". Earlier this afternoon we heard that the pilots have not yet reported and there have been some changes to metrics. We have certainly been sighted on the changes to metrics. We have asked for further dialogue, particularly around the metric for ancient woodland. I think I would not want to say any more just at this stage.

Q85 Mrs Spelman: Even though the pilots have not yet reported, do you think that the preparation of those pilots and the development of the system to assessment, has in any way informed HS2's approach to measuring their own offsetting or have the two things evolved completely separately?

Rob Cooke: I do not think they have evolved completely separately. I do not know absolutely but I would be very surprised if there had not been dialogue between HS2 and the pilots.

Q86 Mrs Spelman: I think we have to hope that there was. Do you want to come in on it at all, Mr Stokes?

Roy Stokes: That is Natural England's areas of expertise. What I will say as a comparison around the Water Framework Directive, which is under our jurisdiction, is we have developed a process on this project, which is a first. When HS1 was built the Water Framework Directive was not in force. For this project we have had to develop a process and a way of monitoring and checking against those ecological changes in those watercourses that will be affected by that. At this moment in time we are very comfortable with that approach. We are very confident that we have a baseline of information. For those who do not know, the Water Framework Directive is on a six-year cycle, the last one being 2009, the next one being 2015, which will be the baseline for this project. So by 2021 we will have a reference point back to how things are working out. So that process might help in monitoring of other biodiversity and ecological situations as well.

Mrs Spelman: Thank you.

Q87 Caroline Lucas: I want to come in on the issue of the time delay between habitat being destroyed and then being either recreated or offset. Do you feel that the metric sufficiently deals with that time delay?

Roy Stokes: Yes, it does and I think this is the question that has come up a number of times today. It is like how long is a piece of string? Some of the mitigation that will be required for certainly some of the works around watercourses will be very evident in a very short space of time because it may be, for example, grass growing back on a riverbank. Other parts will be linked to the hydromorphology of the river itself: how does it find its natural channel back? That could take some years. Others will be around tree planting and all the rest of it. We are still working with HS2 to understand and agree what that monitoring timeline might look like and, indeed—as has been discussed earlier on—who might be best placed to do that.

Q88 Caroline Lucas: Do you want to add anything?

Rob Cooke: Yes, thank you. The length of time a habitat will take to establish is dependent both on the habitat type and also where it is put and then how it is managed. The offset metrics are intended to enable a rapid assessment of that by a ratio, which I would imagine is something of an average. So a metric will take account of or is designed to take account of the amount of habitat you need to compensate within the compensation for the time delay, but that will be an average. In some instances habitats will establish very quickly, especially some of the aquatic habitats if they are adjacent to existing habitats. In others it will take a very long period of time. If you plant trees next to an existing ancient woodland, they are likely to reflect the character and range of woodland more quickly than if you plant trees in an isolated situation afield.

Q89 Caroline Lucas: It is precisely on trees that I want to come back, because the environmental statement sets out indicative times to assume for these offsetting calculations. One that it had, which seemed quite shocking to me, was woodland for landscaping achieving equivalent biodiversity value to an established woodland in just 10 years. How realistic does that seem to you?

Rob Cooke: If I am right, the 10-year woodland one was where woodland was established for amenity value, and then the ancient woodland one I think had a 50-year time scale. Clearly, if you are planting trees, you are not going to have woodland within 10 years.

Q90 Caroline Lucas: No, quite, which is why I am worried because it is not just about whether or not it is for amenity. It is talking about there being equivalent biodiversity, so that is the comparison that is being made between woodland for landscaping and—

Rob Cooke: Again, it does depend on what sort of woodland it is replacing. If it is replacing low quality from a biodiversity perspective plantation woodland, then there might be some degree of equivalence after 10 years. If it is replacing long-term established woodland, even if it is not ancient woodland, then I think 10 years is ambitious.

Q91 Caroline Lucas: Are you confident that the environmental statement makes sufficient distinction between those different kinds of woodland and does not inadvertently hide things through looking through averages and so forth?

Rob Cooke: As others have said this afternoon, there is a lot of detail underlying some of the calculations and the assessment of no net loss, which we have yet to see.

Q92 Dr Whitehead: Mr Stokes, could we turn just briefly to the question of flood risks relating to HS2? What consultation have you had with local councils on that particular aspect?

Roy Stokes: Very little, and I would not have expected to have done so far. That will be something that develops as the project develops. What I will say about the risk is that for each of the 26 community forum areas, HS2 have undertaken a flood risk assessment of each of those geographic patches. They have used the Environment Agency's flood maps, all the hydraulic models that we have. They have used lead local authority flooding information, so they have surface water information. They have used Environment Agency surface water maps. They have also covered off ground water, surface water and risk from things like reservoirs and man-made watercourses. From that they have been able to assess what the potential worst case flood risk is for each of those areas and, as part of their planning process, have listed out—and it is in volume 5 of the Bill if you care to refer back to that afterwards—for each of the areas a breakdown of what the flood risk is and what the mitigation would be proposed to manage that flood risk.

Again, it is worst possible case scenario at the moment. From what we can see—and bearing in mind this is a route-wide discussion that we are having today—there may be some specific locations where there may be a slight increase, but on a route-wide situation there is nothing to suggest that the problem of flooding will be any worse for any properties or people.

Q93 Dr Whitehead: How are those mitigation measures that are listed going to be enforced and monitored?

Roy Stokes: Through the consenting legislation as currently exists. For main river water that will come through the Environment Agency. For non-main river watercourses that will be through either internal drainage boards or lead local flood authorities. As I have mentioned before, we have been working very closely with HS2 and looking at both the design of the culverts and the various other bridges and viaducts crossing water channels, and making sure that we are all happy with the flows that are going through there.

It is worth noting as well that they are also taking into account climate change. With all of their draft designs, of both culverts and bridges and viaducts, they have already built in climate change as well within that.

Q94 Dr Whitehead: Some have criticised the environmental impact assessment itself for a lack of survey work and detailed work on watercourses, flood risk and precisely the sort of things that you have mentioned in terms of the detail of how these various processes would work. Is that a fair criticism do you think or do you think that—

Roy Stokes: It is a criticism that I would have aimed myself, I think, if I had not been so close to the project. It is very difficult in that this whole project is rather chicken and egg in that until the Bill is passed, they cannot gain access to the land. I guess the amount of information and data that we have had to hand has been really useful, along with the local authorities as well. We have everything that we know about flooding on the table at the moment, and that is the way that the designs have been going around. That is not to say that they might encounter other information that we do not currently have, but that would be very much about not knowing what you don't know. If you take on board that we have supplied everything that we know about flooding, the local authorities through which the track goes have also done the same. So we have the current picture.

Q95 Dr Whitehead: All this is going to be a major new burden for the Environment Agency, I guess, in terms of all the sort of issues you have mentioned as far as flooding is concerned.

Roy Stokes: Yes, of course it is additional work but, because of our close involvement with it, we have probably gone through a number of iterations that rather than this being a private developer who is doing some big scheme in the country and just bowls up on day one and says, “I want to do this” and then we start the to-ing and fro-ing around, saying, “We’ll change that and change that.” We have been able to make those changes on the way, so hopefully when the detailed design comes out, it should be there or thereabouts, certainly in terms of the flood risk.

Q96 Dr Whitehead: Is anyone paying the agency for this?

Roy Stokes: There are two project managers—myself and another guy—whose salaries are being paid for at the moment. We have set up virtual teams within our organisation but they are not specifically working on HS2. This is very much business as usual for us. Whatever development was going on anywhere across the country, these are the sorts of questions that we would be asking. This is the sort of work that we would have to turn over. As I said before, the good news about this is that we can see this one coming. So we are able to make space for this and with our strategic view, hopefully, we will be able to speed up the whole process. We will be looking at opportunities whereby we can streamline the design and development of some of the assets and get some common agreements going right along the route.

Q97 Dr Whitehead: In view of the substantial cuts to the staffing levels of the organisation, is that space that you are likely to be in at the expense of the other things in the agency. You mentioned business as usual. Are you confident that you would be able to make that space within the arrangements that you will have in future as far as the Environment Agency staff are concerned?

Roy Stokes: We see it very much as being on the front foot, so from our perspective this is a huge investment. If this thing goes ahead, this is a huge investment. We see this very much as being an opportunity to find some environmental gains out of this. If you think about flood risk, for example, partnership funding now is the way that flood risk projects are paid for. If you look at the route of the track, if you look at the material that could be coming out of this development, we think there may be some opportunities along the way either to use some of that material for flood defences or to influence the way in which the landscaping or the construction of the track itself is done to provide some flood mitigation. It is no different from how we would work with other partners.

Q98 Mrs Spelman: Could I ask one small extra question? Could you reassure the Select Committee that your flood risk maps, which are informing High Speed 2’s provision for construction of the line over flood plains, are sufficiently robust to have coped with the recent extreme flooding conditions that we have faced? The line goes through the Blyth Valley flood plain in my constituency, which was completely under water. It is contraindicated obviously for housing, but it is difficult for the layperson to know whether what happened this winter is the new normal and whether your maps are still robust to inform these kinds of infrastructure decisions.

Roy Stokes: The maps are robust, but I should point out that they were not the only tool that is being used. They have also used our hydraulic models. They have been using typography, so we have LiDAR data as well and, as I say, they have been using local

information as well. During the floods during the winter HS2 have been taking data and readings of the flood plain along the route—so we have the latest information as well—and looking at how that might have affected it.

But in answer to your question, for the amount of work that has been done so far and what has been produced, the information that they have had has been the very best that is available at the moment.

Chair: I thank both of you for coming along.