



House of Commons
Transport Committee

High Speed Rail

Tenth Report of Session 2010–12

Volume II

Oral and written evidence

*Additional written evidence is contained in
Volume III, available on the Committee website
at www.parliament.uk/transcom*

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The Transport Committee

The Transport Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department for Transport and its Associate Public Bodies.

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The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the internet at <http://www.parliament.uk/transcom>. A list of Reports of the Committee in the present Parliament is at the back of this volume.

The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in a printed volume. Additional written evidence may be published on the internet only.

Committee staff

The current staff of the Committee are Mark Egan (Clerk), Jessica Montgomery (Second Clerk), David Davies (Committee Specialist), Tony Catinella (Senior Committee Assistant), Edward Faulkner (Committee Assistant), Stewart McIlvenna (Committee Support Assistant) and Hannah Pearce (Media Officer).

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Oral evidence

Taken before the Transport Committee

on Tuesday 21 June 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Kwasi Kwarteng
Mr John Leech

Paul Maynard
Iain Stewart
Julian Sturdy

Examination of Witnesses

Witnesses: **Stephen Joseph**, Chief Executive, Campaign for Better Transport, **Chris Nash**, Research Professor, University of Leeds, and **Christian Wolmar**, railway author and broadcaster, gave evidence.

Q1 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. I would like to start by asking you, please, to identify yourselves with your name and organisation.

Chris Nash: I am Professor Chris Nash, Research Professor at the university of Leeds.

Stephen Joseph: I am Stephen Joseph. I am the Chief Executive of the Campaign for Better Transport.

Christian Wolmar: I am Christian Wolmar. I am a writer and broadcaster on transport matters, mainly railways.

Q2 Chair: Thank you very much. Could each of you tell us what you see as the strongest and the weakest points in the case for high speed rail as put forward by the Government?

Chris Nash: The case rests, essentially, on time savings and additional capacity. The demand forecasts, uncertain as they are, are based on the best evidence available. On that basis, in standard cost-benefit terms, a line from London to the west midlands, ultimately going on to Leeds, looks to have a very strong case. The weakest area in current appraisal practice probably relates to business time savings, which are currently valued on a very crude basis of simply asking what the time costs the employer. I do not know if you want to go into any detail on that, but there is some research on what organisations are willing to pay for their staff to save time on business travel and it does tend to indicate high values. That approach is much sounder than simply working out what it costs the employer.

Q3 Chair: Mr Joseph, do you agree with that or do you have other points?

Stephen Joseph: I would make a slightly different point. The strongest argument for High Speed 2 is about capacity; it is not about speed. It is about the fact that the West Coast Main Line is already relatively full and is likely, even if past trends are moderated, to get to the point where large-scale increases in capacity are necessary. We have been arguing that all the business case numbers are wrong and that, in fact, the likelihood is that we want more capacity than envisaged by HS2, for reasons to do with wider economy, trends in oil prices and so on. In fact, there is a strong case for capacity relief of the

West Coast Main Line. The weakest argument is that HS2 is currently being considered in a silo and is not being joined up with wider transport policy. It is unclear how it fits with, say, plans for road and air, airport investment and road capacity, etcetera, particularly interurban, and also how it links with local transport investment in the cities and areas that it is planning to serve.

Q4 Chair: You see no evidence that that is being considered.

Stephen Joseph: If you look at the work that is currently being done by HS2 and public statements by the Department for Transport, there has not been any formal statement of transport strategy or, indeed, a rail strategy within which HS2 is a part. That is why we, the Campaign for Better Transport—and indeed, I should say, other environmental groups—are at the moment quite agnostic about HS2 because we want to see what the rest of the package of which HS2 is a part looks like. Depending on what that looks like, it could be positive or negative for the economy and for the environment.

Christian Wolmar: Oddly, capacity is both the strongest part of the argument in favour and the weakest. Undoubtedly, there is some capacity need on the West Coast Main Line. The projections are rather optimistic about how much demand is going to go up, but, nevertheless, there is some need for extra capacity. But that is also the weakest argument because that capacity could quite easily be met by more conventional means. For example, the Pendolinos are being extended but not all of them. Only two thirds of the Pendolinos will have extra carriages, and they could be extended to 12 carriages rather than 11, except on the Liverpool route, where there are particular problems. The need for that capacity could be met in other ways.

Overall, though, there is a fundamental weakness to this, and Stephen alluded to it to some extent. I do not see the strategic case for this. I do not see this set in the wider context of transport needs—it is very much in a silo and in danger of being a separate railway from the rest of the network—and the strategic needs of the country in terms of the environment and the economy generally. There is no particularly strong

argument in favour of why we need this particular line at this particular time.

Secondly, very briefly, the business case methodology is laughably ridiculous. The way that the business case methodology uses very small time savings multiplied by enormous amounts is a very unsatisfactory assessment, on which I am sure that academics like Chris Nash might have some comments.

Q5 Chair: Network Rail tell us that the need for additional capacity, as they assess it, cannot be met in any other way. Do you think that they have got it wrong?

Christian Wolmar: They have. They have a vested interest in this. Network Rail want to be seen to be a go-getting organisation that want expansion, with possibly the idea of some sort of privatisation at the end of it; so they like the idea of growth and having more bits of railway. Looking at the rail package which suggests just expanding the existing Pendolino fleet and changing some carriages from first class to second class would add an awful lot of carriages. Evidence has been given about the precise numbers. I do not see that rail demand is necessarily going to continue on this curve where it has been for the last 10 years, for all sorts of reasons.

Q6 Paul Maynard: Mr Wolmar, returning to the point you have just made, your assessment that demand is likely to taper off, capacity needs can be met through extending Pendolinos, declassifying a number of first-class carriages and possibly extending a few station platforms, is a perfectly valid proposition, it would appear to me. However, are you confident that that is a safe bet to make, because what you are essentially saying is we now have to place a bet on what the capacity demand is going to be in 25 to 30 years' time? Are you confident that your bets will pay off?

Christian Wolmar: I am not a futurologist and futurologists tend to get things wrong anyway. But, looking, for example, at environmental considerations, do we really want a new line that will undoubtedly require extra new trips to make it at all economically viable? Is that a notion that we want as a society, or do we want people to pretty much travel the same amount?

The other factor, of course, is economics. Fuel prices are going to continue to rise. That is generally accepted. Fuel is also probably running out. These trains will require energy to operate. They will also become more expensive, not at quite the same rate at which fuel prices will go up, but we have a Government policy that says fares are going to go up by 3% above the rate of inflation for the next three years. That will taper off demand as well. There are so many factors here. It is a guess. The Victorians, about whom I have written in my books, built their railways on guesswork, saying, "The wind is blowing that way. Let's build a railway." To some extent, that is what they are doing here. They are basically saying, "We think that the trends are such that we need to build this railway." My opinion is the opposite.

Q7 Paul Maynard: Mr Joseph, could I just direct a question to you? Your evidence was very judicious and balanced, which I welcome in this debate as it seems to get quite polarised. You have also referred to the issue of capacity, stating that, if you did believe it was necessary, then that would allow for the construction, potentially, of HS2. Why would it be necessary, if you were to build a new railway line, for it to be a high speed railway line? Is there a case for building a parallel high speed line which is not to the very high speeds that HS2 is being planned?

Stephen Joseph: I absolutely agree that it does not have to be very high speed. We and others have been critical of the Department's specification for this being as high speed as it is because we think that has changed some of the design parameters and may have had an influence on some of the local impacts. Where I would disagree with Christian is that most of the factors we are talking about take you in the direction of needing more capacity, and, yes, having it at very high speeds may not be the right answer.

I would say, however, that, when a few years ago, some Victorian-like pioneers decided to promote a freight line to deal with exactly the same issues—capacity on the West Coast Main Line and provide an alternative for freight, to get a lot of freight off the roads and on to the railways—they used some of this route that is now being proposed and they were faced with equally strong local objections. That was going to be purely privately financed and probably would have had the same impact on its investors as it did for a lot of the people who invested in the Victorian railways, who probably felt at the time a bit like people who invested in Greece do now.

What we have been saying is that there is a case for more capacity and there might be a case for making it high-ish speed at any rate, to allow for getting people out of cars and planes, to be able to take on domestic aviation. Christian is absolutely right to say that there is an issue of pricing here and, if we have constantly increasing RPI +3%, then that will be less attractive.

However, the point I would make is that, if you look at the HS2 business case, there is a point in one little paragraph in which it admits that oil prices might be somewhere above \$75 a barrel or whatever it is the Government's current projections are and might be somewhere close to what they are now. They say that, in that case, the business case for HS2 is much better, and I would agree with that. The argument we would make is that, for economic reasons, the need to unhook ourselves from oil dependency, and, for environmental reasons, the need to unhook ourselves from carbon emissions from transport, we need a lot more electrified rail as an alternative to cars and short distance aviation. HS2 could be part of that, but it needs to be spelt out what that is in relation to, for example, relative pricing of different modes, infrastructure planning and so on.

Q8 Paul Maynard: Professor Nash, could you possibly offer me a critique of how you think the Government are performing in advocating HS2 so far? Many of their arguments focus on eradicating domestic aviation and its transformative potential to

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somehow heal the north-south divide. How do you rate the Government's advocacy for HS2 so far, irrespective of the views you may or may not have on HS2?

Chris Nash: I have to say I am sceptical of the strength of the case in terms of carbon savings. In the long run, as we decarbonise electricity, that case becomes stronger. But even so, when you look at other ways of saving carbon, if that were the only benefit of building high speed rail, it would be a very expensive way of saving carbon.

Likewise, with regard to the regional benefits, there is certainly evidence of high speed lines attracting development. What is a lot less clear is whether they are just moving development from one location to another as opposed to generating wholly new activity. Clearly, moving development from one location to another can be helpful if it helps depressed regions. But, again, I am not convinced that is a strong argument. I do think, as I say, that the capacity issue, which Stephen stressed, is much more important and this is not just a question of capacity for long-distance passenger trips. It is also the growth of freight traffic, particularly maritime containers, on the West Coast and the growth of commuting into cities—London, Leeds and Birmingham. There are other ways of catering for that capacity, but, to the extent that I have seen studies of alternatives, HS2 looks the best value for money in terms of the ways of catering for that need for extra rail capacity.

Q9 Iain Stewart: To what extent would you agree that the choice between upgrading the classic network, for example, Rail Package 2, and building a high speed line is essentially a false choice, because we need to do both? We need to continue upgrading the West Coast Main Line over the next 15 years before which High Speed 2 would open, and, also, after High Speed 2, we would need to keep investing in the classic network so that we can secure the benefits of the released capacity. Would you agree with that?

Christian Wolmar: You are raising the issue of opportunity cost there. One of the reasons I am very sceptical about HS2 is precisely that point. It has been presented as separate money—new money—that is just going to arrive and be churned out by the Department for Transport, with the happy agreement of the Treasury. That is totally fanciful. You are right that, if the huge demand that is projected really comes to light, then maybe both might eventually be needed. I am very sceptical of the demand figures, but I am also very sceptical of the fact it is just not going to happen that we are going to get both. This is an either/or choice. The presentation of it as an idea that HS2 will be a bonus and we will get all the other improvements that were going to happen anyway is fanciful.

Stephen Joseph: We have made it clear in our written evidence that we think it is absolutely critical that investment in the classic rail network must continue. This is borne out by evidence in other countries. You could argue that the French invested in their TGV network at the expense of the rest of network and have suffered from that.

In our view, if HS2 has any case at all, it is because it is going to free up capacity on the West Coast Main Line for both passenger and freight. This is where Professor Nash talked about being sceptical of carbon benefits. The real carbon benefits are not from HS2 itself. They are what you get from released capacity, which is more capacity for interregional services, from places like Milton Keynes to places further north. Currently, Milton Keynes only has an hourly service to places like Birmingham, for instance. It could justify a lot more than that if the capacity were there. With regard to freight, I would stress rail freight because that is where you get the really big carbon benefits and some really big economic benefits by providing relief from road capacity and real choice for businesses in how they get goods around, which is both lower carbon and lower cost in fuel terms. That capacity simply is not there on the West Coast, even now. You are going to hear evidence from a rail freight group later about that. But that is where the real capacity is.

When I talked earlier about the need to put HS2 in a wider context, and here I do agree with Christian, we need to see how HS2 fits in with a wider national plan. If the argument is we are going to have HS2 and we are going to let the rest of the railways rot, then I do not think anybody is going to support it. If, on the other hand, it is part of a much broader strategy, then it has some merit, not least because it allows for some other benefits in terms of creating rail-based development in places like Milton Keynes and other places like the West Coast Main Line, which give people a real option for using rail for local and more longer-distance journeys. You need land use connections to the policy and you need local transport and other rail connections. I absolutely agree that investing in the West Coast and in High Speed 2 should not be seen as choices. We need to do both. We need to do both because otherwise the benefits of HS2 will not be realised.

Q10 Chair: How important would you say it is that that wider strategy is identified and spelt out before there is any decision to go ahead with High Speed 2?

Stephen Joseph: We think it is critical. From a quick skim, the Oxera report that the Committee has commissioned has made the same point. You cannot tell what the benefits of HS2 are going to be. For Buckinghamshire, for instance, you cannot see whether East West Rail will be operable without the extra capacity around Bletchley and Milton Keynes. There are some large benefits from East West Rail. You need to be able to see, in relation to pricing and other capacity of other modes and wider land use policy, exactly what the context is within which HS2 is going to be set, because otherwise you cannot really make a judgment on the economic and environmental costs and benefits you are going to get from it.

Q11 Chair: Professor Nash, did you want to comment on that?

Chris Nash: I just wanted to add a couple of points. Yes, clearly investment in the conventional rail network is still needed, although we have invested heavily in the West Coast Main Line, and that is what

has bought us some time at least. The other point I wanted to make is that, from the published reports, it appears that, having reached the west midlands, going on to Leeds—and I say this not simply because I come from Leeds—appears to have very high incremental benefits. The reason is that you can then relieve the East Coast Main Line of some existing trains, provide a much faster Leeds to London service, and give a little bit of relief to the Midland Mainline as well. You can then come up with a strategy where HS2 makes a big contribution in dealing with the capacity problems of all three of the main lines into London from the north. But I totally agree with my colleagues that that integration with the network as a whole to get the most benefit from it is absolutely crucial.

Christian Wolmar: I would like to make a very quick point on this, which is something you should hone down if you get Ministers here. There is a problem about the extra capacity, which is that trains on it will have to be paid for. It is very unlikely that those services will be profitable; so they will require extra subsidy. HS2, in its early years, will also require subsidy. There will be a very big demand on the rail revenue account which I doubt we will be in an economic position to meet.

Q12 Iain Stewart: I have one other question on the upgrading of the classic line as an alternative to high speed. Would I be correct in thinking that any upgrades to improve capacity on London to Manchester and London to Birmingham would be at the expense of shorter-distance commuter traffic on the West Coast Main Line: i.e. to squeeze in more intercity trains, there would be a cap or a reduction on commuter services?

Chris Nash: There is quite a probability of that. To some extent, the timetable that has now come in on the West Coast Main Line has benefited the major flows at the expense of some of the other places on the route, and that could continue if we do not get a major injection of new capacity.

Q13 Steve Baker: Mr Wolmar, in your article of January, which is titled “HS2’s Long Term Uncertainty”, you wrote: “The business case is really just so much mumbo-jumbo and is so dependent on forecasts of demand as to be meaningless.” Professor Nash, in your written evidence you have said: “As is inevitable with such a long term project, the business case is surrounded by considerable uncertainty, with the future growth in demand the key issue.” I want you to help me, if you can, with this slight conflict. You seem to agree that there is huge uncertainty; you seem to agree that demand is the key issue; and yet you seem to have reached quite different conclusions about whether HS2 should go ahead. Could you just try and explain why you have those different conclusions?

Christian Wolmar: I really have problems with business cases and I have just done some work on mega projects. The study talked to a lot of people involved in mega projects. They asked the question: do you think cost-benefit analysis is a valid way of assessing mega projects? These were planners and various other stakeholders. The Bartlett School at

University College London has done this. 84% of the respondents, and these are people involved in this, said they thought that the cost-benefit analysis methodology was unsatisfactory. There is quite a strong basis for saying it is really mumbo-jumbo. If you alter factors early on in the equation, by year 10 or something you can be 25% to 50% different from the result that you have given. When they give these precise figures for benefits and say there is a 2.6 benefit-cost ratio, it really is nothing more than studied guesswork. Cost-benefit analysis methodology was initially developed to compare projects with one another, not to develop absolute values for them. The other point about it is that the benefits accrue to private individuals, whereas the costs accrue to the taxpayer. That is also why I am deeply sceptical of it. I cannot quite give an answer as to why I come to different conclusions from Chris. Maybe Chris has something to say about that.

Q14 Chair: Mr Wolmar, just on that point, you said something pretty fundamental. It is the cost to the taxpayer and the benefit to private individuals. Would that not apply to any kind of public investment and not specifically this scheme?

Christian Wolmar: Not necessarily because you might have the benefits where a lot of them are coming through the fare box and therefore are largely being paid for, whereas with this project we are seeing that some of it is coming from the fare box but a very large proportion is these time benefits to individual people, which is their time and not societal time, as it were.

Chris Nash: First, the methodology used in this study is based on decades of research. The demand forecasts are based on modelled relationships. There is a clear scientific basis for it. None of that changes the fact that there are big uncertainties when you are looking 10 or 20 years ahead. Relationships which held in the past may break down. Events may take a course totally different from what you put in your variables in the forecasts. The range of uncertainty is such that this may turn out to have been just a reasonable project but possibly not the best use of money. It is very unlikely that it would turn out to be a complete waste of money. That would require absolutely drastic changes in the course of events. So, on the central forecast, it looks a very good project. At worst, it is probably still a reasonable one.

If I could just add one other comment, France, of course, has been the pioneer of high speed rail in Europe. They have a very healthy law which says that, when the Government puts a lot of money into a project, an ex-post appraisal must be published. For all of the earlier French high speed lines, there is now an ex-post appraisal of what has happened. By and large, with the one big exception of the channel tunnel, the forecasts have been pretty good and social returns on the projects have been pretty much achieved as forecast. France has taken a fairly similar approach to these issues as we have and it has worked there.

Stephen Joseph: Can I just comment? First, I do think that in this case all the numbers are wrong for all the reasons that people have said. We have been critical

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of both supporters and opponents of this for focusing on tiny changes in the business case for all the reasons that both my colleagues have said. That means that we need projects like this to take a completely different approach and look at the likely scenarios for the future, high and low oil prices, a different range of ways of things that might happen in relation to the use of communications technology and things like that, and see how robust something like this is against uncertainties and changes in the future. That is the way in which major private sector businesses do approach these kinds of things; they use scenarios. That is what the big oil or drug companies do. They use a scenario-based approach to justify investment as well as straight business cases, and sensitivity tests can be applied to test the robustness of schemes.

It would have been better if the Government had at least supplemented the business cases it has produced with some of those kinds of scenario-based approaches and some sensitivity tests to look at those. The only one, as I have already identified, is one that looks at oil prices and compares a theoretical, much lower crude oil price with one that is approximately what we have now and has much more of a robust business case.

There is one other point I would make. A lot of opponents for this have been talking about HS2 as if it is like HS1 and look at the demand in the channel tunnel for High Speed 1. It did not meet demand; huge amounts of money have gone in and capacity is not anywhere there. We are talking about something completely different here. That was a completely new corridor with new flows. These are corridors in which there are large established flows on road, rail and air. You therefore have a lot of demand. We would argue, as an environmental group, that we want to shift some of that demand from road and air to rail, and HS2 could, in certain circumstances, help that happen. But it is a very different situation from HS1.

Q15 Steve Baker: Mr Joseph, very much on the points you have just made, much of your argument seems to rest upon the oil price. Can I just put three points to you on that? I will try and be as brief as possible. First, have you adequately taken into account efficiencies in motorcars and de-carbonisation of road transport? Secondly, have you taken a view on shale gas, because we seem to have discovered worldwide vast resources of shale gas, which will affect the price of hydrocarbon fuels? The third point I will make, which I will try to make simply, is that, if we look at the oil price since the end of the second world war, it is only high and volatile in dollars, which of course is very important because it is traded in dollars. But, in gold, the price of oil has been low and stable since the end of the second world war, and I put it to you it is quite likely that the oil price is so high because of quantitative easing.

Stephen Joseph: I am not going to get into a debate on that.

Chair: You do not have to address all aspects of that question.

Stephen Joseph: Can I make a general comment? First, the fundamental point is that, although there are lots of things you can do to make motorcars more

efficient and also to use alternative fuels and electric vehicles, all the numbers I have seen suggest that alternative fuels like shale gas and things like tar sands, and, also, electric vehicles, are still more expensive to run and the oil is still more expensive to get than current fuels and vehicles are. There has been some work done for the Low Carbon Vehicle Partnership quite recently which has looked at long-term prices of electric vehicles and they still come out as more expensive in cost to the individual than current vehicles do. There are ways round that and we have been talking to colleagues of yours like Zac Goldsmith, who are interested in feebate schemes as a way to look at that. But if you look at what is likely to happen on oil price and the cost of driving to the individual, it is likely to be higher than it has been at the moment.

The International Energy Agency used to deny peak oil was a problem and has now moved to accept that it is likely to happen. That does not mean you are going to look down an oil well and there won't be anything there. It means the economics will work, the price will go up and that previously untapped reserves, like tar sands and so on, will become economic. That is the case.

By the way—I do not think it is “by the way”, but for this argument it is by the way—there are some huge environmental consequences in getting shale gas and tar sands and exploiting those. They are enormously worse, in terms of emissions and local environmental impacts, than conventional oil extraction is, which is why there is a lot of concern by a number of environmental groups about those methods. But, even were that not the case, as I say, the economics of those, as I understand them, means that they are more expensive. I am not an expert on this. I am reading studies that I have seen, commissioned by the likes of the Low Carbon Vehicle Partnership, which suggest that the price of motoring will be higher in real terms in the future than it is now. If you factor that in and, of course, the political consequences of what is going on in the Middle East at the moment, then what you get is high and volatile oil prices which are good economic cases for having more reliance on rail and public transport for journeys where that is appropriate, and high speed rail could be part of that strategy.

Q16 Julian Sturdy: Mr Joseph, in your opening remarks you said that HS2 is being considered in a silo, which to me was quite worrying. In a number of different inquiries on the Transport Select Committee, we have always heard about the importance of connectivity within transport if we are going to make transport efficient and get the most out of it. You yourself have given evidence to inquiries and talked about exactly that—the importance of connectivity. Do you think that, without better connectivity within HS2, the case could be quite difficult to be made or do you think connectivity will just follow on?

Stephen Joseph: We think it is fundamental. It is fundamental for all sorts of reasons but it is particularly fundamental just in its own terms. There has been a lot of talk about parkway stations; for example, there is one at Birmingham on the London-Birmingham route and there may be one at

Nottingham as well towards Leeds. If you do not look at the capacity for getting people to and from those links, then those parkway stations will not work. In fact, we would argue that they probably will not work anyway. If you look at the capacity on the M42 and the M6, which is what you would need to serve the Birmingham parkway or the Birmingham international station, or the M1, which would need to serve the East Midlands station, there is not capacity there now, let alone with background growth in traffic, and you will just be adding to road congestion around those places.

It is also the case that there is some very interesting work being done by the UCL Bartlett School of Architecture that Christian referred to earlier, comparing door-to-door journey times for high speed rail in different countries. They make the point that in Germany there is good connectivity. Because of good connectivity at local level—good local public transport links—places off the high speed rail network in Germany equivalent to, let us say, Burnley or Wolverhampton here will have good door-to-door links because they link into the high speed network. If we do not have any improvement in local rail or public transport connectivity, then we will get more road congestion around the high speed stations and more city centre congestion in the city centre stations, and we will not get the benefits that high speed rail will bring for the surrounding area.

That is why we have been arguing that you need to have, hand in hand with HS2, investment in local public transport links. I am sure that Chris, as a Leeds resident, would reel off the kinds of investment that Leeds has wanted to have in local public transport over the years. Having been pushed away from trams by Alistair Darling, it now has a trolley bus scheme. But that kind of thing is critical if you are going to be able to maximise the benefits of HS2 and get the wider economic benefits as well so that places like the Black Country in the west midlands get any economic benefits that are going from HS2. You need to have, say, the extension in the Midland Metro so that people can get to and from the Birmingham city centre high speed rail station. That is what has worked in other countries. It is also worth saying, by the way, that SNCF would argue quite strongly that parkway stations have not worked in France. They have often been built for political reasons and have not generated traffic. Where people want to get to are the city centres and you need to provide connectivity to those city centres.

Chair: I will not encourage Professor Nash to tell us about what Leeds needs, important as that may be. Do either of the other panellists disagree with the general tone of what has been said? I think it is consistent with what you have both been saying in different ways. Mr Sturdy, is there anything else you would like to ask?

Julian Sturdy: No, thank you.

Q17 Mr Leech: The one thing that you all seem to agree on is that the projections are not necessarily accurate and it is all based on which perspective you come from as to whether or not you use those projections to support or oppose an extension of high speed. We have just spent billions of pounds

upgrading the West Coast Main Line and most people seem to suggest that the West Coast Main Line, without any further investment, will be at capacity within six to 10 years. Did any of you predict this prior to that investment being made?

Christian Wolmar: Predict what?

Mr Leech: Predict that we would spend billions of pounds on upgrading the West Coast Main Line and still be back to square one in 2020.

Christian Wolmar: We are not quite back to square one. There are an awful lot of empty trains that go up between London and Birmingham and London and Manchester. One has to be slightly sceptical just because it is full at 7 o'clock on Friday evenings at Euston. That is about a pricing policy and not about capacity. In their RUS—route utilisation strategy—on the West Coast, Network Rail say that something like 12% or 13% of trains within five years will have people standing on them. They mean by that that the line will be full. I am not sure I accept that definition of “full”. There is an awful lot of capacity that could be better used through more intelligent pricing policies and all the Rail Package 2 stuff that we have mentioned, which will be necessary. Some of these things will be necessary, but I do not accept necessarily that it is jam-packed full at the moment.

Q18 Mr Leech: Would you accept that, with the level of investment in the upgrade of the West Coast Main Line, it would not have been unreasonable for us to expect some people to be arguing that we would be at capacity by 2020?

Christian Wolmar: We are where we are, as they say in business. But, if you look back, it might well have been an idea to have built a high speed line 15 years ago rather than spending all the money on that. But we did not do that. We did upgrade it, we have improved the services on it and that is where we are. So I do not think there is much point going back to the past.

Q19 Mr Leech: On that basis, could we not be sitting here in 10 years' time arguing exactly the same point, suggesting that 10 years ago, back in 2011, we should have made that decision to build the high speed line and, with hindsight, we would have done?

Christian Wolmar: There is a risk of that. I do not think any of us sitting here or any of the witnesses you are going to see will be able to say definitely one way or the other that the decision is a correct one. As I said earlier, it is really a matter of blowing in the wind. That is why these wider strategic considerations have to come in. The environmental case, for example, should be very strong on this. There are no carbon benefits promised in HS2 Limited's report, which says that broadly this is carbon neutral. If this was fantastically carbon positive and would reduce the amount of carbon, then that would be a justification for it. Basing this on the demand is a guess. We would be guessing. All your witnesses coming here will be guessing about that.

Q20 Mr Leech: Does anyone else have a view?

Stephen Joseph: Without having said that the West Coast Main Line was going to be fantastically popular

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and full beforehand, we have always argued as a group that, if you provide attractive public transport, people will use it and will use it more than traditional forecasts and forecasting methods tell you they will. If you add into that increasing congestion on the roads and apparent changes in oil prices, if not real ones, then you will get more use of rail for freight as well as for passengers. We have seen a welcome growth in rail's mode share of freight from a low of about 6% in the 1990s to 11% now. That growth is continuing, not just in volume but in the mode share of freight across the country, and we would argue that is good for economic and environmental purposes. The danger of not doing things long term on the West Coast to relieve the West Coast, to provide for that freight capacity, is that you choke it off and you create economic concerns on road congestion and so on.

Chris Nash: Can I just add two comments? First, a large proportion of the expenditure on the West Coast Main Line was basically renewing the assets. There was heavy investment back in the 1960s; those assets were worn out. Something like three quarters of the expenditure was simply renewing the assets. We are all agreed that the capacity of the West Coast Main Line will certainly be needed, whatever. So that was needed anyway.

Just one other point. This is not something that has just crept up on us. We were subcontractors in a study for the Strategic Rail Authority, which first put forward a high speed scheme rather like the one now being proposed, the "Y" shaped scheme. That was 2002 or 2003; I cannot remember. More recently, Network Rail did its New Lines Study, in which there were similar conclusions about the need for capacity. It has been foreseen for some time that this situation would arise.

Q21 Mr Leech: I have one final question to Mr Nash and Mr Joseph. You have both recognised that one of the biggest potential benefits of high speed rail is freeing up capacity for regional and local services and freight services. Have you done any work on what sort of increase in capacity we would have as a result of a high speed network to the north of England for those regional and local services and freight services?

Chris Nash: I have to say the most detailed study I have seen was done by a colleague who is a visiting fellow at Leeds for Greengauge 21, which of course is a lobbying group. He, individually, is by no means a high speed rail advocate and I am quite sure he will not have egged the pudding in terms of what he did. That does provide very good evidence of what could be achieved. As one would expect, the place that gains most in the timetables he looked at was Milton Keynes. One or two places lose some services to London, Coventry in particular, but gain services to Birmingham and to other parts of the country. That report gives a good idea of the sorts of benefits to people not on the high speed line that the high speed line could bring.

Stephen Joseph: We have not done detailed work on that. It is not our role. All we note is that there is a capacity issue on both the motorway links in this corridor as well as rail and we therefore do need to do something. We want to see the investment in rail

for various reasons. But we want to see what the full strategy is; so we have not done the detailed work that would be required. There are 18 trains an hour on the London-Birmingham stretch; that is 18 paths that you could free up on the parallel railway line, presumably.

Q22 Paul Maynard: I will just press Mr Joseph a little further on one of his key arguments, which is to encourage the shift from aviation on to rail. In Europe, we have admittedly seen that where a high speed route has been established, e.g. Paris to Brussels, demand for that aviation route has fallen sharply. On that level, your argument would appear to bear some water. How would you respond to the accusation that this is rather a red herring in the UK's domestic setting, because we have already seen a very sharp decline on domestic routes into Heathrow? The establishment of HS2 into Heathrow or into Old Oak Common will not actually reduce the number of domestic flights going into Heathrow because they have declined already. Most of our domestic aviation is on routes that are already poorly served by rail or indeed over water. Would you agree that the aviation argument is potentially a weaker argument to pose?

Stephen Joseph: No, for two reasons. First, even when you have high speed rail from London to Manchester, you are not just talking about London to Manchester flights. You are talking about speeding up journeys that involve London to Manchester, even potentially London to Birmingham but certainly London to Manchester, so that you speed up the London-Scotland journey significantly. There is still quite a significant Edinburgh and Glasgow to London aviation market for which this would provide an alternative. But the main point is not simply about domestic but short-haul aviation and about the potential for near European flights if you have, as we have argued for in our evidence and indeed to the inquiry by Lord Mawhinney, a good HS2-HS1 link with through trains. If you do that, then you can provide a good alternative for short-haul aviation to, as I say, the near continent, which currently is not the case. They are not available at the moment from regional airports and so on.

I would make one other point. When you get to the particular Birmingham-Leeds section of high speed rail, it would be possible to speed up cross-country journeys—this is again the point about not having HS2 in a silo and having it as part of the national rail network—so that, for example, Exeter-Newcastle journeys can be speeded up for the section that they use on this. What I am talking about here is the potential. We have not looked at the detail because you would need to look at the timetable. But, in fact, I have been critical of a number of the proponents for not looking at these kinds of opportunities and the benefits that those bring. But this is why we have been so agnostic about this. All of these are things that could happen with HS2, had not been spelt out at the moment and ultimately will need Government action to make these benefits real.

Q23 Steve Baker: Mr Wolmar, you mentioned price very briefly and it just struck me that we talk a great deal about demand forecasts and capacity, but we talk

very little about the usual mechanism for bringing these two things into balance, which is price. The McNulty report called for a move to predict, manage and provide. To what extent should we be having a different conversation about the management of demand?

Christian Wolmar: Absolutely. That is absolutely key to this. Greengauge has produced some reports suggesting that there will not be any premium prices on this new line or whatever. We do not know that. There is already premium pricing on HS1 where the Southeastern franchise was made to put up its fares by 3% above the rate of inflation instead of 1%. The notion that there will not be some sort of premium rate on this line is very fanciful. That brings into play the wider pricing mechanisms that we have on the railways. I did already refer to that. The bottleneck at Euston at 7 o'clock is created by pricing mechanisms. The Government are already looking at pricing; there is going to be a review next year. But, also, they have a long-term plan to increase the amount of money that is coming from the fare payer and reducing the amount of money that is coming from the taxpayer. All this comes into play, and I am very surprised, like you, that there is not sufficient analysis of that. It is something that maybe the Committee might press Ministers on.

Q24 Chair: Does anyone else have any different view from that? Would you agree that we should deal with demand by increasing prices?

Chris Nash: Can I just add that, undoubtedly, the high speed line itself would practise yield management, as Eurostar and the French TGV networks do, so that there would be a wide range of prices. Equally, on the existing lines, yes, there is more to do on pricing, but there is already a big difference between average fares in the peak and the off peak. I guess the big issue is commuter fares into the big cities. There, the big worry about pushing them up further is that, in general, road users going into cities in the peak are not paying the costs they impose in terms of creating congestion and pollution. Further development of pricing policy on the railways needs to be seen in the

light of what we are doing on the roads as well in terms of pricing to cope with the peaks.

Stephen Joseph: I strongly support that. I was going to say that this is not just about rail pricing. It is what you do, for example, with air passenger duty or plane duty, depending on where the Government ends up on that, with the cost of motoring or, indeed, though I know no party wants to go there, road pricing and so on. As members will know, the Campaign for Better Transport is running a Fair Fares Now campaign which is specifically about addressing the RPI +3%, which we think is wrong for all sorts of reasons, and, arguably, the commuters around London are paying a premium compared with what the competitor city regions are paying in other countries. We think there is a real issue about pricing. Pricing across all modes is one of the big uncertainties. It is one of the other things in here, I would agree with colleagues, that you absolutely have to look at in the context of HS2.

Q25 Iain Stewart: Just to follow on from the pricing point, I would like to pick up something that Mr Wolmar said, where you could increase the capacity on the current line by moving people away from the peak times at the moment. But I would contend that those trains are busy because that is the time that people want to use them, and if you increase fares too much, whether on the classic network or on high speed, you are just going to push people away from rail travel altogether.

Christian Wolmar: No, it does not tend to be the peak trains that are absolutely full because the prices are so high. It is the first off peak train that is often the one that is most in demand. There you could have a more graduated policy so that you do not jump from it being something like £200 return to Manchester, to a cheap fare of £50. It could be more graduated. McNulty, in fact, looks at that and says that you could have shoulders where you ease off so you could have more sensitive demand pricing and that might certainly alleviate this famous 7 o'clock Euston thing.

Chair: Thank you very much, gentlemen, for coming and answering our questions.

Examination of Witnesses

Witnesses: **Michael Roberts**, Chief Executive, Association of Train Operating Companies, **Richard Eccles**, Director of Network Planning, Network Rail, **Anthony Smith**, Chief Executive, Passenger Focus, and **Lord Berkeley**, Chairman, Rail Freight Group, gave evidence.

Q26 Chair: Good morning, gentlemen. Welcome to the Transport Select Committee. I would like to start by asking you, please, to give your name and organisation.

Lord Berkeley: I am Tony Berkeley. I am Chairman of the Rail Freight Group, a representative body of the rail freight industry in the UK.

Michael Roberts: My name is Michael Roberts. I am Chief Executive of the Association of Train Operating Companies.

Anthony Smith: I am Anthony Smith, Chief Executive of Passenger Focus, the independent passenger watchdog.

Richard Eccles: I am Richard Eccles. I am Director of Network Planning for Network Rail.

Q27 Chair: Could you tell us what you feel are the strongest and weakest points in the argument for high speed rail as put forward by the Government?

Anthony Smith: Two very strong points are that a lot of the argument and debate among passengers at the moment is about the capacity of the rail network and the ability of the new high speed line to release both new capacity for high speed services and also, just as important, released capacity in terms of places like Milton Keynes at the moment where, arguably, there

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should be a much better rail service than there is. A strong point about the high speed line is the potential for capacity. From our point of view, the speed is a slight side effect. If it goes a bit quicker that is quite nice, but when you look at the current priorities for rail passengers improving speed is not necessarily one of the greatest things that they are looking for. The weakest thing is that 2026 is a very long time to wait for a train and it is quite important, as you and colleagues have already picked up, that investment continues in the railways up to that point and continues across the country, because, of course, the current high speed plans will help benefit some passengers but by no means all passengers.

Lord Berkeley: For me, the strongest argument in favour of the high speed line is the capacity that it releases, as Anthony has just said. I believe the passenger forecast for 20 years' time, 2030, is roughly double the present traffic. Certainly, for freight, our forecast is roughly that the volume of freight will double by 2030. It is mostly containers on the main routes between London and other places or the ports. I believe we need the capacity for passengers and freight and that the high speed line is a good way of doing it. I have one problem, which is that the biggest problem with capacity, certainly for freight, is from Manchester south and Leeds south rather than from London north, because the West Coast Main Line, as the Committee has heard, has been recently upgraded and the improvements are bigger in the southern end. I see, in the first phase of High Speed 2, a problem when it finishes somewhere north of Birmingham, and the capacity there, with the increased demand for freight and all the passenger trains which will come off the high speed line at that time, could be a big problem. I would much prefer that it started at Manchester and Leeds and worked south in the first phase and then the second phase.

You asked what the weakest point is. Cost may be the one of the weakest ones. I do watch the railway industry pretty widely, for passengers as well. The argument for a new station in Birmingham is probably not made and I do not think the argument for a new station at Euston is made because the passenger transfer at Old Oak Common on to Cross Rail, which is very short of passengers when you get west of Paddington, is something that should be looked at. Conversely, there must be a link, as other witnesses have said, between High Speed 1 and 2 to enable full continental gauge trains—passenger trains, certainly, but sometimes freight—to use it and bypass the North London line, which is the present plan.

Q28 Chair: Mr Roberts, what are the strongest points and the weakest points?

Michael Roberts: In terms of the strongest points, I would agree with what my colleagues have said about the pre-eminent significance of increasing capacity in a corridor where there is already significant demand, particularly at peak times, and it is set to grow significantly in the next 20 years. That additional capacity which will be provided by HS2 would not only benefit long-distance travel—and it is worth remembering that long-distance travel has been the fastest growing sector within the railways since

privatisation; it has doubled as a sector—but, also, that additional capacity can be put to the benefit of people using stations on the existing West Coast Main Line on the southern section stations such as Milton Keynes, Rugby and Northampton. This is a potential benefit to relieve the pressure on capacity serving commuter traffic in the southern sector of the West Coast Main Line, as it is indeed for long-distance traffic.

I would add that we would see the benefits of faster and indeed more reliable journey times that would be made more feasible by HS2 as a strong additional benefit in that this, among other things, provides for improving the attraction of rail, particularly for intercity journeys, particularly between what will be the four major conurbations in England, and the potential that that has for attracting demand away from other congested and carbon-intensive modes, such as road and to some degree air transport.

In terms of what I would call perhaps one of the bigger challenges facing the project rather than a weakness per se, I would say that it is the need to see HS2 more explicitly as part of a wider strategy not just for rail but for transport as a whole. This is an important project, but the rail network today is carrying record numbers of people for peacetime. The rail network is currently carrying somewhere in the order of 1.25 billion passenger journeys a year. Greengauge, the lobby group that favours high speed, has identified that, even in 2055, a high speed network for the country as a whole will probably be carrying about 180 million people, so it is quite a difference of order of magnitude. High speed is important in terms of relieving congestion on a very important corridor and serving our major conurbations. We must see it as part of a wider strategy for rail and transport as a whole.

Richard Eccles: I am not going to say a great deal that is new. It is about capacity. It is about capacity on the new high speed line and on the present network. I would not like to distinguish too much between the high speed line and, as it has been called, the classic network. It is one network that we get in the future. It is capacity not just in a railway man's terms. It manifests itself as choice for the passenger and to some extent for the freight customer too. We are running trains because we are looking to serve the market. We are not running trains because we just enjoy running trains.

I would go with Anthony on the weakness. I am afraid it just takes such a long time and so that defers the benefits and discounts them in the business case. People find it difficult to relate to a new service that will arrive in 2026. Certainly, when I think of getting to Manchester in 2036, I occasionally forget myself and suddenly appreciate how old I will be by that time.

Q29 Chair: Would you regard the need to predict what capacity will be needed so many years ahead as a weakness in the case?

Richard Eccles: No. The need to predict capacity so many years ahead is what the long-term planning process for the railways should be fundamentally about, because we have assets that last. A signalling

system will last 45 years, and many of our tunnels and bridges have lasted since Brunel built them. You have to take a long-term plan to deal with the railway and deliver rail services efficiently at an optimum whole-life cost. It is quite appropriate that we should plan that far ahead; it is just disappointing that we cannot deliver slightly faster.

Q30 Kwasi Kwarteng: I am very interested in what people call the “predict and provide” approach, which is clearly what is driving this thing, because not that many years ago we had the Eddington report, which was completely the opposite in terms of transport policy and what we should be looking at, where he identified little problems which were the ones that we should solve. To what degree do you think that the Government is right to pursue this “predict and provide” approach? Clearly, in your last answer you suggested that that was what we should be doing and that somehow the Government had access to this all-seeing futurology, if you like, and we could predict demand in 15 or 30 years’ time. Do you think there is any flaw with that approach?

Anthony Smith: I am not sure it is a flaw. All transport modelling appears to be a bit of a black art when it boils down to it and there are a tremendous number of assumptions built in. But it strikes me that if, as a country, we want to continue to travel around in the way that we do and to do it in more sustainable ways, if we want to have more travel choices in the future and to have an economy that is very successful and based on people moving around, taking big decisions about increasing the space for train and tracks and having more punctual trains is a very key political decision. There is always going to be squeeze round the margins of the peak and how you manage people wanting to travel in the peak and off peak, as you discussed earlier. The concern is that some of the suggestions in the McNulty review in a sense feel very producer-led. The awkward passengers are getting in the way by wanting to travel in the peak and, irritatingly, do not want to book six months ahead for their rail travel to go to Birmingham. It is treating them a bit like units of production. The whole purpose of all this activity is so that passengers and freight can move around the country. If you build that in at the start, you will sense that something has to change in terms of the space on the railways and, therefore, the Government’s decision to move ahead on this is probably not wrong.

Lord Berkeley: Could I come in there, because the Government also has a policy of reducing the carbon emissions by 80% in 2050, which is a long way away? The Department for Transport’s success so far in this field is not very good. The worst one is going to be in freight because nobody has invented a 40 tonne lorry that can go for 300 km or 400 km in a carbon-free means. I am told that the only way you can do that is to have a battery that weighs 40 tonnes, which does not leave much space for freight. Assuming that the logistics industry continues as it is, developing worldwide and Europe-wide, then one has to think about how the long-distance freight is going to be carried, because rail freight takes about 12% at the moment on a tonne-km. The only way to do it long

distance is by water or rail, which could be more carbon-free than the present diesel engines. That is going to involve, on the Commission’s estimates, about three times the existing volume of rail freight. I think it is nearer five times, but it is probably academic being 40 years away. But we have to plan for these things and also work out how it affects other Government policies like the Carbon Reduction Programme.

Q31 Chair: Would anyone else like to comment?

Michael Roberts: An observation is that in this country and probably in most other countries in the world we have never managed to predict and provide properly. We do not predict very well and we certainly do not provide at the time and in the manner that is most efficient. That applies not just to the railways but to road transport, and, indeed, aviation as well. Listening to some of the evidence provided in the previous session, what is clear in this particular case with HS2 is that we have had a situation where it has been known for some time that demand was going to grow and grow substantially within the corridor from London to the north-west, and what we have been unable to do collectively as a nation is to respond to that sufficiently quickly and to a sufficient degree. The great merit of HS2 and the proposals behind it are indeed to provide a response to it. But, as I said to you in my earlier comments, we need to see HS2 as part of a wider strategy which does indeed think about how we use other interventions such as the use of price, properly, not just in rail but in other forms of transport such as road transport, to ensure that capacity and demand is better aligned than it is at the moment.

Q32 Chair: Mr Eccles, it has been suggested to us that Network Rail’s predictions and support for High Speed 2 are down to self-interest. Is that a reasonable comment?

Richard Eccles: I thought it was slightly harsh. The long-term planning process that operates on the railway is led by Network Rail, but virtually everyone in the rail industry participates in it. When we did our New Lines programme and produced those demand forecasts originally, we had a steering group of the DfT, Transport Scotland and the Welsh Assembly Government, and we were assisted by a number of train operating companies and rolling stock companies. When we did demand forecasts in the route utilisation strategies such as the West Coast Main Line RUS that we are just about to publish, the industry stakeholder management group included 46 separate parties. I do not believe that they would collectively sign off something that Network Rail was doing in its own self-interest. I would reject it totally, Chair.

Q33 Kwasi Kwarteng: I just wanted to put out a thought and hear your comments on this. This is not a private sector investment, but, if it was, and I was looking at this and I was an investor, a lot of investors look at the downside. You are always trying to protect your downside. I do not think, clearly, we in the public sector have that approach. But, if I were a private

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investor, I would say yes, the benefits look very attractive, but what particular scenarios—I think a gentleman in the previous session referred to scenarios—could arise for this thing to be a complete disaster? What is the worst case?

Chair: Who would like to tell us about the worst case scenarios?

Kwasi Kwarteng: If you were doing this as a private investor, you would be really focused on that.

Michael Roberts: Clearly, one of the key determining factors for the success of the venture will be the strength of demand to use the product. Scenarios which anticipated, for example, a complete slowdown in the economy, which is a fundamental driver for movement generally and rail transport specifically, which anticipated major increases in, for example, road capacity along the same corridor where that capacity was provided free at the point of use, as indeed is currently the case to users, or where oil prices decline to such a level that, for example, the cost of motoring was significantly cheaper than today, would be the sorts of things, although not the only things, which would fundamentally undermine the business case to the extent that demand drives the need for this project. But I would argue to the Committee that using those particular examples—economic meltdown, massive expansion in road capacity and a price of motoring significantly lower than today—are scenario features which we would not want to consider as the future or are highly unlikely to happen. So I would argue that, yes, the sensible approach would be for any investor to consider the risks and the downside potentially of any investment, but I think a realistic investor would not anticipate the sorts of features that I have just mentioned as likely.

Q34 Kwasi Kwarteng: What you are saying is the doomsday scenario is very unlikely.

Michael Roberts: Yes.

Anthony Smith: I cannot comment on the financial potential implications or otherwise, but it would be a disaster, in public relations terms from the passengers' point of view, if the new line is ultimately perceived as a rich man's railway which only a certain sector of the population can use. Of course it is very difficult to predict at the moment the pricing and the way that it is ultimately sold, but it is very important to try and get an understanding of that as quickly as possible. A high frequency, high capacity route from Birmingham to London will attract commuters, apart from anyone else. People will start commuting on it in both directions. How it is sold and how it is priced is absolutely key. The dreaded yield management word has been used already and, of course, there will be a temptation to sell every seat on it at every time of day for £1 leaving any flexible tickets being expensive or effectively non-existent. But you have to look at how attractive the West Coast has become because of the frequency. Three trains an hour between Manchester and London is pulling people towards it. They want to use it and they buy tickets. A lot of people want flexibility. They do not want to be tied to one train with one seat. The way the package is ultimately sold is the PR disaster that could happen, or not, hopefully.

Q35 Chair: Does anyone else want to comment on the worst case?

Richard Eccles: My concern would be capital cost and interest rates, like most businessmen. But the market is quite an attractive market. Throughout this last recession, four out of six of the sectors, as we call them in the rail market, continue to grow in terms of passenger numbers, if not in terms of revenue. All the pointers for growth in the rail market in the future are very favourable. Last period, we had 105 million passenger journeys on the railway compared to 100.3 million in the same period a year ago. Business is booming. This would be a strategic piece of state transport infrastructure, and generally those are considered quite good investments.

Q36 Chair: But 20 years on would that be a reasonable assumption?

Richard Eccles: 20 years on?

Chair: Looking ahead 20 years.

Richard Eccles: As I say, if you could have confidence about the capital costs and the interest rate, I believe that you could take a 20-year view of the market and not be scared off by that.

Lord Berkeley: Madam Chair, as some colleagues on the Committee know, I did work for Eurotunnel for a number of years and there are good and bad lessons to be learned from that. It was a privately funded construction project because Margaret Thatcher required it to be done that way. It nearly went into financial meltdown several times but it got built. The lessons I learned from this were, first, to build it quickly. With any financing, speed is of the essence. Secondly, look at the competition. The competition we have heard about this morning is not only rail on existing lines but road as well, and to some extent air. Thirdly, do not change your mind halfway through, which was part of the problem. But the fourth thing is, having built it, as we saw on High Speed 1 in the early days of its operation, the Government decided that to sell it to the private sector the best way of doing it was to have no independent regulation. The Government argued that it was the best regulator you could possibly have. This is a Government that awarded Network Rail—no disrespect to Richard because he was not involved in it—the management of the infrastructure on a cost-plus basis for 80 years, which is pretty generous really, and then it said it was a great regulator. The channel tunnel is still not regulated properly and the European Commission is looking into it at the moment. So I hope one of the lessons that will be learned from HS2 is to put a proper regulator in there from the start, as we have in the rest of the network. I still think that, for HS2, it is such a big project that having it built in the private sector would not work, and I agree with the Secretary of State's view on that. But some of the disciplines that come from it and some of the mistakes we learned would certainly be worth taking forward.

Q37 Chair: You mentioned time scale and you said it was important to build things quickly. Does that mean you would like to see this project built in the shortest space of time?

Lord Berkeley: Of course, the planning and the hybrid bill and everything has to be done properly, but it is just the question that, for those financing it, which could include the Government or the private sector, the risk of things changing in a very long construction time escalates. I would love to see the thing, as I said earlier, start from Manchester and Leeds and work south. But if it has to be done in phases, I hope the phases are not quite concurrent but consecutive and overlapping so that the problems that are often caused during construction, and we saw it in the West Coast Main Line upgrade, are as short as possible for the benefit of passengers who get disrupted and freight as well.

Q38 Paul Maynard: One of our tasks in this inquiry is to try to assess the various arguments that are put forward and whether they have merit or not. There seems to be a general consensus that capacity is the key issue we are seeking to solve, yet none the less I do hear many stakeholders in the rail industry, particularly from the north of England, make the argument that the capacity challenge can be met merely by adding a carriage here, lengthening a platform there or declassifying a first-class carriage somewhere else. Could I ask Network Rail what assessment they have made of the capacity gain of those limited, more simplistic interventions?

Richard Eccles: The reason we did our New Lines Study a couple of years ago was to try to look at what the best value investment would be to create the capacity that was necessary into the future. We are already aware how we could create one or two more paths in the morning and evening peak that could only be used by the London Midlands services, and only then if they had 125 mph tilting stock. We are extending the Pendolinos to 11 cars. It is very difficult to see whether they could be extended further than that. We are grade-separating a junction at Stafford that we know will give us an increment in capacity that might allow us to run another off peak path for long-distance high speed services to London. But these are all very tactical interventions; they have a good business case by themselves. But what we cannot get is a strategic intervention that would be value for money on the existing network that would provide the kind of step change in capacity that we know we will require in the future. That is why we looked to see if building a new line would be the best value for money answer for that step change in capacity, and we found that it was the best value for money answer. Then we looked at the secondary issue: did you get a better business case if it was a high speed line? We believe that you do get a better business case.

Q39 Paul Maynard: Clearly, building a new high speed line will have a significant impact on the existing network, particularly at interchange points and at termini. What assessment have you made of the impact of High Speed 2 on services in and around

Manchester in particular, because there will be those in the north who argue that the most fundamental transport project for the north of England is not High Speed 2 but, rather, the Northern Hub? What impact does HS2 have on the Northern Hub?

Richard Eccles: We are beginning to look at the Northern Hub and HS2 as a single opportunity. We do very much believe that, wherever possible, in places such as Manchester and Leeds, the station for HS2 should be a city centre station so that we can get connectivity with the rest of the rail network and we can create a catchment area for HS2. Clearly, bringing trains into the centre of our cities is a difficult proposition when the network is stretched in most of the regional city centres, which is why we need to plan both initiatives together, not separately.

Anthony Smith: Sometimes memories can be short and, of course, all of us who lived through the West Coast upgrade will remember how painful it was trying to do a major upgrade on a working railway, the pain that passengers went through in that eight-year period and the premium prices they paid throughout while suffering a very substandard service. The potential alternative of building a new line appears very attractive from the passenger point of view because it does keep the pain, to a degree, off to one side.

Q40 Paul Maynard: Mr Roberts, speaking for the train operators, what is the financial impact on a service's profitability of declassifying a single first-class carriage on, say, a Pendolino?

Michael Roberts: I do not have that information to hand but I am happy to follow it up, if that would be helpful.

Paul Maynard: I would be interested to know.

Q41 Chair: Mr Eccles, you spoke about High Speed 2 and the Northern Hub being one opportunity, but the Manchester and northern part of HS2 is not planned for many years to be in operation. What about Northern Hub? When are you planning that to start?

Richard Eccles: As you well know, we intend going ahead with the Northern Hub and we have been very fortunate to get some advanced funding to start the first phase in this control period. But, none the less, when we do our long-distance planning, we will be looking to plan the development as one issue rather than two separate issues. In our plans, we will have scenarios where we are assuming that HS2 is delivering passengers into the centre of Manchester. But, again, the assets that we are providing for the Manchester hub need to be supplying services for 20, 30, 40 years.

Q42 Chair: When do you intend to start the Northern Hub?

Richard Eccles: As you know, we are well advanced in the planning of the Northern Hub. We start spending on infrastructure before the end of this control period. In the budget the Chancellor made a statement.

Q43 Chair: So that will not be changing.

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Richard Eccles: That will not be changing. Sorry, forgive me. No, this is not going to delay the Manchester hub. I am talking long-distance planning. Don't worry.

Q44 Chair: Right. I just wanted to be quite sure I hadn't missed anything there. Lord Berkeley, do you want to make any comments on this question?

Lord Berkeley: Only on Mr Maynard's original question. Let us accept that the forecasts for 20 years' time are going to double the passenger and freight traffic. They are all going to be slightly wrong but let us just look at that as a principle. On the freight side, Network Rail is lengthening the loops where you can put longer trains in and we can run longer freight trains, which makes a great deal of difference. But doubling the number of trains needs a step change, as colleagues have said. That either needs a new line or one could put in extra tracks beside existing lines and more grade separation, but, as Richard Eccles has said, that causes problems. So we have got a big change coming and we need to plan for it.

Q45 Iain Stewart: In your opening remarks all four of you rated the capacity gains for high speed ahead of speed and reduction of journey times. I find that quite significant. Following on from that, is it fair to say that the criteria for High Speed 2 have been too narrowly set and, if we looked at other options, building a new high speed line but perhaps not at 250 mph operating speed, we would open up other options, perhaps routing it alongside an existing transport corridor, opening up better connectivity options that we have been discussing this morning? The question is: have the criteria been set too narrowly?

Anthony Smith: I am not sure the criteria are too narrow, but perhaps what it says on the tin is a bit unfortunate. The title "high speed rail" is a bit of a misnomer in our eyes because it seems to be better called something like Big Rail or New Rail, and the high speed bit is a bit of an add-on, because, as I said in my opening remarks, what can be done with the train and tracks, which are freed up in a sense, is just as important. The Committee should probably be aware that Network Rail and ourselves have been asked by the Department to do some very preliminary work on what could be done with that so-called released capacity. We are going to go out and talk to some passengers about what some of the options are in Milton Keynes, Coventry, and north of Birmingham as well. Of course, it is very difficult to think what you might want in 2026; it is a very long time away. But starting to think about this is very important because those potential benefits for those communities and the links between those communities and beyond is a tremendous prize, and it is really worth having and really worth thinking about.

Q46 Iain Stewart: Let us accept hypothetically that we build a new line. What I am trying to get at is this. Are we, by setting this operating speed at 250 mph, limiting our options when there is potentially a broader range that we could consider?

Michael Roberts: I was the one person on this panel who did mention that the faster speeds and shorter journey times, to be specific, was one of the additional benefits and a strong benefit, although maybe not as strong as the capacity benefits. What is important to underline in that respect is the opportunity for shorter journey times, as I mentioned, between our four major conurbations: London, west midlands, Manchester and west Yorkshire. It is the opportunity to shorten those journey times in terms of unlocking wider economic benefits. The case that is being put forward in terms of the economic benefits of HS2 identifies something of the order of £6 billion over the lifetime of the project in wider economic benefits. Those would not materialise without the higher speeds. If one is going to build a new line, building it to a higher speed specification provides that greater opportunity for wider economic improvement that you would not get otherwise.

Lord Berkeley: Could I just add something, Madam Chair? We are in a situation now, as the Committee will have seen from the arguments about the new high speed trains going through the channel tunnel and who builds them, whether it is Alstom, Siemens or someone else, that there is a world market and a European market in these trains and in the design of tracks. Most of them are going in the 300 kph to 350 kph range at the moment. Clearly, Germany, France and Italy have all decided that is the right kind of speed range and you design the track to suit. That is the most economic way of doing it. We do not need to use it all the time but it provides the opportunity for using fairly standard trains, which will save a great deal of money rather than having specials built for this country.

Richard Eccles: A couple of years ago we went out and talked to transport users just to try and explore the very point you are making. We did some research on Virgin trains. We went out to motorway service stations and to a couple of airports and tried to get a feel of what value people were putting on journey times: stated preference theory. It really robustly demonstrated what is probably obvious. People do not value long train journeys. They want to get from point A to point B. Reduced journey time is very attractive. The appraisal methodologies we use are subject to valid criticism, but that is a robust part of what we do, I believe. It is worth investing in reducing people's journey times. With a high speed line at 250 mph, you are talking about reducing the journey time from Manchester to the same as it is from Birmingham or thereabouts now. You are talking about reducing the journey time from Edinburgh or Glasgow to the same as it is from Manchester now. These are real step changes that give the customer what they perceive to be a massive benefit.

Q47 Iain Stewart: Can I just follow up? I am not talking about building just a normal speed alternative additional line. 250 mph is quite a step up from most of the operating speeds of high speed trains elsewhere. At 250 mph you have effectively got to go in a straight line and that is why the current route that carves through virgin countryside has been planned. If you had planned a route that operated at, say, 186 mph,

does that not open up the possibility of routeing it alongside an existing motorway corridor? You would still have substantial time gains in terms of journey times but maybe not quite as much as the 250 mph. Is that viable?

Richard Eccles: There is a difficulty with aligning our railways in this country with our motorways. As I am sure you know, we have built the motorways with bends in them as good, sound, safe driving policy for many decades now. We do not have the opportunity that they have on the continent to build miles of straight railway next to motorways. An 186 mph railway is HS1, effectively. I do not believe you would reduce your construction costs significantly, though I would like to check that and perhaps come back to the Committee. It is much more likely that you would make a sensible investment decision and build, at very little incremental cost, a piece of infrastructure that would support the rolling stock not just that is available today but tomorrow, and particularly driven by the basis that we believe you get significant benefit by reducing journey times, though I guess the bit of the answer I need to check is whether the capital cost of building an 186 mph railway would be significantly less than the other one. I do not have that information with me.

Q48 Chair: Do you have any costings on that?

Richard Eccles: Yes, we have lots and lots of costings; I can get the answer. We did cost building a two-track railway literally adjoining the West Coast Main Line. So we have a number of things we can look at.

Anthony Smith: I have no idea what the optimum speed is from the economic or performance point of view, but it strikes us from the existing passengers' perspective that it is the whole package. You get potential for more trains, more reliable trains, and there are not slower trains trying to weave in and out of the faster trains. The whole thing comes as a package. Whether it goes at 150 mph or 170 mph or 250 mph, I have no idea what the optimum speed is. But it strikes us that the opportunity of the new build is getting all these things together. If it happens to go a bit faster, then that is great.

Q49 Mr Leech: Based on your most pessimistic growth forecast for passenger growth and in freight, how long would we be able to go just simply by doing additional upgrades on the main line routes without having to have a brand new line?

Lord Berkeley: From a freight point of view, assuming that our forecasts are reasonably correct, within 10 years we shall see some congestion on the West Coast Main Line and the other routes that would benefit from a high speed line that will seriously affect the ability to take the growth in freight. The operators will probably have to turn traffic away. They may offer a different route or a different time, but there is congestion on the other parts of the network as well. So it will constrain growth within 10 years.

Q50 Mr Leech: What about passenger growth?

Lord Berkeley: They are interlinked of course. If he wants more trains, I rather like the idea of Anthony sorting out how many extra trains he can get on the existing line at Milton Keynes. We want more freight there, but we have all got to work together on this.

Michael Roberts: My recollection of the central case is that the southern section of the West Coast Main Line will be full by 2024. I cannot remember what the worst case options are.

Q51 Mr Leech: That is with upgrades.

Michael Roberts: That is anticipating the other changes—the sorts of changes that Mr Eccles already mentioned.

Q52 Chair: When you say “full”, what exactly do you mean? Do you mean full at certain times?

Michael Roberts: It would exceed the conventional load factors at peak time that the industry uses at the moment to trigger the case for additional infrastructure, and that classically is at about 70% load factors in the peak. We already face the prospect on that central case of the route being full, given the definition I have just given you, in 2024. But phase one of the route itself will not start coming into operation until 2026, assuming that the planning processes go as currently anticipated by HS2. Even on that central case of everything being fine and going well, planning approval being agreed, the funding in place and construction going to plan, we are already facing the prospect that there will be a gap between the point at which the route becomes full and the point at which additional capacity has been provided.

Richard Eccles: I guess, for me, “full” means that we cannot path another train when any of the operators want it and that the rolling stock that has been used on the route is exploiting the full capability of the route; it is at its longest and its internal configuration is the most appropriate for the market. I do not believe that we have confidence in any interventions on the West Coast that we have planned past 2018. “Full” is a difficult concept, because if you cannot buy a ticket on the train you want to travel on then that is full. We treasure the walk-on railway at the moment, but the walk-on railway is becoming more and more difficult as the load factors increase. So 2018 begins to be when my long-term planning process runs out without this new line option.

Q53 Mr Leech: One of our previous witnesses, in response to my question about the money we had already spent on the West Coast Main Line, suggested that perhaps a decision might have been made prior to the previous upgrade of the West Coast Main Line to have a high speed rail line planned at that time. Do you think, if we were to decide not to proceed with high speed rail, that in 10 years' time, with hindsight, we would be saying this decision needed to be made 20 years ago or 10 years ago?

Richard Eccles: I would absolutely agree with that, yes.

Michael Roberts: I would agree with it too.

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Q54 Mr Leech: Is there any suggestion that in 10 years' time, if we decided not to proceed with high speed rail, we would not have that view—that a decision should have been made at an earlier stage?

Lord Berkeley: From a freight point of view there are other options, but I do not think they are very economic. You could put four tracks back in the Midland Main Line; you could put four tracks on the Chiltern line through High Wycombe, which is challenging, shall we say? There are lots of other things you could do, and it may be that for freight that would be fine. There are two major problems though. One is the aggravation to the existing line that would happen during construction, which we have seen on the West Coast Main Line. The second is for economic reasons, which would take a long time to explain, that freight does not pay the same access charges as passenger. The financial case for this just would not stack up and that is the way it is. It starts off with European Commission legislation. From a freight point of view we need the extra capacity. We do not really mind how it is provided, but we cannot pay the capital cost of it because the economics just do not stack up.

Q55 Mr Leech: But, on balance, given all the economics, would you say that from a freight perspective this is the best way of providing that extra capacity for you?

Lord Berkeley: Yes, I would, definitely.

Anthony Smith: Barring the economic meltdown that has been discussed earlier, a step change in the ability of the railway to carry more passengers must be a step in the right direction. How the network of high speed lines is ultimately executed will also be very important, as previous witnesses said, because the simple London to Birmingham tube is obviously just the start of a much bigger network, and how that fits together when it is built is terribly important. How the planning works on the ground will be crucial. I remember the Chairman of SNCF, in a slightly rare moment of Gallic self-reflection, said the thing that they had learned about the TGV network is to put as few stations as possible on it; don't stop. Don't have terminal stations if you can avoid it; go through places to other places. Thirdly, don't forget about freight. It seems like a very important lesson, with three important issues to bear in mind.

Lord Berkeley: Unfortunately, he also said, if you want to build a high speed line quickly or anything else quickly, if you want to drain the swamp do not consult the frogs, which is really rather unfortunate, but there we are.

Q56 Steve Baker: Just one simple question. I got slightly concerned, Mr Eccles, when you said you had no confidence in interventions beyond 2018. Could you just tell what capacity upgrades we will see on the West Coast Main Line before 2026?

Richard Eccles: We are upgrading the power supply, which is necessary to run more trains in the future. We are doing grade separation at Stafford. We are remodelling Bletchley. So we are doing a series of capacity schemes. We are having a look at the mixture of passenger and freight services on the northern

section of the route, north of Preston, to see if we need to relocate or lengthen some of the loops that Tony dreads his trains being put into. So we still have a series of them. We are spending a significant amount of money on interventions on the West Coast Main Line, but we would expect to have these largely finished at around 2018 time. Beyond that, for me, for an intervention to be valid it has to have a business case and it has to have funding. I do not have confidence that we can develop any further interventions that will demonstrate a good business case to justify investment and that will attract funding in the context that we will be in there. Perhaps we will be regretting that 10 years ago we did not make a more sensible decision.

Anthony Smith: On the point about the immediate future, we have just finished some research for the DfT, again, in terms of looking at what current users of the Virgin and London Midland services on the West Coast would like to see in terms of new franchises or, in the future, to inform the specification of the new franchise on the West Coast, which is now delayed, as you know. The priorities for improvement are very basic in a sense: value for money for the price of the ticket, punctuality, reliability of the train, and to be able to get a seat. Those are the things that Network Rail, the train companies and the Government in the short-term future need to try and facilitate to keep, in essence, what is a bit of a success story on the West Coast.

Michael Roberts: Just to add to the previous comments, I do not know if Mr Eccles has mentioned the additional Pendolinos that are due to come on stream as well to expand the rolling stock capacity on the route. Of course, before 2026, all being well, there will be 14 years of a new franchise in operation. Depending on how that contract is let, there may be every reason for the new franchisee to bring on additional improvements of the sorts that are being mentioned, in order to deliver the kind of quality benefits that Anthony has mentioned that passengers are looking for in terms of improved capacity and improved reliability. That is a contract which has not been let yet and will not be for another year or so, but there is the opportunity through the franchising process for further improvements to come alongside the hard network-related ones for which Network Rail is responsible.

Lord Berkeley: I think Mr Eccles has forgotten the Nuneaton North Chord, which is a freight chord to connect the Felixstowe-Nuneaton cross-country line on to the West Coast Main Line and to enable many more freight trains to go direct from Felixstowe on to the West Coast Main Line without going down to London and along the North London line. That is due to be finished in two years' time.

Richard Eccles: Yes, it is, indeed. Madam Chair, I am afraid I did forget to mention something almost as important as the Nuneaton North Chord, which is that we will be replacing the signalling system, as it comes up for renewal, with a much more flexible system called ERTMS. It is in-cab signalling. That has the potential for an increase in capacity on the network generally, perhaps by as much as a path an hour, which is a very important intervention that I should

have mentioned. That will be over the next 10 or 20 years.

Q57 Julian Sturdy: Lord Berkeley very early on in the proceedings raised the fact that he thought high speed rail should start in the north and move south, specifically for freight. Assuming the Government makes the decision to go for high speed rail—this is a question really for the rest of the panel—is the proposed strategy to start in London, move up the Midlands and move north the right strategy, or do you think there are some merits in what Lord Berkeley has said about starting in the north and working south?

Q58 Chair: Lord Berkeley agrees with that. He has made that clear. Does anybody else have any views on that?

Michael Roberts: My view, given the growth of demand on the southern section that is anticipated on the West Coast Main Line, is that I would start at the south and build it up to Birmingham and then beyond. It is worth mentioning, in addition, something that we have not touched on. In terms of the prospects for high speed services to extend beyond the core conurbations that have been talked about with regard to HS2, potentially going further north beyond Manchester and Leeds, this is an area, clearly, that HS2 is looking at, but in principle those high speed services could be delivered by using existing lines rather than a new high speed line or set of lines further north. That would be consistent with experience in France where two thirds of the TGV service is run on classic lines, albeit improved for the purpose. But, having regard to the way the demand is due to go in the next 20 years, one would start at the southern end.

Q59 Chair: The lines you have referred to have been north of where? You are saying it might not be necessary to have high speed lines.

Michael Roberts: It is talking about the prospect of high speed services beyond Manchester and Leeds, for example, which is an area of focus currently for HS2, which is due to report on this at the turn of the year.

Anthony Smith: Given the cost of the project, given the pain it will go through in the planning process, you have to start where the greatest number is. Building the London-Birmingham bit seems sensible, although it is worth remembering, as previous witnesses said, that will bring benefits for all parts of the country straight away from 2026. Trains from Scotland will be able to use that for the last bit of their run into London and vice versa, so there will be benefits. But the true value of the whole thing comes, as Mr Roberts says, when you link the great conurbations together. The intercity journeys between Leeds and Birmingham, and Birmingham and Manchester, at the moment are very substandard. They need a lot of upgrading, not to mention Leeds across to Manchester as well. There are a lot of other benefits to be had.

Q60 Chair: Mr Eccles, could you also give us an idea of what priorities there would be for the areas

that would be released if the high speed line was built? Where would investment go?

Richard Eccles: On the first part of the question, we have to start at Euston. Euston is on the critical path. It is sensible to start all over the route between Euston and Birmingham. In terms of the priorities that have been agreed for use of the released capacity on the West Coast Main Line, there is no agreement yet and there is no solid proposal. We ourselves have looked at a number of timetables, but, as Anthony said, we are just about to go out to users and local authorities and do some research about what the communities that are going to use the existing West Coast Main Line into the future would want the capacity to be deployed on.

Q61 Chair: When is that consultation going to start?

Richard Eccles: That is going to start within a couple of weeks.

Q62 Chair: When will it conclude and when will there be some ideas of what developments might take place?

Richard Eccles: In the late autumn. In September to October time we will begin to get initial information on what people are saying. It is more of a research exercise than a consultation. I suppose there is not much difference between them.

Q63 Chair: What does that mean?

Richard Eccles: It means we are going to go out there and ask questions that are quite structured so that we can use the information we get back. We are going to offer some suggestions perhaps of what the line might be used for and see how people react to those.

Anthony Smith: As we are doing the research for this, I might just be able to add a little bit more detail to that. What we are going to try and explore with current passengers and some of the consultees is the trade-off between using that space for greater frequency, longer trains, more punctuality, and some of the issues and trade-offs that are contained in there, to try and get a sense of what might underpin some of the new timetables that might be worked on towards 2026.

Michael Roberts: Just to put a bit of real life flesh on those sorts of ideas, there is the prospect that the released capacity on the existing line made possible by HS2 could, for example, double the frequency of services to London from towns like Milton Keynes and Northampton in the peak time as well as other times. It could also shorten journey times. The Northampton journey time could be shortened from nearly an hour, which it is at the moment, to something of the order of 43 to 46 minutes. But, also, it could improve the frequency of services within the west midlands region, for example, Coventry, serving potentially a new station at Kenilworth and others. Potentially, there is quite a wide variety of options for the use of the additional capacity, let alone its potential use for freight, which I have not mentioned but which clearly is going to be the focus of the consultation.

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Q64 Chair: What about freight?

Lord Berkeley: This all sounds wonderful. In 2026 the high speed line will be built to Lichfield and Birmingham, and I trust that freight will be allocated a number of extra paths in the southern bit of the West Coast Main Line with the released capacity. However, north of Lichfield, all the high speed trains on the HS1 southern bit will go on the existing line. That is maybe three, four, five or six trains an hour, depending on where they are going, plus all the additional freight trains that have been kindly allocated space on the southern half of the existing West Coast Main Line. There is going to be a right traffic jam there going north from Lichfield for a period of about 10 years. I am hoping that Network Rail—and we do work very closely with Richard and his team—will be able to find alternative routes for freight, either from London or from Felixstowe or from anywhere else. It needs some extra alternative routes for passenger trains as well, though, until the second phase from Manchester south and Leeds south is connected into Lichfield. That is going to be a big challenge.

Q65 Chair: Lord Berkeley, you used the word “trust”. You said, “We trust this will lead to more freight lines being available.” What is the procedure for deciding that? Do you think freight gets a good deal? Does it get a proper look-in on the use of existing lines?

Lord Berkeley: Network Rail and Passenger Focus are doing this study that they both mentioned into how many extra passenger trains would be desirable on the West Coast Main Line. We have already made the point that there has to be capacity for freight. We have a strategic freight network which has been agreed and we should be looking for strategic freight rights on this line so that there are certain paths reserved for freight on all the main lines. It has been agreed on one line already, and we hope we are going to extend it out to other ones so that passenger operators cannot just come and say, “We want that path because we got there first.” Freight operators do not take a path until there is a customer or they have a business for their train, unlike some passenger services, which probably operate with very few passengers. It gives us a timetable. It is a different way, but we are hoping, with the strategic freight rights and capacity, that we will be able to negotiate some paths on that line. I am sure we can.

Q66 Chair: Are you confident you will be able to negotiate a satisfactory solution?

Lord Berkeley: I am pretty confident we can do it up to Lichfield in 2026, but north of Lichfield after it has opened—there will be extra passenger trains and that is fine—we shall have to negotiate very hard and there will have to be some new solutions found for the interim, I think, between 2026 and whenever the second bit opens.

Q67 Chair: Do you think the organisation is there to get a proper solution?

Lord Berkeley: I do, yes, Madam Chair. I do. We did have a problem a year or two ago with a train operator

who said, “We demand priority for paths because the Government wants it.” We said that is not the way the industry processes work. Everybody applies to Network Rail, and if the demand exceeds the capacity then it is the rail regulator, who is independent of Governments—we hope he is; anyway I think he is—that will make a decision. That is the right way and I am confident that we will be able to come up with a solution.

Q68 Chair: Mr Eccles is nodding, so I will take that as agreement. Is that right?

Richard Eccles: Yes. I was simply going to say that we know that, if we can get an extra path an hour for 10 hours a day up and down the West Coast Main Line, that will take 300,000 lorry movements off the roads in a year.

Q69 Chair: Mr Eccles, in the written evidence Network Rail has given us, you make some very strong statements about the benefit of high speed rail, High Speed 2, and particularly about economic development benefits. What is that based on? Is it work that Network Rail has done or are you quoting from other work done?

Richard Eccles: We are quoting from the work we did in the New Lines Study and the work that we have seen that HS2 Limited have done within their business case. Also, in the New Lines Study, we looked at high speed rail around the world with the assistance of Professor Nash and had a look to see what had happened in other countries, because there is a long history of high speed rail in other countries. We believe that high speed rail does make significant contributions to the economic value. We do not believe that the present appraisal techniques demonstrate that fully because they are much more leaning towards socioeconomic benefit, but more appropriate appraisal techniques would much more clearly demonstrate the link between improved transport systems and economic value.

Q70 Chair: What sorts of economic value are omitted from the current assessments?

Richard Eccles: It is not omitted; it is not given appropriate weight. It is things like job creation, tax generation and true economic inputs.

Q71 Chair: Areas like job creation, you think, are not concerned adequately in the current appraisal.

Richard Eccles: Yes, absolutely.

Q72 Chair: But have you undertaken any other alternative appraisal to demonstrate what those benefits might be?

Richard Eccles: Not in this case, but, funnily enough, we have, Madam Chair, just recently completed an exercise in Merseyside where we have compared present appraisal techniques with a technique that we have developed with KPMG and demonstrated what the benefits are in terms of jobs and taxation and that kind of thing.

Q73 Chair: Has that been published?

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Richard Eccles: It will be published with the agreement of Merseytravel and Merseyrail in about three weeks' time.

Chair: We would be interested to have that information, if the Committee could have that, please.

Richard Eccles: By all means; absolutely.

Chair: Thank you very much, gentlemen.

Examination of Witnesses

Witnesses: **Nicolas Petrovic**, Chief Executive, Eurostar, and **Pierre Messulam**, Rail Strategy and Regulation Director, SNCF, gave evidence.

Q74 Chair: Good afternoon, gentlemen, and welcome to the Transport Select Committee. We are very pleased indeed that you have been able to join us today and give us the benefit of your experience in running your high speed rail. That is very valuable to us. Could I ask you, please, if you could just say your name and your positions?

Nicolas Petrovic: Good afternoon and thank you very much for hearing us. I am Nicolas Petrovic. I am the Chief Executive of Eurostar.

Pierre Messulam: I am Pierre Messulam. I am the Rail Strategy and Regulation Director in SNCF.

Q75 Chair: Would you say that your experience of high speed rail shows it to be a success story, or what weaknesses would you think it might have exposed in the project?

Nicolas Petrovic: In the case of Eurostar, high speed rail has been a success. It has brought a number of things. The first thing is the reduction in journey times that we have experienced over the years because the first services were three and a half hours long. Journey times came down. The journey to Paris came down to two hours and 15 minutes. Each time we have had a step change in the reduction in the journey time, we have had an increase in our market share against airlines and an increase in the market size in general. That is the first element that we saw, which was a big success. Where market share as a rail operator started pretty low, close to zero, at the moment on London-Paris and London-Brussels the market share is 80%. We attribute that mainly to the journey time reduction. The immediate benefit we have had from the high speed lines built to our destinations is the capacity and reliability of our services. Our punctuality was in the region of 70% about nine years ago, and we are now at 94% to 95% punctuality, which is due to the fact that we can operate in a simpler environment and run our services more frequently and more efficiently. This is also a big driver to gain market share against airlines, especially in the business market, which values the punctuality of the services very highly. It is generally a very successful story for us.

Q76 Chair: Were the predictions about expansion correct?

Nicolas Petrovic: On Eurostar, we know that in the past, especially at the start, there were some predictions which were very high, which did not materialise fully. Last year we carried 9.5 million passengers, and we expect to be close to 10 million passengers this year. From a market share point of

view it has been a very good success story, once again with an 80% market share. It is very high on our routes. Also, we have developed new markets which did not exist before: for instance, the market of short breaks for continental leisure customers coming to London. There was a bit of that before high speed rail, but we managed to double the size of that market over the years, because we could operate more frequently and more efficiently.

Q77 Mr Leech: Mr Petrovic, you said that one of the reasons why market share has gone up is because journey times are coming down. How much of it do you attribute to journey times for airlines increasing because of additional security, with security checks slowing down the process at airports?

Nicolas Petrovic: That is a very good point. We have reduced our time, and they have increased theirs. We do not attribute the relative weight of each to our growth in revenue. There are a number of factors which drive the fact that people like to take high speed trains. There is journey time, the fact that the time in the airport is generally longer and you have more productive time on board the train, because obviously, when you travel by air it is very fragmented time. You have to go to the airport, wait, go through security, and so on. We do not have the relative weight of each of the factors, but we can see in terms of market share that, when maybe 10 years ago the tipping point between air and rail was maybe a three-hour journey time by train—then people would consider taking the train rather than air—this has gone further now. With a four-hour journey time, we now have more and more people choosing rail.

Another example is this. Now that we have a high market share on a point-to-point basis, we are trying to develop our market share on further destinations, connecting with other high speed classic trains. That is where we see our highest growth. We have more and more customers choosing to travel from, let us say, London to Marseille, or Leeds to Paris, by connecting, because overall they value the shorter journey time and the higher punctuality compared to airlines.

Q78 Mr Leech: Would you agree with that, Mr Messulam?

Pierre Messulam: Yes, broadly. May I try to answer your first question about the experience of high speed rail we have in SNCF? I would say it is a success. We are carrying more than 120 million passengers yearly on the high speed network. It saved the rail industry in France from collapse 30 years ago, because we

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were going out of business, facing airline and road competition. It helped us to get into the market again, and to have a big slice of domestic travel. Up to now I would say that domestic travel airlines have lost a lot of their market share, and our flag carrier, Air France, is complaining that with TGV it is no longer the same business, for low cost companies, and even for them.

I would say it is a success for us. It is a success for our customers, because one of the key factors was to have good price management, offering the opportunity to a lot of people to travel by train with quite low prices, which was the other side of the high speed French programme. It was a success for economic development, because it had a strong impact on some areas which were losing ground, specifically in the south of France or the northern part of France. There was a better connection with Paris, on the one hand, and between different regions in France on the other, helping to enhance the competitiveness of the territories.

On your question about prediction, I would be a little cautious. We were both over-optimistic and under-optimistic. At the very beginning we were very under-optimistic, and the success was better than expected from, let us say, the first high speed line between Paris and Lyon, which is the major trunk route for the French network between Paris and the south-east. We were so happy about that, that we were perhaps a little over-optimistic on the next lines. On balance, with a 30-year programme, I would say that we have to be very cautious about the predictions. This is not an exact science. We had, let us say, on average, 6% of over-optimistic prediction, but it could be far higher, specifically on the north route to Paris and England, when we just miscalculated our prediction for the channel traffic. When you discuss the matter of traffic predictions with PPP people, and bankers such as Fitch, they are very cautious. That is one of the real risks of the project.

Our experience makes us think that, in the long run, you are quite close to your predictions, but the way you reach the long run may differ in several factors. Basically, on the last two high speed lines we opened, predictions were matched sooner than expected. But when we had matched the predictions, which showed that the predictions were quite right, growth went slow or flat, which means you have to think about both growth and volume in time. But the two factors are important. The first years are very important to generate revenue to pay the first costs, specifically the rolling stock costs. You have to screen your predictions to have a robust business model.

Q79 Iain Stewart: In developing the TGV network in France, by what criteria did you justify intermediate stops?

Pierre Messulam: Our policy was to say, the fewer intermediate stops the better. To put it another way, transportation is basically about geography and demography. You just stop when there are passengers to take care of. Basically, when you build a new high speed line, you are aiming at quite a high volume of passengers, otherwise you cannot balance your investment. Our policy was to say that we are building

in two ways. A high speed line should have few stops but should have connections, so that when you leave the high speed line and go on to the pre-existing network you can offer connections to people further down the road. The idea was to say that, when you are running at high speed, you should run at high speed. If you stop, you lose a lot of time. Just to stop once on a 300 kph route loses seven minutes. When you consider that your investment is 150 km long, giving you 30 minutes' gain, seven minutes is a huge loss of competitiveness compared to your investment. The less you stop on a high speed line the better, but you may manage connections with pre-existing stations on the pre-existing network so that your high speed train runs at normal speed further down and has an impact on the market, but not on the high speed line itself.

Q80 Iain Stewart: Looking back over the last 30 years of operation, would you have done it any differently? Has the reality matched the predictions in terms of intermediate stops?

Pierre Messulam: Previously, six months ago, I was in charge of the next TGV project poised to be open in December, which is a 150 km line between Dijon and the German and Swiss border. We have two intermediate stops. Basically, the decision was made considering the demographic weight of the cities. In one case it was 300,000 people and in the other 200,000. It is a market, so it makes sense to stop.

But on other lines, such as the TGV East, for instance, we have very few intermediate stops between Paris and Lorraine or Paris and Strasbourg, because it does not make sense. There are too few people living there to offer stops. What is important in our understanding of the high speed project is not that you are working on a stand-alone project but you are working on a network project. High speed makes sense for medium or long distance with huge volumes. It is of the utmost importance to provide efficient connections so that, regardless of the big cities at the two ends of the line, other cities may benefit from the high speed operation too. That is what we manage with our TGV network, both with direct trains and with connections with regional trains, so that the project can have a positive impact for a lot of people who do not live in the big cities.

Q81 Steve Baker: On the London to Paris line, has the market now reached saturation, by which I mean is there any growth in excess of the population growth?

Nicolas Petrovic: It is becoming a mature market. We expect natural growth due to GDP and population growth. But you are right: we are close to saturation. That is for the general growth of the overall market. That said, what we notice is that when we have strong marketing activity we can provide seats. Especially for peak periods, there is still room for manoeuvre. This is the reason why, among other things, we are investing in new rolling stock, because on the high speed line we can have more capacity. We need to have trains which have more seats so that in peak periods we can sell more. But, generally, we are close to the total size of the market.

Q82 Steve Baker: You mentioned capacity. What is the number of train paths per hour that you operate?

Nicolas Petrovic: At the moment we operate between two and three trains per hour. We can go up to four or five in the peak periods.

Q83 Steve Baker: But is there anywhere on the network that operates at 18 train paths per hour?

Nicolas Petrovic: 18 pathways per hour?

Pierre Messulam: On a high speed line, nowhere in the world. The Japanese are running 12 trains per hour. We are running a maximum of 12 trains per hour. We are considering next December 13 trains per hour, and nobody does more.

Q84 Steve Baker: What would you say is the practical technological limit?

Pierre Messulam: That is a very difficult matter. I am in charge of some of the ERTMS programmes for SNCF. We have had a discussion in France about this capacity. It is a complex question. You have to consider the braking power and acceleration of the train, and also the stop pattern. The more often you stop, the bigger the impact on capacity. Ideally, you would say you would go from A to B without any stop. Today, we think that with ETCS or ETMS you could have about 15 to 16 trains per hour.

Q85 Chair: Is there a plan that links the high speed rail with the existing regular classic line? Is the network planned as a network rather than just looking at high speed rail?

Nicolas Petrovic: I am not sure I understand your question. I am sorry. What do you mean?

Chair: Is there a plan for a rail network—not high speed rail taken in isolation?

Pierre Messulam: Right at the beginning our approach was to say that the high speed line is a leg of the network itself and is reusing part of the network. Basically, we reused the Paris Gare de Lyon station because we thought it was too expensive to build a new station for high speed operation in Paris. So we reused the network. A lot of connections with the French Alps, for instance, come out of the high speed line around Lyon and use the pre-existing network, at lower speed of course.

Q86 Mr Leech: How important has connectivity with airports been in the French high speed network?

Pierre Messulam: We developed two main stations connecting high speed lines with airports. One is of course Roissy Charles de Gaulle near Paris, which has a connection with 65 cities in France daily. The second one is in the Lyon area with the Saint Exupéry airport, which is also located on the high speed line, with fewer connections. It should be said about the Roissy Charles de Gaulle experience that the trains stopping in Roissy are not Paris-bound. It is interregional traffic from Lille to Marseille or to Bordeaux, or Strasbourg to Brussels and so on. A feeder of the system is just interregional traffic. Basically, the business model is to say that people north of Paris use the TGV to reach Roissy without going to Paris itself. People south of Paris use the TGV to reach Roissy without going into Paris. That

is two flows, and trains could be quite balanced, with people going to Roissy or people in Roissy going back home north or south of Paris, or east or west, if you prefer. That is basically what happens, and Roissy station is operating very nicely now. We think it is a success. We have a joint venture or a commercial agreement with Air France to have combined tickets with other airline companies now for people travelling back out of Paris to reach the airport.

Q87 Mr Leech: Am I right in thinking that each city that the high speed rail network serves has a station in the city centre?

Pierre Messulam: Basically, yes.

Q88 Mr Leech: Was there any specific reason why it was decided to be done that way rather than having out-of-town stations?

Pierre Messulam: To put it bluntly, it was a matter of money at the beginning. We had stations; we had a pre-existing network. It was cheaper to use the track in the urban areas and use the existing station to enter the urban areas.

Q89 Mr Leech: Are there any areas, though, with hindsight, where you might have chosen to take a high speed train just to the airport on the outskirts of the city or set up a brand new station as a more appropriate location for a high speed link?

Pierre Messulam: Again, a high speed line, in our understanding, in our practice, is just a way to harness our competitiveness with shorter journey times. Then we have to save money, so we use the pre-existing stations as far as we can. We went to Roissy because there was a market to be addressed. We built up a station in Roissy because there was no railway before. But from Besançon, Dijon and Lyon, we used pre-existing stations. Then we had a new question recently on the TGV Rhin-Rhône, but again I shall make a statement about geography, about stations. You have to consider why you need to stop, according to the demography of the territories you are going through. Between Paris and Lyon there is only one major city, which is Dijon, with 200,000 people and that is it. So, no question, you go directly straight from Paris to Dijon. You could have a stop in Le Creusot and Mâcon, but they are very small cities with no big commercial impact, so forget it.

In eastern France you have a batch of medium-sized cities between, 100,000 and 300,000 people, quite close, around 80 km away one from the other. That was completely new for us. How should we address the market? One option was to say a big station, but 80 km is quite far away, or build up stations in every medium-sized city. The question is: is the market big enough to sustain the business? Yes, but that means that some trains go from Paris to Zurich, and stop in Belfort, for example, but not in Besançon or Dijon, the two other small cities, and some international trains from Paris to Germany stop in Dijon but not in Belfort. We have to find a balance. When you have medium-sized cities, you just have to address the market but not to over-address the market. We built up a pattern to have a good frequency for each medium-sized city, but not with trains stopping

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everywhere, because otherwise the journey time was no longer a match for long-distance traffic. That is why I say you have to think about the way you use your high speed line and the connections you have with regional trains to provide frequency, either with direct trains or with a connection with another station which is a little further down on the high speed line, so that you can offer good journey times and frequency. In our market, we discovered that frequency was a major driver for modal shift in both directions, by the way.

Q90 Chair: Has high speed rail helped economic growth in a city or a region?

Pierre Messulam: Basically, it helped companies to have better connections first with international airports or with international corridors, or with Paris, which are the big decision centres. It runs both ways. For customers of companies, it is easier to visit your suppliers and have discussions, because the connection is better both in journey time and frequency. For the company, it is easier to go and see its customers or go to address new markets because the journey time is shorter so that they have time to make the journey in one run on the same day. We had a strong impact. Take Lyon 30 years ago. The funny story was that, in the first stage, big companies moved from Lyon to Paris because they no longer needed to have big headquarters in Lyon. But then in the second stage smaller companies grew up in Lyon because they could do business because development was cheaper there, the work force were cheaper and it was no longer a problem to commute from Lyon to Paris to visit customers. It is a balance, but basically the lesson we learned with regional authorities is that a high speed line is not a gimmick. You have a strong modalisation of the territory, with a consistent investment plan on roads to enhance connection with the high speed stations, on industrial parks, with taxation of some kind, and training of the work force so that the connection with a high speed line is a catalyst for and will enhance real economic growth. In some areas where local authorities did not pay attention to connection with roads, taxation and training the work force, frankly speaking, nothing happened and TGV could not save them.

Q91 Chair: Mr Petrovic, has Lille been a success because of rail?

Nicolas Petrovic: As Pierre said, it is all about being a catalyst. High speed rail in itself does not create everything. Lille is a good example. It used to be a region with a lot of difficulties. They had to close down their mines and their heavy industry, and the unemployment rate was 40%. When you go there now, it is much better. They have used the high speed line and the station to create wealth. High Speed Rail has also brought our capital cities together: as you know, in London there are many French expatriates who have chosen to live here. It is a catalyst. It speeds up the exchanges between big cities and it takes the businesses a few years, but after that they are very quick to take advantage of the fact that it becomes very simple and seamless to go from one location to the other. All our markets have grown consistently

over the past eight years, despite tourism problems, different problems with the flu, with SARS, and obviously with the recession. We have grown our markets consistently over the past eight years with a very strong catalyst. It does not create everything on its own, but if it is accompanied by other things it is very powerful.

Q92 Steve Baker: Is it correct that the further away from Paris the TGV network stretches the more subsidy it needs to operate?

Pierre Messulam: No, it is not correct, for this reason. Fortunately, people who were in the industry 30 years ago chose to make the most profitable project first, which fortunately for everybody, including the taxpayer, made sense. The most profitable route and the most trafficked route is the Paris to Lyon route, but it is just a matter of demographics. Lyon and Marseille are the two biggest cities outside Paris in France, so of course that is where the traffic was; it is more intensive. What happens now is that we are reaching or maybe overreaching the needs and the capacity to finance new high speed lines on both aspects. Maybe environmental constraints are more expensive than when we used to build 30 years ago. But, basically, it is because the markets are smaller. The question now is: what is the bottom line below which you stop? It is a difficult balance between economics because, on the one hand, if the cities are very small it does not make sense to invest a huge amount of money to build high speed lines for our cities with under 100,000 inhabitants. On the other hand, everybody is keen on TGV. It is so important to have a connection with Roissy for the airport, to be connected with Paris with a high speed operation. It is like a brand for our territory. Our position now is that we think we have a good high speed network. We should use it as much as we can and develop a very good, attractive interchange system, with regional trains, for people who do not live near a high speed line station. That makes sense, and if you consider what is happening in Switzerland, for instance, or even in Germany, that is what they did.

Q93 Iain Stewart: In designing the TGV network, did you encounter significant concerns from communities along the routes about the visual impact and the noise impact of the trains, and since they have started operating do you get many complaints about those?

Pierre Messulam: We had a lot of arguments and the more recent the project the more eloquent the arguments. At the very beginning, 30 years ago, we were crossing rural areas with few inhabitants so only hunters were complaining. We had a small problem north of Lyon in Laval La Martinière, which is a more densely populated vineyard area, and we had to build up noise protection along the line. What went really wrong was the connection between Lyon and Marseille in the Rhône Valley. Both inhabitants and Parisians who used to have their cottage in the area were complaining about the noise. We managed it. It was quite painful, but we managed it with changes of the track pattern and with noise protection, basically.

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What should be said, also, is that the legal framework of infrastructure in France seems to be quite different from the British one. It means that the state has the power to take over properties for national interest so that people may go to court contesting the national interest—"utilité publique", we say in French—and very seldom the court disagrees with the French state position, for good reasons. Basically, what we have learned is that we have to discuss with the communities around the track to give them a very realistic understanding of the impact. It is not as bad as some people think it will be, and when there is a problem you have to discuss it with people and find solutions. It could trigger extra cost, but the sooner

you figure out how you can fix it the cheaper it will be. When you build up a line, you may build up not walls but just earth hills—I do not know the English word, sorry—along the line. It is very efficient, it is green and everybody is happy.

Q94 Iain Stewart: Once you put in these noise reduction measures, do you still get complaints?

Pierre Messulam: No; frankly speaking, no.

Chair: Thank you very much indeed for coming and speaking to us so fully about your experience. Thank you very much.

Tuesday 28 June 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Jim Dobbin
Mr John Leech

Paul Maynard
Iain Stewart

Examination of Witnesses

Witnesses: **Professor David Begg**, Director, Campaign for High Speed Rail, **David Frost**, Director General, British Chambers of Commerce, and **Jim Steer**, Greengauge21, gave evidence.

Q95 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. Could you give us, please, your name and organisation?

Professor Begg: David Begg from Yes to High Speed Rail.

David Frost: David Frost, Director General of the British Chambers of Commerce.

Jim Steer: Jim Steer, Director of Greengauge21.

Q96 Chair: Thank you. What would you say are the strongest and weakest points in the case for high speed rail?

Jim Steer: High speed rail is needed to support a growing and more diverse economy, as the Government is now seeking, and to do so in a way that is a more environmentally sustainable approach than any other that has been looked at. That is its core strength: supporting economic growth. In terms of weakness of where we are at the moment, the key concern we would have in Greengauge21 is that there is talk, at high policy level, of a truly national high speed rail strategy. What we have is something that is a little shy of that. To my mind, a truly national strategy would, at least in outline terms, talk about Scotland and Wales, and indeed the English regions that are not covered by either HS2 or the Y network proposals. Simply put, we would say it does not quite go far enough, but obviously it is an excellent start.

David Frost: We consider the strength is that this country is running out of capacity. Rail travel continues to grow. In the first quarter of 2011, there were 316 million journeys, with long-distance journeys up by about 4.1%. That is the first point. Secondly, we are running out of capacity. The third point is that the population of this country continues to grow and we cannot continue to fiddle and essentially tinker with the existing network. We need a new national high speed network if we are to significantly improve the economic performance of this country. The weakness would be that we have an inability in this country, I believe, to deliver major infrastructure projects. We are fantastic at talking about it, but when it comes to delivery it takes an inordinate amount of time, if we ever get there.

Professor Begg: The main arguments “for” are capacity ones. It provides the best economic case for increasing railway capacity. One of the other key strengths is that it does help to bridge the gap between the north of England—indeed, the north of Britain—and the south. So I would argue for high speed rail on regeneration grounds as well. The potential argument

“against” is that a project of this scale is costly. If it comes at the expense of other very important transport projects—railway projects—then I think that is a potential argument against it.

Q97 Chair: The Campaign for High Speed Rail launched a bus poster campaign, “Their lawns or our jobs?” Do you think that is the nub of the case against high speed rail?

Professor Begg: It is a creative poster campaign that a PR company have come up with. The PR company have done an excellent job so far in trying to highlight that there are millions of people in this country who have not got engaged in the high speed rail debate because it is so far off, but, potentially, it is important for their future economic jobs and livelihood. It was a good campaign in terms of highlighting that. A number of the protesters, while I can understand why they have been campaigning against it, and most people would if they felt their quality of life was going to suffer in any way, are in a very privileged position economically, and a number of the people who will benefit from this scheme are not in that same privileged position.

Q98 Chair: Are there any southern-based businesses or local authorities that are part of the campaign?

Professor Begg: Yes. We have businesses from all over the UK, predominantly in the north of England, but we have them in the south as well.

Q99 Chair: How do we know that the economic benefits that you speak about are going to happen? We have had evidence from people who are challenging whether the narrowing of the north-south division and economic regeneration will take place.

Professor Begg: It must be really challenging for this Committee to weigh up all of the evidence that is before it, because the problem is that economics is not a science; it is incredibly subjective and you will get very different views. You will get views from people who say that shrinking journey times between cities would benefit the less prosperous areas. That is all the evidence we have come up with in the Northern Way. I would argue, with my Northern Way hat on, that, if you shrink journey times between the north of England and London, the benefits from the north of England proportionately are greater than the benefits from London. But the big challenge here is that, if you stick rigidly to cost-benefit analysis, which looks at welfare economics and puts all of the weight on

journey time savings, then that does discriminate against railway schemes per se. If you stuck rigidly to traditional economic analysis, you probably would have built very few railways schemes in this country, including Cross Rail, the Jubilee line and even the Manchester Hub. If you just looked at traditional economic analysis without the wider economic benefits, the case would be flimsy.

Q100 Chair: Mr Steer, in the evidence we have had from Greengauge you talk about regeneration benefits and more jobs coming, but what is all that based on? Is it wishful thinking or is it based on any solid information?

Jim Steer: It is based on the best analysis that we have between us available to use. As David Begg has just said, this is not a perfect science, and, as your Committee concluded when you looked at the relationship between transport and the economy, it is one thing to invest in transport, but to get the benefits you also need a response from business. Obviously, it is not within the gift of those developing the transport project to provide that. David Frost may want to comment on that in a moment. Therefore, there are effects which are, in a sense, indeterminate.

The academic community, of course, wants to look at this question in a very clinical way and pose the question: if nothing else happened at all and you made this or, indeed, another transport investment, what would the economic reaction be? But the kinds of tools that are used to look at that deny the existence of, for instance, a rebalancing of the economy, say, from south to north. That is not permitted in the analysis, because it takes out the level playing field approach. So you have to look at the best evidence you have. We know that there are more trips with ends, as it were, in the north and the midlands, and we have to try to attribute the benefit of those more efficient journeys between the north and the south, which of course is what high speed rail is linking.

An awful lot of the research, of course, is looking at other countries, and one always wonders whether we are the same or different. The Chen and Hall research, looking at what has happened with improved journey times by rail in Britain over the last 30 or 40 years, concludes that it has had a good positive impact on employment levels and productivity in the cities that have been served by faster train services. I have to say that, even within that, there are some exceptions. You heard last week from Monsieur Messulam, who explained some of the complex set of effects on the city of Lyon, with perhaps some relocation of jobs to Paris, and then some promotion of local businesses seeing Lyon as a city with excellent connectivity.

At the end of the day, that is what we think will happen. We think the opportunity for development in places which are currently simply excluded by the development community will change because they will see accessible centres dotted around Britain and not just concentrated in the south-east.

David Frost: I would make four brief points. First of all, the history of the railways is littered with arguments against development. If one goes back to the Liverpool-Manchester railway in 1830, there were arguments against it, saying that it would be of no

economic benefit and the canals were perfectly capable of shifting textiles between one centre and another. At every stage, there proves to be enormous economic benefits. The initial view was that the creation of HS1 would unlock about £500 million worth of investment. When the survey work was done in 2008, the figure they came up with was £20 billion—40 times greater than that.

The next point would be that, when we have surveyed businesses across the UK, the overwhelming view is that business would like to see a high speed rail network in this country. It will link them to their customers and their suppliers more efficiently, and to their work force as well.

The final point I would make is that, if one looks globally, there is an enormous expansion of high speed rail. Someone, somewhere, clearly gets the benefits. I was in China three times last year and, as part of that, saw the growth of the high speed network across the whole of China. Yesterday, we saw the opening of Shanghai to Beijing. Right across the globe, countries are waking up to the economic benefits that high speed rail will unlock for both the economy and business.

Q101 Iain Stewart: I would like, first, to return to “Their lawns or our jobs?” poster campaign. Don’t you think it is not just insulting to some of the opponents but unhelpful to polarise the debate in this way, given that there are many people who will support high speed rail as a concept but have real concerns about the validity and the business case for this particular project?

Professor Begg: The campaign was trying to highlight that nimbyism is a big barrier to infrastructure development in this country. There are a number of reasons why we have a transport infrastructure which is not nearly as good as most people and most businesses would like. Apart from funding, the other reason is that we do have much stronger local opposition to the schemes, which often outweighs what is in the national interest. The very fact that people are speaking about this campaign, hopefully, from our point of view, gets people focusing that high speed rail is right for the economy nationally, even though it might not be popular with some people locally.

Q102 Iain Stewart: I accept that there are local concerns, but not all the opponents are people along the line of the route. My personal view is that I would caution you not to polarise the debate in this way, because there are organisations, like Campaign for Better Transport and CPRE, who do back high speed rail in principle but not this particular scheme. They have concerns about some of the other points you were making about integration into the broader transport policy.

Professor Begg: The reason I got involved in this was because there was a very vociferous “no” campaign which was extremely well funded, in excess of £1 million, and coming up with what I thought were a lot of bogus arguments. The vast majority of funding for this, from individuals, has come from people who do live along the route. The purpose of our campaign is

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to engage all these people in the UK who will benefit from high speed rail, who are not vociferous and not registering their support for it at present.

Q103 Iain Stewart: Can I pick up on one of your other points and ask the other members of the panel to comment? You did express a concern that there could be a diversion of resources to fund High Speed 2 from other transport projects. Some of the evidence we have received suggests that the success of high speed rail is not just putting the line in itself but the connectivity to each of the termini on it.

Professor Begg: One of our big failures in transport and one of the reasons why we have underinvested in transport infrastructure compared with some of our international rivals is that, historically, we have not had as much commitment and engagement from the centre of Government, from No. 10 and No. 11 Downing Street. That is a view that you could attach to Governments of all colours, going back historically. What is different, it seems to me, about the high speed rail debate is the level of engagement that we have right from the centre of Government. That persuades me that, for the first time, we might see an increase in investment in transport that a number of us have been calling for.

Q104 Iain Stewart: Are the other members confident it will both be investment in high speed rail and other projects?

Jim Steer: The signs currently are good. After all, the Transport Secretary had to find the £750 million just to do this planning work in the current spending round last October, which was obviously a time of major cutbacks, and nearly all of the rail projects that were on the stocks, as it were, were approved for development at that stage as well. Currently, at least, we can say here is a Government that has put its hand in the Treasury pocket, the taxpayers' pocket, to make the first stage of this project possible and has not cut back on the classic network.

I would also point to two other things. The first is the experience with the Channel Tunnel Rail Link as it was then known—High Speed 1—which was always regarded as a separate funding stream and kept separate from the rest of the Department for Transport accounts. There is a precedent there that might be followed. There is another interesting precedent that stems from HS1, and we learned at the weekend that the Secretary of State for Transport is thinking in similar terms for HS2. When you have built it and you are over the riskiest stage, you can let it through a 30-year concession on a commercial basis. A third of the capital outlay for HS1 was recouped that way. Greengauge has some work that we hope to publish very shortly that PwC are doing, and we will certainly make sure the Committee gets a copy, looking at what might be the value of a concession let on HS2 along similar lines to that for HS1. What I am trying to suggest is that, in Government accounting terms, there is a return, a cash payback, for these investments. Sure they are downstream; you do not get them back in the year you spend them; but they entitle Treasury to look at this in a rather different way from routine transport expenditures.

David Frost: I would simply say that we cannot allow that money to be centrally diverted from existing infrastructure. You only have to look at the West Coast Main Line, which is creaking now and operating many times at capacity or over-capacity, to know that we need to continue to invest. I would suggest that, due to the chronic failure in this country to invest in infrastructure over a number of decades, we have a very poor infrastructure in this country. International survey after international survey highlights that. The World Economic Forum was one of those that shows that our quality of infrastructure was 33rd in the world. That is not good enough for a supposed 21st century leading global economy.

Professor Begg: I was asked by the Chair what the potential downsides are. It is a potential downside, but it is an argument against any big transport scheme, is it not? The level of spend on Crossrail of about £2 billion a year is equivalent to the level of spend that will be committed to high speed rail. For that argument outlined as a potential downside to be valid, you would not carry out any big transport scheme in this country.

Q105 Steve Baker: Professor Begg, I am slightly confused by what you have said because everybody has talked about the economic regeneration, but at one point you said that the case for high speed rail would be flimsy without the wider economic benefits. It feels to me as if we are saying the economics are complex and it is not a science, but it is all about the economics. Could you just clarify? Is it about the economics? Is it about regeneration? How certain can you be that the economics will work out?

Professor Begg: I was making the point that, if you go back historically and look at any big railway scheme, whether it is Crossrail or really successful schemes like the Jubilee Line, they have all had very flimsy cost-benefit analysis cases. That is because we focused on time savings. That focus on time savings means, invariably, you will find that, if you look at the large number of motorists who will benefit from improvement to a road, using that traditional welfare approach to economics, road schemes, traditionally, always come out much better than rail schemes. That might help to explain, if you look back over 50 to 60 years, why road always benefited much more than railways did and why previous Select Committees would have been quite critical of this. It is only now that we are starting to realise this is such a narrow way to assess the impacts of our transport scheme and what we have to try and assess is the impact on the true economy—what happens to GDP and gross value added—that the case for high speed rail is much more persuasive.

When I was chairing the Northern Way, we would argue that the benefits for high speed rail are three times greater than HS2 have estimated because they have taken a very narrow, traditional approach to high speed rail. We would also argue that, if you take a historic view of what impact rail schemes have had, the impact is two to three times greater than the Department for Transport ever estimated in the first place.

Q106 Steve Baker: I have to say I am hugely sceptical of terms like “the true economy”, but that is perhaps for another day. Can I just pick you all up on this? We talked about the diversion of resources, for example, and I am reminded of a report from the TaxPayers’ Alliance where they suggested that, if you look at the capital that will be taken from elsewhere in the economy and put into high speed rail, four times as much capital will be behind every high speed rail job than is behind, on average, jobs elsewhere in the economy. Their suggestion was that high speed rail would destroy four jobs for every one it created. What would you say to that?

Jim Steer: It overlooks a whole set of things, but let us just concentrate on two. One is the question of how many jobs it will create, and what you have had in the formal assessments are estimates of new development around stations in the assessment of Sustainability. There are a few tens of thousands, and people have even criticised that and said most of them are in London. None of that analysis—and, fair enough, the TaxPayers’ Alliance did not have anything else to draw on—allows for the possibility that you will get a growing economy out of this. You will get more jobs and in places in which at the moment it is quite hard to stimulate jobs. We commissioned some work from KPMG which gave some evidence on this. Incidentally, that greater number of more productive jobs translates into tax incomes, and that is the second point: what is the net cost?

Q107 Chair: Could you tell us, Mr Steer, what the KPMG research showed?

Jim Steer: It showed that there would be several tens of thousands—I will look up the exact number—of additional jobs created by virtue of the improved productivity that businesses would experience from high speed rail. It is based on looking at the high speed rail network at a national level rather than the smaller HS2. But this also showed that those jobs would produce additional tax income. We are talking long term, but, by 2040, this was additional income of between £6 billion and £10 billion per annum to Treasury.

I do not think it is right just to look at the capital expenditure, and David has mentioned £2 billion a year for several years’ outlay, and not allow for the fact that you are going to create an asset that you can concession. With HS1, you got a third of that back within a year or two of opening. Also, you are going to improve the economy in a way that, as far as we can measure, and it is not an exact science, will produce additional tax incomes. I would say to the TaxPayers’ Alliance, “Look at the overall picture and the net effect on Treasury, and also look at the wider job creation,” and those ratios will look much healthier than they have concluded.

Q108 Steve Baker: I am just trying to understand why this argument is advanced that slightly faster journey times will create jobs. It seems to me that jobs are created when capital is accumulated, by which I mean productive goods, and that is the source of real wealth. I would just like to put it to you that the reason the north—our industrial heartland—is in decline,

which really matters, is because of very high taxes for a very long time, plus currency debasement, rather than the lack of a railway line. What would you say to that argument?

Jim Steer: I do not know that I share your view as to the tax base being the cause, but it does not really matter—

Chair: We need not go into overall economic theory except as far as it relates to this.

Jim Steer: When you create a really serious step change in the quality of the transport accessibility to a place, you change the ambition and desirability of that place for development. Businesses will say, “I can locate here,” and enjoy what is, I hope you would agree, after all, a lower cost base in the north of England than in the over-congested south. This is just a waste at the moment, nationally, that we cannot exploit because our transport links are not good enough, and they are going to get worse over the next 15 years.

Q109 Steve Baker: I have one small follow-up to that. Is that not just a redistribution of wealth from a more dispersed area to areas closer to the end points of the railway line?

Jim Steer: I would say not “just,” but you are right: there would be redistribution as well as the improvement of efficiency. There is a simple efficiency gain. If it only takes you an hour to get to your business meeting, first, you are more likely to make that meeting, and, secondly, it saves you time to do other things.

David Frost: Coming back to your initial question about the TaxPayers’ Alliance, it is an organisation for which I have a huge amount of respect, but I think in this case they are quite frankly wrong because it is an argument against any form of transport investment. If we are seriously questioning whether there are links between economic growth and faster transport links, you could argue did we ever need to progress beyond the horse and cart? I would suggest that, at every stage, when we have seriously shortened distance times, we have seen economic growth. The universal response from our membership, whether it be in Scotland, the north-east, the north-west, west or east midlands, is that businesses within those communities believe that shorter journey times will benefit their businesses and those regional economies, in terms of being able to get to their customers more efficiently and faster, therefore lowering prices, being able to get to their suppliers quicker and more efficiently, and also having better access to a talent pool for employees as well.

Q110 Chair: Professor Begg, you referred earlier to the benefit-cost analysis underlying the Government’s case. Were you saying there that that had missed out the issue of the economic development rather than it had miscalculated it? I just want to be clear what the point is you are making.

Professor Begg: The Department for Transport have always erred on the side of caution. High Speed 2, I would argue, have been particularly cautious and sometimes pessimistic on the benefits from high speed rail, because they have one eye on a judicial review.

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What they do not want to do is to be exposed in any way in a judicial review. There is a much more persuasive case—an economic case—for high speed rail than has been submitted so far, but I understand the reasons why it has not been tabled.

Q111 Paul Maynard: Clearly, the greater the detail we go into on the issue of High Speed 2, the easier it is for opponents and proponents to disprove the other side's case by reference to detail, and we are left with a rather unsatisfactory mush of a debate over the philosophical desirability of high speed rail or not. I just wonder whether the panel regards high speed rail now as an inevitability, and, if not, what they think are the greatest risks to achieving what they hope to see?

Professor Begg: If I thought it was an inevitability point, I do not think I would be spending so much of my own time on the campaign for it and raising money for it. History tells us that political decision making can be quite fickle. It is especially challenging for a Conservative Government, a coalition Government, who have a number of big donors to the Conservative Party threatening to withdraw funding. This is particularly challenging for Conservative Members and Conservative Ministers who are pushing this scheme. I do not think it is a done deal by any means, and it is especially challenging in a difficult economic climate like this where there is a tendency to be much more short-sighted, not take the long-term, lose touch of vision and lack confidence in the economy.

My big concern is what signal this would send out to everyone in this country and the rest of the world if we say we are not doing this. Everyone else is doing it. Why is Britain not doing it? Do we lack confidence in this country? Do we not think we are capable of delivering a big project like this? Are we not prosperous enough as a nation to have a level of technology that our international rivals take for granted? It would just be such a slap in the face to this country.

David Frost: I certainly do not see it as inevitable. That is the very reason that I am here and putting evidence on behalf of our members. My concern is that, when you come back into the UK from an increasing number of countries in the world, you feel you are coming back to a country with very second rate infrastructure, infrastructure that has been patched and make do and mend, and increasingly overloaded. This country is crying out for some very significant investment which it has not had, as I said earlier, over many decades.

But there is the power of nimbyism. I am scarred by my experiences working in the west midlands in the 1980s and 1990s when I was heavily involved with the M6 toll. That was a programme that only took three years to build, but it took 21 years from someone saying we needed it to actually cutting the tape. It just got bogged down. We remember the Newbury bypass. What about the M40? These are projects that at the time generated enormous heat, but now it would be inconceivable to imagine this country without those projects. In some way we have to get over that and highlight how the economy of the UK is going to suffer if we do not invest in this network.

Jim Steer: There is a threat, clearly, to the project. Judicial reviews can delay and Ministers might lose heart. I personally think that we have not yet won the environmental argument, although the case is entirely winnable. That affects a lot of constituencies. A lot of people are very concerned about the carbon future of the country. The fact that this first stage scheme is only carbon neutral in the analysis has discouraged people. I do not think it should because the longer-term prospect is that it will make a big carbon contribution.

Q112 Paul Maynard: Given the threat to the project you have all identified, how then do you evaluate the quality of the Government's arguments in favour of High Speed 2 so far? Do you think they are making the right arguments to achieve their goal? If they are not making the right arguments, how would you critique what they are saying?

Professor Begg: I do not think they are making the right arguments in terms of maximising the economic regeneration case for the scheme and engaging the north of the UK behind this scheme in particular, because it is the north of Britain that feels as though they are going to benefit the most, but it is not a talking point in any of the pubs or the high streets because it is just so far off.

Having said that, I can understand 100% why they have been so cautious and constrained in presenting the arguments, because once you are into judicial review everything is picked over. The last thing the Department for Transport will want to be accused of is overemphasising the case for high speed rail. For me, the key challenge here is how we make sure that so many people who will benefit from this scheme realise that they will benefit from it, not just people that are around the high speed route, but people who are not on the high speed route and will benefit because the capacity on their route is going to be freed up. A lot of them think, at present, that they are going to be losers.

David Frost: I have to say I am impressed by the commitment that this Government has shown, both from the Prime Minister and also from the Secretary of State for Transport. It has been absolutely clear and unambiguous support for this proposal. I personally think that the pro campaign has to up the game. Consistently, when we look at major infrastructure projects, it is the antis that make the running. We need a much more effective co-ordinated campaign that does not just link in business organisations but, importantly, recognises that those businesses are made up of employees and we should be looking at the future of those businesses, their employees and the communities across large swathes of the UK. I believe very strongly that we are going to have to put in more resource and a more cohesive effort if we are going to make significant progress in promoting this.

Jim Steer: I would make two points. When you see the business case that we are looking at which opponents criticise, saying it is not strong enough, it is a business case that the Department and Ministers are directing towards the Treasury. They set the rules for how these are done and it is a public exposure of a spending Department versus Treasury debate. Just to

remind ourselves, even though it has all those cautious elements about which David talked, it is a good business case and, as far as we can see, it is based on suitably cautious assumptions. I do not think it should be criticised for doing that; it has to do that. The Government has to back this, where it matters, with funding.

The second point to make is that there is a need, that I hope Government will recognise as it moves forward, to engage far more, and David just mentioned employees and businesses and so on. But we would like to see wider engagement with local bodies, including those, for instance, along the line of route affected, which does not seem to have happened in perhaps the way it might have done. Maybe local authorities are not quite as strong and robust as they were, but Kent county council, for instance, at the time of planning the Channel Tunnel Rail Link, concluded in favour of it. It was an ally of Government to get the planning right and to address local concerns. Although it may seem very late in the game to achieve that with authorities that have taken strong negative positions, I do think there are benefits for them as well, and getting a better relationship with local groups and authorities would still be helpful.

Chair: The consultation period has almost finished so it is rather late in the day.

Jim Steer: Sure.

Q113 Paul Maynard: Would you, therefore, not agree that it is probably very important, if not vital, that any campaign for high speed rail does not try to set north against south or imply that somehow any benefit to the north would be at the expense of the south, and that the benefits are nationwide, because I share Mr Stewart's concern about the tone of some of the advertising we have seen so far?

Professor Begg: I agree it is important not to polarise anyone but to try to get maximum support for the campaign.

Q114 Jim Dobbin: Primarily, this evidence session is about high speed rail, but high speed rail is only part of a wider transport strategy. Where do you think it fits into all of that? What is its priority in the spending programme for transport?

Professor Begg: I would argue it would be really good if we had something as coherent, strategic, visionary and long term in other modes of transport as we have for rail. It is not quite "predict and provide" for rail, but we are seeing this is going to be the growth in demand. We have underestimated it historically. Intercity rail demand is growing at 5% per annum. We need to build the capacity to cater for it, otherwise we are going to congest or price people off the rail network. We do not have that same strategy for aviation or roads. We do not have that long-term visionary strategy for these other modes of transport. It is not rocket science.

If demand is growing, and it is, then it does not matter what new technology comes on board and how much we use the internet; we just seem to want to travel more and more. There are only three ways you deal with it. You either price people off the network, which is incredibly difficult for politicians to implement; you

allow them to be congested off the network, which is what has happened to a lot of our road network; or you build the extra capacity. Interestingly enough, I think that is the right approach for rail. I would much prefer building the extra capacity to cope with the extra demand on rail than pricing people off the network or not allowing them on the train because it is too congested.

Q115 Jim Dobbin: On the aspect of pricing, do you think that the Government should have a proactive policy here, having some influence on the pricing for the consumer?

Professor Begg: Pricing of railway tickets?

Jim Dobbin: Yes.

Professor Begg: They have a big influence through the franchising process and the regulated fares. At present, the Government do have quite a big impact. In fact, a number of the train operators would argue that they need more flexibility. There is an ongoing debate here.

David Frost: We know that the population and the demand for travel continue to grow, and the economy will continue to grow. What the business community has consistently cried out for is a 30-year transport infrastructure plan for this country, rather than a piecemeal approach that looks at air, roads and rail. We believe that is much needed and long overdue.

Jim Steer: If I may just add, it is quite clear that to get the full benefits of high speed rail it needs to be very carefully integrated with local and regional transport systems. There is a start of that process happening, but it needs to be taken much further. Its interface with airports is also extremely important. These are hugely interesting challenges for the people planning these things, the like of which we have not really experienced before. It requires people to think in strategic terms as well as the definition of individual projects, as the latter can sometimes work against the achievement of coherent networks.

Q116 Jim Dobbin: It is interesting to compare transport strategies in this country with transport strategies in Europe, for example. How do you place the UK's strategy?

Professor Begg: It is interesting because, when I was chairing the Commission for Integrated Transport, we were asked that very question by John Prescott. We were asked to explain why high speed rail was not on the agenda in the UK 12 years ago. It is an interesting question and I keep on looking back, because I was not promoting it 12 years ago. I have asked myself why and there are two reasons. One is that we did not think the growth in demand for rail travel was going to be permanent. We thought there was a temporary peak, but it has just been relentlessly consistent and it has just not gone away. That is one thing.

Another thing is that we were so focused on trying to make the railways safer following Hatfield and other things, but, when we looked at this international comparison, the conclusion was that we got ourselves tied in knots in this country on economic assessment. We just had report after report. We assessed things until we were blue in the face, whereas other countries had a strategic vision. It seems that the key challenge

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for this Committee and for Government is that, if you judge this just on whether there is a commercial case for this, then you would not do very much on the transport front. There is not a lot that makes commercial sense, certainly on the railways. Is there an economic case for this? You will find people in front of this Committee giving you arguments for and against and interpret the economics in different ways. But it seems to me the third category is strategic. Is this strategically right for the UK? I would argue a resounding yes; it has to be strategically right for the UK for reasons that we have outlined.

Q117 Steve Baker: It is refreshing to hear somebody say that railways do not make commercial sense. That is what you have just implied.

Professor Begg: If you take a very narrow investment appraisal, yes.

Q118 Chair: Can you clarify that, please?

Professor Begg: Railways do not make money, by their very nature. There are no railways in the world that do. It is not just Britain. There are very few; maybe the odd one in Japan might make a return.

Q119 Steve Baker: Mr Frost, you made a very passionate case for investment and, of course, it is a very sensible thing to call for, but I have to say I asked a private equity investor if he would like high speed rail. He said, "Yes, of course. It would be wonderful. You would arrive earlier and fresher," and all the rest of it. "Would you invest in it?" He said, "Oh no, that is a cruel question." Are there private investors queuing up to invest in high speed rail, and, if not, why not?

David Frost: My understanding of the view of the Secretary of State is that the intention is to lease this line once it has been constructed. We can point to HS1 where the figure for leasing was greater than that which was expected, if I can put it that way. Quite clearly, there is a view that there will be a substantial amount of interest in the leasing of this line.

Q120 Steve Baker: The other point is that we seem to have said that a 30-year plan for transport would be welcome, together with very careful planned local and regional integration. We know that, commercially, it is assessed in different terms from other investments. Why is it that this set of arguments is appropriate for transport when it is not appropriate for other aspects of the economy like food or clothing or whatever else?

Jim Steer: I think they are appropriate for other areas of the economy such as energy generation. This is not like a retail question. This is about how the country functions and how cities relate to each other. One can overstate the 'planning' them, and I have heard previous witnesses say that what we need is an overall master plan and all this kind of thing. I put my hand up; I am somebody involved in planning. I do not think you have to get all the detail right at the start. You just need to clearly state what you are trying to do and be flexible about how you develop it. I do not think this is something we should be frightened of, as if suddenly we have to adopt a totally different regime

in this country in order to bring this about. We just have to be a bit brighter and a bit better at getting different organisations working together towards a shared goal. That is one of the things, to go back to Mr Dobbin's earlier question, about the difference between us and European countries. It is being prepared to say, "Here is a shared goal." Really, if you are not prepared to do that, you do make things hard for yourself.

Q121 Iain Stewart: You have all expressed your wish that high speed rail forms part of a broader strategic transport plan for the United Kingdom. Are you confident that the other elements of that transport plan are being developed, and, from that, is therefore the strategic route of high speed rail—not the detailed route but the strategic opinions of the country it connects, including airports and High Speed 1—correct, or are we not able to make that call yet?

Professor Begg: There are two responses to that question. One is that I am hoping that the fact the coalition Government are rightly taking a long-term approach to railways and planning accordingly acts as a beacon for getting the policy decision right on the other modes of transport. The problem on the roads is that you can never take a "predict and provide" approach on those because cars are just such an inefficient user of road space, especially in our cities, that you could never do that. The reason why we do not have a coherent roads policy, and all political parties are now in the same box on this one, is that it involves the all-too-difficult decision made around road pricing, and unless you have road pricing, you cannot have a coherent roads policy that makes any sense in this country.

When it comes to the challenge on aviation, while I do think that there should be a much more coherent long-term strategy for aviation that is right for this economy, it is a bit more challenging than rail because of some of the environmental knock-on effects.

David Frost: If the question is, "Is the route broadly the right one?" I would suggest it is. It links all the major centres of population and gives clear access from the north and midlands of the country down to the south. There will always be pressure for towns and cities to have a connection to it and expectations will have to be managed. Our view is that, broadly, that route is correct.

Jim Steer: The key links that cities have told us over the years we have been working on this are links to London, links between themselves—these cities are not moving around; they are still the same big cities they were 100 years ago—and links to the global gateways, as Rod Eddington called them in his transport study, which, in particular, are the main airports and, in particular, the airports with the biggest business connectivity. I would say HS2, with its plan to link the centres of London, Birmingham, Manchester and maybe in future Leeds, but also the Scottish cities, and Heathrow and the centre of London, and connect to the Channel Tunnel Rail Link, is undoubtedly the right concept. Yes, I do not think there is any particular issue around the route from that level.

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Q122 Iain Stewart: Specifically on the aviation point, if one of the objectives of high speed rail is to achieve a modal shift from short-haul aviation, both domestically within the United Kingdom and to the north of the continent, is the phasing of Heathrow on phase 2 correct and will there be sufficient capacity linking High Speed 2 to High Speed 1 to achieve that modal shift?

Jim Steer: You could make the case for bringing Heathrow forward, but in a practical sense to do that would delay seeking the powers for HS2, and, therefore, although it might be desirable, I do not see it as being a practically helpful step. But the link to Heathrow ought to be developed rapidly in our view and we have suggested how it might be done, partly because domestic flights to Heathrow are disappearing rapidly across to European hubs and the battle is going to be a rather different battle from the one that other countries have experienced between short-haul domestic airlines and high speed rail. The short-haul airlines will have gone by the time high speed rail is here. They will have gone from being domestic to international travel, which is even worse in environmental terms. That link to Heathrow opens up the prospect of reconnecting Britain to its major international hub. The HS1-HS2 link is fine. There is an interface with the North London Line to be resolved, which might require some further attention. But, no, this is an excellent part of the scheme. The real worry was that in the rush to get HS2 out these things would be forgotten. They have not been and I think that is very welcome.

Q123 Chair: Are there any other views on the strategy on having the London to Birmingham link first and then the Y-shaped Leeds and Manchester link? Is that the right way to go or are there any other views on the phasing of the Heathrow link as well?

Professor Begg: It has to be. If we were not starting high speed rail by connecting our two major cities, then we would be asking questions why that is the case. I think the route is right. The big challenge for any future Government is where they go from Birmingham first. At present, the line that has been taken by Government is that they are going to build the line from Birmingham up to Leeds at the same time as the line from Birmingham to Manchester. Hopefully that is right, but it will be challenging.

David Frost: In terms of the phasing, yes, I support it. The concern would be that it does not just stop at Birmingham but there is a real timetable to get the next phase of the Y developed. One argument that has

been put forward is whether, if we are looking to link in Scotland, you could not at some stage start to build south from Scotland and then connect at a later stage in the middle.

Q124 Chair: Would you prefer that to be done?

David Frost: In our view, the prime aim is to follow the plan, get Birmingham and then get the Y built.

Q125 Chair: Are you satisfied with the way the Government wants to proceed with the Heathrow link?

David Frost: Yes.

Q126 Steve Baker: Mr Frost mentioned connecting services across to Europe. We have had a memorandum from Mr Jonathan Tyler of Passenger Transport Networks, talking about the capacity of HS2. I am afraid I just have to leap to the conclusion, but he says that his argument leads to the inescapable conclusion that the maximum capacity of 16 trains per hour will be fully utilised by London's services. It follows, given present assumptions, that no capacity will be available for independent through services to HS1, the channel tunnel and Europe, or for direct services to Heathrow. Have any of you considered this notion that to deliver the capacity that is required there will be no capacity for Heathrow or for Europe?

Jim Steer: Jonathan Tyler took a particular view on the capacity limit of HS2. HS2 limited themselves defined that as being 18 trains an hour and, when asked, explained that this is going to require a new form of train control system to manage headway safely. There is still debate about this. Again, you heard evidence from Monsieur Messulam of SNCF, who said that is beyond where anybody has reached yet. First of all, there is a debate about the capacity, but I disagree with his idea that, somehow willy-nilly, the route will be filled with trains to London which would block the opportunity to run services across London and, incidentally, calling at London. There is a station at Stratford designed for this kind of service that is unused. There is wasted expenditure to date that can be brought into use for services to the continent.

What I would say is that, in the longer term, there is a case for a second north-south high speed line. Ministers may say, "We have enough on our hands with the first one," but there is quite clearly a case for doing that in the longer term.

Chair: Perhaps that is for another day. Thank you very much, gentlemen, for answering our questions.

Examination of Witnesses

Witnesses: **Geoff Inskip**, Chief Executive, Centro, **Stephen Clark**, Core Cities Group, **Kieran Preston OBE**, Leeds City Region, and **Geoffrey Piper**, Chief Executive, North West Business Leadership Team, gave evidence.

Q127 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. Could you, please, give your name and organisation?

Geoffrey Piper: I am Geoffrey Piper. I am the Chief Executive of the North West Business Leadership Team.

Kieran Preston: I am Kieran Preston, Director General of West Yorkshire Passenger Transport Executive, representing Leeds City Region.

Geoff Inskip: Geoff Inskip, Chief Executive at Centro.

Stephen Clark: Stephen Clark, Transport for Greater Manchester, representing the eight core cities of the English Core Cities Group.

Q128 Chair: Where does High Speed 2 fit into your transport priorities and, in particular, rail priorities? Is it at the top, the middle somewhere, or where does it come?

Geoffrey Piper: Thank you for that question. It comes top if we look at a long-term strategy. As a representative of a consortium of major companies which have to look over decades in terms of their strategic planning, this clearly comes top. It comes top equal with some shorter term but equally essential investments: for example, the Northern Hub, which, we argue—and our members, again, are unanimous on this—is essential if the north-west is going to compete to its full potential in the years to come. It is not an “either/or”. It is a “both”: Northern Hub and high speed rail.

Q129 Chair: Mr Preston, where does High Speed 2 come in your scale of priorities?

Kieran Preston: It figures very highly indeed, because it is about offering very significant opportunities for economic growth in the north and the Leeds City Region and, indeed, rebalancing the economy. One of David Cameron’s first comments on becoming Prime Minister, when he visited Yorkshire, was to say that for too long the economy has relied on London and the south-east and it is just too narrow a base to deliver the kind of growth that we need to deliver.

On the point that capacity will be constrained on the East Coast Main Line and the West Coast Main Line by 2020, it is just unacceptable that opportunities to travel to London and have that connectivity with London and the other big cities are constrained. I have seen previous witness statements that almost suggest an option is to manage demand, but that would be disastrous for our ambition to rebalance the economy. It would also be disastrous in terms of our ability to compete internationally. The other dimension, apart from capacity, is the importance of high speed. By shrinking the distance between London and other big cities, we get the opportunity for those productivity benefits, which are estimated to be round about £6 billion.

Q130 Chair: We are going to come back to some of these points, but at this stage I want to establish how important you think that this project is.

Geoff Inskip: Very, very important indeed. In 2008 the west midlands region determined that the high speed rail network was one of the key priorities for the region in terms of its competitiveness going forward and also in terms of securing the local rail capacity we need for those local connections. The capacity work we had done at that time indicated that we needed something akin to High Speed 2, because we were already being squeezed off the intercity networks. Our local rail services were being squeezed off in the December 2008 timetable. This was real and it was now, and that is one of the reasons why we have made it a very high priority indeed.

Q131 Chair: Mr Clark, you represent the core cities. How high a priority is high speed rail?

Stephen Clark: I would say that in the long term it is the top priority. In the short and medium term, there are other priorities that are important for rail in the core cities, in particular the pressures on the commuter flows into the core cities that themselves echo the changing economic structures of those cities. In particular, that is about lengthening trains and it is about doing schemes like the Northern Hub, electrification of the main lines, for example, to Sheffield and Leeds. In the long term, it is key and it is top of the list, but there is a lot to be done in the short and medium term as well.

Q132 Chair: Do you see these short and medium term and long-term priorities as being in competition in any way?

Stephen Clark: No. They are very much complementary. Both reflect the changing structure of English cities; both are about sustaining their economies; and both are about the long-term development of their economies vis-à-vis the south-east of England.

Q133 Mr Leech: Mr Inskip, just going back to the point you made earlier about why it is important for the midlands, is capacity the most important or is shaving off a relatively small amount of time with the journey between the west midlands and London more important?

Geoff Inskip: We would start off by arguing the case for local rail capacity: i.e. the release on the classic network of the capacity so that we can then enhance our local rail services. That is extremely important to us, but so is the importance not just of the connectivity to London particularly, as we see it, but connectivity on the Y network. We argued very strongly that we must see the Y network built because it is connectivity to Manchester, Leeds and Scotland, as well as the connectivity into London, that will allow the west midlands region to thrive as a region and be competitive across its European counterparts. It is not about being competitive vis-à-vis London particularly

but also about making the west midlands, Birmingham, etc., competitive vis-à-vis our European counterparts, where we need to have a very good transport infrastructure around the west midlands to do that.

Q134 Mr Leech: In your view, is there no alternative that could increase the capacity for local and interregional services and provide that network and connectivity to the north and the south and Europe?

Geoff Inskip: We have looked at a number of options to try and see whether there was a better way of doing it, and there is lots of discussion, certainly in the west midlands, as no doubt the Committee will be aware, in terms of Rail Package 2. We have looked at Rail Package 2. It enhances some of the intercity network by, say, three train paths an hour or something like that. Okay, fine, if you want that you can have it, but it is not going to solve the long-term problem we have. The long-term problem is, as has been mentioned before, that in December 2008 we were squeezed on our local rail services. That is going to get even worse as there is a preference for intercity and cross-country services to go in at the expense of local services. This is about a package of measures, and the only thing that really does it in a big way is by building a new line. Once you start thinking about building a new line, it has to be current technology, it has to be good technology and you might as well make it high speed.

Q135 Mr Leech: Has any assessment been done on the impact that it will have on Birmingham airport?

Geoff Inskip: We think it is going to be a good thing for Birmingham airport, frankly.

Q136 Mr Leech: It will not become a London Birmingham airport.

Geoff Inskip: There is a great opportunity we see in the west midlands, because it is about positioning the west midlands, if I may say so, in a way that connects into Europe via Birmingham airport. It will have a connection into Heathrow as well. We will have a connection into central Europe; we will have connections into Manchester and Leeds, and into Scotland. Basically, the west midlands and Birmingham becomes a thriving hub of the UK. We believe that will generate a lot of jobs and that is why we feel passionate about it, because this is about the west midlands in the long term; it is about our children and our children's children.

Q137 Iain Stewart: What sort of businesses and job creation do you think High Speed 2 would bring to each of your regions?

Geoffrey Piper: Across the board, for example, in the north-west, we have a burgeoning creative and digital industries sector. We are also the largest manufacturing region of the UK. We have a big pharmaceuticals industry, a big visitor economy, and many other industries. The consortium which I lead has senior representatives from each of these sectors and others, and they all continue to speak unanimously about the advantages of investing in high speed rail. It is important to recognise that high speed

rail can and should be more than just a considerably enhanced passenger service. It will open up capacity and provide greater flexibility for freight as well.

Going back to the first of the sectors that I mentioned, the digital and creative and media sector, the MediaCity centre, just in the process of opening in Salford, has already attracted major departments of the BBC. It is clear that that is going to become a very major hub for international media services. That in itself will create, inevitably, huge growth in demand for passenger travel between Manchester and London, of course, but also other European centres. If we are going to have the opportunity for that travel to be environmentally friendly and not all conducted by air, then that will be an essential addition. It is cross-sectoral. We have, as I say, a very broad-based economy in the north-west, and I am not aware of any particular sector which is against high speed rail.

Q138 Iain Stewart: Before, perhaps, the other panellists comment, last week we heard evidence from one of the directors of SNCF, who, from the evidence of the Paris to Lyon high speed line, found that some companies that have headquarters or regional quarters in Lyon moved back to Paris, because it was easier for them to commute up and down. Do you see any downsides to transferring away from the region into the south-east?

Geoffrey Piper: As I have just said, I have not heard of any expected downsides. It would be very surprising if there were not some. I would like to make the point that we see improved links, faster links and greater links between two cities as almost always leading to benefits at both ends. We would not expect this investment, when it comes fully on stream, to be anything other than good for London as well as the north-west.

Q139 Iain Stewart: Is that a view shared by everyone?

Kieran Preston: The City Region has a population of about 3 million and 100,000 businesses, but it has a very high concentration of financial business services, which I believe the research shows are better placed to benefit from investments such as high speed rail. Didn't the SNCF guy also say that there was then subsequently movement in the other direction? I agree with Geoffrey that it is a symbiotic relationship.

Iain Stewart: Yes, cross-traffic. I would make the point that it is not all positive. There are some disadvantages and downsides.

Geoff Inskip: In the west midlands, we see great opportunities to get the investment in from India and China, in particular. You have seen the recent visit around Longbridge and that type of thing. We are actively engaged with our colleagues in India about bringing investment in to the west midlands right now. But we do recognise that those investment decisions are made based on connectivity generally of a region. It is not an easy thing and these companies can go elsewhere. They can go to Europe and invest in other places, and so we are in a very highly competitive market to attract jobs here.

Directly in relation to your point, the argument is essentially for Birmingham and the west midlands to

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make its position pretty clear and start extolling the virtues of its connectivity to attract in that regional investment.

Stephen Clark: If you take the English core cities, they represent about 27% of UK GDP and it is about 16 million people. It is a huge area of importance, or the urban centres are, for the economy of the UK. With regard to your question about which particular sectors might benefit from high speed rail, to my mind it is a cross-sectoral thing. Business location decisions, of course, are affected by transport. They are hugely affected by transport, but they are also affected by other things as well. Sometimes, if you can reduce the importance of the transport, some of those other things can come to the fore. For example, in many of the English cities there are very strong university centres around which science-based businesses grow. But look at those businesses. London does some special things. London is the area in the country where a lot of capital allocation decisions are made, be it in the private sector or the public sector. Those businesses locating, say, around universities need access to that capital in order to foster their businesses. The more you can bring the cities closer together with those sorts of decision makers in London and the more you can bring to those cities the advantages of global connectivity that London has that is unrivalled with anywhere else in Europe, the better it is for all sectors in the economies of the English cities.

Geoffrey Piper: Another sector which we see benefiting hugely is the transport sector itself. Two of our members who are particularly strongly in favour of high speed rail and HS2 are the Manchester Airport Group and Peel Holdings. Manchester Airport Group might not immediately be thought of as being a strong advocate of high speed rail, but they have been one of our strongest. They have written regularly in support of high speed rail, which they see as an opportunity to bring greater scope and capacity for international travel from Manchester and focusing on domestic travel involving switching to the rail mode much more.

Peel Holdings are the very major private company which hold major land holdings in the north-west, including the Port of Liverpool. They are currently working on a £10 billion investment which has had the go-ahead and planning thus far in Liverpool and Wirral; and they are looking forward to a revival of the Port of Liverpool with the widening of the Panama Canal, on the other side of the world, which is expected to create quite a shift in terms of international shipping patterns. So there are two other transport sectors which themselves strongly support high speed rail. In the case of Peel in the Port of Liverpool, there is a strong lobby for at least a spur from HS2 to be planned to go towards Liverpool.

Q140 Chair: You all talk about the benefits that you want to see and that companies are convinced will come, but how do you know this is going to happen? We have received evidence which says it is not necessarily the case that the benefits would come in the way that you are all anticipating them. It has been put to us that, where there is greater connectivity, the

stronger regions or cities will benefit at the expense of the less strong. How do you know that these aspirations will become real?

Geoff Inskip: It is a combination of a number of things. Let us start with Eddington and look at Rod Eddington's report. He made a very good case about connectivity and the value of connectivity bringing in economic wealth.

Q141 Chair: But that is to do with assumptions and somebody's ideas. What actual evidence is there that these changes will come in the way that you are all hoping? Is there any basic evidence it will happen in the way that you want to see it?

Geoff Inskip: It is an economics argument, as the Committee is pretty much well aware. If you look at Lyon and Lille, you can see what they say about themselves in terms of what has happened in those cities. If we look at High Speed 1, we can say it is 100,000 jobs and we can say it is about £20 billion of economic activity through High Speed 1. Those are evidence-based things and you can point to those.

In addition to that, though, we had a look at an equivalent viewpoint from some consultants, KPMG, who did some work for us, looking at the value of High Speed 2 connectivity to London and also the increase in the local connectivity that we could get. That showed that through that improved connectivity we could draw in something like 22,000 jobs into the west midlands and increase GDP by about £1.5 billion a year. It is an economics report, but it is based very much on generating that better connectivity, which then drives economic activity.

Q142 Chair: Is this the report that is due to be published shortly or is this a different one?

Geoff Inskip: We published our report some time ago. It is on our website. We are very happy to send it through to you.

Q143 Chair: In your evidence you refer to a report that is due to be published. Is that something else? That is a report on economic impact, I understand.

Geoff Inskip: We have done a number of reports. The one that we are talking about in there that is due to be published shortly is a further report, which we will let you have as well.

Q144 Chair: When is that due?

Geoff Inskip: That is due very shortly now, about the end of the month. It is days away.

Chair: Thank you. We would like to see that.

Stephen Clark: I should say as well it is a very important question and that Core Cities Group commissioned some work in this earlier in the year in order to look at exactly that question, to try and assemble and bring together all the evidence around the economic impacts of transport investment, first, and then high speed rail on cities across the world. That work is due by the end of the month, and we will be very glad to furnish that to the Committee.

Chair: We would like to have that, please.

Kieran Preston: Just to add, Chair, I believe there is some work done post-ANT the Jubilee line, where the economic case did not stack up initially. It was

basically a political commitment, but the post-ANT work that was done on that did in fact demonstrate that the benefits were there. The real problem is that you cannot have a separate universe while you try and attribute growth and benefits, whether it is to a transport investment or to other factors in the economy.

Q145 Paul Maynard: While obviously one of the great issues of contention is whether the benefits will flow down into London or up into the regions on the construction of high speed rail, is there not a more fundamental question? What will happen within the regions, whether constructing a high speed line to Manchester will be of disbenefit or benefit to Liverpool, similarly Birmingham and Coventry, Leeds and Bradford, and I am sure you can pair them up? What research have any of you done or what thinking has gone into how you ensure that the secondary cities in a region that is not connected directly to the high speed line will none the less benefit and maybe benefit disproportionately, perhaps?

Stephen Clark: It is absolutely vital that the strategy for developing high speed rail considers exactly that question because it cannot go everywhere. The high speed line will clearly be limited in the extent the high speed trains can go on to other places. It is very important that in the planning for high speed rail those linkages are developed as part of the plan. That is why, in the point I made at the very beginning, the investment in the local transport systems that distributes people from the high speed rail to surrounding towns and cities is absolutely an essential part of what needs to be done to prepare for high speed rail.

Kieran Preston: It is absolutely right that we need to look at how we disperse those benefits of high speed across the City Region and, indeed, how we feed the high speed line. Similarly in Leeds City Region, we have had an initial look at what kinds of improvements we would need to make to the local network. As you would expect, there is a combination of electrification, possibly tram and train. In Leeds, we have a project called NGT Trolleybus, which offers a fairly flexible ability to respond to wherever the line eventually is, with articulated vehicles with significant capacity. It is hugely important that you can disperse those benefits.

We have a slight problem and that is the problem you mentioned about Leeds versus Manchester or Liverpool versus Manchester. There is a concern in the Leeds City Region that we do not start to see any benefits at all from HS2 until maybe seven years after its completion, whereas to the north-west high speed trains will be able to join the classic railway and reduce journey times to Manchester. It is quite unsettling, and certainly business feels strongly in the Leeds City Region that something needs to be done and can be done to ensure that the region benefits, not just Leeds but beyond Leeds and through to north Yorkshire and the north-east. There is an ability to link the Midland Mainline to HS2, electrify it and deliver very significant benefits much earlier. It makes economic sense to do that because you start to capture some of those very important transport and

productivity benefits much earlier than you otherwise would do.

Geoffrey Piper: I agree entirely with what Kieran has said. It is interesting to look at different places in the north of England. I have attended a lot of debates and conferences of one kind or another on the case for high speed rail over the last four or five years. There is always a clamour from all the different cities, Glasgow and Edinburgh as well, “Can it please come to us?” There is competition and that, in itself, implies a pretty strong feeling among those who are professionally involved, at any rate, in a strong case for high speed rail.

The other thing is that it is about confidence in investment in our various regions. We believe that, as soon as there is a clear Government commitment that this is going to happen, we will see considerable growth in investment and business expansion long before we see any high speed track. It is obviously chicken and egg to an extent, but there is definitely a clamour from a lot of different towns and cities who want to be able to benefit.

Q146 Chair: What about the point that Mr Maynard was putting to all of you—that one part of the region might benefit to the detriment of another? He mentioned that, if there is a link to Manchester first, does Liverpool lose out?

Geoffrey Piper: I personally think that when you consider distance—Liverpool and Manchester are 36 miles apart—certainly in the case of that sort of local geography, provided the local services are adequate, capacity-wise as well as quality-wise, it has to be a plus; it has to be a benefit. Where one region benefits from high speed rail but maybe 150 miles away there are city regions which are not so benefiting, I can well see, and I am sure we can all see, that that would be seen as a negative. For example, if high speed rail went as far as Manchester and Leeds and never beyond, one can imagine Newcastle missing out and losing out.

Q147 Paul Maynard: Where I am trying to lead you all, perhaps unfairly, is to suggest that we need to start to see proposals like the Northern Hub as being not merely parallel to HS2, but the essential precursor component of a high speed network, because HS2 without a Northern Hub or without many of the other transport interventions that are being planned would lead, I believe, to the disproportionate benefits flowing to Manchester and to Leeds, but not to other key cities. Would you agree with that?

Stephen Clark: Absolutely. I also recall your first question where you asked for evidence as well. I can give you some evidence. There is some good work that Northern Way did looking at Manchester and Leeds connectivity. It was not done from a transport point of view or with a view as to what the answer was, but to try and understand how those two economies work together. The conclusion it came to is that they would perform hugely better if the connectivity—it did not specify how—between the two centres was improved.

The second piece of evidence was some work that I think Centre for Cities did—I will check the reference

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for you—that looked at towns in the north-west of England and their economic prosperity when set against their connectedness. It looked at places like Burnley, Warrington and Blackburn; I think it looked at the Calder Valley. It came up with some quite stark conclusions around the connectedness of places and their prosperity. I completely agree with what you say about the Northern Hub, for example, paving the way for high speed rail so that the benefits spread.

Geoff Inskip: What you can see from the work we have done in terms of the connectivity for places like Coventry, for example, is this. You mentioned Coventry in particular because it is one of the things that exercises our minds, particularly in the west midlands, as you know. While high speed rail will have a step change in economic geography, it means that people will have to think very differently from how they currently think about the economics of this country and how it works. That will mean that we need the improved local connectivity which goes hand in glove with the High Speed 2 network. If you look through the evidence, you will see in the report we have said that with just high speed rail there are about 10,000 jobs and about £600 million of GDP, but with that local rail connectivity added in to it, with the local improvements we can get, that doubles those numbers, broadly. That is why you are right in saying that we do not just have to look at High Speed 2 on its own but with the local rail capacity that is also needed. Of course, the Northern Hub is also part of that solution.

Geoffrey Piper: This emphasises, does it not, the importance of the context in which high speed rail is considered and the need for the rail strategy being agreed for the long term so that these decisions are taken together and not separately?

Q148 Jim Dobbin: I have a couple of points now on the building process, because there is going to be disruption in the system while this is happening, particularly affecting Euston. My experience of new projects, particularly in motorways, is not very good, quite honestly, because the new M60, which joins the M63 and the M6 at Mere village, seems to have been lined with cones ever since it was opened, reducing the traffic from three lanes to one lane. That is the way it is at the moment. There are concerns that this whole process is not all going to be rosy and there will be cost implications to this. Does that not concern you?

The other cost that is in the pipeline is the need for regional rail enhancements that follow this. Will these be fully funded? Will the Government come forward with the money? It is a very broad-based issue about disruption, getting it right and the joined-up thinking.

Geoff Inskip: You are right, of course, that the construction is a big challenge and we have to get it right. There will be disruption. We are going to have to say—and we will have to look at the longer term—is this disruption worth it in the long run? The answer to that question is an undoubted yes, from my perspective. But we do need to make sure that we minimise the impact of that disruption as best as we possibly can. I am pretty sure that we have some very good railway engineers in this country who can do

that, and I have some confidence in them being able to do that.

On the wider point about funding, we should definitely have reference to the McNulty report. The McNulty report talks about how we can possibly double our capacity on our rail network, or that is the vision anyway within it. But it is saying we are not going to be able to do that unless we are efficient at what we do. If we can start delivering the sorts of savings that we are talking about through McNulty, 30% savings, etc., then that gives real scope to improve our local rail services, which is much needed. If you combine that, then, with the funding that is being used currently to deliver Crossrail and assume that continues to come through but funding instead High Speed 2, you have a nice little funding package there that makes sense for everybody.

Kieran Preston: One of the reasons why, certainly, the City Region and the Core Cities are so keen on this one-off opportunity is about the transformational benefits beyond the traditional transport and productivity benefits. If we get our planning right and plan land use issues and spatial planning and take account of the potential impact of HS2, then there is a huge opportunity to achieve those transformational benefits. They have been estimated at perhaps as much as three times the £44 billion benefits that are being claimed for HS2. It is crucial that, certainly beyond Birmingham, we need a lot more information as soon as possible to start doing this planning. But, also, the sooner we can get the statement from the Department as to what the dowry is to spend on our regional rail networks, then we can plan with confidence, because there are certainly local concerns. When you have the average age of trains of 30 years in the north and it takes 35 minutes to get from Halifax to Leeds on a two-car Pacer, there is a degree of cynicism. Unless there is that kind of announcement that there will be money to deliver the kind of regional network to support HS2, then that is a challenge that has to be accepted.

Geoffrey Piper: In terms of Mr Dobbin's question about disruption and cost, which are obviously extremely important questions, we experience disruption every day. Travelling between Manchester or Liverpool and Birmingham, unless you go at a ridiculously early hour, on the motorway it is not unusual to take three hours. You see all the lorries, one after another, chugging along—probably stationary, not even chugging. If you think of the cost of that to the economy and the cost to the environment of what we have at the moment, yes, I and, I am sure, all our members would willingly swap that daily, hourly disruption for a period of disruption and cost to get it sorted for a generation and more.

Q149 Jim Dobbin: I agree entirely with what you have just said because the M62 goes right through the middle of my constituency, so I see that every day. I have a specific question for Geoff. Can you tell us the cost of the regional rail enhancements you envisage?

Geoff Inskip: We are looking at a number of studies at the moment. Broadly, we need to spend round about £300 million to £400 million on our local rail enhancements to get that set up. I should say that we

are not expecting that suddenly to be delivered in one fell swoop. This is going to have to be done over a period of time, and the fortunate thing, I guess, is that time is at least on our side a little bit. We have from now until 2025 to get this thing put in place nicely. It is one of the reasons why we are suggesting, again, that we take control of our local rail networks. It is beyond the remit of this Committee, but it is quite an important aspect that we take control of our local rail networks as PTEs, so that we can start making that investment.

Q150 Steve Baker: I am sure we would like to see the north regenerated as soon as possible, but I am just trying to get my head round why so many hopes are planted in high speed rail. Would you agree with me that the West Coast Main Line sees most of its congestion in standard class and, therefore, there is a case to be made that you could have capacity quicker by converting first class to standard?

Geoff Inskip: I have seen congested standard class. I have seen the railway when we have declassified first-class carriages to accommodate for that. The issue for us is that, even if you did all of that, and I am pretty sure first class is pretty outmoded and outdated now and I am not sure we should have anything like that going forward, nevertheless, what we have shown through the demand forecasts is that even that gets full up. We will end up with full trains by 2025. The Network Rail study is pretty robust. Our own view about it is that it undersells the case.

We are looking, at the moment, at traffic growing at 5% plus on our rail network and the forecast within High Speed 2's forecast and the Y network is about 3.5% or 3.4%. So it will very quickly catch up to the fact that the danger, for me, is more about pricing people off the network. That is about the only way the demands can be managed, frankly, until we build a High Speed 2 network.

Q151 Steve Baker: Within what you have just said there is an assumption that high speed rail will not, in itself, price people off the network.

Geoff Inskip: No, I do not think it will.

Q152 Steve Baker: Why do you think it will not end up charging premium prices?

Geoff Inskip: Because the 16 train paths that we get out of it will be sufficient for that demand. I listened very carefully to what Jim Steer was saying as well, and I half agree that, if you take us to the extent of our arguments, we say we need more than just the high speed rail network. We need more high speed rail network than is currently planned. Our point at the moment is let's at least get there first and then we will have to think about it then. I know this is not something that High Speed 2 particularly want to hear, but it is an issue about whether you do and should you forward track now high speed.

Q153 Steve Baker: I think that came up before. Does anybody else have any comments on why it is that high speed rail is a particular trigger rather than capacity increases through other means?

Kieran Preston: The business case—the work by HS2—is pretty robust. Incremental change to the existing railway will only take you so far. You will reach the stage where you do need that additional capacity. Once you follow that line of thinking it leads very quickly to a new line. As Geoff said, the benefits you then have through utilising the classic railway, whether it is for freight, intercity or more local journeys, mean that you just get that step change in capacity. I am not sure that the exercise has fully captured the benefits of releasing the additional capacity on the classic railway.

Q154 Chair: Does anybody on the panel think that the same effects could be achieved by improvements on the existing line?

Geoff Inskip: Quite the opposite actually.

Stephen Clark: In terms of the work that has been done on the existing line, my understanding is that it has not properly looked at the peak versus off-peak issue, taking your original question about standard class versus first class. It is clearly important that the peak is planned for in any provision of capacity. That is the first thing.

The second thing is that it is not quite clear where the Rail Package 2 will get you. After 20 years, would you want to do the same thing again? Are we looking back now on the West Coast upgrade that was authored in 1990 and saying perhaps we should have done that differently? I think we are. It is something which requires imagination as to how we want the transport system to evolve in the country. You take the Jubilee Line, which Kieran mentioned. There was a time when Docklands got by on the Docklands Light Railway and the Jubilee Line had a poor business case. But the decision was taken, yes, this is something that is important. It is inconceivable to have London Docklands without the Jubilee Line at the moment. These great transport changes require some imagination.

I will give you another example of things that you do not expect. In Greater Manchester, the tram system took eight trains an hour off the busiest section of track in Greater Manchester about 15 years ago. Nobody at the time even imagined that that would lead to an expansion of services across the north-west of England and from the north-west of England to Scotland. Nobody imagined it. Sometimes, with these big transport changes, you cannot imagine quite what is going to come at the end of it.

Geoffrey Piper: I was simply going to say that, although our belief is that this is more about capacity than it is about journey times, I have had to spend over the last 10 or 20 years—quite a bit of time—supporting inward investment agencies. There is no doubt about it that, if you have projects looking at possible locations around Britain and Europe, journey times between the locations that you are offering and the capital are clearly a factor.

We are convinced that to bring Manchester within an hour and a quarter of London, and Liverpool within about an hour and 35 minutes of London, whereas currently it is over two hours, is going to make a major shift in terms of how people perceive those major centres. Given that they have the other

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advantages of a manufacturing capability, of universities and other advantages, we think that removal of one of the major obstacles which we have in terms of distance and time from London can make a very big difference.

I also spend quite a bit of time with young people, and I have to say that, when talking with young people of school age or whatever, it really comes home when you think about the job prospects that young people have in places like Liverpool, Manchester and Sheffield. When you start looking at them and sitting down and discussing their future, the importance of this kind of prospective investment—high speed rail—really does come home. That, at the end of the day, is what drives us. We see it being a major boost to inward investment, the creation of jobs and business expansion, and without this kind of step change the alternative is not very happy at all.

Q155 Mr Leech: Mr Piper, what is the tipping point when a shorter journey becomes so much more attractive? For instance, billions of pounds are being spent on the West Coast Main Line upgrade. The journey time from Manchester went down from a minimum of two hours and 36 minutes to about two hours and four minutes, which is the quickest time. I do not think most passengers see a massive difference between those two; it is still over two hours. Is it that it suddenly drops below two hours, or if it was one hour 55 minutes would that make a difference? Where do you draw the line that it makes a significant difference?

Geoffrey Piper: It is a percentage drop. Going from two hours five minutes to one hour 55 minutes might be psychological for some people, but I do not think it is a tipping point. When you start getting it down to one hour five minutes or one hour 10 minutes, or whatever it is, bringing Manchester as close to London as Birmingham is currently, that is what I call a step change; we have moved a northern city to being one which almost sees itself as a satellite of London. That will be transformational.

Mr Leech: Apart from disagreeing that I would not want Manchester to be a satellite of London—

Chair: We mustn't get diverted, but it must be recorded that we do not all accept that the north will ever be a satellite of London.

Q156 Mr Leech: In other terms or in footballing terms they already miss out, but is there a danger that Manchester gets a massive competitive advantage over Liverpool, if Manchester's time is an hour and 15 minutes and Liverpool is still over two hours?

Geoffrey Piper: We see it as all one place. I live west of Liverpool and work most of my time in Manchester.

Chair: We are getting very controversial now.

Q157 Steve Baker: Mr Piper, you made a very passionate case about young people's futures and we all share that concern. The problem for me when we are talking about high speed rail is that we seem to be pinning our hopes on a particular state-subsidised technical solution to turn around young people's lives. Earlier in the day, we discussed the allocation of

capital, 30-year plans and so on. Is there not a fundamental question at stake here about how society operates? Should we be dependent on the state providing these massive grand schemes or is there something about a more dynamic society which would offer a more hopeful future?

Chair: Members can answer if they wish to. I think we are getting a little away from transport.

Steve Baker: Forgive me. I realise it is slightly off high speed, but it just seems to me that that is the motivation for everyone. Everyone wants to see the north turned around, but at the heart of it is this reallocation of capital from everywhere else in the country to these particular places. Really, I am asking if you genuinely believe that that is key to your young people's future.

Geoffrey Piper: Yes, I do. The supply of one of the most basic essentials of doing business, getting a job and living your life needs to be adequate. I do not think it is for the state to tell people how to live their lives, but it is beginning to look as if there are plenty of people in this world who are very interested in investing in this kind of additional facility in this country, whether it is from Canada or China, and I do think that, where there is that strong business case and every prospect of it being a commercial success as well as an economic success, then that should be welcomed by those of us carrying some responsibility for the future generations. I think there is a very strong case.

Q158 Chair: Does anybody else want to come in?

Geoff Inskip: Without doubt, the Government have to intervene to provide transport infrastructure like this. It has to be provided in the first place by Government because I do not see any alternative. There is an opportunity at a later time to talk about £13 billion worth of revenue, £6 billion of operating costs, to sell that out as a concession, for example, to raise further money, maybe to build further high speed rail after that. But I cannot see any alternative and we do need to provide the transport infrastructure. That can only be done by Government.

Kieran Preston: Just to add to that, the benefits are too widely dispersed to expect the private sector to capture them. It is the Government's responsibility, in my view, to do that. If you look at David Begg's work with CfIT, as he was saying earlier, comparing investment in the UK with other European countries, we are about half the level of the average of 14 European countries. Some recent work by the OECD showed that we are bottom of 20 in terms of the percentage of GVA that we invest in transport. We just need to get our act together and start capturing these benefits.

Q159 Chair: I have two points I would like to put to you before we end. First, Mr Inskip, do you support the choice of the Birmingham terminals and can you see any way of mitigating the connectional problems?

Geoff Inskip: We do support the Birmingham terminals. The first one, the interchange at Airport NEC, is very well located and that is fine. The other one is Moor Street, essentially, or Curzon Street, as some people call it. I prefer to call it Moor Street

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because it is adjacent to Moor Street and it is almost at the back of Marks & Spencer, frankly, within Birmingham. We are looking at a tram connection between New Street and Moor Street. That will help that connectivity, but it is a stone's throw away from the two. In airport terms, the terminals are extremely close together and much closer together than some airport terminals. That connectivity is important. We are certainly not complacent about it and we need the right levels of investment to go in to ensure that that connectivity to New Street and Moor Street takes place.

Q160 Chair: Do you think there is a case for an intermediate station in, say, Warwickshire or Milton Keynes so that more people in the west midlands can benefit? Do you have any view on that?

Geoff Inskip: The difficulty we have with putting in intermediate stations is the more intermediary stations we get the more everybody wants one. This whole debate about high speed rail fascinates me because everybody wants a station. Therefore, it has to be a good thing because everybody knows in their heart of hearts that is exactly what they want. They want a high speed rail station in every single city, every single town, and then they will all be happy. The truth of the matter is it would not be high speed rail in those circumstances. So we have to make some choices and those are difficult choices to make. What High Speed

2 have come up with is a pretty good way of balancing that between the connectivity at Old Oak Common, which we support, Heathrow connections and Euston connections. The Greengauge21 work showed city centre to city centre really worked for connectivity and for intercity travel. That is it: Birmingham city centre to Euston, to Manchester, to Leeds. We are quite happy with the proposals that are on the table.

Q161 Chair: To Mr Clark and to Mr Preston, we had some evidence at a previous session on freight, about congestion on the line north of Lichfield before the Y link was completed. Is that something that concerns you?

Stephen Clark: Yes, it is. We have not mentioned freight today, but movement of goods by freight is an important component of the rail system. One of the advantages of high speed rail is to provide more capacity for freight on the existing routes. That is really important for the way the UK economy works. There are some issues about how you accommodate the projected train service north of Lichfield, when that phase of the new line is created. There is a need for a bit more work to look at that and understand that and fit in freight and all the other additional uses that can be made of that released capacity.

Chair: Thank you very much, gentlemen, for coming and answering all our questions.

Examination of Witnesses

Witnesses: **Councillor Stephen Greenhalgh**, Leader, Hammersmith & Fulham Council, **John Dickie**, Director of Strategy & Policy, London First, and **Daniel Moylan**, Deputy Chairman, Transport for London, gave evidence.

Q162 Chair: Good afternoon, gentlemen, and welcome to the Transport Select Committee. Could I ask you to identify yourselves, please, with your name and organisation?

John Dickie: John Dickie. I am the Director of Strategy and Policy at London First.

Daniel Moylan: Daniel Moylan, Deputy Chairman of Transport for London. I am speaking for the Mayor.

Stephen Greenhalgh: Councillor Stephen Greenhalgh, the Leader of Hammersmith & Fulham Council.

Q163 Chair: What would you say are the strongest and weakest points in the case for high speed rail?

Stephen Greenhalgh: I would start off by saying that one of the strongest points is the economic regeneration potential within my borough. The previous witness talked about the connectivity at Old Oak. Old Oak is one of the forgotten parts of Hammersmith & Fulham. It is landlocked railway sidings. In fact, I only got a site visit for the first time last week. I pass it every day virtually in the train but, yet, you do not notice it. It has the economic potential to create a new city for London, bigger than Canary Wharf, to unlock thousands of jobs and 11,000 homes. What excites me is the economic impact to transform one of the most deprived communities in the country.

Q164 Chair: Are there any weaknesses in the case? **Stephen Greenhalgh:** None at all.

Daniel Moylan: The Mayor and Transport for London support High Speed 2 in principle, but there are some important consequences that need to be better addressed than has been the case so far. If I could mention those very briefly, the first is the necessity for mitigation of the adverse environmental effects of the route within Greater London. Ideally, the Mayor would like to place this in tunnel all the way, but it does run close to many houses along the route and there needs to be a better attempt to mitigate the environmental impacts and as it crosses the Colne Valley if it is to be acceptable.

The second one is that our figures show that, as the line goes beyond Birmingham, it will need a new tube line in London, passing through Euston, to disperse the passengers arriving there. Our figures will be developed in our response to the consultation due at the end of this month, but at the moment that does not figure as part of the proposals. We believe it is not only necessary but it is necessary for it to be phased in to the proposal so that, as the line develops to Scotland, that new tube line is already in place.

The third concern relates to the proposal, slightly tangential, to run High Speed 2 through London on to High Speed 1 lines. The proposal at the moment, as I understand it, is that this is to be done using the North

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London Line, which is a commuter line of some significance in which TfL has invested, which has seen very dramatic growth as a consequence of that investment. I am assured by the High Speed 2 company that I do not need to worry my little head about this, but our view is that we need cast iron guarantees and possibly an alternative route to connect the two lines together.

Finally, supporting in some ways what Councillor Greenhalgh has just said, the very fact that the Old Oak Common site is inaccessible at the moment by surface transport, other than by rail, needs to be properly addressed if that site is to be developed and is to be a major rail hub. Quite apart from the prospect of building 11,000 homes and a new city on top of it, which is a very worthy aspiration for Hammersmith & Fulham, there needs to be a way of getting in and out of it, and that is not properly addressed at the moment in the plans.

Q165 Chair: We did not receive any written evidence from Transport for London. Is there any particular reason for that?

Daniel Moylan: I am very sorry about that. We have been focusing on developing our response to the consultation. We want that to be as robust and as properly examined as possible. We intend to have that ready to that timetable. We did not have material we felt we could submit in writing at this stage. I do apologise if that has inconvenienced you.

Chair: That is all right. That is why we called you today so that you can tell us directly what your views are.

John Dickie: The greatest benefit that high speed rail has the potential to offer is the one that has been set out by some of your earlier witnesses. It is, as the Northern Way put it, the once-in-a-generation potential to transform the economy of northern Britain. That must be, by a mile, the central potential benefit that high speed rail can bring.

There are two ancillary benefits that matter to us at London First. One is the increase in capacity for commuter lines into London that would be freed up by creating a new high speed line. The other is that the cross-party consensus around the principle at least, if not necessarily the route, of making a step change investment in infrastructure is very welcome against the context of Britain not being good at making long-term infrastructure decisions, especially ones which span general elections.

In terms of the weaknesses around the case, I would cite two. One is the package of points Daniel has just made about the importance of having interconnectivity within London for high speed rail. People will not thank any Government if they can get from Birmingham to Euston in half an hour, but it takes them half an hour to get off a holding pen at Euston on to a congested Victoria Line. So we do need to make sure we have the capacity to move people on when they arrive in London, whether at Euston or Old Oak Common.

The other is that this is not a substitute for a proper aviation policy. The potential for high speed rail to take some of the pressure off Heathrow by reducing intra-UK flights is real enough, but the number of

slots that would be freed up by all of the current traffic flying from cities such as Manchester to London by high speed rail is about 4% in total. It is worth having but pretty marginal. At the same time, you would put lots of great cities in Britain in closer contact with our hub airport, which will of course increase demand on that airport. So we do need to have a proper, integrated approach to transport policy that looks at how you dovetail increasing south-east airport capacity with the provision of high speed rail.

Q166 Chair: Do you think that that has been addressed at the moment?

John Dickie: Not sufficiently.

Q167 Chair: Councillor Greenhalgh, you spoke about the regeneration impacts of High Speed 2. Are you convinced that that will happen?

Stephen Greenhalgh: High speed rail is critical to this happening. There is still a case for an interchange station at Old Oak and, effectively, it becomes the Clapham Junction of the north. If we think in national and international terms, at Old Oak Common, right next to Park Royal, which was created about 100 years ago and is now still the largest small to medium-sized business park in Europe, we can get connectivity to five airports. Ironically, from Old Oak Common today, you would get to Birmingham City more quickly than you would to Gatwick. But you can get to five airports very quickly. You connect to seven national rail lines, in theory anyway, which will require some planning, and six UK metropolitan railway lines, if you get the planning right. The connectivity is essential because cities are built for people, but they are also built around transportation systems. It requires planning. That is why my very impoverished local authority is paying a lot of money for expertise to try and develop those plans so that we can work with national and also regional Government to land the plan. I believe it can be done, but it is certainly something that requires lots of work and certainly a lot of money to plan it.

Q168 Chair: Do you feel confident you are going to get enough support to make it a reality rather than—

Stephen Greenhalgh: Daniel is going to support me all the way at TfL. I have got Boris behind him.

Q169 Chair: Is that the case, Mr Moylan? Let us ask him while he is here. Is that correct?

Stephen Greenhalgh: Get it out of him. That's a good idea.

Chair: Are you going to be supporting Councillor Greenhalgh?

Daniel Moylan: The Mayor is obviously very committed to regeneration where it can take place. The Old Oak Common site could be part of an opportunity area, which might include Park Royal, so the Mayor would be very supportive of that. Sometimes one has to get a map out, an A to Z, and just look at the Old Oak Common site, which is very constrained. It has Kensal Green cemetery to one side of it, which is full of Grade I listed monuments. I do not think we can expand into that. It has Wormwood Scrubs to the south, which is protected by its own Act

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of Parliament and is an area on which I am sure nobody would suggest developing. So it is to some extent quite cut off from the rest of Hammersmith & Fulham. It is closer in some ways to Brent, and it is pretty inaccessible, as we have agreed, by road. Quite a lot of the land will be required, given that there is to be a Crossrail station here, as well as a High Speed 2 station, and the interchange between them is crucial. If I may, I will come back to that if you ask me any questions about what I have said about Euston and the need for relief there. But a great deal of the land that exists will be taken for that. The laudable development, which I am sure the Mayor would support, would need to be above the land that was taken for all the rail purposes necessary at Old Oak Common. I am sure that can be done with the right planning and the right investment, but it will be a costly, if very desirable, exercise. I hope that constitutes the level of support that—

Q170 Chair: It did sound promising, but there was a “could”, a “might” and an “if” in there. Do you think you could make those a bit more positive?

Daniel Moylan: It is a wonderful thing to do. At this stage, it clearly needs to be demonstrated that it is doable at an appropriate cost. I have every confidence that Councillor Greenhalgh will be able to show that with his expert witnesses and evidence.

Q171 Chair: That sounds very promising. Councillor Greenhalgh, is that good enough?

Stephen Greenhalgh: Daniel is right that it is not an easy thing to land, but the truth is that the site area today is made up of not just old railway sidings that are vast, but light industry warehousing, car breakers and also waste recycling. There is the land around Old Oak Common and the railway sidings, and that is some 50 hectares. That is bigger than Canary Wharf, which is 39 hectares. With some planning around the development and also looking at oversight development and planning that in, it is possible to unlock the potential and create this as a major economic base as well as all the new homes that I talked about. We have a world class master planner in the room, Sir Terry Farrell, who is working on this as we speak to put forward that, and we will be making submissions to high speed rail that show that this can be done.

Daniel Moylan: I absolutely agree with one thing, that—

Stephen Greenhalgh: Only one thing.

Daniel Moylan: Well, everything really—of course, with nearly everything. I absolutely agree that, if the potential of Old Oak Common is to be unlocked, it needs to be planned and baked into the project from the beginning. This cannot be an add-on which is thought of later, because too much will be happening on the ground to allow the development to be captured if it is not thought of and planned right at the outset. I am absolutely clear about that.

Stephen Greenhalgh: Correct.

Q172 Iain Stewart: My question follows neatly on from that and your comments about Euston and the transfer of passengers once you get into London.

Before looking at the specific points, in general, do you think High Speed 2 and Crossrail are being planned with sufficient integration, or is there a disconnect between the two projects?

Daniel Moylan: I do not think there is a disconnect between the two projects. Old Oak Common or somewhere to the west of London is a point at which they must interchange. They cannot interchange more than once on their two lines. They are going to meet once and cross once, and Old Oak Common is probably as good a place as any to do that.

May I develop the point on Euston? The Government has published figures for arrivals at Euston on the assumption that the line goes to Birmingham. That shows that, at that point, you do not need an extra tube line at Euston. The TfL planning department would accept that. The Government have not yet produced the figures—I believe they might produce them in September—which show the consequences for London termini of traffic coming all the way from Leeds, Manchester and Scotland and so forth. We have had to extrapolate those figures. It is crucial to this case that a large number of passengers, as many as a third, are going to transfer at Old Oak Common, from High Speed 2, on to Crossrail. That is part of the case that Atkins has put forward on behalf of the Government—they are the firm working for the Government on this—to show that you do not need additional dispersal at Euston.

While we accept that as far as Birmingham is concerned, and while we are prepared to accept that a third of the passengers will get off at Old Oak Common and transfer to Crossrail, we none the less believe that, once the line is extended, we will need an additional tube line to serve Euston. This is even with a rebuilt Euston station and one that is going to connect the Circle and Hammersmith and City Line platforms at Euston Square station. They will be connected to Euston station at below ground level. At the moment, you have to come up to surface to transfer. The platforms themselves, however, will not move. It will still be a walk below ground and there will be no additional capacity per se on those lines as a result of this development. Even with an expanded Euston station that reaches out and integrates Euston Square station below ground, we believe a new tube line will be needed.

The important point of this is the phasing because we believe this will be needed as HS2 progresses north. In other words, it is no good building it to Scotland and then saying, “Let’s build a tube line later.” I am agreeing broadly with what London First are saying on that—that this needs to be given very serious consideration. Of course, when the figures of the Government or Atkins are produced, which I believe might be September, that will give us the evidence to take this argument further. But at the moment, we are working on our own figures which have been extrapolated by professional planners from what we know, and that would appear to us to be the case.

Q173 Iain Stewart: The reason behind my questioning as to whether Crossrail and High Speed 2 were being planned together is this. I have heard one option for Crossrail is that the commuter services

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from Northampton, Milton Keynes and Watford would not terminate at Euston any more but go into Crossrail, which would free up capacity at Euston. Is that strategic level of thinking happening in planning the two projects together, or could we be doing better on that?

Daniel Moylan: I have not heard of that. That is the first thing I would say. At the moment, TfL and its subsidiary, Crossrail Limited, are focusing on constructing the line and particularly constructing the tunnel. Questions can be addressed, therefore, in the future about what it is we run through that tunnel, but it is fair to say it is intended that there will be up to 24 trains per hour in the central section serving the existing and predicted demand already. Whether one can get additional trains through the tunnel from other places I do not know. I would have to take advice on that.

The short answer is, yes, in principle, one could think strategically at any stage about what you put through the tunnel, but I am not entirely sure that it is going to have the sort of capacity that will allow great relief on main line stations. I am speaking there unbriefed on that. It is a general response on a point I have not heard before, so forgive me if I have to correct myself later, but I think that is correct.

Q174 Iain Stewart: May I ask one further question to Mr Dickie, picking up your point about aviation strategy? To what extent do you believe that, if High Speed 2 is connected to Birmingham airport, that could relieve capacity pressure on Heathrow by making Birmingham airport effectively a Zone 6 part of London?

John Dickie: The challenge London has in the short and medium term over airport capacity is not simply the raw availability of flights; it is the location of those flights. The pressure, as you will know, is acute at the moment and was acute throughout the recession at Heathrow where there is no spare capacity and where the two runways are operating at over 99% of theoretical capacity, which means that when anything goes wrong the airport is incapable of meeting its schedule. There has been, and is, spare capacity at the moment—for example, at Stansted. Simply improving connectivity with the runway at Birmingham will create greater choice, no doubt, for people taking short-haul trips in particular, but it will not create the capacity where we need it most, which is at our hub airport, where, for a variety of reasons to do with the way in which transport traffic works, you can have the maximum range of long-haul destinations served. I do not think giving greater access to Birmingham will solve the problems about the need for increased capacity at a hub airport in the south-east.

Daniel Moylan: If I could briefly add to that, you may be aware that the Mayor has quite strong views about airport provision in London and the south-east. I entirely agree with what Mr Dickie is saying. No major city or country is thriving at the moment without at least one major hub airport, because the consequences of allowing for that transfer traffic in one airport is that the airlines are able to provide more flights, more frequently, to long-distance destinations. Those are the destinations we need to address if we

are to continue to attract international investment into London and to the UK generally. It is very difficult, for example, from London to get a flight directly to an emerging Chinese city. It is much easier if you go to Frankfurt or Paris. Those are the markets in which we have to compete. It is possible that Birmingham will compete better with Luton for the north London leisure market as a result of high speed rail. I can certainly see that happening. People would go to Birmingham, just as many of them go to Luton at the moment, in order to do short-haul leisure travel. That is fine; there is no problem with that. But it is not creating what the economy needs, which is a major international airport. That cannot be provided at Heathrow any more because it cannot expand, so we need to think afresh about that and we need to think also about the connectivity.

Can I just briefly draw your attention to a comment in this morning's *Times* where a lady from Greenpeace, I think, or Friends of the Earth pointed out—and this is supporting what you [John Dickie] said earlier—that, if you abolished all domestic flights at Heathrow, it would allow you to eliminate stacking? As flights approach, they have to be stacked. It would allow you to eliminate stacking. It would not create any more capacity as such so small is its effect. You could just use the whole of that additional room in eliminating stacking that takes place at the moment. Our figures at TfL show that that is a very plausible statement.

Q175 Steve Baker: Could you just confirm that the costs of improving London's infrastructure to work with high speed rail are not yet in any business plans?

John Dickie: Yes.

Daniel Moylan: Except for the rebuilding of Euston station, that is correct.

Q176 Steve Baker: There is a substantial element of cost which is not in the current cost-benefit analysis.

Daniel Moylan: We believe so, yes, because we believe that there needs to be a more thorough and better dispersal method from Euston, which would involve a new tube line.

Q177 Steve Baker: Just as an indication, could you put some sort of order of magnitude on those costs? Are we talking tens of billions or hundreds?

Daniel Moylan: No. I am groping a little bit here, but I think the figure we would be looking at in current prices would be in the order of between £6 billion and £9 billion for the tube line we are talking about. It would be under £10 billion.

John Dickie: There are different ways that you can go about providing this relief, and, of course, the argument for what is often referred to as Crossrail 2, the Chelsea to Hackney line and running that through Euston, is not simply to provide relief at Euston. There is a demand case within London that would justify the construction of such a line anyway. Quite how you would calculate the intra-London case for doing this with any marginal costs required to deal with high speed rail would be quite a difficult exercise.

Q178 Steve Baker: For the sake of estimation, it feels like the cost of high speed rail is at least a quarter more than currently estimated, simply to enable London to deal with the—

Daniel Moylan: As John says, how you would apportion the costs of that new tube line between what is necessary to service High Speed 2 and what will eventually be necessary to service London's population growth, which is projected at 1 million over the next 20 years, is a question you would have to look at.

Q179 Chair: Has that been worked out at this stage?

Daniel Moylan: No. That will be a judgment.

Q180 Chair: That would have to be addressed if we wanted to have that.

Daniel Moylan: Yes. To do a business case, you would have to address that and decide how much you would apportion to the cost of High Speed 2.

Stephen Greenhalgh: Obviously, Daniel is a transport expert and it is always very risky to take on experts, but I am not sure that the only answer on dispersal is that you take off a third of passengers where HS2 meets Crossrail. If you look at integrating the tube network in another way at Old Oak Common, particularly with the Bakerloo Line, and possibly the Central Line, then maybe the cost is not an extra £6 billion to £9 billion. It is really important, from a transport perspective, to maximise the interchange to the west as well as providing that economic hub. That needs to be looked at before we say the answer must be a new tube line.

Daniel Moylan: That is true, but I am not sure it brings the costs down tremendously. As a rule of thumb, we are looking at adding two new stops to the Northern Line, to service the Vauxhall area as it redevelops. The estimate for that is in the order of £500 million to £600 million for an extension there. While I agree that it is absolutely right to look at alternatives, including Old Oak Common, I am not sure that it necessarily is going to be a cheap alternative.

Stephen Greenhalgh: It might be cheaper.

Q181 Chair: Are you saying that these things have not yet been addressed or worked out in detail?

Daniel Moylan: The work TfL has done is largely related to a new tube line through Euston because there is already an existing case for a new tube line running, as it has been known in the past, from Chelsea to Hackney, sometimes referred to as Crossrail 2. So there is a case for that in any event. There is no case at the moment, obviously, for extending the Bakerloo Line to Old Oak Common because there is nothing there. That would be purely an HS2 exercise if you were to do that. The work we have been doing would bring in benefits that are greater than simply the dispersal of passengers from Euston, as John said, but we are very happy to look at any proposal that Stephen has for alternatives that could help address that.

Chair: I just wanted to clarify that.

Stephen Greenhalgh: Daniel is saying there is a business case anyway for that new tube line and so it

would be wrong to say that is the cost of doing HS2. I would say that, potentially, we can make the economic case that you can create something that will provide the economic might of something like the city of Manchester or the city of Birmingham, based at Old Oak. It is not there yet—you cannot see it—but you can potentially create it if you plan it properly. That can provide a gross value added and a contribution in the billions to the UK economy that makes the case for high speed rail in and of itself.

Daniel Moylan: Could I just respond because I just had something put in my mouth which is not what I am saying? What I am saying is, irrespective of how the business case is made and how costs are allocated, on the figures that we have developed at the moment, there will be serious congestion problems at Euston when the line goes beyond Birmingham which need to be dealt with in a practical sense. Our view is that the best way of dealing with them is to bring into play this Crossrail 2 line but divert it via Euston so as to get the benefit. It is something we would want to do anyway in due course, but it is something that would help deal with these dispersal problems. We are willing to look at that argument again in the light of the Government's figures when they publish them, but at the moment our figures show that there is a practical issue that needs to be addressed, and this is the best way, we think, of doing it.

Q182 Chair: Do you agree with the Government's general strategic approach on HS2, in particular the direct link to Heathrow coming in the second phase?

Stephen Greenhalgh: It is 11 minutes from Old Oak Common, so in that sense it is very hard to say what connectivity to Heathrow means, but 11 minutes is not a long time. Certainly, the right thing to do in the first phase is to get the interchange right at Old Oak because you deliver the connectivity to Heathrow, effectively.

Daniel Moylan: Could I just speak on this Heathrow matter for a moment? I do not want to sound negative in any way because I am sure that is the right thing to do, but I would just like to say, first of all, from the Mayor's point of view, that Heathrow is not the airport of the future. Heathrow is an airport which cannot grow any more and, therefore, there is a question about what the alternatives to that ought to be. We could address those perhaps on another occasion.

But there is an issue at the moment, which is where, at Heathrow, this loop is going to stop, because Heathrow has dispersed terminals: three major terminals—one in the centre, terminal 5 and terminal 4. As this train, this loop, comes down and on to Old Oak Common, which terminal is it going to serve, because it is not straightforward or apparent to me that the whole airport can be served by one stop on this line? Then the next question is: how many trains does the Government envisage using this loop? As I understand it, they will come down from Birmingham. Most trains will continue to Old Oak Common directly; others will take a loop through Heathrow and come to Old Oak Common that way. That is as I understand what is proposed, but I understand the number of trains doing that is likely to be quite small. In terms of the number of passengers carried I am not

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sure that it is necessarily the highest value part of the project, which, as I say, the Mayor supports, but that is not necessarily the highest value part of it. I am sure you would want to look into those issues more closely. Finally, there is the point, as already made, that, even if all of the people arriving at Heathrow by air from regional cities were to come on this train, the reduction in flights and the capacity created thereby would be very small.

John Dickie: You are not doing an inquiry into the future of Heathrow.

Q183 Chair: No, we do not want to go further into dealing with airport capacity. It is high speed rail, the links and the link to Heathrow.

John Dickie: I shall keep off that, but I should just say that we do not entirely share the Mayor's views on the future of Heathrow. The first stage position seems to me a sensible, pragmatic arrangement, which will provide, as Stephen said, potentially very good connectivity between high speed rail and Heathrow with a journey time of 11 minutes. The key practical way of making sure this works is to get the

interchange at the station between the high speed rail platforms and the Crossrail platforms right so that it is smooth and effortless. As Daniel said, even if you have a station within the Heathrow curtilage or adjacent to Heathrow, because there are five terminals, that can still involve quite a bit of chopping and changing to get from the high speed rail terminus to the actual gate or terminal from which you are going to be taking off. The practical way in which this is designed is what will be critical to making it work.

Stephen Greenhalgh: You have to get a lot of expertise, but, just to finish, Old Oak bisects where Heathrow Express goes today, so you effectively integrate what currently serves the airport in terms of fast rail from Paddington. That is how you will be able to serve the airport in the first instance. I do not doubt we need to look at more definitive solutions in the future if Heathrow does remain the hub international airport. That is for the future, but in the first phase, to have connectivity, 11 minutes away is no bad thing for high speed rail.

Chair: Thank you very much, gentlemen, for coming and answering our questions.

Tuesday 12 July 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Jim Dobbin
Mr Tom Harris
Julie Hilling

Kwasi Kwarteng
Mr John Leech
Paul Maynard
Iain Stewart

Examination of Witnesses

Witnesses: **Jerry Marshall**, Chairman, AGAHST (Action Groups Against High Speed Two), **Bruce Weston**, Director, HS2 Action Alliance, **David Bayliss OBE**, Trustee, RAC Foundation, and **Lord Wolfson of Aspley Guise**, gave evidence.

Q184 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. I would like to start by asking you to give your name and the organisation you are representing, if any.

Lord Wolfson: I am Simon Wolfson. I am not representing my company but I am the Chief Executive of Next plc.

Bruce Weston: I am Bruce Weston. I am a director of HS2 Action Alliance.

David Bayliss: Good morning. I am David Bayliss and I represent the RAC Foundation.

Jerry Marshall: I am Jerry Marshall. I am Chair of AGAHST—Action Groups Against High Speed Two.

Q185 Chair: Mr Marshall, could you tell us something about the group you are representing and try and give us an idea of who is involved and how representative what you are saying is?

Jerry Marshall: AGAHST is a federation of 77 local groups from Camden in the south to the Tamworth area in the north. It includes two national groups: HS2 Action Alliance, who are our evidence-based part of the campaign, and Stop HS2, who are the campaigning part of this organisation. It is a group of all the organisations that exist exclusively for the purpose of bringing to light the difficulties in the business case for HS2 and suggesting a better alternative.

Q186 Chair: Mr Weston, can you give us some information about who you represent and who is involved in your organisation?

Bruce Weston: HS2 Action Alliance is an organisation questioning whether HS2 is in the national interest, so we are very much concerned—

Chair: But who are you?

Bruce Weston: Who are we? We are a company limited by guarantee that is supported by a number of subscriptions from individuals and occasional fundraising events.

Q187 Chair: But who is involved in the organisation? We need to know, when you are giving us your views, on behalf of whom you are speaking.

Bruce Weston: We have 73 affiliated organisations of the organisations that Jerry spoke of who support us. As an organisation ourselves we have four directors, so we are small. Nobody is paid. We get our support

from the 73 affiliated organisations and other action groups.

Q188 Chair: Lord Wolfson, you have told us that you are not representing your company today. Are you representing anyone apart from your own views and perhaps those of the people who signed a letter to the press?

Lord Wolfson: Not at all, no. I am representing my own views. I am not sure why I was invited to come, but having been invited I thought I would come and put my views to you.

Q189 Chair: Thank you. We are very pleased to hear it and we will listen to what you have to say with interest.

The Secretary of State has suggested that some opponents of HS2 are Luddites and nimbys. Would any of you put yourselves or your organisations in that category?

Jerry Marshall: I would like to answer that, if I may. Clearly, the very beginning of the campaign came about when people close to the line and affected by it looked at the business case and blew the whistle. Now it has widened to a much wider grouping, most of whom are not involved, ranging from the TaxPayers' Alliance at one end, for example, to the Green Party at the other, and many, many councils, as you are aware, and environmental groups. That is not, of course, a fair description of business people like me who look at it concerned that this is very poor value for money.

Q190 Chair: Lord Wolfson, are you a Luddite or a nimby?

Lord Wolfson: I have been an active campaigner for more investment in infrastructure in this country for the last five to 10 years, both publicly and privately. I have advised the people who are proposing this scheme that they need to invest more in infrastructure. My opposition to it has nothing to do with Luddism or nimbyism. It is to do with the fact that it is not good value for money. The key, if we are going to have good infrastructure in this country, is that we have to invest sensibly and carefully rather than just throw lots of money at an investment that is not going to produce a good enough return.

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Q191 Chair: Mr Weston, are you a Luddite or a nimby?

Bruce Weston: I would not describe myself in that fashion. Again, it is true that we became interested in HS2 because we live fairly near the line, but our opposition to it is entirely based on its business case. Frankly, if we did not believe that the business case did not work, we would not have spent anything like as long working on it as we have. The initial interest was driven by proximity but the opposition is driven by it being a waste of money. That is basically why we have such a wide group supporting the case against HS2 now.

Q192 Kwasi Kwarteng: To make this very clear, Lord Wolfson, what is your interest in this? Do you have any direct personal interest in where the line is with regard to where you live or anything?

Lord Wolfson: No. It comes nowhere within earshot or even a short travelling distance from where I live. I live just by the M1 so that is where I get my noise from, not from rail. I have no personal interest in this other than that I would like to see more investment in the infrastructure that we desperately need in this country. That is both in my personal interest but also in the interests of my company and business in general.

Q193 Mr Leech: You have all said this morning that your opposition is based on the business case and that you do not think it is good value for money. Would you all accept that there are other people who are arguing very strongly that there is a good business case for HS2 and that there is a reasonable alternative view? You just take the view that it is not a good business case.

Lord Wolfson: No, I would not. I am a businessman. I listen to business proposals all the time. There are two things you have to consider. One is the absolute level of return and the other is the level of return on an investment relative to what you could be spending that money on elsewhere. Even if you look at the slightly spurious benefit-cost ratio arguments that are put forward for HS2, they are less than two and a half times the benefits of an average pool of road investments. Even on the basis of the arguments put forward for HS2, it is not a terribly compelling return on the investment that we are getting relative to what we could be doing with that money.

Q194 Mr Leech: In your view, what should we be doing with that money?

Lord Wolfson: We should be prioritising the highest return investments first. It is a very simple rule of any form of investment. If you look, for example, at the Eddington report and the average benefit-cost ratio of the road schemes he looked at, it was around 3.7. That compares to 2.6 for HS2. It is quite clear that there are many other projects that should be taking priority over this one and are not.

Q195 Mr Leech: Can you give us some specific examples of projects that you think should take precedence over High Speed 2?

Lord Wolfson: For example, the widening of motorways and the elimination of known pinch points in our road network where, every single day of the year, people have to sit in traffic jams that do not need to be there. I can give you countless examples of them if you want. The Blaby road into work, which I sit in every day, is fine, but there is a lot of investment in road that needs to be done now and is not being done.

Q196 Mr Leech: Are you really suggesting that the solution to rail capacity is modal shift from rail to road?

Lord Wolfson: Absolutely not. Ninety-three per cent of the motorised passenger miles in this country are done by road. That is where we should be prioritising investment. If you say there is a limited pool of capital to invest in transport overall, then ring-fencing a huge quantity of that to put into a low return investment in our railways does not make sense in the national interest.

Q197 Mr Leech: If you are not suggesting that it is about having modal shift from rail to road, what do you say to Network Rail and others who are arguing that certain areas of the rail network will be at full capacity within a decade?

Lord Wolfson: I would say that plenty of our roads are at full capacity. It is not that we should not be investing in rail. It is that we have a limited amount of money and we have to spend that where it is most useful. It is not getting the return that it requires by investing it in rail. In an ideal world I would like to invest more in infrastructure overall across rail and road, but given that we have limited amounts of capital, that has to be used sensibly. It is not in the national interest to take a huge chunk of that and invest it in a very low-return project.

Q198 Mr Leech: On that basis, if we did not have a limited amount of money, would your opposition to High Speed 2 be removed?

Lord Wolfson: Absolutely. If you want to say that we have an infinite amount of capital to spend, then yes, any investment, no matter how low the return, as long as it is marginally above the cost of interest; but we do not have an infinite amount of capital.

Q199 Mr Leech: On that basis, if politicians and political parties are prioritising rail over road, HS2 would be a reasonable investment.

Lord Wolfson: If you look at competing rail investments it is not in any way the best return on capital. My question is, why are we prioritising rail over road when more than 90% of our passenger miles are done by road?

Q200 Steve Baker: I would like to pick up on Lord Wolfson's point there. Why would you say that politicians are prioritising rail over road?

Lord Wolfson: I have no idea. I have spent the last 20 years building a retail portfolio and I can see the immensely transformative effect that new road networks have on local economies. It amazes me that we do not want to invest in roads. The love affair that we have with railways amazes me.

Q201 Steve Baker: Could anybody else comment on rail versus roads?

Jerry Marshall: I would like to go back a stage and say that one of the fundamental problems of HS2 is that it does not look at our key transport priorities. It picks up something which is not one of the top priorities. We have a very good service north-south. In fact, 92% of—

Q202 Chair: Mr Baker was asking you on this point of road and rail whether you think it is right to prioritise rail over road, or would you deal with current problems by road investment first?

Jerry Marshall: I just wanted to point out that there is an overall case to look at the broader picture and not just pick out this one issue. We have no particular opinion on road. We do think there are much better alternatives with much stronger business cases in terms of providing our capacity through rail.

David Bayliss: We need a national transport strategy and a regional development strategy within which the relative roles of road and rail can be properly judged. At the moment we have this proposition to spend £30 billion or so of money on rail. National rail carries 7% of the passenger market in this country and 9% of the freight market. Of that 7%, only about a third is long distance rail. Here we are, at a time when we have barely sufficient funds to keep the existing system going, committing huge amounts of money to try and solve the problems on a tiny part of the travel market. It seems to me that in the absence of a proper thought-through national transport strategy that is foolhardy.

Q203 Chair: Mr Bayliss, I go back to the written evidence you produced for the Committee where you elaborated a little on this. Would I be right in saying that if there was a national strategy that looked at all modes of transport, you might agree with High Speed 2—if you had a national strategy against which to consider it?

David Bayliss: If the national strategy identified this as part of the national problem that needed solving, then High Speed 2 would be a candidate but not the only candidate because there are other railway schemes that could help. High Speed 2 will not help the railway south of the river. It will not help Anglia Railways. It will not do anything for railways out to the west country. One needs not just a comprehensive transport strategy for all modes but a comprehensive strategy for the railway system.

Q204 Steve Baker: Can I return to this question of nimbyism? The pro-campaigners tried to set up a conflict between jobs in the north versus lawns in the south. What would you say to people who think that this project is about the revitalisation of the north? Perhaps, Mr Weston, you would like to answer.

Bruce Weston: It is a very interesting debate. Lots of people seem to take it as read that HS2 would benefit the north and the midlands as opposed to London. The evidence such as there is—to be clear, as far as I can see, the evidence is ambiguous in the generality—seems to point at the principal benefits going to London, on the basis that, if you have a dominant

capital city and you improve the transportation to that city, the economic benefit tends to go to that dominant capital city.

It is a very complicated area, and a number of people who have spent an awful lot more time looking at these things than we have done have expressed their views on it. In your evidence, you will see that Professor Mackie has cautioned that probably the net effect will be a benefit to London rather than to other regions. Professor John Tomaney has given evidence in which he reviews all the studies that have—

Chair: We have received that evidence and we will be hearing from Professor Tomaney.

Bruce Weston: Although it is saying it is not conclusive, it is pointing in the direction that if there is a net benefit anywhere, that benefit would go to London. It seems to us quite bizarre that it is being sold on a ticket that this is part of rebalancing the economy. We just cannot see the evidence for it.

Lord Wolfson: It just does not make sense. We have a lot of shops and in fact our headquarters are in Leicester, and that is where I work every day. The idea that somehow building one railway line to Manchester and Leeds that will be open in eight, nine, 10 or 25 years—I can't remember how many years' time it is—will somehow regenerate that area is nonsense. Every single day of the year, if you want to travel into Manchester from the south, in the Altrincham area, the best way of doing it is to go all the way round Manchester and in the other side because the roads are so terrible in the south of Manchester. If you want to travel on the M62 from Leeds to Manchester, every day there is a traffic jam—every single day. The idea that there are not better infrastructure schemes in which to invest to make people's everyday life better in those areas is just nonsense.

It is that emphasis on “everyday life.” It is what people are doing every day when they are going to their work. The quicker they can get to work, the more likely they are to take a job. If you can reduce the travel time to work, you increase the numbers of people who can go to work.

Q205 Chair: Lord Wolfson, are you saying you do not think that rail strategy has a part in this? You have spoken very forcefully in your views on value for money, and now you are talking about dealing with congestion and getting people to work. We have had other witnesses from business who are adamantly opposed to your views and have given us an entirely different view. Why do you think there is such a discrepancy?

Lord Wolfson: Most people would recognise that the difficulties people have getting to work are the biggest transformer of policies.

Q206 Chair: But why have we had such different opinions from other business leaders?

Lord Wolfson: I do not think anyone would argue that congestion, whether it be on commuter rail or commuter roads, is not a problem for business. The question is how much benefit we will get from investing the £33 billion.

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Q207 Chair: But other business leaders who have come to our Committee have diametrically opposed views to yours. Why do you think there is such a difference?

Lord Wolfson: I was halfway through. I do not think they are diametrically opposed. I think what they will say is, "Look, there is a benefit of putting high speed rail into Manchester and Leeds." I would agree with them on that. There is a benefit. The question is, is the benefit anything like worth £33 billion?

Q208 Mr Harris: There has been a lot of talk about opposition to HS2, which is simply the first phase of what is envisaged to be a national network. But HS2 itself will only go from London to Birmingham. Do you accept that the business case for high speed rail would be transformed with the introduction of a national network linking London, we hope eventually one day to Glasgow, and that business case would be very different from the business case for HS2 as an isolated piece of infrastructure?

Chair: Mr Marshall, do you have any views on that or are the views of your group based just on the first part of these plans?

Jerry Marshall: I cannot see that extending the line further to Scotland will significantly change what is already a very weak economic case. I disagree with Lord Wolfson in that we believe the costs are greater than the benefits. We have done the sums and you have seen them. They have been peer reviewed by FTI and led by Vicky Pryce. You have solid evidence that it does not stack up. The problem is that people have misunderstandings about major issues like the value of time, which I am sure you have looked at; but 40% of the benefits come from the value of time. Given that people do work productively on trains, that is erroneous. I am almost as productive on the train as I am in the office. The time saving to Scotland of an hour would have little benefit in terms of time. The fundamentals of the case do not stack up, whether it is to Birmingham, Manchester and Leeds or Scotland. The cost-benefit ratio is affected by the value of time and also by the unrealistic comparator. We should also consider the alternatives in terms of rail. There are much better and cheaper ways to provide all the capacity that we need: doubling West Coast Main Line capacity without any major infrastructure changes; trebling with a few pinch points; and providing less crowding than HS2 offers. There are far more benefits that will come out of that than through creating a completely new line to Scotland.

Q209 Mr Harris: One of the elements of the business case is attracting additional people to use HS2 who may currently fly or drive 400-odd miles. This is a new argument on me. Are you saying that the more you reduce the time of a journey the less attractive it becomes to people because they do not have enough time to work on the journey?

Jerry Marshall: No. I am saying that the benefit of time reductions is very marginal. What is more important is being able to work consistently. This goes beyond Scotland, but for those who have to get the train into New Street, walk to Curzon Street in Birmingham and then carry on, clearly it is a much

more difficult journey than being able to work effectively on the train. The benefits of time savings are fairly marginal. When it eventually goes to Scotland there will no doubt be some people shifting from aviation. HS2 say 6%. We think that is overstated for all kinds of reasons. The routes from London to Scotland are already declining and much of it is already taken by train. The environmental benefits of modal shift from planes to the trains will be relatively slight.

Q210 Mr Harris: Can I ask the whole panel whether you see modal shift from air to train of itself as a good thing? Do you have a view on that?

David Bayliss: Can I make two comments? To deal with the first question, I have doubts about whether a more comprehensive network would substantially affect the benefit-cost ratio, but it might do. If we had a national rail strategy which dealt with the full picture, we would know the answer to that. My own view is that the economic geography of Britain is not well suited to high-speed rail when you compare it with France and Spain, for example.

The switch of travel from air to rail would be a good thing. It would reduce aviation emissions provided the airlines responded appropriately. In principle it is a good thing, but you have to ask the question, "At what cost?"

Q211 Mr Harris: I have one last question on the figure of 7% of all journeys being made by train. This becomes a bit of a circular argument: if only 7% of journeys are made by train, let us spend more money on roads. Do you think the Government have a role in rebalancing those figures and encouraging more people to travel by train rather than by car? Are we content for 93% of journeys to be made by car? Is that a good thing? Do we want to see more money invested in roads to try and get that 93% figure up a bit?

David Bayliss: You have introduced the figure. There are parts of the transport market where it would be advantageous to switch people from road to rail. I accept that and it needs to be thought through in the context of the different travel markets. My concern was that a huge amount of potential money is spent on meeting the needs of a small part of the transport market at the expense of the majority. Most travel goes by road, and road is more important to commerce and industry. You have had evidence on the importance of rail to commerce and industry, but all the literature shows that road is regarded by commerce and industry as more important. The problems on the road are more debilitating than problems on the railways.

Jerry Marshall: I think rail is a great way of travelling. I go by rail whenever I can because I can work on the train. We need to make it accessible to as many people as possible. One of the problems with HS2 is that there is not the level of connectivity that the West Coast Main Line has because that connects up all the urban areas in the midlands and obviously continues to the north.

Q212 Chair: If, together with the building of High Speed 2, there was a plan to make better use of the existing line and to link those lines up in a connected system, would that change your attitude?

Jerry Marshall: Why pay for capacity that we don't need? The background forecast in growth from 2008 is 102%. The peak-time standard class capacity that we can create, simply by longer trains and by substituting one first-class carriage for a second-class carriage, is 138%. That is just the peak time standard class, so we do not need both.

Q213 Chair: Are you saying then that your argument is about capacity, not about linking up networks?

Jerry Marshall: We are already very well linked. The existing West Coast Main Line links up all these key cities in a way that HS2 does not do. People from Coventry will have to travel—

Q214 Chair: Yes, but my question to you was that if—and it is a big “if”—the HS2 plans were part of a linked network system would that change your view on it? From what you are saying, it appears it would not because you are looking at the capacity issue where you just disagree with the assumptions made for HS2.

Jerry Marshall: The benefits would have to exceed all the costs, properly assessed. If the benefits exceeded costs, we would certainly look at it. That is the basis of our objection to HS2. It is incredibly poor value for money. We are open to all alternatives and would look at them.

Bruce Weston: I would like to declare an interest in this. I am very keen on rail. My day job is as a railway consultant. I am not at all against rail. What I am against is HS2; I think it is the wrong project because, basically, we simply don't need it. We are already a well-connected country. We are a small country. We have good, frequent, fast InterCity services. In the Eddington study, they did a piece of work that looked at the degree of connectivity by rail between capital cities and the next five largest conurbations. The UK came out pretty well from that. We have repeated that exercise and we still come out with faster average journey times than France, Germany, Italy and Spain. People realise this. Last month there was a publication of a survey of 25 European countries done by the EU, asking questions of long and medium-distance rail passengers about—

Chair: Mr Weston, for the moment I want to concentrate on the issue that has been raised. Other members may well raise wider European issues.

Q215 Iain Stewart: Rail Package 2 is often cited as the viable alternative to meeting forecast growth in passenger numbers. Would you not agree, though, that in the long term RP2 will only give a finite capacity increase and that looking at the position over the next 30 to 50 years, we are going to need RP2 or elements of it and another strategic north-south rail route?

Jerry Marshall: RP2 in itself is not an optimal solution. We are working on a much better version than that. There are two issues here. One is that HS2 only delivers the urgent capacity needs such as the overcrowded fast commuter trains to Milton Keynes

and Northants in 2026. I do not think Milton Keynes can wait as long as that. By dealing with Ledburn Junction at £243 million—a third of what the Government are paying in this Parliament just to plan HS2—we can double capacity from four to eight trains an hour to Milton Keynes. That can happen quickly. There is a speed issue in the first place.

Secondly, there is the long term that you are raising. As I mentioned earlier, we can treble the capacity if we deal with the rolling stock changes, which go a little bit beyond RP2, with, ultimately, 12-car trains except for Liverpool, and four of the pinch points identified in RP2. That triples capacity, against which we have this 100% expected increase in capacity. We have an opportunity to do the simple rolling stock changes and then review in the 2030s and see whether we really are growing as fast as is expected. We strongly suspect that that growth will drop off because there has been no increase in long-distance domestic per passenger travel for decades in the UK. What we have seen is a modal shift to rail for lots of good reasons—for example, being able to work on trains—which are coming to an end simply because once you are working as efficiently as you are in the office it won't continue. I think it will go back to norm, which is that for many decades rail travel has not particularly increased.

Add to that that we are now at a tipping point in terms of technology. A lot of us have started to use Skype video conferencing and webinars instead of one-to-one meetings in the last year. We have only had the internet 15 years. The benefits for this go up to 2086. Look ahead another 15 years. I think we will really see a step change in the way that particularly business people communicate. It won't cut business travel. I recommend you always meet someone the first time, but it will reduce the growth significantly. Taking the HS2 very high-risk approach, all or nothing, £33 billion, when you've got it you've got it, doesn't make sense. I believe you should be taking an incremental approach. The danger is that we do HS2 to Birmingham and then give up because it is not being used. It is underused, as is HS1, and it becomes, as we have been saying for a while, a white elephant.

Q216 Iain Stewart: Can I challenge some of your assertions there, particularly that RP2 will treble capacity?

Jerry Marshall: Not RP2. I am talking about an alternative.

Q217 Iain Stewart: Or RP2 plus. Some experts in the rail industry have calculated that at peak times, which are obviously when the main capacity demands are, RP2 will only increase capacity by 25% and will not even come close to meeting the forecast increase. The second point I would like you to address is that RP2 will deliver some extra capacity on the InterCity services but at the expense of stopping services to places like Milton Keynes, Nuneaton, Lichfield and Tamworth, which have already seen a diminution in services since the West Coast Main Line upgrade.

Jerry Marshall: On the first point, it is just a matter of arithmetic. It is not really complicated. The peak-time standard class number of seats between 4.30 and

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6.30 in the evening out of Euston on the InterCity services is under 6,000 at the base level 2008 timetable. By making the various changes we are suggesting, we get the seat numbers up to just over 13,000. That is an increase of more than 130% where you need it: standard class peak-time capacity. It is simply wrong to say that that is not the case.

Q218 Iain Stewart: These are not my figures. These are credible industry experts who have challenged the numbers. I do not want to get into an argument but I am just trying to make the point that your case is not a unanimous view.

Bruce Weston: Could I try and clarify this a little because the way that the Rail Package 2 numbers are presented is frequently quite misleading? They are presented as an increase over the do-minimum situation, which has everything up to the increase in most of the Pendolino fleet plus the four extra Pendolinos built into it, plus the high intensity December 2008 timetable, none of which is actually in the base from which you calculate the demand increase. If you do it on a like-for-like basis, instead of getting a 54% increase with RP2, which is what it delivers against the do-minimum basis, if you do it on the same basis as the demand, you get an increase of 151%. This is entirely from DfT numbers that we provided to them. The only comment we have had is, "We don't do our numbers that way." We can take it as read that you get a lot more capacity.

Rail Package 2 is not particularly efficient as a way of addressing peak capacity because it is a clock-face timetable: the same number of trains each hour at the same times each hour. The alternative that has been developed, which is an improvement on that, is not a clock-face timetable and provides considerably more peak capacity. The way to do the sums is not against a do-minimum that is fairly near the conclusion but to start it back from the level at which you are taking the demand, and that is the 2007–2008 base, not where you get to after you have had all the timetable changes and you have lengthened most of the Pendolino fleet.

Jerry Marshall: On your second point, which was the fast commuter train capacity up to Milton Keynes, we have developed train paths which show you can increase from four to eight trains an hour. I completely accept that that is urgently needed capacity. The way you can do that is through the grade separation project at Ledburn Junction. That is urgent.

Q219 Iain Stewart: I am not just talking about commuter services from places like Milton Keynes to Euston. I am talking about InterCity services that stop at several points along the line of route. The trend is to speed up the journey times from London to Manchester and London to Glasgow but you start stripping out these intermediate stops. For my constituents that is causing quite considerable anger. I can only see RP2 exacerbating that.

Jerry Marshall: As I say, we can more than double capacity on the West Coast Main Line InterCity services through these train extensions or where the companies—

Q220 Iain Stewart: You are missing my point. These are stopping services. RP2, it is put to me, will certainly enhance capacity on the major city centre to city centre times but at the expense of intermediate stops.

Jerry Marshall: I do not see why there is any difference in terms of capacity if you have a longer train and only three rather than four first-class carriages.

Iain Stewart: It does not stop.

Q221 Chair: Mr Marshall, the issue that Mr Stewart is putting to you is that it is not necessarily just about capacity but intermediate stops.

Jerry Marshall: Sure, but what I am saying is that if you don't have more trains but you have more capacity on the InterCity through these changes, it does not reduce the capacity for the stopping trains.

Q222 Paul Maynard: It is fascinating to listen to you all so far. I have to congratulate Mr Marshall on his incredible ability to be more productive on the train than he is in the office—

Jerry Marshall: I am not saying I am as productive.

Q223 Paul Maynard: I am sorry. I have not actually finished. Can you possibly be quiet and listen for a moment rather than talking to me? As a frequent commuter on the West Coast Main Line in standard class I certainly do not recognise that. I am also always reluctant whenever anyone talks about reaching a technological tipping point that that is also the tipping point where they are beginning to lose the argument.

I have listened carefully to your responses to some of the questions, particularly from Mr Harris. Whenever an alternative scenario is produced, I note that your responses often focus on either the benefit-cost ratio or the economic scenarios. Most would agree that it is very easy to deconstruct the business case and indeed the economic case. It is a very subjective process. You can alter any one of a number of variables and effectively have a random number generator.

Equally, I note that some of you—Lord Wolfson and Mr Bayliss, for example—look at this from a more macro level of, "Shouldn't we be investing more in roads? Shouldn't we be investing in that?" As an apostle for road charging, I would agree with Lord Wolfson entirely, but our job on this Committee is to try and assess whether High Speed 2 is an appropriate project to embark upon and also in particular to test the arguments of both sides—both Government and the opponents.

When I am listening to you as opponents of this project, you almost fall into your own trap. If we could take some of Mr Marshall's assertions regarding Rail Package 2, I note he is trying to say that he is coming up with a sort of super version of Rail Package 2. That is a bit like a benefit-cost ratio; you can put whatever you want in it and get whatever you want out of it. But do you have a figure for the revenue impact of declassifying first-class carriages? I could not see it anywhere in your written evidence

that I have gone through. I am asking Mr Marshall and not you, Mr Weston.

Jerry Marshall: No, I do not have a figure on that. Bruce may have a figure. We could work it out and send it to you. The load factor is only 20% on the first-class carriages so I do not think there is any great difficulty in going down from four to three carriages because they are grossly underused at the moment.

Q224 Paul Maynard: Is that the average load factor or the load factor at peak times or off peak?

Jerry Marshall: It is the average load factor.

Q225 Paul Maynard: Just looking at the strategic case for high-speed rail, Mr Marshall, because that seems to me to be as important a consideration as the economic and business cases, how would you view the extension beyond Birmingham in terms of the strategic case for high-speed rail? I know that you can have a discussion about its impact on the benefit-cost ratio, but with regard to the strategic case for high-speed rail would you not agree that it becomes a more strategically defensible proposition once you go north of Birmingham?

Jerry Marshall: If it happens at all, it will be less of a white elephant if it goes to Manchester and to Scotland. But the evidence from, say, HS1 is that it will be heavily underused. HS1 is running at one third of forecast capacity.

Q226 Paul Maynard: What differences do you see between HS1 and HS2? Why do you think they are comparable projects? I notice that many opponents of HS2 constantly cite HS1, even though, to my mind, it is a very different project. It just has two of the same letters in it; that is all.

Jerry Marshall: They are very different projects, but I think one can learn from other high-speed projects not just in the UK but elsewhere. One of the consistent factors about rail project forecasts is that nine out of 10 rail projects overestimate the number of passengers. They forecast too high by an average of 106%. We can learn lessons from that. There are some similarities of course. Because it is the UK, distances are relatively low, and the cost per mile is very high compared with, say, France. That is similar with HS1 and HS2.

Q227 Paul Maynard: When we were in Germany last week, which I think is perhaps the most similar situation to ours, and speaking to Deutsche Bahn, they were quite clear that they had adopted what they thought were conservative demand forecasts that were exceeded by the demand for the new lines that they then put in. You can assert that demand is never exceeded, but what if it is? What do we do then?

Jerry Marshall: I did not say that; I said nine out of 10. Germany is very different because there was a radical reduction in travel time. They have played catch-up. It is now very similar to the West Coast Main Line in terms of both distance and travel time between London and Birmingham. Cologne-Frankfurt is very similar to that. Inevitably, there would be good use of it because of that very substantial reduction in travel time compared with the time differences that

HS2 would make. When the railway first came in, the time distance from eight hours, Liverpool-Manchester, to just over an hour when trains came in, was a step change and it made a radical difference.

Whenever that has happened on the continent, and it has often happened that journey times have halved, it has made the line more successful. Others all over the continent are close to bankruptcy because they have not stacked up and have not had the demand. The line into Amsterdam, for example, is close to bankruptcy. The line from Milan to Paris has been downgraded to standard speed. Across Europe there are lines that are in deep financial difficulty.

Paul Maynard: And there are others that are successful. Thank you.

Q228 Kwasi Kwarteng: I want to talk about the European experience of the Committee and see what you thought about some of the findings. We asked the Deutsche Bahn person about slashing the times. He said that on some of the routes there was a capacity issue; it was not the saving of the time, but the increase in capacity. I do not think any of you as yet have really addressed the capacity issue in the sense that Lord Berkeley, who is involved in freight, said that High Speed 2 was absolutely essential to increase the capacity for freight. This was similarly something we came across in Germany. In terms of the freight routes, it is very important and they were transformed by High Speed 2.

Jerry Marshall: Freight forgets that the new line from Felixstowe to Nuneaton will increase freight capacity enormously. Bruce will know the figures more accurately, but that will be a very substantial input in creating capacity and taking it away from the southern part of the West Coast Main Line. I do not think there is a capacity issue in terms of freight.

The other point that I do not think was brought out in the business case at any point was the Chiltern Line speed increases and time reductions. That will bring the Chiltern Line down very close to the West Coast Main Line speeds which will inevitably draw off capacity from the West Coast Main Line. It is seven minutes slower than the West Coast Main Line to Snow Hill. That has not been included in the figures that the DfT have prepared. That opens later this year.

Bruce Weston: Neither has the lower price of Chiltern, incidentally.

Q229 Kwasi Kwarteng: Does anyone else have a comment on freight, because I have a supplementary question I would like to ask?

Bruce Weston: Only that the Felixstowe to Nuneaton line could take half the freight that is currently on the southern part of the West Coast Main Line.

Q230 Chair: Mr Bayliss, what are your views on freight? We did have very strong evidence from Lord Berkeley that High Speed 2 was very important for releasing other lines for freight. He did make this case very strongly. Do you have a view on freight?

David Bayliss: Not specifically on freight, Madam Chair, but on the general principle that if we see an increase in demand then we must increase capacity to accommodate it. I thought we had got beyond that.

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That was called predict and provide and we don't do that any more on roads or air travel.

Q231 Chair: Do you think we should do it for freight?

David Bayliss: Why should we do it for freight?

Q232 Kwasi Kwarteng: This is a more general question. As you know, the Committee went to France and Germany and looked at how high-speed rail had developed there. Not once did anyone say, "Don't do it. This is going to be a disaster." On the contrary, people suggested that they were trying to extend their networks. The French are trying to extend it. They have something like 18 lines. The Germans were looking to increase the network by 60% from now to 2020. Everyone was broadly positive. What do you say to that? Are you saying that we are so different and so special that the experience they have found in the last 20 years, which is one of almost unalloyed success, would not be repeated here and, on the contrary, it would be a disaster in Britain?

Jerry Marshall: There are two main differences. One is that 92% of passengers in the UK are very satisfied with journey times. That is higher than France, Germany and all our main competitors. It is the second highest in the EU. We already have a very good system that people are very happy with.

Q233 Kwasi Kwarteng: Rail is so good here that we don't need it.

Jerry Marshall: That is only one factor. Secondly, our cost per mile on the route to Birmingham is £160 million. In France, it is between £11 million and £16 million per mile. The cost structure in the UK is very different. That is partly to do with density of population and partly to do with distances. I don't know who the people talking to you were or where they were coming from, but the third thing is that if you look more broadly, unemployment in greater Lille has actually increased relative to the French national average since high-speed trains arrived. There has not been a transformational effect on Lille or Lyon if you look at the broader picture in those areas.

Q234 Kwasi Kwarteng: Does anyone else have a view?

Lord Wolfson: It is not a question of whether this would be a nice thing to have. It would definitely be a nice thing to have—lovely.

Kwasi Kwarteng: That view is not unanimously shared.

Lord Wolfson: It would be lovely to be able to jump on a train; very nice. The real question is about cost. The interesting thing that struck me about Germany when I was there last week was how good their motorways are and how relatively uncrowded they are. I went from Gütersloh to Frankfurt. It took me two hours, virtually uninterrupted. You would never get that experience on a British motorway at peak times. This whole issue is not about whether high speed rail is a good idea. It is about whether it is a good investment for this country at this time, given the fact that we have limited resources. That is my objection. My objection is not that in itself this is a

bad idea. It is that in itself it is a bad idea if it means that we cannot invest in other infrastructure that is desperately more important.

Bruce Weston: There is one other very important difference between the High Speed 2 proposal and the situation in Europe. The extended network, which is what the Government are consulting on in terms of their strategy and the economic case, requires 18 trains per hour in peak with no services going to Heathrow. They are either extra or emendation. In contrast—you have heard evidence on this—12 has been the maximum in Europe. This is very important because nowhere is able to do 18 trains an hour. It requires new technology. There is a risk that that technology will not be deliverable. We have asked HS2 Ltd questions about this. We have asked them for the evidence on which they are basing the assumption that it will become possible. They have not given us any. They have told us that they have spoken to train manufacturers, signal manufacturers and operators of other high-speed railways in coming to this view, but they are refusing to elaborate. We made a complaint to the Information Commissioner on this. It is absolutely crucial because if you cannot deliver 18 trains an hour, you cannot get the benefits and it becomes pointless taking a branch up to Leeds because you cannot carry the traffic. Nowhere in the economic case that has been made for HS2 is there any discussion of this risk. There is no account taken either in terms of costs or in terms of producing the benefits.

The situation is actually worse than that. Although HS2 Ltd have put in their documentation that they expect this will become deliverable, last summer they are on record basically accepting that it was not; that the maximum they would be able to deliver on a Y configuration would be 14 to 15 trains an hour. There were several options for what they could do. They could four-track the stem of the Y. They could reduce the services or build a second railway. HS2 Ltd are recorded as favouring building a second railway.

Q235 Kwasi Kwarteng: What Lord Wolfson said was very interesting. He said it is very much a return on capital point and that there are other projects where we could get a better return. Broadly, if we had infinite capital, he thinks that there would be benefits from this. You are suggesting that, even if you had infinite capital, we would not gain anything. I would be interested to know what the position of Mr Bayliss and Mr Weston is in regard to this project. Is your issue with it that there are other projects that we can get a better return on, or do you think in absolute terms that it is a turkey and that we would lose money?

Bruce Weston: I think in absolute terms it is a turkey. If you do the sums properly, you get less money back in terms of economic and social benefits than you put in in terms of subsidy. It has a benefit-cost ratio of about half.

Q236 Kwasi Kwarteng: What is your position on this?

David Bayliss: It may be, if we had enormous amounts of capital, that this scheme would be worth building. However, before you could determine that,

you would need to look at the other things that should be done more cost-effectively to the rail network. I suspect the residual benefit-cost ratio after that would be rather low.

Q237 Kwasi Kwarteng: Your position is rather similar to Lord Wolfson's that there could be a return on this thing.

David Bayliss: It is possible, but on the basis of what we see now it seems rather unlikely.

Q238 Iain Stewart: I have just one very quick follow-up question to Mr Weston's point. I am a little puzzled. As part of your evidence you are suggesting that the passenger demand will not need to be met by High Speed 2—it will be “a turkey”, as you say—but then you are also criticising the number of train paths as too much for the line. Surely both positions cannot be correct.

Bruce Weston: I think they can be correct. Basically the point we are making about demand is that there is tremendous uncertainty. The Government have taken a number of positions which favour more rail growth than they would do if they were taking better evidenced positions. Putting that on one side, to be competitive with existing services you need a level of frequency on the services on high-speed rail. They have worked out what they need and they say that is 18 in peak. All I am saying is that, as a matter of fact, there is a very serious technical risk about whether that is deliverable. The West Coast Main Line route modernisation, which was based on the idea that you would bring in a new signalling system and it would reduce costs, was abandoned and you went back to conventional signalling. If something similar to that happened, you would not be able to deliver the service specification to be able to go up to both Manchester and Leeds. That seems to me a pretty important risk.

Q239 Jim Dobbin: I have a couple of points to raise, Chairman. I was interested in Lord Wolfson's concern about the lack of road space. The M62, as it happens, goes right through the middle of my constituency with one town on one side and one town on the other side. The biggest bane of my life and my local community is heavy goods vehicles trundling along the M62. Do you not think that if you were to expand the motorway system, all you would do is fill it full of more HGVs, which will further disrupt the quality of life of my constituents?

Lord Wolfson: It is a very good point. The real question is, do we want economic growth? If we want economic growth, that will involve more traffic. I agree with you that more capacity on the road networks will result in more traffic, and that traffic will represent increased economic growth. There are two ways of tackling this problem. The first is the genuinely Luddite way. It is to say: just stop the traffic, strangle it; put it in traffic jams and it will go away. The second is to say: invest far more in technology to reduce the noise that roads make. It is criminal in this country that we do not do more to reduce the noise from railways and roads. Even in China, which relatively is a much poorer country per head than Britain, they go to great lengths to shield

the noise when they have roads and railways going through high urban areas. The technology is there. You can reduce the noise by 50% by using different types of surfaces on the road and different types of sound barrier next to the road. We do very little of that. I would answer that question by saying, rather than strangle the economy and stop the traffic, make the traffic less noisy and address the problem that way.

Q240 Jim Dobbin: What about transferring freight from road to rail?

Lord Wolfson: There is a big problem with that, and I speak as a major haulier myself. Ultimately, all that freight has to get to the consumer. The consumer does not come to the rail hub. The consumer goes, in our case, to 550 shops. All the freight we get in by ship we take by rail to a hub to put into our warehouses. To get it from the warehouse to the stores and customers—we deliver next day to most of our mail order customers—rail is just not an option because it cannot do it in the time. The idea that rail could service shops or consumers in their homes in a timely fashion, for example, is not really feasible.

David Bayliss: May I add to that, Chair? I agree that we need to do something about the road network. I am looking at a chart showing that we have a third of the provision of motorways per capita as Germany and less than that compared with France. It is not simply adding new capacity. We need to manage the demand on the main road network by the introduction of some sort of road pricing system. More capacity coupled with road pricing is the way ahead, with high environmental standards, as Lord Wolfson has said.

Q241 Jim Dobbin: Other members of the Committee have touched on the comparisons between Europe and the UK. There is just one point. Would you all agree that the channel tunnel has been a benefit to this country in so far as we have access to our biggest trading partner?

Lord Wolfson: The key question is not whether it has been a benefit but whether it has been a benefit sufficient to pay for the capital that was invested in it, taking into account the opportunity cost of what could have been done with that capital.

Q242 Kwasi Kwarteng: What is your view on that?

Lord Wolfson: My view is no, but I do not have the figures. It is my gut feel. It was predicted as having 25 million passengers by now and it has had about 10 million. One can only assume that the case upon which it was based has not succeeded.

Q243 Chair: Are you saying, then, that it should not have been built?

Lord Wolfson: I think if we had our time again we could have spent the capital more wisely.

Q244 Chair: In doing what?

Lord Wolfson: Investing in our road network, for example, or improving our commuter trains into the centre of London. I think there are plenty of examples.

Kwasi Kwarteng: That is a consistent point.

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Q245 Jim Dobbin: That is interesting. The point I am trying to get out is that, in my view, the channel tunnel has benefited part of the country, between here and the south. Therefore, it becomes a magnet for industry and people who want jobs.

Lord Wolfson: Does it really, though? Has that really happened?

Q246 Jim Dobbin: Do you not think that we should be sharing that with the rest of the country?

Lord Wolfson: But has that really happened? Has it really been a magnet for jobs?

Jim Dobbin: Those are all the indications.

Lord Wolfson: Not in my experience. In the south-east of England I cannot see where it has created jobs.

Jim Dobbin: That is the first time I have heard that view.

Lord Wolfson: I just wonder where they have come from and where they are.

Q247 Chair: Does anybody else want to comment on the economic impact of the channel tunnel?

Jerry Marshall: On the specific case of regeneration in the south, if house prices are a reasonable proxy of development, I understand that house prices in Ashford have not risen as fast as house prices away from HS1 and the channel tunnel route. I do not see that there has been great stimulation to the south. What was forgotten there was the level of competition from the ferry companies. Again, with HS2, we have forgotten that there will be competition from the West Coast Main Line, the Chiltern Main Line and, ultimately, airlines from Paris to Birmingham.

Q248 Jim Dobbin: You are really suggesting is that HS2 would be of no benefit to the midlands, the north-east, the north-west and Scotland.

Lord Wolfson: No. We have to be very clear. What virtually everyone on this panel is saying is not that there would be no benefit but the benefits will not be sufficient to warrant the investment of capital in that form of transport, particularly given the requirements elsewhere of our other infrastructure and how much better that money could be put to use. Coming back to your channel tunnel thing, it is not about saying: is it beneficial or not? It is about quantifying the benefit and working out whether that benefit justifies the investment we have made in it as against other investments we could have made.

Q249 Chair: You keep saying, Lord Wolfson, that other things could make better use of the money. What are the other benefits, assuming the same money was available over the same period of time, and we are talking about a 10-year programme?

Lord Wolfson: If you look at the Eddington report, you can take a list of any number of road improvements with benefit-cost ratios of more than 7.

Q250 Chair: So it is road improvements.

Jerry Marshall: I would say rail as well.

Q251 Chair: I am asking Lord Wolfson at the moment.

Lord Wolfson: It is anything where you are getting a high benefit to cost ratio. That is the rationale of business. What drives business is the careful and sensible use of capital. I see no reason why that should not drive Government as well.

Q252 Chair: I know the general statements. I am trying to get behind that.

Lord Wolfson: M25 Junction 28 to A12 Brook Street improvements—7 points. I can go through the whole list.

Chair: All right, you have said roads. Maybe you are aware that Sir Rod Eddington also came to this Committee following his report and expressed support for high-speed rail—not for maglev but for high-speed rail.

Q253 Kwasi Kwarteng: Lord Wolfson, I am equally aware that you are very conscious of return on capital, and that is very important. But I have to stress the experience that we found in Europe. They are equally eager custodians of capital.

Lord Wolfson: No. If you look at European Governments, they are not terribly great custodians of capital.

Q254 Kwasi Kwarteng: Just to the general panel, what you are saying goes against the evidence of every country that has had high-speed rail. No country has said, “We want to uproot the system and destroy it.” You refer to China. They are building thousands and thousands of kilometres of high-speed rail.

Lord Wolfson: Yes, I saw it just last week.

Q255 Kwasi Kwarteng: And you have been on it. Every industrialised country in the world is investing in this infrastructure. You are saying that, for whatever reasons, because we are very particular or because the rail is so fantastic here—

Lord Wolfson: No, that is not what I am saying.

Chair: Please let Dr Kwarteng finish his point.

Q256 Kwasi Kwarteng: I understand your return on capital point, but I am trying to extend that. If what you say is true, why is it that every industrialised country that has this technology is seeking to extend it and does not regret their initial move to introduce it? Why is that the case?

Lord Wolfson: Two answers. First of all, Governments are always loth to admit that they regret anything. How many Governments do you think are going to stand up and say, “Actually this is a great big waste of money”? It is just not going to happen.

Q257 Chair: More to the point, first, you think that Governments in general do not want to say that they are wrong.

Lord Wolfson: Exactly; of course not.

Q258 Chair: Anything else?

Kwasi Kwarteng: It was Government people we were speaking to. We were talking to businessmen.

Lord Wolfson: I cannot answer the question.

Kwasi Kwarteng: Sorry.

Lord Wolfson: The answer to the question is that once you have got it, of course you do not regret having it. The question is, is it the top priority for UK investment? The answer has to be no. It comes back to that. I do not think HS2 is necessarily a bad idea, but it is a bad idea if it means that we are not investing in projects that are far more deserving of the money that is being spent.

Q259 Chair: Let me go back to what they might be. Mr Marshall?

Jerry Marshall: Yes; there are other rail projects which will do far more to regenerate the north. For example, the Northern Hub will be crucial. Electrification of the Midland Main Line and into Cornwall will have great environmental and business benefits and is relatively inexpensive compared with HS2. I would dispute that every country says it is a good thing. Portugal have decided to suspend construction of their high-speed line. The line I mentioned to Amsterdam is close to bankruptcy. There are some problems overseas as well.

Kwasi Kwarteng: That is particular networks, but they all remain committed to the thing in principle. We are just talking about one line.

Chair: It is a fact that in investigations that the Committee have carried out, not talking to Governments particularly but talking to businesses a lot more, certainly a different view has been given, but we must move on now.

Q260 Julie Hilling: I have a few little areas which are dotted around. I want to pick up the point you are making about other investments. You seem to indicate that, if we are going to do High Speed 2, then none of the other investment will take place. That is patently not true and that should be recognised. The Northern Hub will hopefully be in the next control period funding. That is not dependent on whether or not High Speed 2 goes ahead.

Jerry Marshall: The Government clearly want to cut subsidies to rail from the current £5 billion a year. It looks to me as though HS2 will require subsidies. It seems to me that future Governments will be very cautious about other investment, which will be impacted and slowed down and will not happen as quickly, such as the Midland Main Line and indeed intra-conurbation metro services that will provide great benefits. Some of these systems like Northern Hub will be negatively impacted by HS2, because HS2 will provide a drain to London. I note that Geoffrey Piper was talking to this Committee about Manchester being a satellite of London. I am not sure that is what Manchester and the north-west want. They should be strong business areas that are competing on their own terms in a European context rather than becoming satellites or dormitory towns of London.

Q261 Julie Hilling: I do not particularly want to ask you about the business case, but I do want to put on record here that businesses across the north-west, including Manchester Airport, are strongly in favour of High Speed 2. I think that should be on the record.

You said earlier that there was no evidence of modal shift. I want to ask you about the modal shift there has been in the north-west, particularly in flights from Manchester to London. Less people are using it as a hub airport; people don't do it any more. Do you accept that there is modal shift if train times are reduced considerably?

Jerry Marshall: Absolutely. Over the last 15 years there has been a very significant modal shift from both cars and coaches. The overall background of a long distance domestic travel per passenger has not changed. There has not been a growth in that. That is going up in line with population. But there has been a shift to rail because it has been possible to work on trains, and there is the internet and airline-style pricing. They have been clever about pricing because of service improvements. All these things have made rail more attractive. It is why we have had a significant increase in rail. Another one, of course, is the increase in Government subsidy of rail, but most of those drivers are coming towards the end of their life.

Q262 Chair: So you do not think the expansion is going to continue. That is what you are saying.

Jerry Marshall: I think it will continue, and we accept that the background growth of 100%, though it might be overstated, is the case we need to deal with, hence working on an alternative that will much more than cover that 100% increase.

Chair: You have given us the detail of that in your written evidence.

Q263 Julie Hilling: I do not think you have collectively said how we are going to deal with the capacity issue. You have talked about improving Ledburn Junction, but Network Rail are saying that within 10 years the West Coast route will be at full capacity. We are talking about a need for freight paths. Where does that exist? If you don't build this, then how do you deal with that capacity? You talk about the expansion of Milton Keynes and Northampton. A big increase is predicted in terms of population in those areas. How are you going to deal with this if we do not build new track of some description?

Jerry Marshall: As I have mentioned before—

Chair: Just a moment, Mr Marshall. I think somebody else wants to comment.

Bruce Weston: There are a couple of points on that. On the idea that the West Coast Main Line is going to be full up in 10 years, I understand that David Higgins gave this Committee evidence concerning how quickly the West Coast Main Line might fill up. He did predicate his observations on the basis of growth continuing as it has in the last few years. Of course Network Rail do not predict that it will grow at that rate. They predict it will grow at a much slower rate.

Chair: We have received evidence from Network Rail directly so we will assess what they told us.

Q264 Julie Hilling: I am still wondering if there is an answer to what you are going to do about that need. Just saying, "We will put another carriage on a Pendolino" does not solve the problem.

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Jerry Marshall: It is much more than that. We have supplied the detail, and we have talked about how we can double and ultimately treble capacity on the West Coast Main Line by dealing with pinch points. That creates massively more capacity—all that we need. It also takes it in a more incremental way so that we can wait and see what really does happen to demand. No one really knows exactly what will happen, but if we can cover this immediate forecast to 2043 very comfortably, we can take a fresh look in a couple of decades and see whether it really is continuing to cope with it.

Chair: Thank you. You have also backed this up with written information. I want to move on because we have other witnesses waiting.

Q265 Steve Baker: Very briefly, you have all looked very closely at High Speed 2. You have all passionately argued against it. Is there anything that could be done to HS2 to make it acceptable to you?

Lord Wolfson: Yes. First of all, reduce the cost of it and start to look at innovative ways of funding it. It is absolutely absurd that we are not using the potential uplift in property values around stations to help fund the building of the railway. Secondly, we could build it faster. It is ridiculous that in China they built 1,300 km in four years, 85% of which is elevated. In the UK, it is going to take us four times as long to build something that does not hit anything like the 1,000 km mark. If you build it faster and more effectively, you do not have to start spending the money now. That means the time value of the money increases, which means that you get a much better return on the investment.

There are all sorts of things that can make this project viable if we look at it, but basically it comes down to two things. First of all, reduce or mitigate the cost through being innovative and clever about it. Secondly, increase the speed at which you build it because that reduces the dead time you have between the beginning and end of construction.

Bruce Weston: The problem HS2 has is that as long as there is the ability to improve the capacity you have

on the existing network, that can be done much more cheaply and incrementally than building a new railway with all the risks you get with that.

Q266 Chair: The question was whether there is anything that could change your view. Are you saying no because you are looking at other ways of dealing with the problem?

Bruce Weston: What would change my view is if you actually reached a point, which you might in 35 or 40 years' time, where you have run out of those opportunities and you feel that you need to build a new railway. But if you did, because the approach on time savings is misguided, you might trade off between shorter journey times and environmental impacts and energy consumption and noise. That trade-off will tend to favour a slower speed that could follow existing lines and you would build your new line near a motorway.

Q267 Chair: Thank you. Mr Bayliss, you probably did answer this point earlier, but is there anything you want to add?

David Bayliss: If the Government doubled or trebled its capital transport budget to allow more deserving projects to go ahead, then it may be that there could be a case for High Speed 2.

Lord Wolfson: I agree with that.

Q268 Chair: Thank you. Mr Marshall, is there anything that would change your mind?

Jerry Marshall: Simply to say that the case is so bad environmentally, technically and economically that it is difficult to see how tweaking HS2 would make a difference. You need to go back to the drawing board and look at what the key priorities are and the best ways of dealing with them.

Chair: Thank you very much, gentlemen, for coming and answering questions.

Examination of Witnesses

Witnesses: Councillor Martin Tett, Buckinghamshire County Council, Chris Stokes, 51m, Professor John Tomaney, Newcastle University, and Councillor Sue Vincent, London Borough of Camden, gave evidence.

Q269 Chair: Good morning and welcome to the Transport Select Committee. I start by asking you to identify yourselves with your name and the organisation you are representing.

Professor Tomaney: I am John Tomaney from Newcastle university.

Sue Vincent: I am Councillor Sue Vincent from the London Borough of Camden.

Martin Tett: I am Councillor Martin Tett. I am Leader of Buckinghamshire County Council and I am here in my capacity as Chair of the 51m alliance of local authorities.

Chris Stokes: I am Chris Stokes. I am a rail industry consultant working for 51m and also pro bono.

Q270 Chair: Could you start by telling us your main reasons for opposing High Speed 2?

Professor Tomaney: I should begin by saying that I am pretty agnostic about High Speed 2. My interest is in regional development and assessing the claims that have been made by Ministers in DfT and other documentation that HS2 has the capacity to transform the economic geography of the UK. I am particularly interested in that question. As to the wider issues, as I say, I am agnostic and I am not part of any campaign or representing any organisation.

Q271 Chair: Do you want to declare that you are a member of any other campaigns?

Professor Tomaney: I am not a member of any other campaign, no. I would like that on the record, Chair.

Sue Vincent: I am particularly concerned about the lack of assessment that has been done on the impact of the London terminal at Euston, and, in particular, the comparison between other London terminals; the criteria that High Speed 2 has proposed for the London terminal do not seem to fit in Euston, particularly around the minimal impact on the surrounding area. I am also concerned with the impact that it will have on existing tube networks and the North London line.

Q272 Chair: Is the basis of your concern the local impact?

Sue Vincent: Yes.

Q273 Chair: Is this affecting businesses as well as individual people?

Sue Vincent: Yes, it is. It impacts on existing businesses but also businesses that are here today that are proposing to invest in Camden, but obviously blight has already taken hold.

Martin Tett: I may have a different perspective from the witnesses you heard earlier. As local authorities, we are very used to having to take a bigger picture perspective at times to push through schemes that are quite often unpopular locally. I am sure as MPs you are always familiar with that as well.

We set out to test against four key criteria. We looked at the business case to see if that actually stacked up. We looked to check whether all the options had been sufficiently evaluated. We wanted to check sustainability of the project, particularly its green credentials. We also wanted to test the national interest perspective to see if it really would effectively narrow the north-south divide. Our conclusion in all four is that it has been found seriously wanting.

Q274 Chair: Do you think there is any possibility that you could change your mind and be satisfied on any of those tests?

Martin Tett: I think not, and I will be very blunt about it. The business case has some very serious flaws to it. I am happy to elaborate on those. The green credentials in particular are really unproven. If anything, it will have a serious negative carbon impact, which is something the Secretary of State has significantly—I will be careful how I say this. Those who advocate HS2 have misrepresented the green credentials of this. We are very keen as local authorities on the whole sustainability agenda. We are very keen on a balanced approach to investment. But when you look at HS2 there are some serious deficiencies. It relies on increasing travel.

Q275 Chair: Members may ask you more detail on that. I just want to get a picture of where you are coming from.

Martin Tett: I apologise. It would be very difficult to change the business case and the green credentials in particular in such a way that as local authorities we could support HS2.

Q276 Chair: Thank you. Mr Stokes, what are the main reasons?

Chris Stokes: There are several reasons. First, there is the very high capital cost. I am thinking in terms of the high capital cost per mile which does put HS2 in a different league from the European high-speed lines you looked at. Secondly, there is the time. There are no benefits until 2026. There is overcrowding on the West Coast Main Line route. In particular, Milton Keynes and Northampton peak overcrowding is a problem now. I do not think that can wait until 2026. It is worth making the point that it is very disruptive. Because of the rebuilding of Euston over a seven to eight-year period, HS2's own submission to you says that they would expect to maintain at least the off-peak level of service worst case. In the worst case that is a 40% reduction in commuter peak capacity into Euston.

Lastly, HS2 clearly provides a great deal more capacity but it is unbalanced. Birmingham, where 1,100-seat trains can operate four times an hour, has enormous capacity. It is more than I think it could conceivably need. But where trains go on to the existing network—for example, to York and Newcastle, thinking of the full Y, and to Preston and Glasgow—HS2 provides no more capacity than now because it is dumping trains on already very congested parts of the existing network.

Q277 Paul Maynard: Professor Tomaney, I would like to explore some of your evidence. I accept your argument that merely declaring “build it and they will come” in terms of regional development is not a convincing argument. The Government need to adduce more information. What is your assessment in terms of the overseas examples of what impact high-quality regional governments' economic planning had on the success of individual routes? Was that a controlling factor?

Professor Tomaney: Yes. To the extent that you could point to examples in provincial Europe where there has been development gain as a consequence of the arrival of high speed rail, it seems to me that what has been critically important in that process has been massive investments by regional, state, provincial and national governments in creating the conditions for development around those stations. The stations themselves do not, on their own, provide those development opportunities. What is required is much larger-scale economic development planning, usually by regional development authorities of one kind or another, which is slightly ironic. That, to me, is a very key point. If we look at the well-worn examples of Lille and Zaragoza, that seems to me to have been critical to the relative success of those places in the context of the investments that have taken place.

Q278 Paul Maynard: Would you agree that if we were to have HS2 that ran as far as Manchester, without adequate regional economic planning by some future body that we can only dream of, the line might not in itself generate economic growth? There is particular concern, for example, that Manchester might profit at the expense of, say, Liverpool. How could that danger be mitigated in terms of actions

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taken either by central Government or indeed by city regions, which will probably be in existence by that point?

Professor Tomaney: I would agree with you that that is a real danger. Even in the context that I have described—the Nord-Pas de Calais region around Lille, for instance—there is quite a bit of evidence in that case and in other cases, in Spain and so on, that some of the gains which Lille has made in terms of economic development have been at the expense of surrounding cities. I think that is pretty clear. The evidence for that is quite strong. It is probably also true of some of the Spanish cities that have made relative gains. The gains that they are making are not relative to their capital city; they are relative to the towns around them in several cases. I agree with you that that is a danger. In order to mitigate it, we would need very strong regional planning mechanisms of a type we do not have at the moment. We would need very much more in terms of resource commitments to regional policy than we have at the moment. That is my answer to your question.

Q279 Paul Maynard: You are probably aware of the Northern Way's research into the impact of transport investment on inter-urban connectivity: i.e. where it is strong in one city and weak in another, the stronger city benefits. What sorts of transport investment, such as the Northern Hub, do you think will be required in those city region areas to make the arrival of high speed a success?

Professor Tomaney: The evidence for high-speed rail to transform the economic geography of the UK is fairly weak. It is very difficult to find and we have looked hard for it. On the other hand, the evidence that investment in metropolitan public transport systems can make a difference to local economic development is quite strong. It is certainly much stronger than the other case. It is in that sphere that I would see potentially important gains to be made, particularly connecting satellite towns to sources of job growth in major cities. It is the intra-regional connections that seem to be important, particularly if the ambition is to build up strong local agglomerations. That seems to be the most critical form of investment in terms of transport. That was an issue which the Committee's previous inquiry on the transport and economy addressed.

Q280 Paul Maynard: Finally, would you include roads in that package of improvements?

Professor Tomaney: Roads are important but I would not go as far as your previous witness that the secret to economic development is building more roads. I do not think there is any evidence to support that. On the contrary, there is a lot of evidence that that is not a very sensible way of carrying on.

Q281 Chair: Professor Tomaney, I just want to be quite clear on what you are saying. If we had High Speed 2, the Northern Way and regional policy, would that be a good combination for economic regeneration in the north?

Professor Tomaney: I would put it the other way round. We need regional policy and then we need to

think about high speed rail. There is very powerful evidence that Mr Maynard mentioned in relation to the Northern Way and the discussions around the Northern Hub. The Manchester Independent Economic Review is going over similar ground. In a situation where you have one dominant capital and you connect that dominant capital to peripheral cities and regions by high speed rail, the bulk of the gains accrue to the capital. The evidence for that is very strong. We demonstrate that in the memorandum we have submitted to the Committee.

It would be interesting if we were to think about developing high-speed rail connecting northern cities, for instance. That is counter-intuitive. Nevertheless, in terms of what we know from economics, evidence and actual empirical examples, it might be a better way of thinking about tackling the problem.

Q282 Chair: We have had information, for example, from Centro about the Birmingham area based on a KPMG study which is projecting significant economic success and development in that area as a result of high-speed rail.

Professor Tomaney: I am aware of that study and we reference it in our evidence. One of the issues that arises from that study—it is a generic problem with economics—is how we test for endogeneity. What is cause and effect? I am not convinced that the KPMG study is demonstrating the causality in the right direction.

Q283 Chair: So it is a matter of assessing causality.
Professor Tomaney: Yes.

Q284 Steve Baker: Mr Stokes, you mentioned the capital cost per mile of HS2. You said it put HS2 in a different league. Could I ask you two things? First, could you just elaborate on that point? Secondly, could you connect that to the average capital employed per job in the UK, if you can?

Chris Stokes: The cost per mile of HS2 varies between twice and up to about eight times the cost of equivalent high-speed lines elsewhere in the world. This is partly due to the fact that we are a highly congested country and it is quite difficult to build one of these things without having to tunnel or take major mitigating action. Partly, HS2 Ltd themselves identified in their report last year that capital costs for some reason, which I think Infrastructure UK have been trying to bottom, are higher in this country than elsewhere. The 40,000 claimed jobs for HS2 are very expensive. If that were the only possible job creation, and I defer to Professor Tomaney and others on issues like that, I believe that simply is not a sensible way of investing to create additional jobs. It is around £400,000 per job. It is enormous.

Q285 Steve Baker: What does this mean for the rest of the economy? What is the opportunity cost to the rest of the economy of diverting capital into high-speed rail?

Chris Stokes: I would not claim to be an expert on the rest of the economy but I would be strongly of the view, as a longstanding and extremely emotionally committed rail industry person, that both for the north

and for the industry there would be a better bang for the country's buck by improving the network in the north; for example, electrifying and speeding up the Liverpool-Manchester-Leeds-Newcastle core, which is very important. I had not thought of going the whole hog, as Professor Tomaney suggested, and making that a high-speed railway. I believe that would produce a better result for the north.

As has been previously discussed, InterCity services to London are quite good. Rail has a good modal share. Its modal share in the rest of the country away from London is very poor. If we want to achieve beneficial modal shift in environmental terms, the way to do that is away from London by speeding up poor links.

Q286 Steve Baker: May I ask Professor Tomaney or any others to reflect on the opportunity cost, please?

Professor Tomaney: We have not undertaken a study of the opportunity cost of this. Looked at from a regional development perspective, I could say that if I had £30 billion-odd to spend on regional development I would not necessarily be spending it on a high-speed rail system. We have good evidence that what matters for regional development is investment in skills, knowledge and technology. Transport is important, but as I have said, the evidence is much stronger on investment at the metropolitan level. Connecting metropolitan economies seems to be much stronger. Rail can be part of that, but so can buses and improving the ability of pedestrians to move around cities. These seem to me to be part of an opportunity cost. We have not measured it and I cannot put a number on it. It would be a very difficult task to do. It would be interesting to have a go. That would be my best response to your question.

Martin Tett: If I could just add to that, we are very concerned about this because the north-south divide issue keeps coming up and it is one of the major planks that the Government have emphasised. As has been said by Professor Tomaney, and even in your own Oxera report, the evidence base for this is extremely hazy and sketchy. Our emphasis would be on balanced investment both in road and rail across the country. We would like to see it regionally diverse so that it is not just emphasised in terms of one particular route. We desperately need investment in the south-west, Wales, Scotland, East Anglia and other parts of this country, which have been starved of investment and threaten to be starved of investment going forward if everything is put into this particular basket.

The other two aspects I would like to emphasise are that the manufacturing industry, which has to be the renaissance of the north of England in my opinion, really needs strong support. If there is an opportunity cost here, it is the opportunity cost of emphasising the importance of manufacturing industry to this country and giving it very strong support.

Q287 Kwasi Kwarteng: We heard anecdotal evidence from my colleague Julie Hilling in the last session that businessmen in the north-west are largely in favour of this proposal. I appreciate that the Committee is made up of academics and politicians,

but none of you, with respect, runs a business in the regions that will be affected, as I understand it. I am willing to be corrected. Given those two facts—that you are composed of who you are and, if it is true, business people in the north-west want the line—how can you explain their desire for this? They are business owners and they are saying, “Being in the north-west, this is going to help my business and I want the line;” you are an academic saying, “This is purely illusory.”

Professor Tomaney: Is that a question to me?

Kwasi Kwarteng: To the whole panel, whether you are an academic or politician or whatever.

Professor Tomaney: I am not a businessman so “Guilty.” But I have looked carefully at the evidence, as much of it as we could find, and I present my conclusions. In the north-east, which is where I am from, you will certainly find business people who are in favour of it. Intuitively, it makes sense. If you improve the transport system between a small place like the north-east and a large market like London and the south-east it will benefit, but when you look carefully at the evidence it is very difficult to substantiate.

Q288 Kwasi Kwarteng: Their intuitions are wrong.

Professor Tomaney: Their intuitions are wrong, yes. I am not speaking for them; I am speaking for myself. I am saying that when you carefully examine the evidence it does not support the argument.

Q289 Kwasi Kwarteng: With respect to that point, my prejudice is usually on their side. They are the ones who live or die by the success of their businesses. That is what puts bread on the table. They are taking a view and you are saying that their calculations or their intuitions are wrong. That is interesting.

Professor Tomaney: I am an academic; I do not do prejudices. We do evidence and analysis, and we present the results. Other people can then try and resolve that evidence in relation to their prejudices.

Q290 Chair: But there are judgments involved at the end of that, are there not, Professor Tomaney, as we said before?

Professor Tomaney: Sure; of course there are.

Q291 Kwasi Kwarteng: For clarification, I was saying that if I had to listen to your evidence or to a group of businessmen who lived in the area, who live and die by profit and loss every day and that is what their livelihood is, my prejudice and my inclination would be to listen to their advice ahead of yours. That is what I was clarifying, but I am interested in your views.

Martin Tett: I would like to say, as someone who has worked in private business for well over 25 years, that I have a certain feel for how the private sector reacts to these sorts of things. I also know Manchester very well having lived there for over four years. I understand many of the regional issues there as well. It depends on the question you ask the business community. My instant reaction when I first heard about this was, “That sounds really good.” It is when

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you get behind that and you start to say, “What is the evidence base for this?” As local authorities, we are always challenged by you to be evidence-based on everything we say and do. If you ask business people if they would put their own money into this, that is the real point when the rubber hits the road because you are asking taxpayers and businesses around this entire country to fork out what will probably, if we look into our hearts, be well in excess of £32 billion to pay for this. That is the point at which people have to make a decision.

I recently sat on a panel of the Thames Valley Chamber of Commerce which was heavily weighted towards Berkshire and Oxfordshire businesses. They are not along the route. The panel was myself and also a senior representative of HS2. The business audience started out very much saying, “This sounds like a great thing.” When they heard the arguments, the costs and the alternatives, that swayed them completely and they came out 87% against. It is a question of giving them a balanced argument. I know that the Secretary of State and the pro HS2 groups have wooed northern businesses very heavily. I can completely understand when they hear only one side of the argument; indeed, they do not understand the costs that would accrue to them and the economy while they might intuitively come out in favour.

Chris Stokes: I think on this one I duck.

Q292 Kwasi Kwarteng: Do you have a view on this?

Sue Vincent: As a southerner I do have a view. It is very important that there is connectivity in the northern areas. Strategic investment is very important, if the north-west divide exists, to ensure that the most economic benefits are given to the north-west. In the south, we have been somewhat cushioned by the recent economic downturn.

Q293 Kwasi Kwarteng: I have one follow-up. To agree with you in terms of what I see, we have to make some heroic assumptions. We have to assume that the experience in France and Germany was wrong, that somehow it does not apply to Britain and that we are all right in terms of our rail position. We have to assume that the business interests who support this are also deluded inasmuch as they have not heard the evidence. You are swimming against a very strong tide. I was just wondering if any of you had anything to say about that.

Sue Vincent: The tide is very strong because it is a very large infrastructure project that has gathered substantial weight over a period of time. The evidence is strong. However, when you start to cut underneath the evidence on the surface, Councillor Tett has explained that if you do start to drill down, businesses are not perhaps quite so keen on what they see as the economic benefit. Also, our geography is not the same as other European countries. We have to take that into consideration as well. We already have a fast rail network in England and the UK.

Q294 Kwasi Kwarteng: You are of the view that things are so good that we do not need it.

Sue Vincent: Ninety-seven per cent of rail passengers are apparently satisfied, so that is not bad.

Kwasi Kwarteng: I just wanted to clarify that. That is fine.

Q295 Iain Stewart: Let us imagine that HS2 does not go ahead at this point and that we invest in the Northern Hub and increasing capacity in the West Coast Main Line and all the other types of transport infrastructure projects that have been mentioned. In your view, what is the danger that in 15 years’ time another Transport Select Committee—maybe us or our successors—will be having exactly the same arguments? The point I am making is this. As I see it, we do not have an either/or choice. We have to look at both. I am not saying that that means HS2 as the specified route and specification, but do we not need to grasp the nettle and look at having some form of additional high-speed rail capacity in this country alongside all the other types of transport infrastructure projects?

Chris Stokes: The problem we all face is that no one has a fully functioning crystal ball and we are talking about the long term into the future. The point I would make is that it is possible—I do not think this is fully understood yet—to produce an enormous increase in capacity in terms of seats by upgrading the existing route.

To illustrate that, currently, the Pendolinos are nine-car trains: four first and five standard. Overcrowding is absolutely a standard-class issue. Standard class is 294 seats. With 12-car Pendolinos, three first and 12 standard, there will be 594 seats. So simply by reconfiguring and lengthening the trains it is possible to double the standard-class capacity on the route. It is also possible—it has been talked about earlier today with regard to Ledburn Junction—to make infrastructure investments that would enable the peak commuter capacity to Milton Keynes and Northampton to be doubled. Those are both towns with rapidly growing populations. With further investment in specific bottlenecks, it is possible to separate the remaining bottlenecks where freight and InterCity trains have to use the same track between London and Crewe pretty much the whole way. Not only would you then be able to run one or two more InterCity trains at peak periods, you would also have a step change in capacity for freight on the route.

The problem that you face going further north, say, from Crewe to Glasgow, or with the full Y from York to Newcastle, is that you have two-track sections of railway with mixed InterCity passenger and freight trains that are full now and HS2 does nothing for them, so they remain full after 2033. The incremental approach can deliver major benefits much sooner, at less risk, with less disruption and at much less cost.

Martin Tett: Let me give Mr Stewart a very straight answer to his question. Yes, you are absolutely right. You could be sitting here in 30 years’ time—hopefully, many of you will be—making that point. History is littered with predict and provide schemes. Some of them turn out to be correct; many turn out to be incorrect. I put to you that a gamble of £32 billion of taxpayers’ and businesses’ money is a big roll of the dice on the basis that it may happen.

The issue here is, are there better alternatives that can be rolled out quicker, incrementally and that effectively spread that cost? There are, and I think Mr Stokes has outlined some of those. We can meet the demand incrementally as it materialises over the next 30 years. We are very confident about that. More importantly, we can deliver improvements on the commuter services down from Northampton and Milton Keynes much more quickly than HS2 would do. If eventually that demand does materialise you will be right, but we do not believe it will because the world in 30 to 40 years' time will be radically different from the one in which predict and provide today is being judged.

If you look at what is happening in terms of the roll-out of high-speed broadband around the Far East in places like Korea—I am sure Members are very familiar with that—I think that will radically change the business geography of this country. It would be reckless to gamble £32 billion at a time when, quite frankly, in four years' time I am not convinced we are going to be out of the economic wilderness and I think we are still going to be deeply mired in debt. I welcome the scrutiny that this Transport Committee is giving it.

Q296 Iain Stewart: Can I come back on both your comments? Yes, we do not proceed with HS2 at the minute and we upgrade the West Coast Main Line, as you suggest. In 15 years' time, for the sake of argument, there is still a big capacity demand to meet. Surely, there will not be any further upgrades that could be done to the West Coast Main Line. It will have reached its finite point. We would then still have a 15-year gap between starting the discussion about HS2 and its eventual delivery.

Martin Tett: To be honest, I thought I had answered that question but I will try it again. You may be right. I am being very straight about it.

Q297 Iain Stewart: But what would you do for those 15 years when the West Coast Main Line is utterly full and nothing else can be done to it? You would still have 15 years of construction time.

Martin Tett: But you have to remember that today we are talking about delivery in 2026. A lot of the delivery in terms of the Y would be well beyond that as well. The immediate need, particularly in places like Milton Keynes and Northampton, is relief on those commuter services today. HS2 will not do that.

Q298 Iain Stewart: That is why I am saying we need to do both now.

Martin Tett: I am sorry if I am not answering your question as bluntly as you want me to. I am trying to be very straight. We can deliver an incremental increase over the next 15 years that will meet what we believe will be the very likely and probable increases in demand. If demand really does keep going exponentially and is not capped until 2043, which is the assumption in the business case, which I have to say I find very dubious, then you may well be right. But I think that is an enormous gamble for the sake of £32 billion, which this country can ill afford at this time.

Chris Stokes: Can I offer a different and perhaps a rail industry perspective which I hope may be helpful? I am old enough to remember the original electrification of the West Coast Main Line in the 1960s. The passenger volumes on that route went up very dramatically over four or five years and, indeed, as a repeat of now, there was massive modal shift from the air service to rail and volumes on the West Coast then effectively plateaued and started to decline as the quality of service declined until the recent upgrade, which I would regard as historically quite parallel to the upgrade in the 1960s. Again, there has been a massive shift from plane to rail on Manchester to London, but that has now largely happened. Rail has grown very rapidly because the service has been transformed. There was a step change. I do not think that there will be continued growth.

The evidence that you have already had is quite interesting, both from Eurostar and from SNCF. Eurostar acknowledged that the market from London to Paris is close to saturation. Rail is an extraordinarily good product from London to Paris. Personally I believe it would be pretty perverse to travel from London to Paris by any other means, but the total travel market is not growing. It is close to saturation and at a much lower level than the original forecasts for the channel tunnel rail link.

Similarly, Monsieur Messulam said that they had experienced growth in line with their predictions broadly very strongly for several years after opening the high-speed line and then it had plateaued. I may be wrong and, as I said, we do not have crystal balls, but it is taking an enormous bet to say that the growth will just carry on and that the doubling of capacity you can get by train lengthening and train reconfiguration is not going to be sufficient, particularly, if I may say so, in a position where many of the peak trains are actually peak trains by price and not peak trains by volume. The earnings that Virgin get from the 17:03 from Euston to Birmingham are very high because they do not have cheap fares on it, but that train is not full. I counted it last night; it is only half full. We should not run away with the idea that all the peak trains are full. The trains that are full are the ones at 19:00 where there is this complete cliff and suddenly very cheap fares are available. There must be more rational ways of dealing with that than spending £30 billion on a high-speed railway.

Q299 Kwasi Kwarteng: I have a couple of questions. One is a specific question. Do you have an interest? Do you live in a place where the proposed route is?

Chris Stokes: I live on the West Coast Main Line but not near HS2, so I do not have a direct interest at all.

Q300 Kwasi Kwarteng: Mr Tett, my understanding is that you are a councillor in Buckinghamshire through which the line is going to go.

Martin Tett: But I do not live along the route.

Q301 Kwasi Kwarteng: No, but you are representing the interests of people who do.

Martin Tett: Can I be absolutely clear on that? Yes, I live in Buckinghamshire. The line passes through

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Buckinghamshire and many of the local authorities I represent lie along the line of the route, but as I said at the beginning, we are very used to taking some very tough decisions. Our challenge is an objective one.

Q302 Kwasi Kwarteng: I just wanted to establish these facts first. I am not impugning your motives.

Martin Tett: No. But it is very easy and the Secretary of State does try very hard—I understand entirely why as a politician he would try and do it—to paint anyone who opposes this purely as a nimby. That is not the case.

Q303 Kwasi Kwarteng: My understanding is that you represent a ward around Euston; is that right?

Sue Vincent: It is Holborn and Covent Garden ward that I represent but I am a Cabinet member for environment and deputy leader of Camden.

Q304 Kwasi Kwarteng: And that is going to affect your borough.

Sue Vincent: Yes, it is going to affect Camden.

Q305 Kwasi Kwarteng: What do you say to people like the Secretary of State? We are rehearsing the question that the Chair asked in a previous session. I will try to put it as clearly as I can. What do you say to people who say that, yes, there is a sophisticated opposition to this, but it comes from highly educated and relatively affluent people, who essentially are nimbys, who essentially have an emotive hostility to the project and are clever enough and well-resourced enough to come up with myriad sophisticated arguments against the project, some of which we have listened to, but essentially they just do not want it in their backyard? What do you say to people who say that?

Chair: Councillor Vincent, what do you say to that? You are representing people who are clearly going to be inconvenienced, or more than that. Is there any way you could possibly be saying anything other than what you are saying?

Sue Vincent: Yes, we will be inconvenienced, but obviously this Committee knows that there is a gamut of communities that will be inconvenienced. Some are very articulate and knowledgeable about these things, but there are also many people who are not. Regent's Park Estate, which is the main impact zone for High Speed 2 rail coming into Euston, will be impacted enormously and that is 40% black and minority ethnic communities. In Regent's Park Estate, the potential demolition is of 190 to 260 homes, and that is just within the impact zone. With homes outside the impact zone, the figure goes up to about 450. They are a very different community. They are in an economically deprived area.

Camden is very short on open space, for example. We obviously have huge housing issues, but we are incredibly proud of being the third largest economic driver in London. We are also used to taking tough decisions with King's Cross and St Pancras International Station, both on the north of Euston Road. If you look at the area and take the area of Euston Station in context, there are myriad

communities, one of which is the business community who are already feeling the impacts of blight.

Q306 Kwasi Kwarteng: What would you say to that, Councillor Tett?

Martin Tett: You have a very good point. Are there communities along the track who are opposed to this because it goes close to where they live? Absolutely, and that is, quite frankly, perfectly legitimate. They have an absolute right to be concerned about their environment.

Q307 Kwasi Kwarteng: But I would add that the Secretary of State is perfectly right to say that they are nimbys because that is what they are.

Martin Tett: It is the derogatory nature to which people take some offence. Quite frankly, I find it offensive to coin a phrase that characterises black and ethnic minority communities in Camden, people living in west London and in very deprived parts of Aylesbury in a very derogatory tone because it tries to stereotype the debate. We have tried to make this a facts-based debate. It is quite interesting that some of the proponents of HS2 try and revert to stereotypes rather than debating the facts.

If you look at the business case and then the opposition to it, what you find in virtually all the opinion polls—there have been four very recently that have been national or regional polls—is that each and every one of them has come out very consistently strongly opposed. I will not quote the exact numbers, but the YouGov and *Telegraph* poll, the *Birmingham Post*, and indeed the *Railway Gazette*, all came out with well in excess of 50 and quite often into the high 80s or 90s against. They are not the people on the railway line.

Professor Tomaney: At the risk of sounding a little bit academic and philosophical about this—I stress that I am an agnostic academic from Newcastle so HS2 has nothing to do with my life—this is an argument between affluent people. The prejudiced businessmen you listen to are affluent people. They are in favour of it. The people who are against are affluent people. One of the points about high-speed rail is that it is for and about affluent people. The highest income quintile group are the group which are most likely to use high-speed rail. This is not a policy proposal that is inherently about meeting the needs of the poor.

We may make a very sophisticated argument that it will have development impacts down the line at the second, third or fourth order which will improve the lives of the poor, but inherently that is not what it is about. To set up this argument of it being about nimbys versus sensible, rational, ordinary people who are going to benefit I do not think helps advance the argument at all. That is my observation.

Q308 Jim Dobbin: What is your view or overall impression of transport systems across Europe in comparison to this country?

Martin Tett: Sorry, who is the question aimed at?

Chair: Would anyone like to comment about this?

Jim Dobbin: Anybody?

Chris Stokes: In terms of rail, we are like the curate's egg: we are good in parts. I believe that the InterCity

services to and from London are pretty good on the whole. The services and the development of the services in Scotland will end up as good as anywhere else in Europe. When they have electrified the main route between Edinburgh and Glasgow, the Scots will have 12 trains an hour between those cities by four different routes. But then you take, say, the north of England and I am afraid is "Eat your heart out." There are parts of the services in the north of England such as the line from Leeds to Skipton and Ilkley which have been modernised, are good and provide a service that people can feel proud to use, and are a really attractive alternative to the car. There are parts of the network around Manchester which, frankly, I perceive as being close to a distressed purchase.

Q309 Jim Dobbin: Would you say that the transport systems in Europe are better integrated?

Chris Stokes: In some cases, yes. In the case of Switzerland, for example, very much so. In the case of France, I think probably not. Indeed, one of the problems in France is that they have demonstrated the truth of the opportunity cost hypothesis because they have consistently invested massively in high speed, and the standard of the classic network—the conventional network—has declined. That is recognised by the president of SNCF, for example. Yes, I am very attracted by the Swiss model. If I had a £30 billion pot in my gift, I would want to spend a sizeable chunk of it replicating that across the country as a whole instead of in pockets like London, Scotland and spots elsewhere but not consistently across the country.

Professor Tomaney: On the point about how well integrated the systems are, particularly the existing systems and the high-speed rail system, the story varies quite a lot around Europe. For instance, a recent study I read was looking at Spain and France; we did not cite it in our evidence because we only came across it after the event but it broadly supports what we say. It makes the point that in Nord-Pas de Calais there are certain towns that now have worse connections to Paris as a result of the introduction of TGV than was the case beforehand. Arras is a good example because it is not connected to the TGV station. It takes longer to get to Paris from Arras than it did before the TGV system was introduced. So there are these anomalies.

In the German case, the levels of integration between the existing system and the high-speed system are better in that respect, but as I understand it, that is a decision the Germans made central to their approach. In terms of the German system, you can point to more productive regional development impact as a result of taking that approach than you can, say, in France where all the attention is focused on Euralille. I was there last week and it is fantastic. It is a great TGV, a great piece of kit and looks fantastic, but you have to take the picture at a much wider level and understand what is happening in places like Roubaix, Tourcoing and towns round about which have not benefited at all from that investment. In fact their relative position has declined.

Q310 Jim Dobbin: The point I was trying to reach really was that you do not think there is any need for us to catch up.

Chair: Is there anything for us to learn?

Professor Tomaney: Of course there are things to learn. I am not arguing against high-speed rail personally. I am arguing against the claim that it will transform the economic geography of the UK. There is not any evidence to support that argument. That is my point. If the objective is to transform the economic geography of the UK, you would go about it in a different way from what is being proposed in ministerial speeches and DfT consultation documents.

Q311 Steve Baker: Councillor Tett, in a couple of places in your evidence you seem to be suggesting that this scheme is not being subjected to the same scrutiny as like schemes. For example, you say the timetable for environmental surveys and assessments is unrealistic and seems to have been driven by political expediency to meet parliamentary time scales rather than an adequate evaluation timetable. Is it the case that you are saying that HS2 has not been properly scrutinised in the manner you would expect?

Martin Tett: That is absolutely correct. The business case has not been compared on a like for like basis. There are many examples and I could give you a few in terms of the starting point. A lot of the costs for developing the network are included in the evaluation of their examination of Rail Package 2 but they are not included in the examination of High Speed 2. The wider economic impact is put into High Speed 2 but not into the Rail Package 2 analysis. There are many cases where there has not been a like for like examination, particularly with regard to what we regard as the next best alternative.

It is very important to stress that the way they have done their analysis is to compare it against two options which, quite frankly, no one is really supporting. They compare against the do-minimum, their option B, and against Rail Package 2. No one is really putting those forward as options. What we are proposing is something called Rail Package 2 plus, which includes extra increments to that. As I have said earlier, we believe it can be delivered at a substantially reduced cost—we are talking about between £2 billion and £3 billion rather than £32 billion plus—much more quickly and, importantly, incrementally in line with demand.

Just on the environmental piece, something we found seriously deficient in this is the consideration of the environmental issues. The green agenda is very poorly covered in this. There is no thorough environmental impact assessment. As local authorities, we would be required to produce a full environmental impact assessment to justify our choice of particular routes and examination of options. Nothing like that has been done. There is only a desk-based appraisal of sustainability that is extremely high level. That is a serious weakness in the argument.

Q312 Steve Baker: In relation to the timetable, what would have been your expectation for full scrutiny?

Martin Tett: I am not sure I fully understand the question, but in terms of undertaking a full

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environmental impact analysis, that would probably have taken about an extra year, I would guess. That would have carried out a thorough ground-based examination of the route all the way from Camden, my colleague Councillor Vincent's area, right the way along the route. That would have revealed a great deal more information.

The current proposal has very little evidence base in terms of the environmental impact. Indeed, your own Oxa report points repeatedly to the very poor evidence base, for example, in terms of narrowing the north-south divide, the regional inequalities issue and particularly the economics of the Y. You have to remember that this business case is absolutely predicated on the Y. It does not stand up on London to Birmingham alone. It relies on the Y route north of Birmingham, yet the cost base and the evidence base for those numbers is very superficial.

Q313 Iain Stewart: I have two route-specific questions. The first is to Councillor Tett and the second is to Councillor Vincent. Councillor Tett, if you lose your argument and High Speed 2 goes ahead on its planned route, one of the very valid arguments that people in Buckinghamshire have is that they will have all the pain of the route going through but no access to the line. If it does go ahead, do you believe there should be some form of intermediate stop along the line so that at least people in Buckinghamshire could gain access to it?

My second question is to Councillor Vincent. You have expressed understandable concerns about the impact round Euston. Previous witnesses have expressed concerns about the lack of capacity at Euston and the underground network to disperse arriving passengers. Do you think there is a case for not having Euston as the terminus but basing it at Old Oak Common or somewhere close by where it would interchange with Crossrail? They are two very different questions.

Chair: Councillor Tett, can we ask you first? Should you lose the argument, would the people of Buckinghamshire like a stop?

Martin Tett: I always hope, Madam Chairman, not to lose the argument, but let us accept the premise. Suppose it does go ahead. Would there be a stop somewhere like Aylesbury, which is a growth town? The Secretary of State, when he was asked that question by us directly, ruled it out completely. He has said that there is no chance whatsoever of a stop at an intermediate place such as Aylesbury.

The reason for that is quite straightforward. If you look at the speed advantage, which was the Government's original premise for this particular routing, by the time you have ramped up the speed coming out of London and reached a high speed, you have to jam on the brakes to stop at Aylesbury. Then you accelerate again, and lo and behold you are in Birmingham. You lose the speed argument completely. All you have really done is just add capacity to a route rather than delivering the business case on which this whole justification for £32 billion is predicated.

Q314 Chair: Do you accept the Secretary of State's argument that it would not be practical?

Martin Tett: Do I believe that if you want a business case based on a speed argument, i.e. that every minute spent by a businessman or an individual on a train is wasted, you could not have an intermediate stop? Of course, I do not accept that argument.

Chair: Don't worry; we are not trying to incriminate you in any way. It will all be put down very clearly.

Q315 Iain Stewart: The reason I asked that question was because when we visited Germany and we looked at, and indeed travelled on, the Frankfurt-Cologne line there are two intermediate stops. They have configured the train pattern in such a way that there is one express that does not stop and a second stopping one, which, by all accounts, is quite a useful fare generator for Deutsche Bahn. That is the reason why I asked that question.

Martin Tett: I think Mr Stokes can amplify that.

Chris Stokes: There is a technical rail issue in that if you had a stop at Aylesbury, unless you stopped all the trains there, which might be beyond Councillor Tett's wildest imaginings, you would reduce the capacity of the route. There has already been discussion today about whether 18 trains an hour is feasible. I am fairly convinced it is not. A stop at Aylesbury would reduce the capacity very significantly and dramatically undercut the business case. I think the Secretary of State is dead right that if the line is to be built, it should not have an intermediate stop between Old Oak Common and Birmingham. I shall now get kicked under the table.

Q316 Chair: Thank you for clarifying that. Councillor Vincent, when you respond to Mr Stewart's points could you also tell us your concerns about the disruption you fear at Euston under the current plans?

Sue Vincent: Yes. First of all, the case for Old Oak Common, like Euston, has not particularly been made yet. That is one of our basic premises. We have not seen any evidence base or analysis of the assessment why Euston and/or even why Old Oak Common. A terminus at Old Oak Common would certainly reduce the impact and disruption at Euston. To lead into the disruption at Euston, obviously it is a very tight urban and dense city. It is surrounded on three sides by a conservation area. The impact on the local community and local economy is substantial in terms of traffic movements, demolition and the resultant noise and nuisance.

We have obviously had experience with King's Cross and St Pancras International and experience of mitigating factors. Nevertheless, to take one small health factor into consideration, the people in the ward closest to the stations live 10 years less than those living in Hampstead. They are also slightly richer in Hampstead but I do not think that has much to do with it.

The concern we have about High Speed 2 coming into Euston is on the access and egress—the dispersal of passengers coming in. We have the Victoria line at very full capacity heading south to Victoria. We have the Northern line heading into the City and to Bank.

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It would certainly seem that a terminus at Old Oak Common, where it could be connected to Crossrail and Heathrow, would make very good economic sense as well as shaving off quite a substantial amount of money for tunnelling under London.

The concern we have about transport dispersal at Euston as well is that from the figures and evidence

we have seen, we would need to commit to Crossrail 2 if High Speed 2 came into Euston. That is obviously a huge concern because that is an additional expenditure, but it does seem from the experts I have spoken to that the figures would stack up.

Chair: Thank you very much for coming and answering our questions.

Tuesday 6 September 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Jim Dobbin
Mr Tom Harris
Julie Hilling
Kwasi Kwarteng

Mr John Leech
Paul Maynard
Iain Stewart
Graham Stringer
Julian Sturdy

Examination of Witnesses

Witnesses: **Ralph Smyth**, Senior Transport Campaigner, Campaign to Protect Rural England, **Steve Rodrick**, Chief Officer, Chilterns Conservation Board, **Dame Fiona Reynolds DBE**, Director General, National Trust, and **Professor Roger Vickerman**, Professor of European Economics, University of Kent, gave evidence.

Q317 Chair: Good morning and welcome to this meeting of the Transport Select Committee. Could we start, please, by you identifying yourselves with your name and organisation to help our records?

Ralph Smyth: I am Ralph Smyth. I am representing the Campaign to Protect Rural England.

Steve Rodrick: I am Steve Rodrick, the Chief Officer of the Chilterns Conservation Board.

Dame Fiona Reynolds: I am Fiona Reynolds, the Director General of the National Trust.

Professor Vickerman: I am Roger Vickerman, Professor of European Economics for the University of Kent. I should also mention that I am on the Analytical Challenge Panel of HS2, but I am here in a personal capacity because you asked me to come.

Q318 Chair: Thank you very much. Would each of you tell us, briefly, what your position is in relation to High Speed 2?

Ralph Smyth: CPRE's case is that the evidence is not there yet for us to come to a final decision. We do not have a national strategy for transport that would set High Speed 2 into a proper context. In addition, we do not have detailed information about particular impacts of the High Speed 2 route—for example, about noise contours or precise impacts of what it will look like, in terms of the landscape, or what the impacts will be on, say, ancient woodlands or features of biodiversity. At the moment, the case is not proven, though, in principle, we are in favour of high speed rail and investment in the rail network.

Steve Rodrick: The Chilterns Conservation Board is against High Speed 2. We are against it because we are given a job by Parliament to conserve and enhance the natural beauty of the Chilterns. While we understand that national development has to take place, and occasionally that may be in a nationally protected area, we are not convinced that the evidence put forward for the national benefits outweighs the huge and irreversible damage that would be done to the Chilterns.

Dame Fiona Reynolds: The National Trust is neither for nor against High Speed 2. Our position is that if it goes ahead it should be the greenest ever, and we should demonstrate a commitment to a very strong environmental framework and also mitigation against adverse impacts. We, too, have objected on the grounds of it passing through the Chilterns and would

have preferred a more open process to the initial route selection. We are also very concerned about the particular impact on Hartwell House, one of our properties held inalienably. The proposal, as it stands, would take inalienable land from the National Trust, which is obviously a very particular concern of ours. We are, therefore, discussing possible mitigation and protective measures with both HS2 and DfT.

Professor Vickerman: My position is simply that I want to see the best possible analytical processes gone through, with a particular interest in ensuring that any of the wider economic impacts that can derive from major transport infrastructure investments are properly evaluated and set against any of the environmental or other detrimental effects that might be perceived by others, so that we have a proper planning framework in order to be able to assess that.

Q319 Paul Maynard: I apologise for jumping in early with my question to Professor Vickerman, but I have a Delegated Legislation Committee to attend at 10.30, so I shall leap straight in. You are clearly an expert in the European aspects of high speed rail. To what extent do you feel that France and Germany are useful models for us to study to understand what the impact could be on the United Kingdom?

Professor Vickerman: That is a very, very good question, because we have to be careful about taking examples and moving them through space. The starting point was very different, in terms of the rail networks of both of those countries and why they needed high speed rail. However, we can see some effects developing there, in terms of the creation of economic benefits that it has had to provincial centres—cities like Lyon and Lille in France. We also have some very preliminary evidence that there are some benefits to intermediate stations, but only in the German case so far.

All of these are good examples of why we need to look at the evidence that has been acquired but then apply it to our particular cases. You cannot generalise and say that high speed rail will always centralise. Clearly, it has not in many of those other cases we have seen. The specific effects have to be examined in each particular case against the economic structures of the regions involved. From that point of view, yes, we can use the same analytical techniques but we

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cannot blithely take an answer from one and put it to another.

Q320 Paul Maynard: Are there any European examples you would point to that you feel might be instructive?

Professor Vickerman: Yes. The first high speed line in Europe, the Paris-Lyon, is probably the closest example you would get to London-Birmingham. They are further apart from each other, but you are talking about first and second cities. The impacts there were very substantial, both in terms of the usage of the service and also in terms of the impact that it had on the ability to regenerate and redevelop the commercial centre of Lyon, the Part-Dieu development. Although there are some downsides of that within the region, in that you see a degree of centralisation towards Lyon from some of the immediate surrounding areas, I think that is one of the positives. You see it to a smaller extent in the case of Lille, but the Lyon one is probably the best example to use, simply because, to the extent you can get similarities, there are similarities there.

Q321 Paul Maynard: Have you noticed any difference in terms of benefits derived from those lines that have followed existing transport corridors, compared to those lines that have carved their way through what one might call virgin countryside?

Professor Vickerman: No, and I do not think anybody has looked at that specifically. Paris-Lyon, of course, took the shortest route, because existing transport corridors could not be expanded to take the new line. Köln-Frankfurt does follow the motorway and has had an impact on places like Montabaur and Limburg an der Lahn, and it is quite difficult to disentangle whether it is due partly to motorway, partly to rail or the combination of the two.

Q322 Paul Maynard: I have a final question, if I may. You mentioned “first and second city”. I am always unwilling to ask witnesses to speculate, but could you possibly speculate on how you think Birmingham’s derived benefits could differ from Manchester’s if they are both connected to the high speed network, and how they, in turn, could differ from the benefits of accessing the network for a city such as Liverpool, which would be close to Manchester, or even, say, Cardiff, which would effectively be nowhere near the high speed network?

Professor Vickerman: I fear we do not have long enough, Mr Maynard.

Chair: As briefly as possible, please.

Professor Vickerman: What one needs to look at very carefully there is the economic structures of those cities, which are different from each other, and the role they play in the national economy. You can see that the benefits for each of those might well be different. I would not be able to speculate in terms of bigger or smaller, but they would be different and one would need to look at that.

Q323 Paul Maynard: When people argue that Manchester will derive an extra economic benefit compared to Birmingham—that is, the real benefits

are delivered when you go north of Birmingham—you would not necessarily state that that was conclusive.

Professor Vickerman: On a priori grounds, no, you would not say that. It may well be the case because they have different roles and different regional roles, but that becomes a much more difficult question to analyse.

Paul Maynard: Thank you.

Q324 Jim Dobbin: Whenever there is any development to take place in the constituencies of Members of Parliament or local politicians, there is always a campaign against it. That is what normally happens because people are generally protective of their locality and their local environment. Do you think there is an issue here where there is some nimbyism going on, or are these people luddites?

Chair: Some opponents of high speed rail have been categorised as nimbys and luddites. Do you see yourselves in that category?

Steve Rodrick: If I might answer first—because often the finger has been pointed at me—yes. Plainly, that is an accusation one would expect. In our case we are looking after a particular part of the country and, rightly, are very proud of it because it has national protection. It is an AONB, and for good reason, so we expect it to be given national protection. Bearing in mind that it is national heritage, we are all guardians of somewhere like the Chilterns so we are all nimbys, if you like. At least I would hope everybody is saying, “That matters to me, even if I do not live there.”

I am very keen indeed to impress upon you that we, as a board, are made up of people, of whom some are appointed by the Secretary of State to protect the national interest. We are not all local people looking out for our back gardens. We are from around the country. Some of us grew up in Scotland. My chairman is from Manchester.

Jim Dobbin: You could not have grown up in a better place.

Steve Rodrick: It was certainly a wetter place. We are genuinely trying to take a national perspective here, although we are very conscious indeed that some people think we can see no further than our back yards. It is not the case.

Q325 Chair: Mr Smyth, I know you have raised some objections, but you say you are not opposed to this in principle. What do you make of the charge that maybe it is nimbyism or luddite-ism?

Ralph Smyth: The difficulty for many people here is that there is no strategy—no context—against which to judge HS2. If you are supposed to try and work out what the national interest is and whether it trumps the local interest, you need some strategy—some national planning—to help guide that. The difficulty people face is that the first they knew of high speed rail was simply, “Here is the route,” drawn along a map, possibly going through your back yard or possibly, in the case of some people in London, underneath it. People were not involved.

Greg Clark, the Minister for decentralisation, at a lecture given to CPRE earlier this year, talked about not simply announcing and defending a proposal but involving people throughout. We feel very strongly

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that people should have been involved in working out what the transport priorities for the country should be, and then what sort of high speed rail system we might run, in terms of the network and in terms of specifications, rather than suddenly being presented with, “Here is the single option. We would like to build it. What do you think?” That is what we would say has fanned the fire of nimbyism.

Q326 Jim Dobbin: I have another question on another tack. I am a Member of Parliament for the north-west, despite the accent, and we need jobs. The issue is about bringing employment to parts of the country, which we think this can do. Therefore, the argument becomes one of the north against the south. Have you any comments to make on that?

Dame Fiona Reynolds: I wonder if I could respond, in the sense that I think it relates to your earlier question. People faced with a very particular proposal with limited advanced consultation do tend to react defensively. However, if they are engaged in the debate, they are perfectly intelligent and able to take a broader view and are quite sympathetic to finding solutions which optimise outcomes. That might be jobs, environmental mitigation or the quality of the local environment.

I would draw a parallel with HS1, the line through Kent, with which I was involved—rather a long time ago now—where, partly because it was one local authority with a very strong leader, Sandy Bruce-Lockhart, there was incredibly good consultation and incredibly good engagement of local communities. Even if all their needs could not be satisfied, they were much more supportive of the final route chosen, because they felt they had been part of it. Whether the argument is about jobs or the north-south, people need a framework, as Ralph has said, to engage with it, and it will be more constructive and helpful in that context. Simply being presented with something gets a naturally defensive reaction.

Q327 Chair: Would you say that this consultation is being handled differently?

Dame Fiona Reynolds: We have not yet had the public debate about the initial choice of route. As I say, we share the concerns about the Chilterns and would have preferred to see a much more open discussion about, say, the M1 route, which was ruled out very early. Similarly, although there are individual consultations beginning to take place, if the initial publication had been accompanied by a commitment to have open meetings and open debate, both with locals and with national groups, and with others with a more strategic perspective, we might have got further with the important issue of whether this is the right route and how to make it, as we would say, the greenest ever.

Q328 Mr Leech: Dame Reynolds, you made the point about Kent and suggested that the consultation and collaboration had been far better. How much of it was to do with the fact that people in Kent felt they were getting something out of it, compared with the

Chilterns, say, where local people do not feel they are going to see any benefit from HS2?

Dame Fiona Reynolds: That may well be a very material point. The fact is, though, they were really given the chance to get involved. The route was modified, changes were made and people felt better about it as a result of that process. We are, obviously, very concerned not only about the Chilterns but our own particular property. At the moment, we are not seeing much shift in this recognition that there are environmental and other adverse impacts which need to be addressed. There is a feeling that environmental impacts are too expensive and further measures cannot be taken, and that is a disappointing perspective at this stage.

Q329 Steve Baker: Mr Rodrick, as you know, I have a Chilterns constituency that will not be affected by the present route of HS2 but is affected, and indeed blighted, by the M40 cutting through the Chilterns. Is there something we can learn about the experience of the M40 running through the Chilterns that applies to high speed rail?

Steve Rodrick: Had I been around when the M40 was built, perhaps I would be in a better position to respond. I am very conscious of the feeling that if you can put in a railway which hugs an existing motorway—that was certainly the case in Kent and made it more palatable—there might be less opposition. In the case of the M40, the alignment and topography do not lend themselves to that, so we simply cannot look at that as an option. Plainly, one accepts that some of these things are built against opposition at the time and people come to terms with them to a certain extent. However, if the M40 is anything to go by, 30 years on it is still causing problems, because it was done “to us” rather than “with us”, if you like. A lot of the design and specifications were not right for the area, and we are still living with it. As you know, it is still a very noisy thoroughfare through beautiful countryside. You would not want it that way if you could avoid it.

Steve Baker: Thank you very much.

Q330 Chair: Professor Vickerman, you wanted to comment on this point.

Professor Vickerman: Yes. I would comment on two points. One is about Kent. It was a mistake to think that Kent was homogenous. Clearly, there were people who thought they would benefit from it and people who thought they would suffer from it. A considerable number of different views had to come together.

I would like to come back to a very important point in this. The danger is we only start advancing our methodologies for appraising these things when we have a specific project in mind that focuses people’s minds on that project rather than the general issues. That is a great shame in terms of improving, for example, the WebTAG guidance which is used for appraising major transport projects. It always strikes me that there is an imbalance between what we can do and quantify in terms of the economic benefits, going back to Mr Dobbin’s question about jobs and so on, as against the environmental effects, which are dealt with, in my view, in a much less satisfactory

way because of both the landscape effects and all of the other effects. They are not put on the same metric, and that is why we get into this debate all the time about jobs against the environment. If you are on one side, jobs must win; if you are on the other side, the environment must win. Both are equally important, but we need to get the analytical tools right.

Q331 Chair: Has the appraisal of sustainability been carried out properly?

Steve Rodrick: If I might come in there, we have grave misgivings about the AoS. It is a very high-level document. When most people read these things, they try to equate what they read with their own experience and the places they know. It is practically impossible with an AoS. We are particularly disgruntled because we feel the impacts on the Chilterns, as an AONB, as a nationally protected area, should have been specifically identified. That is what national policy requires, and it is expected. The AoS did not include a Chilterns-specific section. We were lumped in with West Ruislip and Aylesbury. Lovely places though they might be, they are not the Chilterns. Therefore, we have grave misgivings about that.

It is plain, from our experience and from the public road-shows, that everyone expected a greater level of detail about the impacts than was being given to us. That is not to say the information did not exist. It just was not being given to us. I can give you two examples. The AoS did not anywhere say what the land take would be for this major development. I am sure, if any of you have had any dealings at all with a planning application, it is one of the first things you expect to see—how big it is physically. We are not given that. Again in the Chilterns, a very particular matter to us is the amount of spoil coming out of the tunnels and cuttings—absolutely gargantuan. 11 million cubic metres of spoil would come out. This was not identified in the AoS, nor was it explained what would be done with it. That matters enormously to those of us who are looking after a nationally protected area. If you are a local person living in Great Missenden, you are absolutely terrified at the prospect of having a million trucks going up and down your road.

From our point of view, the AoS was at too high a level for the purposes and did not engage the public. Even for those of us who have a very professional and detailed interest, it did not provide sufficient detail for us to get stuck into. We have had to come up with our own calculations and assessments and tried to debate with HS2 and the DfT on those levels, often being rebutted with, “That is a matter of detail. We will deal with it later on.” From our point of view, “later on” is too late. We would like to discuss those things now. Therefore, we have grave misgivings about the AoS.

Q332 Chair: Is the position in relation to spoil the same? Have you been given any information on what is to happen to it?

Steve Rodrick: We queried the one figure in there, which is to do with a particular tunnel. They issued an erratum saying that it was wrong and multiplied the figure by two or three times. It is a quantum out. We are not talking about hundreds of thousands of

cubic metres here; we are talking about millions of cubic metres, with all the knock-on impacts. I think it is reasonable, when anyone is asked not only about a route but a strategy, that you have some idea of the major environmental impacts. We do not believe the AoS addressed those. When we get to the Environmental Impact Assessment stage, the whole argument will have advanced so far that we do not feel we will be influencing the debate.

Ralph Smyth: I have two points to add there. The first is about the way the AoS did not really deal with alternatives. If you have a high-level appraisal you would expect it to compare different route alternatives. CPRE and other NGOs were very concerned that these trade-offs were not transparent on why the route went where it did, rather than using other routes that might have lesser impacts on the natural environment and heritage. That information simply was not there. We would expect at this stage when you are down to one route, that you would have a very detailed environmental impact assessment.

The second point is about carbon. This has been identified already by the Department for Transport as something that communities bash them over the head with. The carbon case is very weak. It depends not only on High Speed 2 but, again—and I am coming back to the same point like a stuck record—whether the wider transport strategy, and indeed the wider environmental strategy, for example, are generating sufficient low-carbon electricity. These things are all interconnected. The AoS simply says, “We cannot work this out. There are too many external factors.” That is not really acceptable for something that, as Fiona says, should be the greenest ever project.

Q333 Julian Sturdy: Professor Vickerman, I have listened carefully to what you said when we recently talked about the key arguments of economic growth and jobs versus environment. It seems to me that these are going to be the key arguments as we take this debate forward. In your view, do we have enough information about these two key areas to make an evaluated decision on this? This seems to be where the main debate is going, and I have fears as to whether we have looked at this properly. I know a number of the other panels have raised this issue as well.

Professor Vickerman: Yes, and it is a great shame that it always does come down to jobs versus environment—that these things are opposing—because they could be very much on the same side. An enhanced environment can and should be very good for business. It is about getting things on to the same metric in order to be able to do that. We have two deficiencies there. One is a deficiency about acceptance of evaluation of the environment. It can be done, and it is done in lots of cases, but at the moment, I say the WebTAG guidance is not sufficient on that. Although the Department has been pushed to try and enhance it, it has stayed within the environment of the existing ways of doing that.

The second one is the wider agglomeration effects. We are pretty good now at working out agglomeration effects within urban areas. We can see that in terms of the effect it has on local labour markets. What we

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do not know—because we do not have the evidence on which to base it—is what happens when you join together two very large labour market areas. Does that lead to some sort of super-agglomeration effect, or do the two compete against each other? We do not have sufficient evidence to be able to do that, because the data do not exist yet. We do not have any examples from anywhere that we can really look at to the same extent. There is a little bit of evidence which was done for HS2, the Graham and Melo study, which says it is small. I would tend to agree with that, although I think their estimates are sensible but at the lower end. My hunch is—and it is only a hunch—that there is something much larger than that. But those are areas where we desperately need more evidence. It goes back to the point I made earlier: it is a shame we can only start adducing that evidence when we get into the adversarial process.

Q334 Julian Sturdy: Can we get that evidence, though?

Professor Vickerman: Yes, we can get it. I am going to give you a horribly academic answer. If we could have the money for research that did not only come from a specific project, then, yes, we could start getting that evidence. This demonstrates how important it is, in terms of thinking about how we can potentially move forward, to have a strategic plan for transport development which has brought all of those points in, so that people can see where they fit into this at the local level. That is when a sensible debate can be had at that level. That is probably wishful thinking on my part.

Q335 Iain Stewart: I would like to turn to another aspect of the environmental concerns that have been raised about High Speed 2: noise pollution. Can I ask you, first, how much you are concerned about the potential noise pollution that High Speed 2 would cause?

Dame Fiona Reynolds: Focusing on Hartwell House, which, as I said, is our immediate concern, we were similarly disappointed that the information published was very inadequate on noise levels. Therefore, we have done a bit of work of our own, which has identified that Hartwell House in fact sits in an unusually tranquil area, despite being in south-east England. There is a real question about how seriously the noise issue is being taken. Clearly, one of the options for mitigation is more tunnelling. That comes back to the wider point about whether the business case is “the business case”, and then you compromise it by making environmental mitigation, or whether you embrace the idea that environmental mitigation is so important that it is a full part of the business case and, therefore, it is built in from the start that you are going to treat issues like noise, aesthetics and other considerations more seriously. We are feeling, with the noise issue, that we have not been given enough information and that it is not precise enough. Also, it feels like a luxury, rather than something we would say is an essential part of any mitigation strategy.

Steve Rodrick: We are gravely concerned, as you would expect, by noise impacts. We have had to cut our teeth recently over proposed changes to aircraft

flying over the Chilterns, and we have found that it is extremely difficult to get across the science of noise to the general public. The decibel system is quite hard to explain because it is logarithmic. But what we have been disappointed with is the paucity of information provided. You would expect something like a noise contour map. We have not had that. We have only had the average noise figures published, and it is very easy to mask the peaks and troughs if you do that. What people are really concerned about are the peaks—the things that wake you up, the things that give you a fright. None of that has been published and, because we feel the noise issues have been played down, the natural conclusion is that they are trying to hide something. It may be, with the design of the trains and the cuttings, that a lot can be done. However, because of the way it has been presented, we are far from being convinced we have something which will be satisfactory.

Q336 Iain Stewart: Have any of you had the opportunity to visit the Arup sound laboratory? I went—the Chair did as well—and was quite surprised that there was not the noise impact I thought there might be. I also made a trip independently to the HS1 route. Again, yes, there was the noise of a train, but it was not particularly obtrusive. Is there a need to have a better explanation and an opportunity for residents along the line to be able to hear this so they can make a more informed decision as to the likely intrusion?

Steve Rodrick: It would certainly help. There are a lot of fears, and it is a fear of the unknown to a certain extent. Again, we did cut our teeth on this aircraft issue, and it is amazing how the impact of noise changes with the weather, the direction of the wind, the time of day and the background noise. I did not go to the Arup laboratories, but I went to the laboratories in the road-shows, and they were surprisingly quiet. I can accept, if all the conditions are right, that is how it is, but we know from experience that it is often not like that. If you have to live with it day in, day out, you want to know what the worst case scenario is, not the best case. That is where we find ourselves at the moment.

Q337 Chair: Does that mean you do not accept Arup’s conclusions that the sound is not as significant as people feared?

Steve Rodrick: I think it depends on where you are, the time of day and so on. What Arup is trying to replicate probably is true for some of the time, but is not true all of the time. We would like to know what the worst case scenario is, not what they presented.

Professor Vickerman: Noise is the one environmental effect on which we have both the best technical evidence—complex though it is—and the best evaluation evidence. But it can always be improved. One of the things that is much more difficult is how you equate the steady rumble of the M40 with the peaks and troughs of a high speed train going through. That is a perceptual matter, but we can measure noise, while we cannot measure in quite the same way the landscape and heritage, and those sorts of things. Noise can be mitigated much more easily by technical advance. That is one area where we have shown we

can get both the technical measurement and the economic evaluation pretty close together and have very good evaluations.

Ralph Smyth: I have been to the SoundLab. What was very interesting was the way that sound in urban areas, or sound from cars or planes, often smothered the sound from High Speed 2—or what it was supposed to sound like. However, the modelling has not gone very far in tranquil areas of the countryside, where even a small sound can be picked up. The same goes for urban areas in the evening or at night, when people are more sensitive. They might have bedroom windows open and be able to hear the noise of the train. That is when the noise impact will be particularly difficult. The problem is that High Speed 2 simply modelled the noise levels inside homes, rather than in people's gardens or along footpaths in the countryside. That is really missing, and we need to know more about it.

Q338 Kwasi Kwarteng: I am slightly unsure as to whether this is a general objection or a specific objection to this particular route. I appreciate your concerns about the environment relating to this particular route, but is there any change to the route that you would be prepared to live with, or are you objecting to the whole idea in principle?

Ralph Smyth: The problem there, as I explained earlier, is that we have not had the detailed information about this route compared to alternatives. It is a key principle, whether for Treasury guidance, planning law or human rights law, that if you are going to go ahead with a decision, you need to structure your reasons and show why you have not considered alternatives.

Q339 Kwasi Kwarteng: My question is more general. You have said that you have objected to this route, and you have said that there have not been any alternative routes given to you. I accept that.

Ralph Smyth: There have been alternative routes, but only at a very, very high level of detail, and that is the problem.

Q340 Kwasi Kwarteng: Generally, is there a route out there, hypothetically, given where we are, that you would be happy with?

Ralph Smyth: We are not railway engineers, but we would like to see, for example, the M1 route considered. That is the only credible alternative that could follow a motorway in the same way that HS1 does, and therefore perhaps have a lower environmental impact but a very similar economic impact.

Q341 Kwasi Kwarteng: You are saying that, if that route were followed, that is something you might be prepared to go along with.

Ralph Smyth: To be able to come to a final decision on HS2—the preferred route—we would need to see other options, in particular an M1 route, in detail. At the moment, we do not feel we have the information to come to an evidence-based decision. We are evidence-based, rather than simply seeing HS2 as an

article of faith or something that is intrinsically evil. We need the evidence to come to a decision.

Q342 Kwasi Kwarteng: How much more evidence do you need?

Ralph Smyth: We had a meeting with high-level HS2 and DfT officials a few months ago. They promised to send us more information about the M1—route they looked at—and we are still waiting.

Kwasi Kwarteng: Thank you.

Q343 Mr Leech: Mr Baker, earlier on, mentioned the M40. I am interested to hear from Mr Smyth what the view of the Campaign to Protect Rural England was of the plans to build the M40 when they originally came out.

Ralph Smyth: Dame Fiona may know better than me, but as I understand it, CPRE objected to the particular alignment of the first stage of the M40—that is, up to Oxford. By the time it came to the second stage—Oxford to Birmingham—CPRE was not simply questioning the detailed design; it was questioning the actual principle of a further extension of the motorway network as opposed to, say, rail improvements. Perhaps I can be corrected.

Dame Fiona Reynolds: No. That expresses it very accurately.

Q344 Mr Leech: Mr Rodrick, if the Chilterns Conservation Board had been in existence when the M40 was built, what do you think the view of the board would have been?

Steve Rodrick: I think we would probably have objected on the grounds that it was a nationally protected area, and you have to show that the benefits outweigh the damage. I gather the M40 started not as a motorway but as a bypass to High Wycombe and grew by subterfuge, if you like.

Q345 Mr Leech: Would the panel, in general, suggest that the environmental effects of the M40 have been as bad as the concerns raised before it was built suggested, or has it not been as bad as you might have considered before it was built?

Steve Rodrick: To be honest, I do not think we can answer that, because we did not have a year zero. A lot of us were not there to make that comparison. I can say, for example, that not only does the M40 go through wonderful countryside, but, for those of you who know it, it goes through the deep cutting at Aston Rowant, which is a national nature reserve. You do not want to be doing that, no matter what the pressures are. We are a small country. We have some fantastic heritage. You are supposed to look after it, which is why Parliament designates all these things as nationally important. You have to come up with options that avoid that, so at least you can make that comparison. That is what we are saying with HS2. We are not given the choice. We are given the one route that carves through this nationally protected area. Let us look at what an alternative might have been, avoiding it.

If I might just finish the point, one of the difficulties has been that the specification of this route—that it should go up to 400 kph—meant that you are pretty

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much choosing straight lines. Therefore, you do not have the flexibility in the route planning you would have liked so you could come up with the choices we face today.

Q346 Mr Leech: I asked the question because, in one of your earlier comments, you mentioned local people not wanting a million lorry movements in their area. I am interested to know how much of the disbenefit is the actual disruption during the construction, rather than the long-term legacy of HS2 for the Chiltern areas.

Steve Rodrick: Those are two big issues. I think you are right to draw attention to the disruption during the construction phase, because I do not think that has been taken into account nearly enough. If this particular route is chosen, it will require an awful lot of excavation work, and you will have to move a lot of the materials, whether it is the construction materials themselves or the spoil that comes out, on local roads. It will not be moved on motorways. It is moved on the A road up the Misbourne Valley and, depending on where it goes, maybe even B and C-class roads. That is our worry. That is an enormous disruption. It is not the main reason why we are objecting, but I have to say we think the disruption itself is being understated. A reason for not supporting improvements to the West Coast Main Line, in part, was the disruption that might cause. It is certainly being referred to at Euston where, obviously, there will be a lot more platform construction work. Their disruptions are referred to, but not ours.

Q347 Steve Baker: Mr Rodrick, you mentioned the design speed. Could I ask the whole panel whether you know, or have considered, how much the design speed would have to be reduced by in order to make the route environmentally acceptable to you?

Ralph Smyth: It is worth saying that it is not only the design speed deciding the route but also the two stations—that is, the Old Oak Common station and the Birmingham Interchange station—deciding very much where the route goes. Yes, we are concerned about the design speed, but it is also station location. In particular, there has not been a wider discussion about whether there should be a station outside Birmingham in the green belt, which would mean it would have to go through a lot of lovely countryside in Warwickshire.

Q348 Steve Baker: Are you opposed to the station being at Old Oak Common, full stop?

Ralph Smyth: It is difficult to judge that one, because it so much depends on the wider national transport strategy, particularly because the Old Oak Common station could give real benefits to South Wales and the West Country by allowing an easy interchange on to the high speed rail network. We are opposed to the Birmingham Interchange station but support the town centre one.

Q349 Steve Baker: Would anyone else like to comment on the design speed and the location of stations?

Dame Fiona Reynolds: The only thing I would say is we are very aware that one of the reasons why there is such limited room for manoeuvre is the design speed. I could not say—I am not a technical person—what it would need be reduced to, but it does seem to be limiting the scope for environmental mitigation. Thus, we are reduced to expensive propositions such as tunnels, which obviously we would like to see, but it is all tied up with a mix of issues around both design speed and the extent to which multiple interests, as we have discussed earlier, can be satisfied.

Q350 Steve Baker: What would you say to those who argue that it only affects a narrow corridor?

Steve Rodrick: We are already seeing that the blight is going several miles away from it. Over time, no doubt, the impact will narrow down much closer to the fence-to-fence corridor, if you like, but certainly during the design phase—the fears that go with that and the fear of the unknown—we are talking miles, not just yards. When it comes to some aspects of wildlife, which is hardly getting mentioned at all—this is an area where, for example, herds of deer move across and mammals—that is a great disruption. It is not getting an airing at all. It has been described to me as a Berlin Wall for wildlife, which it is, plainly. If you put a fence up along a railway and dig a deep trench, wildlife does not move around. It has a much bigger impact than we are talking about. On some days the noise will go miles. As you know, with the M40, you can hear it five or six miles away.

Q351 Steve Baker: Finally, with all of that in mind, to what extent were you reassured by the extra mitigation the Government built into the London to Birmingham section before the public consultation?

Steve Rodrick: Do you mean the deeper cuttings?

Q352 Steve Baker: Yes, and so on.

Steve Rodrick: Deeper cuttings certainly help but have the downside of creating more spoil to get rid of. If you cannot see it, you cannot hear it, and you do not know it is there, then that is a better railway from our point of view. We are concerned about some of the noise barriers and bunds that are talked about. These are not attractive features, and in an AONB you do not expect to have ugly features. There has to be a different way of dealing with it.

Q353 Iain Stewart: I would like to ask a devil's advocate question. If High Speed 2 did not happen, and the country did need additional transport capacity from London to the Midlands and the north, and it is not High Speed 2, what would you build instead? Would it be another motorway or more aircraft?

Steve Rodrick: I am not a railway engineer, but I am well aware that there are proposals talked about—Rail Package 2 plus, for example. I have to say, an element of the debate which I do not think has been covered enough is whether or not it is the right thing to encourage travel at all costs at all times. We know the Government, for example, have a policy on reducing the need to travel, thus video conferencing. We are all in that game now of trying to reduce costs and trying to reduce carbon. That idea of reducing the need to

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travel is not much talked about, and surely that would have an impact on demand forecasts in a way that has not been built in yet. I cannot design a railway or a transport system, but it seems to me, certainly from reading what others have come up with—not least, Sir Rod Eddington—that there are lots of other things which should be done first to get things moving. Transport, in itself, is not the end; it is what it achieves, after all.

Q354 Chair: Does anyone else have any views on alternatives to High Speed 2, apart from not travelling as much?

Professor Vickerman: That, clearly, is part of it. Of course, it is not only people who travel; it is also goods, and it is about making sure the capacity is there. What it comes back to is this idea that we are looking at projects on a project-by-project basis and not looking at things in terms of the total transport needs of the country as a whole, and, I would say, from the point of view of the economy as a whole. It may well be that in some cases more high speed rail is relevant and in other cases more roads are relevant. In other cases, it may well be a re-shifting of where the hub airports are, and that is all taken together. That is where one needs that strategic view of the question one is trying to resolve. The danger is that we have these debates around single bits—even single bits of bigger projects—rather than trying to think about it as a whole.

Q355 Chair: You think we are not in the position where we have that strategic view.

Professor Vickerman: I do not think we have that as yet. One advantage one can learn from the way other countries do this is that they do try and have a strategic transport plan. I am not saying they always follow it to the last letter, but at least you have a vision as to where bits fit together, so people can see where the trade-offs are taking place. Everything, as we have heard this morning, is clearly a trade-off somewhere. What I would like to see is that we are able to measure those trade-offs in a single metric, so that we can genuinely provide a better overall answer. It will not remove all objections, though.

Q356 Chair: Mr Smyth, you want to comment on something.

Ralph Smyth: Yes, quickly, about the common metric point. I do not think that is possible. We have tried money, and one of the Department for Transport's less well-known studies tried to cost the value on the Chilterns of a fictional high speed rail line. The answer was £14.32 per household as the so-called landscape value, based on a "willingness to pay" methodology. We have to be transparent that we cannot reduce everything down to a common metric. In terms of capacity, a lot of the opponents of High Speed 2 have said they can get capacity by other means. They are simply talking about seats on long-distance services. If you want to go from, say, Milton Keynes to Rugby, extra seats on a train going from London to Glasgow that does not stop until you get past Birmingham is not much help. That is why we think the really important part of the debate is

about the local train services that could be improved if space on the lines was freed up by taking the very high frequency high speed trains off them.

In terms of reducing the need to travel, yes, there is a point there, but the big issue is to try to shift some travel from road to rail. Even if you reduce the total amount of travel overall, we would hope and expect to see a big increase in rail if we are going to meet our carbon reduction targets.

Q357 Julie Hilling: Mr Smyth, you have touched on a point I wanted to ask the panel as well. Apart from increasing carriages on the long-distance trains, there is a view being put forward, certainly by Network Rail, to say that part of the west coast is virtually at capacity. It will not be that people cannot travel from Manchester to London, but that people cannot travel from Milton Keynes to London, or Northampton to London. What is the view of other members of the panel on the need for that short-distance travel as well—people commuting into London?

Steve Rodrick: Certainly Sir Rod Eddington identified that the priority should be to get people moving in and around major cities. It is the commuting journey—the journey to work—that is the priority. It is an area where we are seeing great changes. We are seeing more flexible work patterns. We are seeing people working from home. We are seeing people using IT a lot more. Over time, certainly over the time period of this railway, that should have a big impact on those travel-to-work patterns.

Sir Roy McNulty put it this way. If you find yourself in a position like this, one of the objectives you should have as managers is to balance demand and supply and try and get the best out of your current supply. At the moment, that is not happening. He was very clear that there are some perversities from the market system, where you end up with some peak trains full to standing point and others empty. There is a long way to go in balancing out those peaks. If you overlay that with some of the different work patterns and travel-to-work patterns that we are seeing, you can get a lot more out of what we have.

Q358 Julie Hilling: You do not think we have to build anything at all.

Steve Rodrick: I am not saying we do not have to build new railways—maybe in the fullness of time—but I am saying HS2 is not one that, personally, I am convinced is necessary.

Professor Vickerman: Could I reiterate the point about it not only being about passengers, but about freight? It is very important to ensure that there is freight capacity on the existing network, and by taking some of the long-distance passengers away from it, you improve that situation. But I would certainly agree with the view that local rail services are also important, in thinking about it as a network as a whole and trying to ensure that people get out of their cars in accessing that. The danger is when you start getting these more flexible working patterns and all sorts of things like that. Unfortunately, the evidence so far is that it increases people's propensity to travel, if you take passenger kilometres into account, not reduces it.

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Chair: Mr Baker, you can have the last question in this session.

Q359 Steve Baker: It is about economics, of course. Professor Vickerman, could you explain the disparity between the claims that have been made by the Government, business organisations and local authorities in the midlands, north and Scotland—claims that HS2 will be good for their economies—with the evidence we have heard from academics and others? Can you explain the disparity, because the academics are telling us that they are unsubstantiated claims?

Professor Vickerman: I think most of them are unsubstantiated claims. Obviously, if you feel that something is going to do good for you, you big it up. We saw that with HS1 in Kent as well, as to all the effects it was going to have. I have to say, they are not visible to the naked eye. Yes, of course, it is about creating a view whereby people are going to invest in an area because it is going to be better connected. There is something psychological about that which is very important, and so you will get that. The danger is that you finish up with everybody running after the same jobs, and there is a real concern about this. That is why we need to make sure, if there is a displacement of jobs going on, where those jobs are coming from. They are not all going to be net new jobs. Some of them are going to be displaced jobs. It is very important we look at the net jobs effect, but also at where those jobs are going to be. That becomes a strategic decision for the Government as to whether they are going to be prepared to lose jobs in one area in order to see jobs gained in another area.

Dame Fiona Reynolds: Could I come in on the critical relationship between these arguments and the environmental proposition again?

Q360 Chair: Could you tell us, too, if there are any circumstances in which the National Trust would withdraw its objection to High Speed 2?

Dame Fiona Reynolds: Yes, indeed. I will come to that, of course. The point I would make rather goes back to the points about the M40. The A14 was another very controversial major road intrusion, as was the M3—we all remember St Catherine's Hill and Swampy. We learned from those very controversial transport road investments—they were still built—how to design roads in a much more sensitive way in relation to environmental and other factors. What is interesting here is that we are almost repeating some of those arguments about the straight line through the protected area that we thought, in a way, transport policy had gone beyond over the last 20 years. It is important that we see the bigger picture around jobs, economics and environment as a means of trying to integrate and reconcile those tensions, rather than it having to be a kind of business proposition and then running round trying to mitigate and moderate some of the environmental impacts.

There are definitely circumstances in which high speed rail could be put in, I am convinced, and would be acceptable environmentally. We have all said that in principle it is not something we oppose, but it means starting to think about the environment from the outset, not as an end-of-pipe reaction as the route goes through. The National Trust is currently objecting, as I said, on two grounds. One is the Chilterns and the other is Hartwell House. For us, the real issue will be about whether the mitigation proposed—and we are still in dialogue—is sufficient. In the case of Hartwell House, a bored tunnel would be our aspiration, which would also help the people of Aylesbury. It is not only about our interests; it would be very much welcomed by the local people. We have not yet had a conclusion of those discussions, so I cannot speculate on where that may go.

Chair: Thank you very much to all of you for coming and answering our questions.

Examination of Witnesses

Witnesses: **Niall Duffy**, Head of PR and Public Affairs, Flybe, **Allan Gregory**, Surface Access Director, Heathrow Airport Ltd, **Jonathan Young**, Programme Director, Group Strategy, Manchester Airports Group, and **Steven Costello**, Director Heathrow Hub Ltd, gave evidence.

Q361 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. Could you please identify yourselves with your name and the organisation you represent? This is for our records.

Jonathan Young: I am Jonathan Young, Manchester Airports Group.

Niall Duffy: I am Niall Duffy from Flybe.

Allan Gregory: I am Allan Gregory, Surface Access Director, Heathrow Airport Limited.

Steven Costello: I am Steven Costello, Director of Heathrow Hub Limited.

Q362 Chair: Could each of you give us a brief summary of your views in relation to High Speed 2 and where you stand on it?

Jonathan Young: We are broadly supportive of High Speed 2. Our support primarily related to two areas: first, concern about serious capacity shortfalls in the medium term on the existing network and the additional capacity high speed rail will bring to that and, secondly, support around the rebalancing of the economy and bringing the northern economy closer to the economic mass of the south-east.

Niall Duffy: We are all in the business of looking for improved infrastructure and better transport links, so Flybe recognises the fact that high speed rail could indeed bring a social and economic value to the nation. In terms of the economic value, there are certain weaknesses, particularly given the fact that we all provide our own infrastructure costs and we all pay for our own capital costs. Our fear, as the biggest

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domestic airline, is that the economic benefit may not be enough to justify tens of billions of pounds being pointed at the south-east, in terms of the impact on the rest of country.

Allan Gregory: From our perspective, globalisation is changing our world and economic growth is increasingly dependent on international connectivity. There are three strategic benefits that we see with high speed rail if there are direct connections to Heathrow. The first is to reconnect the UK regions to Heathrow and the global links that we can offer, and that connection is not good at the moment. The second is the potential to reduce carbon emissions by replacing short-haul flights with high speed rail. The third one is that it can contribute to taking cars off the road, in terms of road congestion and access to Heathrow.

However, there are three key issues to achieving that. The first, as earlier witnesses said, is a real need for a joined-up transport system—air, road and rail. We do not see those in competition. The second is that, in terms of Europe, we believe we are already behind. Other European hub airports all have high speed rail connections right through the airport. We see that they set the current benchmark for air-rail integration—although an earlier witness said we should not copy exactly. The third point is that we see high speed rail as complementary to the hub airport but, to be clear, it is not a substitute for the additional hub capacity we think the UK needs.

Steven Costello: Our support starts from a little higher up the policy tree, which is initially with the very welcome political consensus that has emerged. That is a real credit to our politicians. Credit is also due to HS2 Ltd and DfT for moving us a very long way in a very short space of time. Having said that, interestingly, the previous witness from the National Trust referred to the Channel Tunnel Rail Link and we think that, in many ways, we have been here before. The first proposal, the British Rail alignment from the Channel Tunnel portal to London, was not quite right. It was a good first shot, but often the first thing that you draw, or the first thing you propose, is not quite there. It throws up a lot of issues which then need another iteration. With a particular view to the session today, we think the focus should be on an integrated transport solution. HS2 Ltd's remit was very narrow. It was simply a point-to-point railway from London to Birmingham, and the ability to go north with the Old Oak Common station actually preconceived in the then Secretary of State's instructions to HS2 Ltd.

Bearing in mind this is an aviation session, we would argue that the missing piece of the jigsaw here is Heathrow, and this is not arguing for some narrow special interest. Heathrow is the UK's hub airport. It is not London's airport. Mr Maynard's paper on UK aviation is very helpful in emphasising this. The Treasury, a few years ago, ranked Heathrow up there with the English language, the UK's time zone and the English legal system as one of the four key national economic assets that we have. We ignore that at our peril. It seems incredible, frankly, when we talk to our colleagues in Europe, both on the rail and aviation side, that we should choose, with HS2, to ignore it when there are no compelling reasons to do so.

Q363 Chair: Thank you. I just wanted to get a general view at this stage on where you stood. What would the impact of High Speed 2 be on air travel in the UK? Would it increase air travel? Would there be a modal shift from planes to rail? What would the impact be?

Allan Gregory: If I can speak, first of all, from Heathrow's perspective as a hub airport, currently we have no internal flights in the UK from Birmingham, so for phase 1 there would be no change in terms of domestic aviation with regard to Heathrow Airport. In phase 2, as currently envisaged by Government, we do not have any internal flights from Leeds, but in terms of Manchester, to give you a flavour, there are about 9,000 flights that come from Manchester to Heathrow. In fact, 80% of those are hubbing and they go on to long-haul distances. To give you a feel for quantification, that is about 2% of our overall flights. In terms of the UK, from the hub airport perspective, the real significant change in aviation would be that many flights—we believe there are about 35,000 to 48,000 flights in the north—currently fly to our European competitors, and high speed rail could replace them and keep the economic benefits within the UK. That relies on connections to the north, and indeed that be would enhanced if there were further connections to Scotland. Therefore, it is about connecting the north to Heathrow via high speed rail, which would replace short-haul flights to the European hub airports.

Q364 Chair: Do you think that effect would take place under phase 1, or would it need phase 2?

Allan Gregory: No, we think there would be no effect in phase 1 if it just goes to Birmingham.

Jonathan Young: From the Manchester side we agree, in terms of abstraction from air to rail; that has already happened, in part, in recent times with the opening or the completion of the upgrade of the west coast route modernisation and the impact of the APD. The people who are currently travelling to Heathrow by plane are, as Allan said, connecting to onward flights. However, we also take another view, in that one of the benefits, when high speed rail comes to Manchester, is that it will improve our own connectivity. Where we would see some value is in improving our catchments, particularly to the north and the midlands. It would help develop our existing long-haul network and start to beef up the traffic on some of our thinner routes. Therefore, we do not see it as a threat in that respect in any shape. As was pointed out earlier, less than 50% of our domestic traffic is around London. About 54% is going to other points, including Belfast and the south-west, where there are no benefits from high speed rail at all.

Q365 Chair: Again, would there be an impact from phase 1, or would you be waiting for phase 2?

Jonathan Young: One of our concerns is the fact that phase 2 does not, on the current timetable, come to Manchester for nearly quarter of a century, so phase 1 would not impact on us in that regard, other than in terms of one of the objectives—narrowing the competitive gap between the north and south. It is just a delay to the benefits coming to the north.

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Niall Duffy: Perhaps I can give you a bit of context before I answer the question. We fly from 38 UK airports, right from Sumburgh at the very top down to Newquay at the bottom. We operate four times as many domestic services as any other airline and our business model is slightly different. We do not fly into Heathrow. We could not afford to land at Heathrow. Looking at the current configuration of the planned Y, it will have no impact whatsoever. We will still be flying from Manchester to Southampton, we will still be offering services from Exeter to Belfast and we will still be offering services to a number of your colleagues, whom we fly to work every week, because we fly to London from places that high speed rail will not touch. Thus, from our domestic aviation perspective, it is going to have very little impact.

Steven Costello: With permission, may I slightly expand your question?

Q366 Chair: I would like an answer to this one, but there are other questions that other Members will put.

Steven Costello: One of the key issues with high speed rail that we very much agree with is the idea of rebalancing the UK economy. I come from Tyneside and my whole memory and my family's memory—

Q367 Chair: How would this affect aviation? That is this question.

Steven Costello: It is not simply a question of taking existing routes that serve corridors which HS2 might serve. A very key benefit to the UK could be improving access from the regions to the UK's hub airport. That consistently shows in surveys as being one of the key drags on regional economic competitiveness. Certainly the Chambers of Commerce and the SINEI (Surface Infrastructure of National Economic Importance) study a few years ago showed this. Therefore, we do think it is a slightly wider issue than simply which flights from current airports would move to rail.

Q368 Steve Baker: To what extent do you accept the need for the Government to drive people away from air travel and towards rail travel?

Niall Duffy: I am happy to start. A few years ago, before a lot of the investment was made by airlines like ourselves and other carriers, there was a genuine case for that, but we fly the right aircraft on the right sector. You will not find Flybe trying to cram 150 people on a one-hour flight. Rather, our business model is that we fly one of the youngest fleets in the world, partly manufactured in Belfast, and we fly people on those regular, high-frequency services—from Inverness to London, from Belfast to Manchester and from Birmingham to Glasgow—that are not offered by the train operators. We are based in Exeter, and I came up yesterday by train because there is no point competing with that. As to the market, the fact is that people are simply too time-conscious to worry about whether to take a chance on getting their connection at Birmingham New Street or whether it is a better bet for them is to fly from Manchester to Newquay. Those things have been assisted by the Government, but essentially, the time-conscious traveller wants high frequency, and they want it quick.

Since fuel is so expensive, we have reaped the benefit of investing in lower-emitting, lower-carbon and lower-fuel-burn aircraft.

Q369 Steve Baker: Does anyone else want to comment on this need to drive modal shift?

Jonathan Young: The way we have looked at modal shift is not around driving people out of aviation, but in fact the increased connectivity of High Speed 2, along with the other infrastructure out there, in terms of the existing rail network, would, we hope, start modal shift in people accessing the airport. 60% of our emissions are from people accessing the airport. That is the area of focus for Manchester Airport.

Steven Costello: I have three points. One is that putting Heathrow, for instance, and Manchester on the direct HS2 alignment in the right way—connecting them properly—would help HS2's business case, which is one of the key issues that objectors have latched on to. The second is that expanding airports' catchment gets the most appropriate mode for the most appropriate journey. Certainly, in the case of Heathrow and Manchester, it would help strengthen those airports' competitive positions in a very competitive global market. Airlines have very mobile assets. They can move them anywhere in the world. Third is this slightly wider perspective of short-haul flights to Europe. One way in which Heathrow could potentially gain some capacity but also, most importantly perhaps, some resilience, is if some short-haul flights, that are well within the three-hour to four-hour window that high speed rail can capture, could transfer to rail. Then I think there is a win-win. It is an integrated solution.

Allan Gregory: Can I add to that? There are three dimensions to this, in terms of how people travel. The first dimension is obviously intercontinental, travelling round the world; the second one is within the continent, either in Europe or the UK; and, thirdly, within the major cities. The challenge for us in each of those dimensions is an optimised carbon solution. Therefore, we have to look at all the respective modes and make sure that we have the optimised solution using all the modes at our disposal. It is interesting that there has been a recent European Transport White Paper released which called for the core airports in Europe to be connected to the rail networks, including high speed rail, by 2050. That recognises high speed rail has a key part to play within the continent, feeding the hub airports that release those long-haul flights which are needed to access the globe.

Q370 Steve Baker: Can I put it to you, though, if I have heard Mr Duffy correctly, that he seems to be suggesting, on certain routes, air actually is the carbon-optimised solution?

Niall Duffy: It certainly can be. A study by Southampton University looked at our particular aircraft, which is a turboprop and therefore uses a lot less fuel, and compared it to cars, trains and also coaches. It surprised a few people that our full aircraft was better than the car and the coach. It is not quite as good as the train, but that is why we will not compete with the train on particular given journeys. The market has driven that, partly because of fuel.

Q371 Steve Baker: Would you say that London to Manchester and Leeds was such a journey you would not wish to compete with?

Niall Duffy: We tried Gatwick to Leeds. For two or three reasons—it was partly down to landing costs at Gatwick, but also partly because we just could not compete with the train—we did not continue. We are, as colleagues have said, the best example of integrated transport with places like Gatwick and Southampton in particular. Southampton is fantastic in terms of a genuine hub that works. For that reason—we do a lot of post-code analysis—we are already seeing people from Surrey, Kent, Sussex and even from south-west London choosing to get on the train at Waterloo and come down to Southampton, rather than have to worry about going through a less pleasant experience at some of the bigger airports in the south-east.

Steve Baker: Thank you very much.

Q372 Paul Maynard: I hope my first question is relatively simple. Do any of the panel think it possible accurately to predict the aviation market in 2032?

Chair: Who wants to answer that one?

Niall Duffy: No.

Jonathan Young: No.

Steven Costello: No.

Allan Gregory: No.

Paul Maynard: That is a universal “no”. Thank you. That proves my point.

Chair: It is a unanimous “no”.

Q373 Paul Maynard: The second question is this. The Northern Way—the late, lamented Northern Way—put a lot of effort into evaluating the differential merits of airport parkways and city centre termini for high speed rail, and reached a conclusion that there were more agglomeration benefits to be had if high speed rail were to terminate in a city centre location. Given that you all represent air interests, what is your perspective on that argument? Would you counter it in any way? What are your views on why you should have a parkway station at an airport, if that is what you do argue? Maybe Mr Costello can start. He is championing at the bit.

Steven Costello: It is very difficult for your Committee, because you have been faced with wildly opposing claims, apparently based on evidence. In this case, we are very fortunate that we have real examples. If we look to Europe, not just in terms of the policy to which Allan referred, but real examples, you can see that it is both. High speed rail must serve city centres, subject to the right onward connectivity, but we need to start thinking of major transport nodes as pearls on that necklace. Frankfurt Airport is extremely successful, even though the distance from the city centre is comparable to Heathrow’s distance from the city centre.

We must not forget that Heathrow is the UK’s single largest traffic generator, and it is forecast to grow, despite Government’s very worthy objective of “better, not bigger”. It is due to grow 40% simply through organic growth. We should count ourselves very fortunate in that. It is a key asset. I would hope that the right connection to Manchester and other airports could similarly help those to grow, too. I do

not think it is an either/or case. I do not like the term “parkway”, simply because it suggests a reliance on road connectivity. The wider benefits of a Heathrow interchange were not properly considered by DfT and HS2 Ltd. It is not only a connection between high speed rail and Heathrow airport.

It is interesting to wind back to the political consensus that existed at the time of the Government announcing that HS2 Ltd had been formed, which was very deliberate: a four-way direct connection between Heathrow, the Great Western Main Line, Crossrail and Heathrow. I do not know whether you saw *The Sunday Times* on Sunday, but what seems to be happening now is that, rather than an integrated solution, as Professor Vickerman alluded to earlier, the silo thinking which is embedded in our transport planning means that we have HS2 bypassing Heathrow, then we are bolting on a spur and now, most recently in Sunday’s newspaper, this idea of a new western connection being bolted on again, at the cost of another half a billion pounds, to try to get connectivity between Heathrow and the Great Western Railway. I am sorry I have diverged from your question, but there is a very strong argument, certainly in the case of Manchester and Heathrow, for direct connection between rail, including classic rail, and the airport.

Q374 Paul Maynard: Do you have a Manchester view?

Jonathan Young: Yes. Taking the airport specifically, the Manchester view is that there is a demand for both, in terms of the opportunity to serve a broader catchment and picking up Merseyside and Cheshire. Also, we have recently been awarded—or Manchester airport has—enterprise zone status. Having a station at the airport would add value to that particular development. We also recognise the broader needs of the north and the connectivity you get through Manchester city centre station.

Q375 Paul Maynard: Do you think it unhelpful if Government seek to portray the options at termini as either/or—either you have an airport terminus or a city centre terminus?

Jonathan Young: I would say, specifically talking about Manchester, I can see the value in having both, and the benefits for High Speed 2 in having both.

Allan Gregory: May I add one point? As TfL mentioned in earlier evidence, London is facing a considerable challenge in any case, in terms of congestion within London. The way that the UK railway system has developed is that a number of passengers have to come into London to get a connecting rail service out of London to somewhere else. They do not want to be in London; that is not the purpose of the journey. However, with the way the railway system has evolved, that is what they are forced to do. Strategic interchanges around the capital, whether it is Heathrow or elsewhere, provide the opportunity for people to avoid adding to the problem of London congestion by giving them a choice of a different route. In terms of the interchange, that is a possibility.

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Q376 Iain Stewart: We have talked so far primarily about the relationship between domestic UK air travel and high speed rail. If High Speed 2 was connected to Heathrow and High Speed 1, I would be interested in your views on the potential to achieve a modal shift in air transport from the midlands and Heathrow to the near continent—to Paris, Brussels and Amsterdam, for example. As you see it, with the current plans, is that going to be credible?

Allan Gregory: From a Heathrow perspective, we are in competition with the other European hubs. We see those as Heathrow's competition and, in terms of where passengers select to go, and use their journey to go around the world, it is really about the service offering. What is the best proposition? If the best journey being offered for people in the north, shall we say, is to go via Frankfurt or Amsterdam, they would do so. The challenge for us, in the UK, is to offer a better alternative that has both economic and environmental benefits by going through the UK hub. We would see ourselves in competition with the other European hubs, rather than complementing them.

Q377 Iain Stewart: If someone wanted to travel from Birmingham to Paris, for example, if they built High Speed 2 to connect to High Speed 1—the channel tunnel—is that going to be a viable alternative, or is it going to be too long a journey? The Government are currently planning to expend quite a lot of money on building the link to High Speed 1, and I am trying to get a sense of whether that is going to be a white elephant.

Niall Duffy: Passengers are a pretty savvy bunch and they know and work out quite quickly the most efficient way to use their limited time. An example of that is when the—

Chair: Could you give as brief answers as you can, please?

Niall Duffy: A specific example is when the Eurostar terminal transferred from Waterloo to King's Cross St Pancras. We noticed that passengers south of the river were not prepared to add that extra 20, 25 or 30 minutes' journey time going to Europe. We noticed our Southampton services to Paris and to Amsterdam going up, because they had done that calculation. I do not know the answer to your question, but the passenger will work it out pretty quickly. It seems to me a big gamble to spend that money on the chance that they might go from Birmingham through to Paris, because there are plenty of examples to show that they will work out the quickest way themselves.

Steven Costello: May I add something which I hope is helpful? It is very difficult, in the way that HS2 Ltd has currently approached the proposal, to be definitive. In a way, it reflects the fact that HS2 Ltd had no aviation representative on the strategic challenge panel or any of the other challenge groups, so it is very much approached from a rail perspective. Certainly, from aviation's point of view, it is the worst of all possible worlds at the moment, simply because a line from Birmingham, bypassing Heathrow, through central London to HS1 and Europe would be, in aviation terms, a thin route. There would not be enough traffic from point to point to sustain services at a frequency that is going to generate modal shift.

If, however, you have seamless connectivity—and, hopefully, there is consensus here on this—and you could go from Birmingham to Heathrow, London and on to Europe, then each of those services is doing more than one job. There is a risk to UK aviation as well in the way that the proposals are currently envisaged, in that the spur appears only to have a north-facing chord. You could get from Birmingham in the north to Heathrow, but there is no way, until a loop is eventually constructed, of getting rail services from Heathrow to Europe. Therefore, there is a danger that that places Charles de Gaulle or Schiphol at a competitive advantage.

Q378 Chair: How should it be done?

Steven Costello: The argument is that each node should be one of these pearls on a necklace. Therefore, as in Germany and France, an airport is an interchange directly located on the through line, but with high speed through lines so that not every train needs to stop. As soon as you start getting into branch lines or spurs, you start to lose that seamlessness and the ability to generate modal shift.

Q379 Mr Leech: Mr Young, I know that Manchester airport is keen to expand its long-haul flights. Is there a danger, if it is a lot quicker to get from Manchester to London, that there is a disadvantage for Manchester airport, because there will be more of an incentive for people to get on high speed rail to get to Heathrow?

Jonathan Young: I am sorry, I missed part of that. There was a bit of noise.

Q380 Mr Leech: I know that Manchester airport is keen to expand its long-haul routes. Is there a danger, if Manchester is closer by rail to London than it is currently, that we increase the likelihood of long-haul flights staying at Heathrow?

Jonathan Young: There would always be a risk of that, but what we will be looking at is not only the London market and Heathrow. It is about improving the connectivity to the north of Manchester and into the midlands, trying to attract traffic from there on to our long-haul network. There will always be a risk, but Manchester airport's role will be to respond to that and to look at high speed rail as an opportunity rather than a threat. As we said, it is quite a long way off before it comes, so there is an opportunity for us to do something about that.

Q381 Mr Leech: Would you agree that the risk is reduced if there is a direct link to Manchester airport?

Jonathan Young: The risk is significantly reduced if there is a direct and good-quality link to Manchester airport—there are good connections into the airport itself—yes.

Q382 Mr Leech: Finally, with the Manchester section of high speed rail being so far in the future, is there a danger that you lose a competitive advantage with Birmingham?

Jonathan Young: There is very much a risk in that intervening period between the completion of High Speed 2 phase 1 and then the phase 2 north. That is why I said, earlier, we very much advocate looking at

the acceleration of the programme overall, but also at the acceleration of the section from Birmingham to Manchester.

Q383 Mr Leech: Finally, in terms of the general issues surrounding high speed rail, if there are direct airport links to the areas that high speed rail goes to, what competitive advantage does it give to those specific airports and what disadvantage is there to those airports that will not be covered in those regions by high speed rail?

Jonathan Young: I am sorry, I did not understand the question.

Q384 Mr Leech: For instance, if there is a direct link to Manchester airport but not Liverpool airport, which is a direct competitor with Manchester, how much of an advantage would Manchester be at in comparison to Liverpool as a result of having that high speed link?

Chair: Do you want to answer that for Manchester Airports Group?

Jonathan Young: No, I do not actually.

Chair: We will excuse you from that one then.

Q385 Jim Dobbin: I want to ask a question on the back of both John's and Paul's questions here, and it applies to both Heathrow and Manchester. You have both talked about the perceived benefits of having a link from high speed rail into the airports. Would your airports be prepared to support it by offering some finance?

Jonathan Young: Notwithstanding the benefits, I would like to point out that High Speed 2 also benefits from the previous investment the airport has made in infrastructure, in terms of investment in the station, recently in Metrolink and the M56 and local road widening that we are committed to as part of our Runway 2 commitments. We have already invested £160 million circa—

Q386 Chair: Following that principle, would you be ready to help to pay for High Speed 2?

Jonathan Young: I would suggest, at this stage, we would feel we have already invested significantly. Where we would be prepared to support—and we have done successfully in the past—depending on the location of a station at Manchester airport, would be in the application for TENs funding.

Q387 Chair: You would make a contribution yourself as well.

Jonathan Young: Through any TENs funding grant we were successful in securing.

Q388 Chair: Through the TENs funding, okay. What about Heathrow?

Allan Gregory: In terms of the benefits, as we have mentioned earlier, they are national strategic benefits. Positioning Heathrow in a capacity-constrained environment, there is, to be clear, a limited commercial case for a contribution from Heathrow. However, there has already been a significant contribution in terms of, although it is not visible, Terminal 5—

Q389 Chair: Would you pay towards High Speed 2?

Allan Gregory: In terms of us being a regulated airport, we would have to have consultation with the airlines. The decision would be by the regulator, which is the CAA. In answer to your question, we see a limited commercial case for any private investment.

Q390 Chair: So that means yes.

Allan Gregory: There would be a limited case—

Chair: So that means yes. I think that means yes.

Q391 Kwasi Kwarteng: I noticed that some of my colleagues were asking very regionally-specific questions. In this vein, I would like to do the same. I represent a seat in the south-east that is very close to Heathrow. Do any of you think that high speed rail offers an alternative to airport expansion in the south-east, and particularly at Heathrow?

Allan Gregory: In terms of Heathrow, high speed really would not release a significant number of slots. In terms of flights from Manchester, which we mentioned, it could release about 2% of the existing slots. Obviously any release is better than none at all, but in addressing the capacity issue, we do not see high speed rail as a solution to that, in terms of Heathrow.

Steven Costello: With permission, may I go back to the previous question? There is perhaps one element that is missing.

Q392 Chair: No. We have moved on from that. Can you answer this one?

Kwasi Kwarteng: I have asked a very specific question and I would like to hear the panel's view on that.

Steven Costello: If Heathrow, for instance, was seamlessly connected to the European high speed rail network, there would be potential for short-haul European flights to transfer to rail. Obviously that is something the Government have no levers or control over, but as we have seen with Paris and Brussels, the market could well decide. However, it would rely on seamless connections, so that you feel as though you are making an air-to-air connection at Heathrow, for that to work. It would not work going on another train to Old Oak Common, and it would not work if there was a very infrequent service via a spur, for instance.

Niall Duffy: I am happy to answer the question. The industry is already finding a way round the fact that there is less capacity than we would like in the south-east. We are already in a code-share partnership with Air France and we are in effect creating a virtual hub for UK passengers in Paris. Whether that is good or not for UK plc is entirely another debate. The industry has already responded to that. We have made that decision. We are flying more to Amsterdam and to Paris and, with those code-share links, literally just yesterday we had our first flight from Inverness to Amsterdam. We are already taking those decisions and getting on with it.

Kwasi Kwarteng: Thank you for giving a very definitive answer to what I thought was a simple question.

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Q393 Julie Hilling: If you are talking about having airports as pearls on the chain, you are presumably talking about a different route for the route from London to Birmingham particularly and, potentially, the other bit.

Steven Costello: Yes.

Q394 Julie Hilling: What is the consequence of that alternative route?

Steven Costello: It is cheaper. It is cheaper even using the Government's figures. However, the Government's figures do not seem to take into account, first of all, the environmental disbenefits of the current route and, secondly and more specifically, the need still to bolt on a western connection to get classic rail access into Heathrow. That is not a cheap thing to do. It also does not take into account the fact that when we started the Heathrow hub project about five years ago, long before Government was really engaged with the idea of high speed rail, it was simply as a private-sector project. I am not here to promote any narrow commercial interests as that would obviously be inappropriate, but something that is missing from the HS2 debate is the way in which private-sector investment can be leveraged. There are plenty of examples starting to emerge. Southend airport, for instance, is an entirely—

Chair: I am sorry, Mr Costello, we need not go into the detail.

Steven Costello: The other benefit of going via Heathrow is time. HS2 has suggested there is a three-minute time penalty in going via Heathrow, which we would argue with. However, because a direct Heathrow station would allow trains to go through at line speed, rather than being forced to stop at a remote interchange like Old Oak Common, it would be quicker between London and the north on a route via Heathrow. Therefore, there is a package of benefits. When you add in the monetised benefits that people like British Airways have suggested in

connecting the UK's regions to the UK's hub, it does become, to our mind, quite an overwhelming business case.

Q395 Julie Hilling: In terms, then, of areas of outstanding natural beauty, in terms of the National Trust—the mansions that it would go through, palaces and all the rest of that stuff—has there been an assessment of how that route would have to change through those bits? Am I right in assuming that it would change significantly?

Steven Costello: It would. We have looked at broad corridors and it would open up more options, including the options of paralleling existing motorway corridors or other ways. I hesitate to give any detail simply because you do not want to be seen as introducing blight. The other issue, in terms of environmental impact, which has been raised by the Mayor, is the impact on north-west London from the existing route. A surface high speed route through London's suburbs... and a route via Heathrow would simply extend the existing tunnel that is already proposed from Euston to Old Oak Common and keep going a bit further. We do not see any overwhelming disbenefits of a route via Heathrow, but we do see what seem to us to be quite overwhelming benefits.

Q396 Kwasi Kwarteng: I want to ask a Heathrow-specific question. If HS2 does lead to a reduction in UK flights to Heathrow, how will these slots be reallocated?

Allan Gregory: In terms of the control of the slots, that is at the airlines' commercial discretion. It would not be under BAA's control, but I think Government do have an option, in terms of protected routes, to specify some. Our view would be that the small number of slots that would be released—about 2%—would be taken up very quickly, and certainly by 2020.

Chair: Thank you very much, gentlemen, for coming and answering our questions.

Examination of Witnesses

Witnesses: **Garry Clark**, Head of Policy and Public Affairs, the Scottish Chambers of Commerce, **Keith Brown MSP**, Minister for Housing and Transport, the Scottish Government, **Tony Page**, Campaign Co-ordinator, West Coast Rail 250, and **Mark Barry**, Advisor on Transport and the Economy, Cardiff Business Partnership, gave evidence.

Q397 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. Could we start, please, by you identifying yourselves, giving your name and the organisation you represent? This is for our records.

Tony Page: I am Tony Page, Campaign Co-ordinator for the West Coast Rail 250 Campaign.

Garry Clark: I am Garry Clark, Head of Policy and Public Affairs at the Scottish Chambers of Commerce.

Keith Brown: I am Keith Brown, Minister for Housing and Transport from the Scottish Government.

Mark Barry: I am Mark Barry, representing the Cardiff Business Partnership in respect of transport and the economy.

Q398 Chair: Could you briefly tell us your approach to High Speed 2, and what your views are, to start with? Who would like to begin?

Mark Barry: If I may, Cardiff Business Partnership is broadly supportive of investment in transport infrastructure as a means of enabling economic growth, rail included. However, we are concerned that High Speed 2 is very much focused on a corridor from London to the midlands and to Scotland and completely ignores those significant numbers of people living in Wales and south-west England. The only data we have seen to examine the economic impact on that part of the country shows quite a big deficit, or impact in a negative way, from high speed rail.

Q399 Chair: Thank you. Minister, would you tell us your views?

Keith Brown: From the Scottish Government's position, we are very supportive, but we do believe that Scotland's case is central to the business case of High Speed 2. We argue that the strategic network proposed by the Department for Transport does not really go far enough at this stage and that, at this early stage, a network plan needs to be established that includes both Edinburgh and Glasgow. That is because we believe the major benefits from High Speed 2 will be realised when it goes to Scotland, because of the modal shift that can be achieved there and the business advantages.

Garry Clark: I think very much as the Minister has outlined there. From a Scottish perspective, our members are very keen on high speed rail, particularly coming to Scotland, but we are supportive of the initial plans to build high speed rail throughout the rest of the United Kingdom. We would like to see Scotland, obviously, included at the earliest possible stage in that, but we are very supportive of the principle of high speed rail, and we are certainly very supportive of the initial plans to get high speed rail development under way in the United Kingdom.

Tony Page: West Coast 250 was formed by and represents over 40 local authorities along the line of the West Coast Main Line, from Scotland and north Wales down to Milton Keynes in the south. We did have Buckinghamshire and Hertfordshire involved, but our views on High Speed 2 meant they decided to detach themselves.

We have consistently campaigned for the upgrading of the West Coast, and the West Coast Main Line is now very much a victim of its own success, as you will be aware, with major capacity problems. We are very strong supporters and campaigners for a new high speed line to provide extra capacity on the existing classic line as well. We feel strongly that the national case for a high speed line also needs to promote the major benefits that can then accrue to the classic line from day one of High Speed 2. There are major improvements to be had, and we believe that a national context needs to be given to the line.

I very much endorse the comments that were made earlier about the need for a national picture and for national leadership to deliver that national vision for a line with national benefits. A new high speed line will obviously benefit travellers on that line, but it will and can deliver, from day one, major benefits to the existing line and to communities all the way along it. That case needs to be made in tandem, so that HS2 is not promoted as some sort of elite service that would enable the opponents to make much more headway than we believe they are entitled to. We wish to see much more emphasis placed on the day one benefits to the existing line, as well as, obviously, the major benefits that will accrue economically and environmentally along the line.

Q400 Mr Harris: Minister, from what you said, the Scottish Government do support high speed rail in general throughout the UK, but obviously to Glasgow and Edinburgh, and I am with you on that. Did the

Scottish Government make any submission to the DfT consultation on this?

Keith Brown: Yes, we did, along the lines I have suggested, with a number of other points made as well.

Q401 Mr Harris: Is there a particular reason you did not submit anything to this inquiry?

Keith Brown: We knew we were going to get the chance to give evidence. We had also given that previous position to the DfT and we thought that would be available to you.

Q402 Mr Harris: Does the Scottish Government accept that High Speed 2 phase 1 from London to the west midlands, even before any more is built, has a benefit to Scottish passengers, in terms of journey times?

Keith Brown: It is bound to have, and it gives extra resilience and capacity to that route, which obviously is a route through to Scotland. We are also very aware of the delays that are possible in the course of very large transport projects. We have one in Scotland that has been subject to quite a significant delay.

Mr Harris: Let us not talk of that.

Keith Brown: Being aware of that, we have formed the view that a partnership group, which I have asked to come together, should also be looking at what we can do in Scotland in the meantime to raise a possibility that, if there are those problems with the infrastructure and land acquisition on that part of the line which you have mentioned, then why not start it from Scotland? The West Coast Main Line is going to have to be upgraded in any event, so—

Q403 Mr Harris: This is exactly what I want to lead on to. Is there any appetite for looking seriously at the prospect of building southwards from Glasgow? I would suggest Glasgow.

Keith Brown: There have been representations from the industry to do that, for the reasons I mentioned. The partnership group is trying to work from the context of the current proposal, but certainly we should look at the question, in any event, of where you are going to start on the line. If you are going to have the line right the way through to Edinburgh and Glasgow, where is the best place to start? Is it best to start in different places at the same time, which there is an argument for as well? It is the case that we are going to have to upgrade the West Coast Main Line through to Scotland in any event because of capacity constraints, notwithstanding the money that has been spent on that? Why not look at what is, in a way, the easier part of the project to do—coming down from the north that way? In the meantime, it also helps the other things that have to happen for the line that you have mentioned already, so there is a case for it.

Q404 Mr Harris: How much work have the Scottish Government done on the financial difficulties, because they are fairly immense even for the UK Government? Presumably, Barnett is not going to cut it, in terms of a 100-mile line from Glasgow and Edinburgh down to Carlisle.

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Keith Brown: First of all, you have to establish the principle, but you are right to say that the financial situation is going to be absolutely crucial to that. As is much the same for the rest of the line, you could take a number of financial models for doing it. For example, serving the track access charges for HS1 has raised around £2.1 billion. Again, there could be money raised through that. The cost to the Scottish Government is very hard to quantify right now, but when I spoke to the Secretary of State for Transport, he agreed the point that the UK Government would be responsible at least up into the border, which is a change from the previous position. Depending on the estimates—and it is probably not right to get into estimates now—you are talking of £7 billion or £8 billion for Scotland, which is way beyond anything we have heard just now. Therefore, that would have to be met by changes to the fiscal arrangements in Scotland, which may mean proper borrowing powers. The biggest capital project we currently have is the Forth Bridge, which is less than £2 billion. However, as I say, there are different ways to fund that. The industry can be involved and you can sell back the benefits of the track once you have built it as well. Therefore, we have to establish the principle of what we want to do first and then look at the financial situation at that time.

Q405 Mr Harris: I have one more question. I am delighted with what you are telling me about the Secretary of State saying that the UK Government would be responsible for the line right up to the border. Obviously, that would not be the case if Scotland were independent. How on earth would Scotland be able to build a line if they were independent? Presumably the English Government would not build anywhere north of Manchester.

Keith Brown: That would be a decision for the English Government, but if we document the financial situation in Scotland, we would not be constrained in the way we are now. I used to be the leader of a very small council in Scotland which has greater borrowing powers than the Scottish Government, which is an absurdity. If that were to arise, the fact is that after independence, Scotland and England, of course, are still going to be the dearest and nearest neighbours they have to each other. We are going to have to work together on those things. I cannot imagine a UK Government being so short-sighted that they would not want to improve their transport links to their nearest neighbour.

Q406 Mr Harris: They would still build the line up to the border?

Keith Brown: That is what the Secretary of State said they would do.

Chair: We are getting into other realms here. Mr Harris, are you satisfied with the answer you have there?

Mr Harris: Yes.

Q407 Julian Sturdy: Mr Page, you mentioned in your opening remarks that you did not want to see HS2 based as an elite service, and we have to make sure we focus on the improvements that HS2 would

bring to the more traditional lines—the West Coast and the East Coast as well, I would say, as a York MP. However, if HS2 is going to be a faster service, which it will be, is it not naturally going to happen that it is seen as an elite service? Does that not bring in the consequences that we are potentially going to have a two-tier service? If that is the case, how do you propose to stop it happening?

Tony Page: Similar comments were probably made ahead of the channel tunnel opening. Pricing, obviously, for the railway operator, will be looking to fill as many seats as possible across the whole day, not only peak but off-peak. Therefore “the elite” was referring more to the nature of the journey. The fact is that the classic line will have major benefits given to it from the release of capacity. The current line is almost full—a point to which one of your colleagues alluded earlier. What we are looking to promote is the greater use of rail travel, and we want to enhance the connectivity within the West Coast Main Line and the regions so that more freight and local journeys can be made. Those benefits need to be set out by the Government; effectively, a mini franchise spec should be delivered, so that communities along the line can see the potential benefits. Milton Keynes has suffered recently from the upgrade, with fewer direct services, but, as the Greengauge study showed only a few months ago, there are major improvements in the number of fast services that could be offered to Milton Keynes and many other communities along the line. Thus, the freeing up of capacity by delivering HS2 offers enormous improvements from day one along the West Coast Main Line. That case needs to be made in tandem. The point I was making was that there is a real danger the debate around HS2 is seen as only about HS2 and serving a particular market when, in fact, the benefits can accrue across the country from day one.

Q408 Julian Sturdy: Obviously, you talked about the opportunity for increasing freight, and that has been mentioned before in the debate we have had. Are you also saying that you would like to see more stops on the classic lines as well, so you are opening up new potential areas for people who have not been served by these lines in the past?

Tony Page: That needs to be looked at as well. I have the Greengauge report in front of me—*Capturing the benefits of HS2 on existing lines*. It has a very useful table, right at the start, which shows the sorts of improvements that can be delivered along the line, starting as far south as Wembley Central and going up to Birmingham. That is just for that stretch of the line. Then, clearly, the potential, with new capacity available on the classic line, for looking at new stations is there, and that can be planned in advance. Our view is that, with the enormous growth in demand we have seen recently, at a time when the economy is flatlining and when there has been a great improvement in reliability—a doubling of passengers in six years—the growth potential is enormous.

The “staying at home” argument we heard earlier is a bit of a canard, because we are looking at much more leisure and tourist travel, and are representing authorities in north Wales, the Lake District and

Scotland. We are not only talking about business travel. We are talking about a huge growth in the leisure market. With people retiring earlier and all sorts of demographic changes and population growth, we believe there is a huge market still to be tapped, and that may also deliver new stations.

Q409 Julian Sturdy: I have one last point. Do you believe there is a danger, though, for the classic lines over the next 10 to 20 years that there will not be the development within them if HS2 goes ahead?

Tony Page: There is a real danger, which is why, in our submission and consistently—first to Railtrack and then to Network Rail—we have made the case that the partial upgrade that has now been delivered needs to be maintained. There has to be regular investment in the line to maintain the current reliability. We now have better reliability, with occasional exceptions, than we have seen for many years, which is delivering the huge growth, and that has to be paid for. We must not sit back and allow the sort of starvation of investment that happened for periods under British Rail, through no fault of its own, because of the financing mechanisms in those days. There is regular money that still needs to be spent on the West Coast Main Line.

Julian Sturdy: Thank you.

Q410 Chair: Have you made any assessment of how much money should be spent on the West Coast Main Line to achieve what you are asking for?

Tony Page: Yes, but I am afraid I do not have those with me, Chair. I could certainly let you have those.

Q411 Chair: Could you let us have those?

Tony Page: Those are mainly based on work that Network Rail has done in the course of the recent RUS study.

Q412 Chair: It would be helpful if you could let us know what kind of amount of funding you have in mind on that.

Tony Page: Yes.

Q413 Iain Stewart: I would like to touch on the potential for freight transport on rail to be increased if High Speed 2 goes to Scotland. Is there currently a capacity problem on the West Coast Main Line at the Scottish end that a high speed line could alleviate?

Garry Clark: I was speaking to some of our members who are active in the rail freight sector. The capacity issues are less at the Scottish end and greater the further south you go on the line, in terms of through traffic from Scotland to the south coast ports, etcetera. There are certainly constraints the further south you go in the network, obviously. We would see high speed rail creating additional capacity and hopefully freeing up some existing track space for freight services, which could be beneficial to freight transporters within Scotland.

Q414 Iain Stewart: Is it only an issue of capacity at the southern end of the line which is inhibiting a transfer from road to rail, or are there other issues we

need to be looking at about access to ports and other destinations for freight?

Garry Clark: There are certainly some access issues. I know there has been some work to improve access to, for example, Southampton over the past couple of years in terms of freight gauge and so on. Hopefully, if we see additional capacity we would see greater numbers of services able to be provided point to point from Scotland to the rest of the UK, and we would hope to see investment in rail freight terminuses in Scotland as well, which would, again, improve the capacity of the network to handle greater amounts of freight and take that freight from the roads.

Q415 Iain Stewart: I have one other Scottish question, if I may. I can see how Glasgow and Edinburgh are very enthusiastic about high speed rail coming there, but what about other cities and towns in Scotland? Do they fear they might be disadvantaged—that Glasgow and Edinburgh would suddenly attract more and more business to the detriment of Dundee, Aberdeen or elsewhere?

Garry Clark: Speaking on behalf of a network of 21 Chambers of Commerce across Scotland, we have pretty universal support throughout the network, from Caithness in the north to Dumfries and Galloway on the borders in the south, in favour of high speed rail. What we do need to see is continuation of the investment that the Scottish Government and Network Rail are providing through the EGIP project in order to improve connectivity within the central belt, first of all, to improve services between the central belt and Aberdeen and Inverness, reduce journey times and increase service times, all of which ScotRail, the franchise operator, is promising at the moment. If we see those enhancements—particularly the central belt electrification, which is currently under consultation—that will alleviate any concerns, or certainly a large number of the concerns, in terms of favouring Glasgow and Edinburgh. Certainly, EGIP itself, in terms of central belt electrification, would open up the market for high speed rail to 3.6 million people within Scotland.

Q416 Chair: Mr Barry, you have told us about the anticipated problems for the Welsh economy. Have any compensatory measures been suggested, or are you seeking any specific actions?

Mark Barry: Not in detail. I would welcome the opportunity to give you a Welsh perspective. I believe all the Members here are representative of northern or Scottish constituencies. From a Welsh perspective, we saw the Great Western Main Line upgraded in the 1970s and nothing since until the recent announcement on electrification. In the 1980s, journey times from Cardiff to London were faster than those from Manchester to London by at least 30 minutes. Since then, we have seen a £9 billion upgrade of the West Coast Main Line and the electrification of the East Coast Main Line, so Cardiff and Bristol are getting further from London in respect of connectivity. That is important.

One of the companies I represent, Admiral Insurance, chose to locate in Cardiff in 1993 because it was less than two hours from London on a train. That company

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now employs 3,000 people with a market capital of nearly £4 billion. They would not choose to locate in Cardiff today because it is further from London and there are other major locations in which it could have chosen to base itself. We were sitting in Cardiff—and it is the same, I think, at Bristol—watching this debate. It is always about north-south, Scotland-Birmingham and Leeds versus Manchester. Yes, we support investment in infrastructure, but the questions that arise are: if you have £32 billion to spend on improving the rail infrastructure of the UK, what do you do? Where do you do it to ensure we get an even distribution of economic impact throughout the UK, as George Osborne and the coalition Government have stated is their objective?

We see that the only analysis undertaken on the economic impact was not by the DfT, which presented very high-level figures—30,000 to 40,000 jobs and the £40 billion positive impact—but by Greengauge's work, of which I am a big fan. I applaud Jim Steer and Julie Mills for making the case for high speed rail. Their analysis of the economic impact shows that Wales and south-west England could lose 60,000-plus jobs. If you are a Welsh taxpayer, you are thinking, "We are going to be paying £1.5 billion towards this £32 billion scheme and we are going to be short-changed by 21,000 jobs, and the Bristol/south-west region by 40,000 jobs." We are thinking, "That is not really good enough." The Greengauge analysis, as you are probably aware, had assumed the Great Western Main Line would be electrified.

Therefore, from our perspective, while we support the principle of investment in rail and high speed, the key issues, like access to Heathrow, connectivity with Heathrow and what you do to improve journey times within Cardiff, Bristol, London and Heathrow, need to be addressed. The HS2 approach has been very narrowly defined and has missed opportunities to do something more strategic for the UK. The Heathrow question is fundamental.

Q417 Chair: Are the suggestions you are putting forward instead of HS2 or broadening the concept?

Mark Barry: They are broadening. I think we should broaden this debate to a high speed rail debate for the UK. I do not know how many billions of pounds in that £32 billion are to mitigate environmental impacts in the Chilterns, but if that is justified, how much, in terms of billions, should be spent on mitigating the economic impacts in those areas not receiving a direct benefit from high speed rail?

Q418 Chair: That is being left out at the moment and you feel it is not being considered.

Mark Barry: That is being left out. I would prefer the DfT honestly to present the impact of this investment across all the regions and major conurbations of the UK. We have five million people living Severn-side—Greater Bristol, Greater Cardiff and Greater Swansea. We are all taxpayers and we want to see the country develop and get out of the recession. We feel uncomfortable that, at the moment, we are not even part of the debate. Therefore, while we support it in principle, the scope of HS2 needs to be broadened to be more strategic and include things like the Heathrow

access question. More passengers need to fly from Heathrow from Wales and south-west England than any other region in the UK proportionately, yet that was not included in the thinking about access to Heathrow. That could have been included and given a different outcome in terms of the result of that assessment. The Heathrow hub scheme, for example, which was discussed earlier, might have been seen in a different light if a more strategic view had been taken of that whole assessment.

Therefore, I am uncomfortable with the narrowness of the approach and the fact that Cardiff is going to be disenfranchised economically, when it is quicker to get to London from Manchester, Leeds, Sheffield, Nottingham, Liverpool and Birmingham than from Cardiff and Bristol. How can we compete? We are the most disadvantaged part of the UK and we need to remove those inequalities.

Chair: Thank you very much for that perspective.

Q419 Graham Stringer: Tony, the opposition to High Speed 2 in this place and, I understand, from at least one west midlands council, does not only come from people who are opposed to the environmental impact on the Chilterns. It comes from some people who believe that you can solve the capacity problem on the West Coast Main Line by parallel running for local trains and for freight and by an increase in the gauge. It is a cheaper solution. What do you say to those opponents?

Tony Page: From all the work that we have done, we would reject that, and certainly our submission makes that clear, because it will not deliver anything like the additional capacity which is needed in the next few years. It might be a palliative, and clearly in the intervening period between now and 2026 one needs to look at possible enhancements in capacity, but the experience of the West Coast Main Line upgrading—and remember it was only partial upgrading—was huge dislocation. Mr Harris, as a former Minister, will remember the problems that existed—the weekend working, the dislocation to travel, the huge number of complaints—to deliver that upgrade and the limited benefits. It was very important, particularly in reliability, but was not delivering huge increases in capacity. We will obviously see more capacity with the Pendolino lengthening, and that is very welcome, but we cannot go much beyond that.

The real issue is whether or not we have the wish to promote the huge benefits in capacity from a new line. That is a combination, obviously, of a business case and a political commitment. At the end of the day, the time period that we are talking about requires a political judgment, and leadership as to whether or not this is going to be in the interests of the country. I certainly endorse the comments that have been made about the need for a national picture and a national vision around the development of high speed lines. We have had the Trans-European Network for many years and, clearly, the Great Western Main Line is part of that. However, in terms of this particular project—HS2—it needs to be put in a national context, it needs to show there are national benefits for Scotland, north Wales and the other regions from the improved connectivity and, above all, it needs to show the extra

capacity and the attendant benefits this will provide. I would trust that the Government, with the hopefully continuing tri-partisan consensus, will be able to promote that case, because it is critical. We must not allow the case for HS2 to be detached from the existing services and major benefits that can be delivered to the existing line from day one, because there is no reason why through services should not operate from Scotland using High Speed 2 from day one. It is not just London-Birmingham we are talking about; we are talking about the whole country benefiting from day one. That case has to be made. It is critical to selling it to the country.

Q420 Jim Dobbin: If we can relate back to the previous conversations that we had with the representatives from Heathrow and Manchester airports, I have two short questions. What impact would the development of HS2 have on Glasgow airport and Edinburgh airport? Would that have an impact? Would it be beneficial?

Keith Brown: One of the things I would say is the absence of that link right now is having an impact on Glasgow and Edinburgh. We have seen the withdrawal of the British Midland flight from Glasgow to London Heathrow, and that is in large part because so-called regional services cannot command the kind of fees or the return that these slots can command if they are long-haul ones. Thus we are seeing a diminution of services to Edinburgh and Glasgow currently through the absence of a high speed rail line.

I mentioned the point that the biggest dividends for this come if it goes to Glasgow and Edinburgh. If you do that, you can get a really substantial 60% to 90% modal shift from air to rail, which helps us all in many ways. That shows the need for that kind of infrastructure to be there. Certainly during the past winter, when Heathrow was in some trouble, as were parts of Scotland, the Secretary of State said the reason why passengers going to Scotland were shunted first was because they had other means of getting to their destination. This, of course, was at the time when both the East Coast and the West Coast Main Lines were out of action, as was the motorway over Cumbria. Therefore, high speed rail would have an impact, but I think what you would see is that if you do not have that alternative it is having an impact anyway. We are losing the slots that are there at Heathrow now, so it would give us a real alternative.

Q421 Jim Dobbin: Briefly, if it was possible to have a link from HS2 into either, both or one of those airports, would you want that to happen?

Keith Brown: As Garry has mentioned already, what we are trying to do between Edinburgh and Glasgow is the EGIP project, which is going to give an improvement in journey times and electrification. That is what we are concentrating on at this stage. Part of that will involve the new junction at Gogar on the outskirts of Edinburgh, which will improve things out to the airport. I suppose those things could be looked at then.

Q422 Steve Baker: Mr Barry, you talked about the consequences to Wales and the south-west of High

Speed 2. Can I confirm it was your evidence that you think 60,000 jobs would be lost in those regions?

Mark Barry: They are not my figures. They are Greengauge's and KPMG's figures from their report published last year, *Consequences for employment and economic growth*. I took the data from that report because I trust their work and analysis.

Q423 Steve Baker: What I am conscious of is that most of the other regions of the UK not served by HS2 are not alive to these consequences. What was it that prompted you and those you represent to pick up on these numbers?

Mark Barry: I used to run a business and spent a lot of time travelling back and forth to London to meet investors. The interaction between south Wales, Cardiff and London is important because people use it for business. Therefore, I have been very aware of the high speed rail debate, Greengauge's perception and the progression, and I have watched with dismay as the debate progressed without any real dialogue or engagement with those of us in the Cardiff city region, Swansea, Bristol or south-west England. It's been like, "Oh, we've forgotten about you guys," and it has not been included. Even in Greengauge's work it was bolted on and assumed it would only be an electrified Great Western Main Line. The only group that has looked at a more strategic impact upgrade is the Bow Group in its report last year, *The Right Track*, which I was quite supportive of, in terms of its incremental approach: upgrading the existing infrastructure, using Brunel's legacy, to deliver, effectively, a high speed rail line for a fraction of the cost of High Speed 2.

Q424 Steve Baker: What would you say to those regions of the UK that have not picked up on these numbers?

Mark Barry: They need to start listening, talking, engaging and doing some reading. That is what I did. The data are out there. You have to pull it out, analyse it and present it. Then it is quite clear. It is the elephant in the room. We do not have a holistic UK high speed rail strategy, or a rail strategy for that matter. We need to step back and have a look at what we are doing for the whole of the UK and in what order, so that we do not disenfranchise one part of the country for the benefit of another—just abstract activity from one place to another. That is not what we want to see. We want to see an even impact, even growth, throughout the UK. Then we can all engage and buy into that. What we have now has not done that.

Q425 Steve Baker: Thank you very much. Mr Clark, I think you said that all of the Scottish Chambers of Commerce, with perhaps a few exceptions, are in favour. I think Mr Brown told us that it would cost about £8 billion to get the high speed rail line from Glasgow and Edinburgh down to the border. At the moment, if I have heard you correctly, it would cost Scotland £8 billion to put high speed rail in. But let us say that it costs £8 billion to £10 billion for the UK, England, to extend high speed rail up to the border. It feels to me like it is costing about £40 billion for England to put high speed rail up to Scotland and

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costing Scotland about £8 billion. Does that sound about right to you?

Garry Clark: I think we have to look at it holistically in terms of a single project for the UK. As I say, we want to make sure that Scotland is very much part of the map when it comes to high speed rail. We do not think that what is on the table at the moment goes quite that far. Obviously, there are financial issues that need to be hammered out between the Scottish Government and the Westminster Government.

Q426 Steve Baker: What would you say to those people Mr Barry represents and those people in the south-west who are going to lose those 60,000 jobs? What is your argument to those people who are bearing the costs in order to support Scottish businesses?

Garry Clark: We have said that a UK-wide high speed rail network would have to include the likes of Cardiff and Bristol at some stage. We need to start somewhere, and certainly the initial London-Birmingham stretch is the start that we need and support. Without that we would not get anywhere. Having said that, from the Scottish perspective, we want to see Scotland very much part of those plans.

Q427 Steve Baker: You would like to see high speed rail everywhere—everywhere that makes sense.

Garry Clark: We would like to see it connecting the key conurbations within the United Kingdom.

Q428 Steve Baker: Over what time scale do you think that would take place?

Garry Clark: At the moment we are looking at 2033 to finish the Y network. We would certainly argue that we ought to be able to commence building south from Scotland at least during that period or, at worst, as a phase 3 thereafter. Ideally, we would like to see construction work start in Scotland to meet with the rest of the United Kingdom.

Q429 Steve Baker: Finally, if I may, would you say the pitch to the people of Wales and the south-west is that they should hang on for 40 or 50 years because it will be good for them eventually?

Garry Clark: They need to be part of the network. The network has to start somewhere. If I was representing my colleagues in the Chambers of Commerce in Wales, I would be fighting tooth and nail to ensure that Wales was very much part of the picture. At the moment, I am fighting for Scotland.

Steve Baker: Thank you.

Q430 Chair: How important do you think it is that these schemes should be phased differently? I accept the problems in relation to Wales and the south-west that we have been told about, but in looking at the general strategic approach—the proposed phasing, the Y shape—is all of that reasonable, or should it be done completely differently?

Keith Brown: One of the problems is that the capacity on the West Coast Main Line currently is due to be breached, if you like, around 2024 and work is going to have to be carried out on that line anyway. What you could end up having is a situation of spending

£26 billion or £30 billion on a line that you would then have to upgrade north of that afterwards at substantial numbers of billions. That helps to make the case for it.

I should also say that if those figures were correct, and we are a long way from it—and one thing I have learnt from my short time in this job is not to make very definite projections about figures on public capital projects—and if you were looking at £40 billion and the Scottish Government were to contribute £8 billion, of course under current rules it would also be contributing towards the £40 billion as well, because that comes from the UK Exchequer; that would be one sixth, and substantially more than Scotland's share of it. Therefore, I do not think there is any case that Scotland would not be paying its way on this. That is an idea of how important it is to us. For those reasons, and the reasons I mentioned earlier on in terms of your point, Chair, about phasing, why not start where it is easiest to start from and build from the north down south?

Q431 Chair: Mr Barry, are there any other points you would like to make?

Mark Barry: As a general point, if you look at the UK and its major conurbations, you should then look at the major transport corridors and analyse them. Where do the most capacity constraints currently exist? What are projected? Therefore, where do you need to remediate? Clearly, the West Coast Main Line, I acknowledge, has a problem, but that is probably on the lower section between London and Birmingham. The most congested services currently, according to the ORR's figures, are on the Paddington line out of London to the west. You need to look at the network as a whole and the strategic corridors. Where are the most capacity constraints? Maybe what you do is go to Birmingham. Then phase 2 is not up to Leeds or Manchester but to another route out of London, or a bypass on the Great Western Main Line or a route across the Pennines. I do not think we have looked at this in a strategic way, at where the major pinch-points are and what can have the most impact.

Also, you have to consider urban rail networks and rail systems to improve connectivity within major cities, because that has a huge benefit if delivered. If you have £32 billion or more perhaps to spend, maybe you are spending it all on connectivity between major cities and not enough on the regional dimension within cities.

Chair: Thank you.

Tony Page: Clearly, there is an assumption about phasing in this country, which is taken over a longer time span than in some other countries, and there is a debate to be had about the way in which we deliver national infrastructure projects. Projects have to be phased, but we should not necessarily assume we will always take as long to deliver projects of this sort. Hopefully, we will not. I think we would all agree—certainly our campaign would—that we want to see the timetable accelerated as far as possible, and we strongly support any initiative to start building the line in Scotland at the same time. After all, the channel tunnel was dug from both ends, and they even met.

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The argument for starting north of the border is very compelling.

The funding is another debate. There seems to be an implicit assumption that somehow this will be public expenditure. It need not necessarily be. We have spoken to private sector funders or potential funders who see quite an attractive proposition. It is the delay and the time in delivering these projects that is the deterrent, not the business case per se.

The final point is about crowding. If you look at the most recent ORR statistics on crowding outside London, Manchester and Birmingham, and then Manchester, are shown as having the biggest problem. Birmingham, hopefully, will be dealt with in the first phase, but clearly there are other major problems along the West Coast, as you will know. Certainly our view, and that of all the companies that we have spoken to that are bidding for the current franchise—that process is under way at the moment—is that there is huge latent potential on the West Coast Main Line. I repeat what I said earlier: we need to make that case so that the benefits cascade around the country and to the current line as well.

Mark Barry: I have one more point on the Great Western Main Line. As you alluded to, we could wait 40 years for an £18 billion high speed line from London to Cardiff, and maybe we do not want to wait that long. There is a much more pragmatic approach to the Great Western corridor. Looking at Brunel's legacy, from my understanding, a lot of that route could cope with faster speeds. If we could invest judiciously in appropriate upgrades and grade-separated junctions and a change to the franchise terms, we could achieve significant benefits in terms of journey times and capacity. If we could achieve the same average speed on the Great Western Main Line between Cardiff and London as currently exists on the West Coast Main Line today between

Manchester and London, we could shave half an hour off the journey time.

Therefore, I am not saying I want a brand new £18 billion line now ahead of you guys. That would be nice, but I am realistic. Let us be more pragmatic and look at what a series of incremental upgrades can deliver for far lower cost, with much more benefit and impact: Heathrow access, four-track on certain sections of the Great Western Main Line, and upgraded signalling, reducing congestion at certain points. You will then be able to offer, effectively, a high speed service for a fraction of the price and deliver huge benefits to all those people in that part of the world who are currently being missed out.

Chair: Thank you. Are there any other points?

Q432 Kwasi Kwarteng: Forgive me if this topic has been raised before, but do you think that the implementation of a high speed rail line would cut the number of flights from Scotland to Heathrow?

Garry Clark: It would certainly generate modal shift, looking at examples in other countries. Currently, the numbers, in terms of rail journeys from Scotland to London, are something like 15%. Looking at examples in other countries, that could probably change to upwards of 60% that would be carried by rail.

Q433 Kwasi Kwarteng: Do you really think it would go from 15% to 60%?

Garry Clark: Yes, minimum.

Keith Brown: The tipping point has a lot to do with the journey time. If you can get it below three hours, then it is even further modal shifting.

Chair: Thank you very much, gentlemen, for coming along. Thank you, Minister, for coming here to speak to us.

Tuesday 13 September 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Julie Hilling
Kwasi Kwarteng
Mr John Leech

Paul Maynard
Iain Stewart
Graham Stringer
Julian Sturdy

Examination of Witnesses

Witnesses: **Sir Brian Briscoe**, Chairman, HS2 Ltd, **Alison Munro**, Chief Executive, HS2 Ltd, and **Professor Andrew McNaughton**, Chief Engineer, HS2 Ltd, gave evidence.

Q434 Chair: Good afternoon and welcome to the Transport Select Committee. Could I ask our witnesses, please, to give their names and position? This is for our records.

Alison Munro: Alison Munro, Chief Executive of High Speed 2 Ltd.

Sir Brian Briscoe: I am Brian Briscoe. I am Chairman of High Speed 2 Ltd.

Professor McNaughton: I am Andrew McNaughton, the Chief Engineer of High Speed 2 Ltd.

Q435 Chair: Thank you. Many of the environmental groups who have made representations to us say that the speed of 250 mph has precluded alternative routes that might be less environmentally damaging. Were you instructed to design the route at 250 mph or was that your choice?

Sir Brian Briscoe: I will ask Andrew to comment on the engineering arguments for the particular speed that we have been designing to. Perhaps I could say first of all, though, that our remit is from the Secretary of State for Transport to advise on a business case for high speed rail, to advise on potential routes and to support him and the Department in consulting on London to the west midlands. We are not advising you or him particularly on strategic transport policy or alternatives, and if there are questions the Committee wants to ask they would be better directed at the Secretary of State.

Q436 Chair: Sir Brian, if you are advising on the routes, that must involve consideration of some of these factors. We have been told by other witnesses that, because the maximum speed is 250 mph, that has precluded some routes from being considered. That would be a factor in your advice on routes, would it not?

Sir Brian Briscoe: Clearly, the engineering specification is affected by the speed of the route and I will ask Andrew to comment on that in a moment. Can I also say, though, that we have been consulting on both London to the west midlands and the wider strategic network with the Department? The consultation closed on 29 July. We have had over 50,000 responses to that consultation. We have not yet been able to analyse all of that material or to do the work necessary to give advice to the Secretary of State about what those results of consultation are saying. What we are saying today is about the work we did

before consultation rather than a response to what has been said during the last five months of consultation.

Q437 Chair: Were you instructed that this had to be the maximum speed?

Professor McNaughton: No, we were not. The original remit from the previous Secretary of State was a high speed line of similar standards or similar type as High Speed 1, in other words, that it was to European standards and at least 300 kph. We developed our early work with our engineering advisers, Messrs Arup, looking at all the possible corridors we could find. There was the original very long list of corridors and that was before we took any view about potential top speeds.

In developing those corridors, it became apparent to us that some were more amenable to higher speed than others. In developing for each one the balance of journey time, cost and impact on sustainability, environment, people, etc., we took each route in turn. I know people have talked about our routes which followed motorway corridors. They had a certain speed potential over various parts of them, greater or lesser. The other routes we looked at similarly, because, while we have a high top speed, the actual speed at any point on the route is always a balance between cost and journey time and impact. Even on the route that we recommended to Government and Government has consulted on, by no means all of it is designed for that top speed.

If I mix kilometres and miles please forgive me, but I will stay in kilometres for the moment. The reason we went initially for 350 kph to 360 kph was partly because each of the routes we looked at, including motorway corridors, had potential for that sort of speed while retaining suitable sustainability impacts. That technology is widely available now, all the major manufacturers produce technology for those speeds, and around the world all our colleagues in every country are designing an alignment for at least that sort of speed.

We took it a little bit further on to the 400 kph or 250 mph for two reasons. One is because we learned very strongly from people that we respect, like Guillaume Pepy in France, that they had wished that they had not designed to the limit of the day because the technology continues to advance. They warned us very clearly not to design to the limit and always leave something in hand either for future generations or simply because engineering systems work better when

they are not running on the limit. There are examples around the world where people have run things on the limit and they go poorly in the end. But we did not, dogmatically, at any time design to that top speed. That was where it was sensible, practical and gave what we considered in our judgment an acceptable balance of minimising journey time and, therefore, benefits to the cities that High Speed 2 would serve, against the cost and sustainability impacts.

Q438 Chair: So the people who believed that the routes aligned with motorways were ruled out because of speed are wrong. Is that what you are saying?

Professor McNaughton: They are wrong. They were ruled out on the balance of longer journey time, higher cost and being no better on sustainability. That was written up in our original report.

Q439 Kwasi Kwarteng: I am interested in this claim, or rather ambition, to have 18 trains per hour. Given that, as I understand, this does not happen in any other high speed network in the world, what makes you so confident that you can achieve this target?

Professor McNaughton: It might be worth mentioning just in passing that High Speed 1, now that it is in the private sector, has stated publicly that it offers up to 20 paths an hour on High Speed 1, but High Speed 1 is a shorter and more compact route. We are confident because those of us who are involved with High Speed 2 have worked individually with the control systems and colleagues around the world on high speed for over a decade.

On a personal level, I have chaired the meetings and the Committees around the development of ETCS or ERTMS, the control system, since 2001. We have worked it through as a whole system because it is not just about technology. It is about the type of service you operate, the layout of stations and so on, which I can go into probably in more detail than you would wish this afternoon but I can if you wish, to provide a system which is very high capacity. We devised this from the start as a high capacity system.

We have worked from first principles to come to a conclusion that, comfortably, reliably, day in and day out, a future railway could operate with 18 trains an hour. Technically, we came to the conclusion at High Speed 2 that our worst case, looking at the whole system, was actually that it would be completely full at 21 trains an hour, but, again, you do not want to run a system right to the limit. That is not just our view; it has been supported. Bearing in mind we know people have challenged this, I have asked others to peer-review our work and our conclusion of this band of round about 21 trains an hour, which means 18 trains an hour reliably, is supported by Network Rail and by Professor Rob Smith, who is the current President of the Institution of Mechanical Engineers. We have asked independently one of the signalling majors, which is Bombardier Transportation, to do their own calculations uninfluenced by what we have done. They have reported to us that they have come to the same conclusion and they have done more ETCS installations in the world, I think, than anybody else. In recent days Systra, the French railway consultancy,

have also reported to us that they have come to the same conclusion. 18 trains an hour was what we went to consultation with and we remain completely confident that that is what we should be basing the future upon.

Q440 Kwasi Kwarteng: Is anyone else going to comment on that? Just as a follow-up on that, to what extent do you think that the capacity argument is dependent on 18 trains per hour? You are suggesting that you could actually do more if you were pushed to it.

Professor McNaughton: I would not recommend more because a railway that runs completely at capacity then is subject to perturbation day to day and therefore is likely to be less reliable, which is why we adopted this prudent approach of sticking to 18 trains an hour.

Sir Brian Briscoe: The capacity issue is one that was at the forefront of people's minds in doing it to provide an entirely new railway. You will have seen arguments that there is still capacity to be obtained from the West Coast Main Line. We are confident that there is not sufficient to meet the level of demand. You have heard from Network Rail about their view about when the West Coast Main Line will be "full" and the view that a new line would provide a substantial increase in capacity for inter-city movement but at the same time free up capacity for shorter distance movements on the existing railway network. You will also have seen in our report that two lines, one in and out of London, were felt to be sufficient at the moment for what could reasonably be thought to be the level of growth likely to occur in demand for long distance rail travel.

Q441 Iain Stewart: I would like to go back to Sir Brian's opening comments just to check that I picked up on them correctly. You said your brief was to advise the Government on specific routes and the design specification of a high speed railway. You are not advising on a broader transport strategy. Is that correct?

Sir Brian Briscoe: What we were asked to do in our original remit by the then Secretary of State was to examine the business case for high speed rail, to examine in particular options for routes between London and the west midlands, and to give advice on a wider network. Our March 2010 report did all three of those. It provided a report on a route from London to the west midlands, including connections to Birmingham and on to the West Coast Main Line going north. It included also, though, a proposal for a route going north from the west midlands on the west side to Manchester, connecting with the West Coast Main Line and therefore going north to Scotland, and also travelling on the east side from the west midlands through the east midlands, through South Yorkshire to Leeds and then connecting back into the East Coast Main Line providing services to Newcastle and Edinburgh.

Q442 Iain Stewart: The reason I ask is because we have received quite a large amount of evidence from groups who are not opposed to high speed rail but

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have concerns about it and also the evidence we ourselves found when we visited France and Germany that what makes a high speed network successful is not the line itself but how it is integrated both in a strategic and a micro sense into the rest of the transport network. I am just a little concerned that you are designing a perfect isolated railway but ignoring the broader considerations about how that integrates into both the classic rail network and broader transport issues.

Sir Brian Briscoe: I think critics who say that are probably wrong. What we are endeavouring to do is to provide high speed rail capacity initially at the point where the capacity constraint is greatest, which is the southern end of the West Coast Main Line corridor, so that there can be better inter-city services north. They could go as far north in the first phase as Glasgow and in phase 2 would go as far north across to the north-east and Scotland, running classic compatibles on the part of the route that is not designed specifically as high speed, in other words north of Leeds and Manchester. Also, we are looking in the station selection for the stations that we have already recommended and also, in terms of looking further forward to the north, how best high speed rail connects with local services, local regional transport and also how the release of capacity on the existing rail network could be used more effectively to improve local accessibility and local connectivity.

Q443 Iain Stewart: Could I give one example of where I think there might be a problem? We heard evidence from representatives in London to say that, once the high speed trains arrive at Euston, very few people actually go to a destination that is within walking distance of Euston. They have to have an onward journey, but the capacity of the tube or bus system is not there to meet the additional passenger numbers so that additional tube lines or Crossrail or whatever it is would have to be built, and that has not been properly assessed in this overall package. That is just one example of how I am concerned that this line fits in properly with the broader transport network.

Chair: Do you see that type of integration as being part of the remit you have?

Sir Brian Briscoe: Certainly, high speed rail works best when you get off a high speed train and you continue your journey quickly; otherwise you lose the time-saving benefits from high speed rail. So it is important that high speed rail is integrated with local transport networks and that has been a part of our planning.

In relation to London, we have made two propositions. One is a station at Old Oak Common which would connect with Crossrail and a station at Euston which connects with quite a substantial tube network at present. We have seen comments that High Speed 2 would drive extra demand into the Euston area and create pressures on the tube system and the local transport system in that part of London. It is true that we do add a little bit to what is already a rapidly growing demand in the Euston area, but that little bit amounts, in our calculations, to about 2% addition to the growth that will be occurring anyway as a result

of more movement in London. HS2 itself is not making the case, if you like, for additional tube lines or additional Crossrail investment. It is saying that this is a well connected part of London. It makes sense to bring high speed passengers into that part of London.

Q444 Paul Maynard: Your design, as you have indicated, appears to be predicated upon the importance of journey time, which is a factor of speed. Is that correct?

Sir Brian Briscoe: Yes.

Q445 Paul Maynard: Who set that criterion? Did you choose journey time to be your designing factor or was that set for you by the Government?

Sir Brian Briscoe: It is a convention in transport planning that journey time is the factor that determines demand or influences demand. So when you improve a journey time between the two locations you increase the demand for the use of that transport infrastructure.

Q446 Paul Maynard: Could I possibly rephrase the question? I am sorry—Ms Munro.

Alison Munro: Journey time was not the defining factor. It was obviously an important factor in assessing the benefits of high speed rail and the benefits of alternative routes, but it certainly was not the only factor that we took into account. We also took into account the cost of different alternatives and also their environmental impact. The way we approached the route determination and also the choices around stations was a balance of those combinations about what it did in terms of journey time and benefits against the costs of the environmental impacts.

Q447 Paul Maynard: The perception we have received, listening to all our evidence, is that the predominant factor has been one of achieving high speed on as straight a line as possible with as few intermediate stops as possible. In other words, you have designed almost the perfect high speed line, as Mr Stewart indicated, and restricted the flexibility in terms of other interactions with the transport network. Key to this and perhaps most controversial that I have come across is the decision to interact with Heathrow at the Old Oak Common hub, which appears to be a highly controversial decision. To what extent were you able to influence Government in a decision over Old Oak Common?

Sir Brian Briscoe: Our remit required us to provide a connection to Heathrow. In the initial report we looked at routes that could run through Heathrow. For a variety of reasons, benefit and level of demand and so on, we decided that that did not make sense, it added cost and did not increase the business case. Old Oak Common is a convenient place for distribution of passengers entering London but not wishing to go all the way to Euston and there will be a network connection there to Crossrail. Old Oak Common is both a convenient place but it is also a place that is strongly supported by the local authority in the area, Hammersmith and Fulham, who see this as a major regeneration opportunity. Alison, do you want to add to that?

Alison Munro: We identified a good case in transport terms for having the Old Oak Common station and, as Sir Brian has said, for the better way it would allow people to get into certain parts of Central London. We estimate that about a third of people using High Speed 2 would choose to use the Old Oak Common station to get into London and that also helps to relieve the pressures on Euston to which you were just referring.

Q448 Paul Maynard: Did your remit preclude you from evaluating any option that had the high speed line going through Heathrow itself, as we have heard many suggest?

Alison Munro: No. We looked at a number of different options for serving Heathrow, either with a direct route through Heathrow, a station in the Heathrow area connected from our route by a spur or a loop and the Old Oak Common interchange station. We looked at all of those options. Our conclusion was that in the first phase of a high speed line there would not be a sufficiently large market wanting to go to Heathrow itself to justify the additional cost that serving Heathrow would bring, but the Old Oak Common station provides a much better way of getting to Heathrow in the first phase. In the longer term, if there is a larger market to serve Heathrow, we considered what the best way was of serving the airport as against what is the best solution for the other people on the high speed line who are doing city to city journeys. That latter market is a much bigger market. Our conclusion was that, in terms of the overall benefit the line would bring, it was better, if you were going to serve Heathrow, to serve it by a spur or a loop so that most people who want to do a journey straight through to London would not have their journey delayed.

Q449 Chair: Atkins and Greengauge 21 have submitted alternatives. Have you looked at those?

Alison Munro: We have looked at a number of alternatives. We have not looked in detail at, for example, the Greengauge ideas of linking further southwards and connecting up to the rail network southwards, although we recognise that the proposal that is currently in the Government's preferred recommended scheme with a spur to Heathrow could actually be extended to provide connections further south. There are certainly opportunities in the proposal to extend in that direction.

Q450 Steve Baker: I would like to ask some environmental questions, but before I do could I just pick up the point you made about journey time driving demand, Sir Brian? Surely, price also drives demand in a crucial way.

Sir Brian Briscoe: The way in which the modelling that we have used for High Speed 2 works is that we make an assumption that fares remain the same on the high speed network as on the conventional network. We do not make a distinction between the two. It is a tactical matter managing the railways that determines how fares are managed.

Q451 Steve Baker: I would just question whether that assumption is valid, bearing in mind that HS1 has premium fares.

Sir Brian Briscoe: It does, but, if you are doing the kind of work that we were doing, which was establishing whether there is a business case for high speed rail, you would either increase the fare or reduce the ridership. Either way it is not going to make a big difference between the estimates you are making of the way the system would operate.

Q452 Steve Baker: You are saying that the business case for this extremely expensive project is largely independent of the price paid by its customers.

Sir Brian Briscoe: I am saying there is a business case which is independent of the price paid for the fare, yes.

Q453 Steve Baker: Perhaps I could just move on to the environmental aspects. How wide will the High Speed 2 corridor be?

Professor McNaughton: The answer always has to be depending on whether it is on the level, an embankment or cutting in. I am sure you recognise that. The basic width between the overhead masts, which is the visible sign of High Speed Rail, is just over 11 metres. We have said through our consultation that a guiding rule is that the railway, even in those places where we include a maintenance access track alongside it, fence to fence is around 22 metres. It is less in urban areas where we would not have the room or the necessity to have a roadway alongside.

Q454 Steve Baker: What is the expected total land take of HS2?

Professor McNaughton: I do not have that number in my mind.

Q455 Steve Baker: In that case I am guessing we do not have a commercial value for that land.

Professor McNaughton: We have an estimated value in our business case for land purchase which, forgive me but it is from memory, is around £1 billion.

Q456 Chair: But do you have that information?

Professor McNaughton: That information is—

Q457 Chair: It is not in your mind.

Professor McNaughton: It is not in my mind at the moment. The information was published in our 2009 report.

Q458 Steve Baker: I am sorry, you said £1 million.

Professor McNaughton: £1 billion.

Q459 Steve Baker: I have seen elsewhere in evidence £4.5 billion.

Professor McNaughton: It is a matter of fact that it is in our report as published.

Q460 Steve Baker: What vegetation and wildlife would be permitted within that corridor?

Professor McNaughton: You need vegetation for stability and coverage. Within the boundary of the

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fence you would not expect to have trees, but bushes are acceptable. It is no different basically from the existing classic railway, where one of the benefits of having particularly prickly bushes is that it provides a wildlife refuge because it is all part of encouraging people not to go near the line. So there can be bushes, grasses, mixed vegetation, but no trees. Therefore, just as on the existing railway, bird life, rodents and the like, but not those of the burrowing kind, would be encouraged. You see that on High Speed 1.

Q461 Steve Baker: What about crossing points for wildlife such as deer?

Professor McNaughton: In a new railway you would design those in with the detailed design, such as green bridges for large wildlife. For the last 20 years we have been designing, in Britain, badger runs and other types of runs into the railway underneath it and they seem to work very well.

Q462 Steve Baker: Could you just let us know how much spoil you expect to be created by HS2 and how it would be disposed of?

Professor McNaughton: Forgive me if I do not remember the exact number, but it, again, is in our published documentation. We designed this railway very similarly to High Speed 1. In fact, a number of my people worked on High Speed 1, so we have brought that experience through. Generally speaking, it lies deep into the landscape rather than on top of it. So we have an imbalance of spoil to embankment of about four to one. That is a lot of spoil. From memory, it is about 4.3 billion cubic metres, but I need to check that and be sure for the record, please, Madam Chairman.

High Speed 1 used 95% of that spoil to landscape locally, to mitigate, to hide the railway and to provide in places false cuttings and green tunnels. We have every expectation that we would follow a similar line and hopefully with a similar proportion, which means that a very limited amount of spoil would need to be taken away to landfill remote from the project. But this is early stages and that really gets worked through in a detailed design should the Secretary of State decide to go ahead.

Q463 Steve Baker: Steve Rodrick, who is the Chief Executive of Chiltern Conservation Board, said that HS2 would be a Berlin wall for wildlife. It sounds to me that, if you take billions of cubic metres of spoil and use it to disguise the railway, it does sound rather like it would be a Berlin wall for wildlife.

Sir Brian Briscoe: Can I just make a comment on that? The Kent Trust for Nature Conservation had all these concerns about High Speed 1. There was a lot of discussion between the Kent Trust and the promoters of High Speed 1. The Kent Trust now say that the line of High Speed 1 is actually a kind of dual carriageway for wildlife because it is protected from other things. It is not farmed, there is no pesticide and there is a degree to which this has actually been a positive for nature conservation. Certainly, we would want to put the Chiltern Conservation Board in touch with KTNC to talk about how that was done. It seems

to me to be an important thing for us as promoters of a project to be able to do.

Can I just make a comment on the spoil issue? One of the things that would be really important in managing spoil, as Andrew says, is that the object would be as far as possible to consume it within the works itself and therefore never take it off on to roads. But we would have agreements with local authorities in the area for the way in which spoil would be handled, for the routing of spoil disposal, and we would keep it off the local roads.

Q464 Julian Sturdy: I would just like to go back to capacity. The key reason behind HS2 is the extra capacity that it will provide, but, when working out future capacity, how satisfied are you that you have actually got the growth figures correct, especially around peak demand?

Alison Munro: Clearly, predicting into the future there is an element of uncertainty as to what future demand will be, but we have used the best practice available in terms of demand forecasting techniques, using the Department for Transport's recommended approach. We have also tested our conclusions against what has happened in the past, so, for example, over the last 15 years we have seen a doubling of growth in long distance demand, averaging about 5% a year. Going into the future, we are predicting growth at about 2% a year, so we are predicting lower growth than there has been in the past. There is actually no evidence at the moment that the growth in long distance rail travel is levelling off; so we have actually assumed that it will level off, in our current model, around 2043. We have taken the best possible advice that we can on how to predict into the future. We have taken what we think is a cautious approach on the whole, and we have also tested our results, using various sensitivity tests, to see how the business case would be affected if we had got it wrong.

Q465 Julian Sturdy: If the growth over the last three years then does not continue and we can manage peak demand and spread out peak demand, are you saying that there would still be a case for HS2 rather than improvements on the classic line?

Alison Munro: Clearly, the critical thing in the case for high speed rail is what future demand growth would be. That is the main driver of the business case, but there is no evidence that the current growth that we are seeing in long distance rail demand is tailing off. One has to take the best view that one can about what the future will be like. The current evidence is there is no reason to think that that demand is going to stop. As I say, we are assuming slower growth than we have seen in the past so to some extent we have been rather cautious about what the future might look like. Demand could equally be higher than we have forecast, in which case the business case would be stronger.

Q466 Julian Sturdy: You think either way the business case—

Alison Munro: Either way—

Q467 Julian Sturdy: That is what I am saying, because we have seen increased demand over the last three years, as you rightly say, but even if that falls away, you feel that the case for HS2 stacks up instead of investment into the classic line. That is the point I am trying to get at.

Alison Munro: If it did not grow at all, then the business case would obviously be severely affected, but as long as a reasonable level of growth continues into the future, our assessment suggests that there is a business case for high speed rail.

Q468 Julian Sturdy: What is that critical point then?

Alison Munro: Our current assumptions have about a 2% per annum growth in future demand up to about 2043. On that basis, for the Y network, we have a benefit-cost ratio, so a ratio of benefits to cost of 2.6. On that basis there is a strong business case. On a lower rate of growth, we tested that only from London to the west midlands so far. If the rate of growth there was lower by, I think it was, 1.1% per annum that we tested, in that case it would reduce the business case without wider economic impacts from 1.6 to 1.3. So it does have an impact, but you would have to have significantly lower demand before there was not a business case at all.

Q469 Kwasi Kwarteng: Am I right in understanding that, if demand does not go up past 2026 for whatever reason, then the benefit-cost ratio will be less than 1 of the project?

Alison Munro: We tested, as a sensitivity test, what would happen if we capped demand in 2026 and there was no further growth. On that basis we estimated that the business case, excluding wider economic impacts for the London to west midlands line, would have a benefit-cost ratio of 0.7, I think it was.

Kwasi Kwarteng: Less than 1.

Alison Munro: There would be less than 1 without wider economic impacts on that basis, but that is quite an extreme view, given what we have seen in the past, about the rate of growth. We do not think that is a realistic assumption. We tested it to show the robustness of the business case, but that is not our view of what the future is likely to be like.

Q470 Chair: When you say “growth”, are you distinguishing between growth at peak times and growth overall?

Alison Munro: This is overall growth. We have not gone to the level of detail of being able to predict differently how the peak and the off peak will grow. This is overall growth I am talking about.

Q471 Mr Leech: One of the biggest reasons why expansion of numbers of passengers has increased so dramatically is the fare structure, the cheap advance tickets and also the availability of trains, three trains an hour from Manchester—more regular than buses sometimes. Have you factored your plans for a fare structure into how you would generate the levels of growth that you are talking about?

Alison Munro: At this stage we have essentially assumed the same average fares as on the existing

railway so broadly similar sorts of fares structures, but we have not assessed that in any detail at this stage.

Q472 Mr Leech: Have you made any assessment on how you are actually going to charge people? Will people be able to turn up and just buy a ticket or will they have to buy tickets in advance, because that would clearly have an impact on the number of people who choose to travel?

Alison Munro: That really would be work that we would do at the next stage, if the Government decides to proceed with the project. It is not work that we have done at this stage.

Q473 Mr Leech: But surely, depending on whether or not you have that kind of fare structure would have a significant impact on the number of passengers.

Alison Munro: There are choices that can be made there and one would expect that the Government would choose an approach that gave the best answer. That would be something, as I say, we would look at in detail at a future date, but the aim would be to maximise the benefits that you were getting from the line.

Q474 Mr Leech: What have you based your figures on, then? Have you based your figures on a structure where people can turn up and pay, or have you based it on a structure where everyone would have to pay in advance, because surely that would factor in how you calculate how many passengers and the level of growth?

Alison Munro: Implicitly, we are operating as a service today. That is the underlying assumption.

Q475 Mr Leech: Basically, you are saying that people would be able to buy advance tickets.

Alison Munro: It would be a mixture, yes.

Q476 Chair: The same system as we have now.

Alison Munro: Yes, that is essentially what we assume.

Chair: That is the assumption.

Q477 Mr Leech: Why have those assumptions not been made public, because there has not been any discussion about how people would be able to purchase tickets?

Sir Brian Briscoe: All we have said is that the assumption in our demand forecasting is that the high speed railway and the conventional railway would both operate on the same fare structures, which implies that, whatever the fare structures are, we would operate for long distances or short distances or whatever.

Q478 Mr Leech: If a decision was made to have a closed system with advance tickets only, that could potentially have a significant impact on your calculations on passengers.

Sir Brian Briscoe: I do not think it affects our calculations on passengers. It might actually affect the outturn of what actually happens if and when the railway is built because, clearly, an operator is going

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to manage the railway and his fare structures in order, one assumes, to maximise revenue from that piece of infrastructure.

Q479 Mr Leech: If you have made your calculations based on a similar model for the conventional railways, that is based on advance tickets and walk-up fares. So, surely, if you were to just go to an advance ticket model only, as they have in some areas, that would have a significant impact on numbers.

Sir Brian Briscoe: I do not think we have done the work to demonstrate that one way or the other.

Chair: You say you have not done the work and you do not have a view.

Q480 Mr Leech: Professor McNaughton, do you have a view, because you were nodding?

Professor McNaughton: Sorry, I should probably keep quiet. I was trying to understand why people would operate a different system from the one that works well today; that is all.

Q481 Chair: Some high speed systems do operate in a different way and you have to book a ticket before you can go on it.

Professor McNaughton: As you look around the world, of course you are right.

Q482 Chair: We are not discussing what is happening in other places. We are asking what the impact would be on the predictions, and you do not know.

Sir Brian Briscoe: Madam Chairman, we have just got to be clear that we do not know the answer to that question. The work has not been done. I think we understand where the issues are and we understand the point that is being made. That will be a next stage piece of work if the Government decides to go ahead.

Q483 Graham Stringer: How many jobs will be created by High Speed 2 when it is running to Leeds and Manchester?

Sir Brian Briscoe: We have set out numbers of jobs associated with the particular stations. I cannot recall them off the top of my head but they are in our paperwork. There are 20,000 at Old Oak Common, for example. Those are directly associated with the development that will occur around those stations. There is also a wider economic benefit from improvements in connectivity and accessibility which will deliver more. Then, though we have not measured this in our modelling, people in the north-west and people in the west midlands have asserted that improvements in this kind of connectivity would drive other economic development. There certainly is evidence that that has happened in other places where high speed railways have been opened and where the policy environment for development has been positive and benign, such as the developments in Lyon and Lille in France and in parts of Spain as a result of high speed rail. While we put a conservative figure on the number of jobs to be generated directly by the railway operation and the associated development, there are probably wider economic benefits that we are not measuring in our modelling.

Q484 Graham Stringer: That means you have not assessed the potential for induced jobs, really, at the end of the line, that is just the jobs of the people working on the railways or closely associated with the railway effectively.

Sir Brian Briscoe: Or development immediately around the stations.

Alison Munro: We have done calculations at this stage only for the London to west midlands phase. For that, we estimated 9,500 jobs for construction, about 1,500 permanent jobs in terms of operating the railway, and then there are about 30,000 jobs we estimated that will be supported around the stations. That is just for that first phase. That is really only in the immediate vicinity of the station. It was not, as Sir Brian has indicated, intending to represent the full picture of what might be generated over the wider region. For example, Accenture have indicated that they think that the high speed railway could generate 22,000 jobs in the west midlands region. Our numbers are, as I say, not intended to capture everything.

Q485 Graham Stringer: The evidence from other high speed routes is that you get more jobs the longer the line.

Sir Brian Briscoe: You get more jobs around the station but you also get them spreading out from those areas as well.

Q486 Graham Stringer: We have had evidence from Wales that they believe if High Speed 2 is built that Wales will lose jobs. Have you looked at any negative impacts?

Sir Brian Briscoe: Not specifically at that kind of impact. My own personal view is that it is unlikely that 60,000 people would move from Wales. What they are saying is there would be a relative benefit to places that are served by high speed rail compared with a relative downside for those areas that are not. That is really just a reflection of the obverse of what I have just said. Places that are served by high speed rail seem to be able to capitalise and create development.

Q487 Chair: What was the remit for the consultation?

Sir Brian Briscoe: For the consultation that has just been carried out?

Chair: Yes, the formal consultation.

Sir Brian Briscoe: It was a joint consultation between the DfT and HS2 Ltd. It was to examine the case for a strategic rail network, and that includes the whole of the Y that we have talked about and connections back, and then a detailed consultation on the route between London and the west midlands with a station at Birmingham, a station at Euston and two intermediate stations.

Q488 Iain Stewart: It is the question of intermediate stations that I would like to discuss. Am I correct in thinking that you assessed the case for intermediate stops in the context of the London to Birmingham section only?

Sir Brian Briscoe: Yes, we did.

Q489 Iain Stewart: Would it not be sensible to assess the case for intermediate stops in the context of the whole Y and a possible connection to Heathrow and a possible connection to High Speed 1 on the continent?

Sir Brian Briscoe: Let me take that apart a bit. Yes, it would be appropriate for us to look—and we will because we have not done that piece of work and finished it and recommended to Ministers yet—at the legs of the Y and what the proper strategy would be. One of the reasons that it is difficult to put an intermediate station between London and Birmingham is that the distance is relatively short, and, while you could have a station which would bring benefits to a place somewhere midway between London and Birmingham, it would diminish the benefits of the network as a whole because it would slow trains down and therefore reduce the demand on the network. That is partly because that is a fairly short distance and also it is the part of the network that would have the greatest pressure on capacity. Further north, going north up the Y, because our remit asks us to, we are looking at the potential for stations in the east midlands, South Yorkshire and a station in Leeds and on the other side a station at Manchester. We have not done the work yet and we have not completed it, but certainly we will need to have demonstrated why we would or would not think it would be a good idea to have intermediate stations as well.

Q490 Iain Stewart: Could I just challenge you on the viability of an intermediate stop between London and Birmingham. We visited and indeed travelled on the German high speed line between Frankfurt and Cologne and there are two intermediate stops there. It is designed in a way where a through express train alternates with a stopping train. I am just puzzled that we are being asked to make a decision on building or not building an intermediate stop in the first leg before a proper appraisal has been done of the full network. It might be that a station that serves Milton Keynes, Buckinghamshire or Oxford could be valuable to travel to Manchester or to Paris if it connects up with High Speed 1. I am concerned that we are not thinking this through logically.

Sir Brian Briscoe: I will perhaps ask Andrew or Alison to comment on the engineering. Our judgment was that the section of line from the west midlands to London is the one that will carry most of the long distance traffic. It will carry traffic from north of the west midlands, as well as being the bit of line that carries the greatest demand from the two biggest centres in the UK. The judgment, and we have a business case illustration of this, is that, if you put an intermediate station in there, yes, you gain benefits in that intermediate station which add to the business case, but you lose benefits because of the necessity of taking time out. If your examples in Europe are bypasses where trains just go straight through, which I imagine they are, but they can also stop, that would be in an area where you were not running 18 trains an hour in order to meet the demand for the whole of the network, I am assuming. That was where our judgment was made.

Q491 Iain Stewart: But you have not actually done the assessment of the business case in the context of the full Y. You have not done that work. That is what I am trying to establish.

Alison Munro: We have done a high-level assessment of the business case for the Y network and that is presented in the consultation materials. Our conclusion from that is that, certainly over time, there will be sufficient demand from the legs of the Y, then travelling down that core trunk to London, to use the 18 train paths an hour that you have on that line. Therefore, if you are going to have an intermediate station, the trade-off is either that you are displacing potentially longer journeys that could be made from points further north, which will carry more benefit with them because they have bigger journey time savings with more revenue, or you impose journey time penalties on all of those journeys. So the balance of that core bit of route is in favour of preserving that for the longer distance journeys. But the balance may well be different, as Sir Brian indicated, when we look at whether there is a case for intermediate stations north of Birmingham. That balance will be different.

Q492 Paul Maynard: Which is more important—reducing journey times or increasing capacity?

Sir Brian Briscoe: I think the driver behind providing a new piece of infrastructure is the need to provide capacity for inter-city movement.

Q493 Paul Maynard: Everything I have heard today appears to be predicated on the need to accelerate journey times and all the caveats to any alternative to what is being consulted upon are being rejected on the grounds that they would in some way slow a train down, reduce the 18 trains per hour that you are targeting, rather than seeking in any way to increase capacity or ridership or imaginative use of intermediate stations. It does seem to be that this particular model that you have alighted upon is predicated solely upon reduction in journey time rather than the increasing capacity where there appears to be general consensus that we need it. Where there is not a general consensus would appear to be this particular route, straight as an arrow, through the Chilterns, no stopping. That is where there appears to be a lack of consensus.

Sir Brian Briscoe: I am not quite sure how to respond to that as a statement, but the capacity of a high speed line at 18 trains per hour is, in our judgment, sufficient to manage the longer-term network and will provide enough capacity. If at the moment, on the evidence we have, we put intermediate stations in, we lose capacity on that line and that is the place where we need it most. What we do as a result of providing that capacity is to open up possibilities for use of the existing network in different ways and we open up train paths that would be available because they are not being used for long distance travel for more local services. That is the judgment that is being made.

Q494 Paul Maynard: The figures we have been shown clearly demonstrate that constructing HS2, as proposed, represents a massive step change in the provision of capacity, undoubtedly. What I am trying

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to get at is what the reduction in capacity could be that would justify the consideration of a more flexible route either along the existing motorway corridors or providing intermediate stops at places like Milton Keynes. Yes, you are making a massive step change in capacity. Therefore, surely, there should be some flexibility at the upper margins to consider how you might be able to create a more consensual proposal that everyone might be able to buy into.

Chair: Is it possible that as a result of this consultation you can look at a different route? Is that possible?

Sir Brian Briscoe: Certainly, it is possible that there will be things that we will need to look at and report to Ministers on and Ministers will need to decide whether or not those things require some change.

Q495 Chair: So that would be the Minister's decision.

Sir Brian Briscoe: We will recommend what we think is the best outcome.

Chair: You will make a recommendation.

Q496 Chair: Is it possible within the remit you have that, following the consultation, you could recommend a different route?

Sir Brian Briscoe: I cannot really say that without having done the work, but certainly nothing is fixed until the Secretary of State makes a decision about the route.

Chair: I think that is what we want to establish.

Q497 Steve Baker: To what extent have you worked with legitimate groups who have brought forward alternative proposals often backed by long-standing industry experts? I have in mind 51m, for example, and HS2 Action Alliance. To what extent did you work with them?

Sir Brian Briscoe: We have had conversations with a lot of action groups and a lot of organisations about their proposals.

Q498 Steve Baker: Did you conduct a serious and proper appraisal of the capacity delivered by their proposals?

Sir Brian Briscoe: I think that is part of what the Chairman was just asking me. Would we be doing that in the run-up to the Secretary of State deciding whether or not to go ahead? Yes, we will.

Q499 Steve Baker: To what extent have you considered the capacity increases that have been delivered by the Chiltern line upgrade?

Alison Munro: We have not taken account of that in our modelling so far. As we have indicated in our written evidence to you, our view is that that would not have a significant impact on our assessment of the case for High Speed 2, but we would expect to do some further work on that and advise the Secretary of State by the end of the year. At the time we did our original work it was not a firm commitment, which is why we did not include it.

Q500 Steve Baker: Living in High Wycombe, I am not affected by High Speed 2 but I am affected by this upgrade, and it has certainly reduced commuter services from High Wycombe, Beaconsfield and Gerrards Cross in order to deliver capacity for Birmingham. I am conscious that there might be lessons here for HS2, but at the moment you just have not done the work because it was not committed and you will do it later.

Alison Munro: We have not done it but we will be looking at it because it is a point that we expect to come back through the consultation; so we will be looking at it.

Q501 Chair: Some of the groups criticising your proposals have submitted freedom of information requests to get the data upon which your recommendations were based. Those were refused. Did the Government instruct you to refuse them?

Sir Brian Briscoe: I am not aware of which ones they are because we have certainly responded to an enormous number of freedom of information requests and responded positively to them.

Q502 Chair: On the ones you did not respond positively to—

Sir Brian Briscoe: I assume either they did not fall within the rules or there was some other reason why they were commercially confidential or whatever. I do not know the answer.

Q503 Chair: Who set those rules?

Alison Munro: We make our own judgments.

Q504 Chair: Who made the judgments?

Alison Munro: We apply the rules within the law and we make our own judgments about how to respond to freedom of information requests.

Chair: Thank you very much for coming and answering our questions.

Examination of Witness

Witness: **Rt Hon Philip Hammond MP**, Secretary of State, Department for Transport, gave evidence.

Q505 Chair: Good afternoon, Secretary of State, and welcome to the Transport Select Committee.

Mr Hammond: Good afternoon.

Q506 Chair: I understand you would like to make some opening comments.

Mr Hammond: Yes. I would just like to clarify, perhaps for context, where we are in the process of developing our proposals for the high speed rail project and therefore to give some context for the comments that I shall be making. As members of the Committee will know, the consultation period came to a close on 29 July. The consultation covered both the Government's overall strategy for high speed rail and the proposed route for an initial high speed line from London to the west midlands. We have received a large number of responses, and my Department and HS2 Ltd are jointly analysing those responses and considering the arguments that have been put forward and any new evidence that has been presented. I should say, however, that that analysis is still at a relatively early stage and at this point I have only had very high-level initial discussions with officials about its progress.

I have not received any detailed reports of any new evidence or any new arguments that have been put forward or raised or any potential conclusions that might be reached, so the comments that I make to you this afternoon will be based on the work done to develop the Government's proposals that have been published as set out in the consultation. In some cases, I may be able to draw on additional consideration that we have given to issues that have been raised in the wider public debate over the course of the last few months, but I should stress that you should not take any remarks that I make at this stage as being indicative of the Government's conclusions following consultation because no such decisions can or should be taken until the analysis of the consultation has been completed and I have had the opportunity to consider the key points made. I have said previously that I will announce my decisions by the end of this year, and that remains my intention.

Q507 Chair: Thank you. Can you envisage any circumstances in which you might decide HS2 should not proceed? Can you envisage any circumstances in which you might reach that decision?

Mr Hammond: As I have said consistently all along, the Government believe that there is a strong case in favour of High Speed 2. Prior to analysing the consultation responses, we have not heard any arguments that we believe defeat that view, but we will look carefully at any new arguments that are advanced or any new evidence that is provided in the course of the consultation and consider it.

Q508 Chair: What kind of evidence could possibly persuade you to change your mind?

Mr Hammond: It is not for me to speculate on the evidence that opponents of the scheme might put forward, but perhaps I should say that some of the arguments that have been advanced and the evidence

that has been submitted in support of them is not as robust as the promoters of those arguments clearly genuinely believe it to be. In the response to consultation, we will seek to deal robustly and in detail with arguments that have been advanced, some of which I have no doubt will repeat arguments that are already in the public domain.

Q509 Chair: Will you be producing a new economic appraisal when you give your decision?

Mr Hammond: The economic appraisal is continually reviewed. If we feel that there are material changes that need to be made at any time, material new information which means that a new economic appraisal would be appropriate and would present anything of value, then we would publish one.

Q510 Chair: The opponents of HS2 have been designated as NIMBYs, Luddites and toffs. Do you think that is offensive to people who might have legitimate concerns?

Mr Hammond: I have said publicly that I regret that the phrase NIMBY has become central to the argument that has gone on here. In fact, if I go back in history, it was while I was recording an interview with the Deputy Chairman of the Chiltern Society that he used the phrase. He said on camera, "I am a NIMBY." I said, "There is nothing wrong with being a NIMBY. There is nothing wrong with seeking to protect your own local environment and to promote the interests of your own community. Just be honest about that particular agenda if that is what you are seeking to do." Some people have presented arguments that are very openly about the values and interests of their specific communities or their specific personal circumstances. Others have advanced arguments that address or purport to address a much wider issue about the national interest, and it is important that we understand when people are arguing about HS2 what case it is that they are seeking to advance.

Q511 Chair: What is your single most important reason for supporting High Speed 2?

Mr Hammond: I am sorry not to give a simple answer to that, but the case for High Speed 2 arises out of a coincidence of requirements. There is clearly a need for additional capacity on the southern part of the west coast corridor from Birmingham to London. It is clear to me that that cannot be provided effectively in any way other than by the construction of a new railway. Having come to the conclusion that one needs to construct a new railway, the benefits of constructing that as a high speed railway and extending it to Manchester and Leeds and thus delivering economic benefits and regeneration benefits to the northern cities are very considerable. It is the aggregation of these different elements. The Government's agenda of rebalancing the UK economy and the way in which high speed rail would contribute to that, the need for capacity and the benefits that high speed delivers over and above a conventional railway, added together, present a very compelling case for the project.

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Q512 Chair: You start off with capacity.

Mr Hammond: I start with capacity. If the compelling case for additional capacity on the London to Birmingham section, in particular also the London to Manchester section, was not there, then a large part of the case for high speed rail would be undermined. Clearly, we build from the capacity-driven case to the benefits that high speed delivers once you get beyond Birmingham. But I fully accept that, if the railway was only going to Birmingham, the case for high speed would be very much less compelling than with a railway that connects to Manchester, Leeds and allows onward running to Scotland.

Q513 Kwasi Kwarteng: I would like, if I may, to ask a question about the politics of this thing. Clearly, as far as your Department is concerned, this has been a huge debate and it has aroused a lot of passion on both sides. Why do you think that the case for High Speed 2 is not making perhaps the strides that you would like it to make? Why has this been such a political hot potato if it is so obviously in the country's interests?

Mr Hammond: This is anecdotal but perhaps this will help to explain the answer. I have tended to find that, when one has the opportunity to speak directly to people who are not passionately committed against the project but who are generally sceptical of it and you are able to explain the capacity issues so that they understand it is not just about going faster but it is about the need to provide additional capacity and the argument then becomes do we provide that capacity with a low speed line or a higher speed line, they are much more likely to be persuaded. The arguments are complex, and too much of the public debate has focused on speed. There is a perception out there that speed is somehow elitist; it is only important to business people whizzing about on important business; it is exclusive and it does not affect other people. The benefits of the extra capacity and the benefits on the existing classic railway of released capacity in the future on the east coast and west coast have not penetrated the public consciousness enough during the course of this debate.

Q514 Kwasi Kwarteng: What do you think of the characterisation that this is somehow northern jobs against southern environmental concerns, because the pro-HS2 campaign has been quite strident in pushing that line?

Mr Hammond: Yes, there is a shorthand there which, as always, over-simplifies the case. The benefits would be for the UK economy as a whole, and it is clear to me—I have said this on many occasions—that the UK cannot prosper as a first rank world economy if half the country is left behind. We have to get economic growth rates in the north, in particular the big urban conurbations in the north, up to the sort of economic growth rates we have been seeing in the south-east if we are to remain globally competitive because you cannot be internationally competitive if only a small part of your economy is delivering that growth performance.

Q515 Steve Baker: Secretary of State, could I draw your attention to the articles in *The Economist* of 3 September? The first one, entitled “The Great Train Robbery”, said: “High-speed rail lines rarely pay their way. Britain’s government should ditch its plan to build one.” If I could go through four headlines from it, they say that high speed railways usually fail to bridge regional divides, that they often displace economic activity rather than create it, that rich regions and individuals benefit at the expense of poorer ones and that high speed rail is a good idea when it connects dense but distant populations. Finally, the last point is that the underlying assumption of high speed rail is that proximity to London measured in journey times is key to regeneration. What would you say in response to *The Economist*?

Mr Hammond: *The Economist*, as you know, does not byline its articles so I have no idea who wrote that piece. I have on my desk the draft of a reply which will be going to the editor of *The Economist* tonight.

Q516 Chair: Will you give us a preview?

Mr Hammond: Yes, I will. As you may know, *The Economist* only publishes responses two weeks following the article in question, so that will go off tonight. We believe that the points that you have quoted are simply wrong and are disputed by the evidence, and we will be putting forward the counter arguments. On the last point that you mentioned, there has been a tendency in this debate to think this is all about connectivity to London. It is not. Connectivity, for example, between Birmingham and Leeds at the moment is shocking. It is two hours and five minutes, which is completely unacceptable. The improvement in connectivity between Birmingham and Leeds, cutting it to one hour and five minutes, will create very significant opportunities for economic benefits in both cities from the effect of that greater and more efficient connectivity between them. It is nothing to do with London. We can go through all of the individual points that are raised in that article and we can and do dispute them, and very much evidence has been published elsewhere which says something quite different indeed. My recollection is that *The Economist* has previously published comment that is much more favourable to HS2.

Q517 Iain Stewart: Secretary of State, we have received quite a number of submissions of evidence from groups who are not opposed in principle to High Speed 2 but are concerned about the narrow specification to which High Speed 2 Ltd has been working. Are you comfortable that all the options of building a new fast railway line have been properly appraised?

Mr Hammond: When you say “narrow specification”, do you mean particularly in relation to speed?

Q518 Iain Stewart: Speed and whether or not there are intermediate stops, how it integrates with the broader transport network, and whether it could follow a motorway corridor. The concern expressed is that because it is to be a 250 mph line, in roughly

a straight line, other options have been prematurely ruled out.

Mr Hammond: There has been an analysis done of alternative options, including following more closely motorway corridors, which, as you say, would mean operating at significantly lower speeds because of the minimum radius of curvature used in designing motorways being much tighter than that appropriate for a high speed rail line.

The problem is that as you move down the speed curve, as it were, the cost of building a new railway diminishes only moderately. I believe the engineering estimate is that a brand new railway built to run at conventional speed, 125 mph, would be about 10% to 15% cheaper than a railway built to run at high speed, 250 mph, yet the benefits it would deliver would be reduced by about a third. The cost-benefit ratio and the value for public money would be very significantly diminished if you chose a combination of new railway and low speed.

Q519 Chair: High Speed 2 told us that they cannot specify the precise maximum speed but did you give a range of speeds that they had to look at?

Mr Hammond: This has probably happened before my time because HS2's remit when the initial work was done under the previous Administration—

Q520 Chair: But it would have been something you took an interest in.

Mr Hammond: I have not specified to HS2 a speed assumption. HS2 have explained to me in my early briefing on the project how any consideration of operating at a lower speed in order to be able to follow more closely a motorway corridor or indeed to be able to avoid more specifically areas of particular sensitivity, which was one of the questions of course I asked them, would have a disproportionate effect on the cost-benefit ratio of the project because it would diminish the benefits without significantly diminishing the costs.

Q521 Iain Stewart: If I could raise another example of where there is some concern about the specification, it is assumed that the line goes straight into the centre of London, to Euston, with a possible intermediate stop at Old Oak Common. That brings up problems about how you are going to disperse passengers to their onward destinations because of capacity restraints on the tube network. Do you have an open mind to other scenarios, for example, having the terminus at Old Oak Common or another area close by, and the onward connection would be provided by Crossrail? I am just trying to establish the degree to which you are willing to be flexible in looking at these variants on the high speed option.

Mr Hammond: There is a multifaceted answer to that. Let us deal first of all with the idea of terminating the scheme at Old Oak Common. There would be a number of issues. First, the experience of high speed rail elsewhere shows that it is the city centre to city centre connection that delivers the greatest regenerative effect and the greatest economic benefits. If HS2 were to terminate at Old Oak Common, it would be entirely dependent upon Crossrail for

onward movement of passengers. That of course would be a very high quality east-west connection but it does not provide any north-south connectivity at all. Passengers wanting to go elsewhere in London or elsewhere in the south-east would need to change twice, once at Old Oak Common and again somewhere else, probably Euston or in the vicinity of Euston, in order to access a north-south route.

It would also significantly erode the resilience of the network overall. If Crossrail were out of service because there was a problem on Crossrail, you would have people piling up at Old Oak Common with no practical way of dispersing them at all. There are not even going to be any very significant road links at Old Oak Common. You would, in practice, have to stop the operation of HS2 for the duration of any outage of Crossrail. One of the big advantages of having Crossrail and Euston is that, first of all, you have more options for dispersal, you take some of the passenger load off at Old Oak Common and disperse via Crossrail, you take others off at Euston and disperse via the Northern Line, Victoria Line and so on, but also you have resilience. If Crossrail is not working, passengers would continue to Euston and make their way via other routes.

Q522 Julian Sturdy: The key, as you have said, for HS2 is the need for additional capacity. Are you happy that there is enough accurate evidence out there to make a proper informed decision on future capacity?

Mr Hammond: Of course it is a forecast and all forecasting depends on assumptions, but I think the assumptions that have been used, which are standard assumptions that the industry uses, are conservative. In fact, when we look at the evolution of demand for long distance travel over the last 15 years and over the last five years, they look extremely conservative. Long distance journeys on the West Coast Main Line have more than doubled in the last 15 years. The rate of growth of long distance rail travel over the last five years has been 5% per annum on average. The model that HS2 has used assumes 2% per annum on average. I generally find when I come before the Committee—perhaps this is reassuring for all of us—that the questions you ask me tend to be the questions that I have been grilling civil servants on. I have asked this question for a year and a half now: how robust are the demand projections? How sure are we about them? It is clear to me that the risks are on the other side and that we may be, if anything, underestimating the passenger demand for long distance rail in the future. It is very unlikely that we are overestimating at 2% per annum.

Q523 Julian Sturdy: With HS2, it has gone on the “predict and provide” principle. Why are we not looking at other transport areas like road and air travel in the same way?

Mr Hammond: Because the Government have an agenda of managing carbon emissions. We have a clear agenda on reduction in carbon emissions by 2050. That certainly will drive the way we look at domestic aviation and, indeed, international aviation. Under the previous Administration, it has coloured the way road projects are looked at. We have made it clear

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that we believe that if we can get the de-carbonisation of motoring to the point where it is clearly on an unstoppable trajectory, by which I mean the big motor manufacturers have invested so much money in it that it is going to happen, then it will be possible for us to look at roads in the future as an infrastructure option that does not conflict with our long-term carbon agenda.

Q524 Julian Sturdy: Does HS2 put other transport projects and infrastructure at risk in the longer term, on the investment side and financial?

Mr Hammond: There will always be a requirement. First of all, there will be a requirement for other rail infrastructure to provide connectivity with the high speed routes that would be the backbone of the network. There will always be a requirement for adequate road infrastructure, but I would hope that for inter-city passenger journeys, once a high speed rail network is established, high speed rail would become the mode of choice for the overwhelming majority of inter-city passenger journeys. Of course, as we move through the de-carbonisation of passenger vehicles on the roads, some choices will need to be made by consumers, by society, and some of those choices have range implications. Battery-operated, pure plug-in electric vehicles have range limitations which make them more suitable to urban and suburban journeys rather than longer distance inter-city journeys. The growth of a high speed rail network to provide the majority of inter-city journeys is probably the right way forward for an economy like the UK.

Q525 Julian Sturdy: Just to go back to my original question on this, you talked about modal shift. Do you feel that the modal shift you have described has been accurately put into the future predictions regarding capacity?

Mr Hammond: The modal shift that I have described?

Julian Sturdy: The modal shift back to rail.

Mr Hammond: There are quite modest assumptions about modal shift in the model. I can look this up if you want me to, but from memory, I think 6% of road and 9% of aviation as a shift. As with all other aspects of the model, this is conservative. It is conservative for a reason. I do not think anybody involved in this project has ever been in any doubt that every aspect of the modelling will come under intense scrutiny. It would not have been sensible to move forward with a model that used optimistic assumptions. It has been sensible to use conservative assumptions throughout.

Q526 Julie Hilling: A number of witnesses that have come before us have expressed concern, particularly the anti-HS2 campaigners, that other investment projects will suffer because of HS2. In terms of things like Northern Hub, issues like lines between Manchester and Leeds, and overcrowding on the trains, can you give us any indication of how those projects will be taken forward in parallel with HS2, or will they disappear?

Mr Hammond: No, they will not disappear. I would say three things. First of all, I hope we have sent a powerful signal about our views on the Northern Hub project by giving the go-ahead to the Ordsall Chord

project, which is the crucial first step in creating the series of projects that are collectively known as the Northern Hub. Secondly, there is a very important point here about the balance of strategic investment in the UK. There has been huge strategic investment going into rail, but most of it has been going into London with Crossrail, tube upgrades and Thameslink. That actually was the right thing to do. London's transport infrastructure had lagged behind. London competes directly with other global cities and was, frankly, losing the battle, so that investment was vitally needed. All of those projects are now within sight of their successful conclusion. By the end of this decade we will be looking at all of those projects having effectively reached their conclusion. HS2 envisages a rebalancing of strategic rail investment in the UK away from intra-London travel to travel between London and the other cities and between the regional cities of the UK. Great Western electrification with HS2 is a vital component of that.

Secondly, the way I always think of this is that we are currently spending £2 billion a year on Crossrail. The HS2 project is a £32 billion to £33 billion project spread over 17 years; that is almost exactly £2 billion a year. It will suck up the strategic investment capacity that the completion of the Crossrail project will make available. But, as we are doing in parallel with building Crossrail, so, in parallel with HS2, we will carry on investing in conventional rail and we will carry on investing in strategic roads in order to provide the overall connectivity that the UK needs. It is very clear that HS2 will only succeed if, at its various nodes, it is effectively connected into a good urban transport infrastructure and a conventional rail infrastructure that will spread the benefits of HS2 way beyond the dedicated high speed network.

Again, an important point that has not always come across in this debate is that this railway does not just serve Birmingham, Manchester, Leeds, the east midlands and Sheffield. It will serve the cities that are beyond those points but can be reached via them by high speed running to those points and then conventional speed running and beyond. Cities like Liverpool, Preston, the Scottish cities, Newcastle and no doubt others which I shall be pilloried for having forgotten at the moment, places like Chester and north Wales will also benefit progressively from the construction of phase one and then phase two of the high speed rail project if it goes ahead.

Q527 Chair: What commitment can you give that this would actually happen? We have received numerous representations from people who are very concerned about this point and who believe that by directing funding into High Speed 2 that might deprive other services of the sort you describe.

Mr Hammond: I can only point to the Government's record. It would have been easy and it would have followed in a time-honoured tradition of British Governments of both political persuasions that, faced with a fiscal crisis, you cut capital spending. The Chancellor very specifically committed to a programme of transport infrastructure investment which matched the expenditure over the previous four years during this spending review period and a large

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portion of that has gone into rail. So, at the time of greatest pressure on the public finances, we have demonstrated by deeds rather than words that we will continue investing in rail. All of the economic analysis of high speed rail shows that in order to extract the maximum value from the project you need to go on investing in the connective rail infrastructure. One of the other questions I will probably be asked at some point in these proceedings is about the commitment to build Birmingham to Manchester and Birmingham to Leeds. You have to assume that we are rational economic actors, that we want to extract the maximum value from this project. Having committed to building the project, it is clear that you get the maximum value out of it by building it to Manchester and to Leeds, and you get the maximum value out of it by continuing to invest in the rail infrastructure which connects into the nodes on the high speed network.

Q528 Kwasi Kwarteng: Some people on the Committee might dispute your assertion that Governments are rational economic agents.

Mr Hammond: This Government will inevitably.

Q529 Kwasi Kwarteng: Leaving that to one side, clearly you have made a point about the capacity, but there is an issue about rebalancing the economy which you referred to earlier and that was one of the questions that raise some concern. What evidence do you have that this is somehow going to rebalance the economy? You have talked about connectivity, but are there any specific ways in which you think that the northern areas will be regenerated directly because of High Speed 2?

Mr Hammond: There are direct and indirect effects. First of all, directly, it is clear to me that faster and simpler connectivity to a location is vital, particularly for inward investors. I have said on countless occasions when I have been in places like Manchester and Leeds that it may not be the way you like to think about it, but the reality is that for most people outside the UK they think about the UK through the prism of Heathrow. That is how they arrive. The question is not, "Where is it?" The question is, "How long does it take for me to get there from Heathrow?" If the answer is that you get on a train and trundle into London, then you get on a tube and pick up a taxi and trundle across to another station, then you get on a main line train and you take a three-hour journey and then you are there in the north-east or the north-west, that is not as appealing as the proposition that we are suggesting here by the completion of this project. You will come out of the terminal at Heathrow, get on a high speed train and in 30-something minutes you will be in Birmingham, in 70-something minutes you will be in Manchester, and in 80 minutes you will be in Leeds. That is something that investors, business people, can clearly understand, so I think there is a direct benefit in that sense.

Clearly, connectivity with London is critically important. All the major regional cities understand and acknowledge that their connectivity to London is important to their prosperity. The evidence from around Europe, where high speed rail networks have been built, is that regional cities can and do benefit

from the construction of better and faster links to the capital. But, as I said earlier, it is also about links between the regional cities. Ms Hilling mentioned the Northern Hub and the cross-Pennine rail links. They are critically important, but links between Birmingham and the north-west and Birmingham and Yorkshire and the north-east are also critically important as well. So all of those things build the picture.

Finally, I would say that the released capacity on the existing main lines and the ability of that released capacity to absorb additional freight paths is hugely important. There is going to be continuing pressure for more freight paths, particularly on the West Coast Main Line, freight paths that simply cannot be accommodated at the moment. For businesses that are in the business of making things and shipping them to ports, rail freight capacity is crucially important. When we talk to businesses, particularly in the midlands, the north-west, the north-east and Yorkshire, the ability to accommodate their needs for reliable low cost, high volume rail freight in the future is going to be crucial to maintaining the attractiveness of those areas to many manufacturing businesses. I am not suggesting for a minute that the future of cities like Manchester lies only in manufacturing businesses but that will certainly be an important part of the equation. So all three of those things—better connectivity for passengers, released freight capacity and the greater connectivity with London and between the cities—are crucial.

Q530 Kwasi Kwarteng: There is a perception that London is going to benefit. What do you say to the people who say this is all very well but it means that London is going to benefit disproportionately to the provinces?

Mr Hammond: Of course London will benefit. We are a single economy, as I said at the beginning. It is inconceivable to me that we can have a situation where London and the south-east goes on growing 2% to 3% a year once this current period is over, and the economies of the northern cities grow at a slower rate, and in 10, 20, 30 years' time that still allows us to be a globally competitive economy. I just do not believe it will happen.

On your point about the distribution of benefits between London and the regional cities, we believe that London will benefit. It may be the largest beneficiary in absolute terms because, obviously, London is a very large city, but the greater proportion of the benefits, according to the model, will accrue to cities outside London. So, yes, London will benefit but others will also benefit and that is the crucial thing.

Q531 Paul Maynard: Given the importance of the capacity challenge that you referred to earlier as being the key driver for much of this project and given that the construction of a new line increases capacity by an order of magnitude, would you agree that there is surely some leeway in terms of assessing routes, corridors, stops and number of trains per hour that none the less allows you some headway in terms of that increase of capacity because you are so increasing

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capacity that there is some flexibility at the top end for tweaking where the route goes?

Mr Hammond: That may very well be the case once we get north of the west midlands. On the spine of the route, London to the west midlands, the capacity of 18 train paths an hour in each direction will be needed. The reduction in capacity that would be introduced by additional station stops, for example, would erode the benefits that were delivered by the railway. I think it depends what part of the railway you are talking about. Once we get north of the west midlands, the ability to flex the offer within the headroom may be there in a rather more significant way, yes.

Q532 Paul Maynard: Why are 18 trains per hour so critical, compared to 16 or 17, just to be clear?

Mr Hammond: In modelling the economic case, clearly there had to be an assumption made about how many train paths would be needed. The model has looked at the current patterns of demand, the likely growth in those patterns of demand and how we would serve different cities in different regions. 18 trains per hour is the pattern on the spine from London to the west midlands that was selected as the modelling base case. It is also well within, we think, the technical capabilities of the line to deliver; so it is not stressing the capability of the line to its absolute maximum. Therefore, that was the modelling assumption that was used.

Q533 Mr Leech: We have heard this afternoon that you are absolutely committed to Manchester and Leeds and not just the west midlands. Why has the decision been made to have a hybrid Bill only to the west midlands?

Mr Hammond: Let me explain because that is a very good question and I understand that it sets some hares running. If we decide to go ahead, I will make the announcement in December. We have, as you know, already started a process to procure the technical support that would be needed if that decision is positive simply because the time scale is so critical that, if we do not do that now and we started that process in January, we would derail, if you will pardon the pun, the process.

On that basis we will have the technical work, the environmental appraisal and the design engineering work that has to be done on the London to Birmingham route ready for the hybrid Bill to be introduced in 2013. Because of the nature of the hybrid Bill it is necessary to complete the design engineering work, as well as all the other supporting stuff like the environmental appraisals, before the Bill is introduced. If we were to seek to include in a single hybrid Bill Manchester and Leeds, we would not be able to introduce the Bill until we had also carried out a formal consultation on the route options for Manchester and Leeds, made a decision on the preferred route and then commissioned and executed the design and engineering work for both of those routes.

If we look at the time scale for phase one, that process started in March 2010 when my predecessor published the preliminary route options for London to

Birmingham and will conclude, on a tight timetable, in 2013 when we introduce the Bill. If we now started the London to Manchester and London to Leeds process in early 2012, we would need three years to get to the point where we were able to incorporate those parts of the route into a hybrid Bill. That would mean the hybrid Bill would not be introduced in this Parliament and construction would be delayed well beyond the current planned date. That is not what we want to see.

We also think that the Bill would be massively indigestible. Remember, there will be a Select Committee process around a hybrid Bill that involves individuals who are affected being able to petition the Committee directly. We anticipate that there will be a large number of people wishing to do so. If this Bill were to cover the entire Y network, we could envisage that the Committee might be sitting for two years on its work. It may be difficult to find Members willing to serve on that Committee who are not directly interested in the project. Of course they would have to be people who are not directly interested in the project. So the parliamentary handling and the delay in being able to introduce a Bill make it simply not practical to deliver a single hybrid Bill.

The commitment I have given to Mr Stringer and to various other people who have expressed this concern, my predecessor among them, is that in the first Bill we will make a clear commitment placing obligations on the Secretary of State to bring forward the necessary steps in the future process within a time scale, to provide the maximum possible reassurance that we can to those who remain of a suspicious nature. But I have to say I still think the strongest—

Q534 Chair: They may be realists.

Mr Hammond: The strongest reassurance lies in the business case. If you look at the business case, the benefit-cost ratio with wider economic impacts, it is 2.6 for the overall project. If you only do London to Birmingham, it drops to 2. Once you have built London to Birmingham, you have put in the most expensive bits of infrastructure, the tunnels at the London end, the station remodelling at Euston and the Old Oak Common interchange station. Once you have built that, the pure economic logic drives you to extend the network. Even if you did not have a political commitment, economic logic would get you there.

Q535 Mr Leech: You said to Alan Whitehouse on *Look North* that you would then build out Manchester and the Leeds branches simultaneously rather than just Manchester and then Leeds or Leeds and Manchester. What will the impact be on cost and what will the impact be on time scale for the completion of the full Y?

Mr Hammond: We have said that we expect the full Y to be delivered in the early 2030s. 2032 is the target date. The cost for the project assumes that we will build the Birmingham to Manchester and Birmingham to Leeds section simultaneously.

Q536 Mr Leech: The estimate of 2032 was based on both lines being done simultaneously.

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Mr Hammond: Yes. I was not making an announcement on *Look North*, I was simply stating a fact about the way the project is envisaged going. This is partly about supporting the UK supply chain, a subject which is topical at the moment, but also by structuring the project in two phases so that there is going to be 15 years plus of work for the civil engineering contractors, the rail engineering contractors and the rolling stock manufacturers, for which they can see they can plan, in which they can invest and that they can skill up for, and which will allow them to participate in this project in a way that they might not otherwise be able to. The clear intention is that we build phase one and, as phase one comes to a completion, we roll in to phase two. Once the rail engineering part of phase one is completed, then we will move into rail engineering on phase two. It will start construction in the mid-2020s and conclude in the early 2030s.

Q537 Mr Leech: We had Keith Brown MSP, the Transport Minister from Scotland, in front of the Committee. He said that he had received assurances from you that DfT would fund the route from Manchester to the Scottish border. Can you confirm that that is the case and in what sort of time scale would you expect to see high speed rail clearly going all the way through to Glasgow and Edinburgh?

Mr Hammond: He may have extrapolated from a conversation we had. The Government have made it clear that their long-term commitment is to a truly national high speed network. We have discussed with Scottish Government Ministers the continuation of the dedicated high speed line to Scotland, and we have made a commitment to them that, once we have got the second hybrid Bill into Parliament, we will then start serious work with the Scottish Government.

Q538 Chair: What year is that likely to be if the project went ahead?

Mr Hammond: That would be in the next Parliament. We would expect the second hybrid Bill to be in Parliament during the next Parliament from 2015 to 2020 and substantive discussions on the business case for a route to Scotland during that time. I should stress that there are a range of options in relation to Scotland. There will be options around enhancing the existing West Coast Main Line north of Manchester, to improve journey times to Scotland. These are not necessarily either/or. It may be that there is a step in between, which is enhancement of the West Coast Main Line to improve journey times to Glasgow, but there may still be a case for a dedicated high speed route to Glasgow further on.

The conversation that I had with the Scottish Transport Minister was along the lines of reminding him that under the devolution settlement the Scottish Government are responsible for funding infrastructure investments north of the border and that, if a dedicated high speed line or, indeed, West Coast Main Line enhancements were made, they would fall to us to fund south of the border but to the Scottish Government to fund north of the border.

Q539 Mr Leech: Would there be any expectation that the Scottish Government would be expected to fund part of it from England to connect maybe Carlisle up to the Scottish border?

Mr Hammond: No. The devolution settlement is clear. Network Rail or rail infrastructure investment in Scotland is funded by the Scottish Government. In England it is funded by the UK Government.

Q540 Graham Stringer: Just following up on what Mr Leech was saying in our previous conversations, you can understand why people in Manchester are suspicious because during the passage of the Channel Tunnel Bill the kind of commitments that you have just given to this Committee were given about trains going straight through the tunnel to Manchester and they were not carried out. Can you be more specific about what commitments and work can be done in the immediate future to reassure those others who have longer memories?

Mr Hammond: I am pleased that if this project goes ahead we will be able, finally, to deliver on that commitment of trains that can run straight through the tunnel from Manchester, Birmingham and Leeds. The timetable that we have set out is that HS2 is tasked to report to Ministers on proposals for routes to Leeds and Manchester in March 2012. The Government will respond pretty much immediately to that report, and an informal consultation on the Leeds and Manchester routes will begin in mid-2012. In late 2013 or early 2014 there will then be the beginning of a formal public consultation, a matching exercise to the one that we have just done with road-shows and so on, on the Leeds to Manchester routes, leading to a decision on which routes to choose, exactly mirroring the process that we have done for the London to Birmingham section.

I have given a commitment, as I have said to you directly, that I am very happy to sit down with representatives of the areas where most of the concern is being expressed—I think that is Manchester primarily—and look at what language and what structures we can put into the first hybrid Bill. I want this suspicion and concern to go away. Some of the strongest supporters of the project are in Manchester and I want to reassure them about the plan for the overall project. We have to be guided by parliamentary process and legal advice, but I am willing to build into the first hybrid Bill whatever we lawfully and properly can to give that reassurance and I am willing to see the Secretary of State committed to carrying out these steps to a timeline in order to make sure that the project keeps moving forward.

But, again, I come to the critical point. Once you have built London to Birmingham, the marginal cost-benefit ratio of then building a line on to Manchester and a line on to Leeds becomes very attractive indeed because the infrastructure is relatively lower cost for some very significant additional benefits that accrue.

Q541 Graham Stringer: That is very helpful, Secretary of State, because most people in Manchester agree with you that the economic case is very persuasive and I understand the parliamentary timetable. Given that two hybrid Bills go through, and

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we both know they are extremely complicated beasts, is there any possibility of speeding up the building phase of the scheme, because, again, you spoke persuasively about changing the economic geography of this country and that is welcome, but let us change it a bit quicker. Is it possible to do that any more quickly?

Mr Hammond: I fear this is where we have to be frank about the tension between maintaining investment in other transport infrastructure projects and pouring money into HS2. We have concluded that a pace of work of about £2 billion a year—it will fluctuate a bit but over a spending review it will represent about £2 billion a year—is deliverable without undermining the needs for investment in the wider railway. If we tried to go faster, depending on the economic circumstances, depending on the Treasury's position at the time, there would be a risk of undermining investment in other projects and I am not prepared to do that. What we have done, setting out a path which is clearly achievable, based on the current rates of spend on Crossrail as the current strategic infrastructure project in which we are investing, is the right way to go. It also provides a much better proposition for the UK infrastructure industry that this will be a project that builds out over a number of years. If we were to throw money at it and say we are going to build it very quickly, I think we would be likely to undermine the ability to participate of the UK-based supply chain.

Q542 Graham Stringer: I understand those arguments, and the implied commitment of continuing the funding into the rail system of the £2 billion that is going into Crossrail is very welcome as well. This question may surprise you. Given that Network Rail costs more than any Government considered it would—I know it was Railtrack before under the Conservative Government, but it costs much more than the Labour Government expected it to cost—is it not possible to take money out of that cost base and speed up the second part of High Speed 2 from that source?

Mr Hammond: We will have to take cost out of the railway. We have made it clear that that is our intention and we have in front of us the McNulty report, which provides at least some suggested routes forward, and we have made a commitment to respond to that with a Government strategy paper on the future of the railway. It is tempting to look at ways to accelerate the project. I certainly would rather be able to walk on to the first train rather than be pushed on in my wheelchair. But the reality is that, if we are going to do this in a way that is robustly deliverable and that does not undermine other demands for investment in the rail network, then, on the projections we have, passenger demand is going to go on rising across the network not just on the inter-city lines. You are going to be asking for upgrades of the TransPennine route to provide passing loops and so on to allow much greater frequency and faster journey times on routes like that. There are similar demands across the country and they reflect rising passenger demand and we have to be able to deal with that, as well as the strategic high speed rail project. If I were

to be tempted to go down the route you are inviting me to follow, I would rightly be challenged by others saying that what I was doing might put at risk investment in the conventional railway.

Q543 Chair: You did tell us before that you would not take money away from other routes to put it into High Speed 2. Are you confirming that or are you wavering from that?

Mr Hammond: No. What I have said is that we are currently investing £2 billion a year in Crossrail as a strategic London-focused project. As Crossrail comes to an end, that £2 billion a year will be redeployed and that is the rate of investment in the strategic rail project. Investment in the business as usual railway will continue. Obviously, I cannot pre-empt the next spending review and the Chancellor would not appreciate me suggesting what he is going to make available for transport investment or specifically for rail investment in the next spending review. That will be a separate issue and we are clear that investment in the railway needs to continue because demand for the railway is continuing to rise.

Q544 Chair: What exactly is the Treasury's commitment to funding this scheme?

Mr Hammond: Within the spending review we have a commitment. I cannot remember the precise figure but it is some hundreds of millions of pounds that takes us through the design engineering stage and deals with the costs involved in the statutory process, preparing a Bill to go to Parliament and taking the Bill through Parliament.

Q545 Chair: What about beyond that?

Mr Hammond: Beyond that, of course, you know the Treasury funds capital projects in tranches and the funding for the next spending review would be delivered when the next spending review settlement is made, assuming the Government have made the decision to go ahead with the project.

Q546 Chair: Are you looking at private finance being involved, if the project goes ahead?

Mr Hammond: Yes. What we have said is, if the decision in December is to go ahead with the project, then we will focus on the financing options that are open. We will obviously do that in consultation with the Treasury and with Infrastructure UK and the Major Projects Authority, all of which will be involved. The working assumption is that this will largely be financed by public capital and that we will explore the options for the sale of a concession once the railway is complete and operating, in other words, mirroring the approach that was taken on HS1. There may also be possibilities of bringing some private capital into the provision of stations, depots and similar ancillary infrastructure, reducing the outlay of public capital required at the outset. But we will explore all of those models and we will look for the one that delivers the best value for money within the constraint of available public sector capital cash spend.

Q547 Steve Baker: Secretary of State, from what you have just said, is there a danger that we could end up socialising losses and privatising profits?

Mr Hammond: We have to see this as a strategic infrastructure investment that will never be made by the private sector on its own. The experience of high speed railways everywhere is that the public sector has had to be involved in mandating them and usually in financing them. The experience of High Speed 1 was that a substantial capital receipt was delivered by the sale of a 30-year concession, while retaining in the public sector the freehold ownership of the asset. That is an attractive option, but I do not think we should shy away from or seek to conceal the fact that it is probable there will be an amount of trapped public capital in a high speed railway that has been invested there because we believe there is a strategic economic benefit to the UK that cannot be captured by a private concessionaire or a private train operator in the form of fare box and profits.

Q548 Steve Baker: HS2 Ltd has a number of external challenge groups. Could you just characterise how successful those are?

Mr Hammond: Do you mean the challenge groups that HS2 Ltd has set up?

Steve Baker: Rather than within itself.

Mr Hammond: That is probably a question that would be better directed to HS2. It is my understanding where I have probed specific issues with HS2 on very many occasions that part of the answer back has been that the external challenge groups have already looked at precisely the question and have deemed the HS2 solution robust or have suggested a way in which HS2 can make their position more robust. I think those have worked well. I am very happy to write to the Committee with more detail or to ask HS2 to write to the Committee with more detail if you want to know specifically how those challenge groups have worked and the kinds of things that they have looked at.

Q549 Steve Baker: Do you have any similar arrangements within the Department?

Mr Hammond: We do not have external challenge arrangements within the Department, no.

Q550 Steve Baker: Would you consider accepting offers from a number of groups who would, I am sure, be prepared to offer external challenge?

Mr Hammond: There will clearly be external challenge. I have no doubt about that. I am not sure that any purpose would be served in duplicating the process that HS2 already has in place. Perhaps I should just backtrack on saying no external challenge groups. We have Infrastructure UK, HM Treasury spending teams, the Major Projects Authority, and we have Ministers, all of whom are routinely challenging, probing and kicking the model that HS2 is producing. HS2 officials, in turn, are having to explain what they are doing to their departmental counterparts, so there are a series of processes within Government that are already challenging what HS2 is doing and I like to think sometimes getting them to look again and think again about the way they are doing things.

Q551 Chair: The business case does not include the environmental assessments. Does that mean that the environment is seen as less important?

Mr Hammond: No. It means that the business case includes the things that can sensibly be monetised. The things that can be monetised have been monetised.

Q552 Chair: Do you monetise loss of beauty?

Mr Hammond: No, you do not, and that is why the environmental impacts—the landscape impacts, for example—have not been monetised as part of the economic case. The economic case is only part of the case for high speed rail, as you know. The Department has an approach which considers five separate cases, of which the economic case is one and the environmental case is another.

Q553 Julie Hilling: One of the criticisms that people are making is that this is just going to be a rich person's toy and people of low or moderate means will never be able to travel on this. Can you reassure people that it is going to be a railway for everybody and what will happen about regulating fare prices, etc.?

Mr Hammond: Uncomfortable fact perhaps No. 1 is that the railway is already relatively a rich man's toy—the whole railway. People who use the railway, on average, have significantly higher incomes than the population as a whole. That is a simple fact. The assumptions underlying the pattern of use of HS2 assume similar pricing to the West Coast Main Line, which, as I have said before, ranges from eye-wateringly expensive to really quite reasonable if you dig around and use the advance purchase ticket options that are available. Therefore, the assumption is that the socio-economic mix of passengers will be broadly similar to those currently using the West Coast Main Line.

There is another point here which I think we have to be absolutely clear about. If you are working in a factory in Manchester you might never get on HS2, but you will certainly be benefiting from it if the salesman and sales director of your company is routinely hopping on it to go and meet customers, to jet around the world from Heathrow in a way that brings in orders that keep you employed. So the benefits of greater connectivity, the benefits of bringing businesses closer to their markets, the benefits from released freight capacity and moving goods efficiently around the country, do not only accrue to the people who will actually use the railway. They accrue to some people who will never even get on the railway. They certainly accrue to people who will use services on the West Coast and East Coast Main Lines that would not have been able to be provided if we had not been able to move the long distance city to city traffic on to a high speed railway. It is a complicated model and the ripple effects will spread across the whole of the economy in ways that it would be foolish to even try and pretend we can wholly predict and quantify at this stage.

13 September 2011 Rt Hon Philip Hammond MP

Q554 Chair: How much would the benefit-cost ratio have to fall before you or the Chancellor decided that this scheme was not good value for money?

Mr Hammond: I have a general principle that I do not allow the Department to consider projects with a benefit-cost ratio that is negative, i.e. "Let's spend £1 to get 90p." You might think that is obvious, but that has not always been the practice in the past and projects have been approved that have benefit-cost ratios below 1. We have taken the view from last May that we will not consider projects of that nature, however attractive they may be for other reasons. Rail projects do not offer benefit-cost ratios as attractive as road projects typically, but in the interests of modal

balance we have taken the view that it would not be appropriate to rank projects simply by BCR, but that it would be appropriate to look at some modal spread as well. As rail projects go, a BCR of 2.6 is quite reasonable. If it were to fall much below 1.5, I would certainly be putting it under some very close scrutiny. But, as I said earlier, the economic case in the BCR is only one element of the appraisal that we will do. We will look at the strategic case, we will look at the managerial case—the deliverability of the project—and the environmental case, as well as the economic case.

Chair: Thank you very much for answering our questions.

Written evidence

Written evidence from Professor John Tomaney, Newcastle University (HSR 14)

THE LOCAL AND REGIONAL IMPACTS OF HIGH SPEED RAIL IN THE UK: A REVIEW OF THE EVIDENCE

SUMMARY

This report addresses claims that HS2 can lead to “a strategic change in the economic geography of the UK”, in the words of the Department for Transport. The report gathers the theoretical and empirical evidence for this claim from within and beyond the UK. It notes the contradictory and conflicting arguments made by different government departments concerning the role of high speed rail in the “rebalancing” of regional economies.

The report notes the weight of recent theoretical and empirical academic work which emphasises that high speed rail connections between cities or regions with different levels of development may favour already strong regions at the expense of weaker regions.

The report examines evidence of the experience of five countries where HSR has been introduced to assess its impact on their economic geography. Taking this evidence in the round it is very difficult to substantiate the argument that high speed rail is likely to have a positive impact on regional inequalities. Cities which are the location of HSR stations may gain some benefits, but distribution of net benefits needs careful analysis. Some of the benefits accruing to regional cities may be at the expense of neighbouring places, while in countries with dominant capital cities net benefits tend to accrue to these.

Looking at the UK situation in more detail, the report examines those arguments which suggest that other kinds of transport investment may make a bigger contribution to the objective of regional rebalancing than HS2, particularly those which improve inter-city connections between cities and regions outside London and the South East.

Overall, the report suggests that the impacts of high speed rail investments on local and regional development are ambiguous at best and negative at worst. It is very difficult to find unambiguous evidence in support of the contentions that are being made by the government? about the potential impacts of HS2 on the cities and regions of the UK.

1. Introduction

1.1 This report is concerned with an aspect of the debate surrounding the proposed HS2 high speed railway. The arguments made in support of (and against) HS2 are complex and, at times, contradictory. Our aim in this paper is to focus on one of the more recent, but increasingly prominent propositions in the debate; namely that HS2 will accelerate the regeneration of slow-growing regions in the UK and assist the new policy objective of “rebalancing the economy” spatially. There are several other arguments which are deployed in support of HS2—such as its potential impacts on capacity constraints, congestion and carbon emissions—but we touch on these aspects of the debate only insofar as they bear on our core question of the likely contribution of high speed rail (HSR) to regional rebalancing.

1.2 Claims about the transformative potential of HS2 for regional economies have gained recent prominence in the arguments of proponents. For instance, the Secretary of State for Transport, Phillip Hammond, has asserted recently that HS2 represents: “A once-in-a-generation chance to reshape our economic geography; bring our key cities closer together; regenerate our urban centres; and tackle the North-South divide that has held this country back for far too long” (2011, no page. <http://www.dft.gov.uk/press/speechesstatements/speeches/hammond20110228>).¹

1.3 A former Secretary of State Lord Adonis has complained recently: “There is a big debate about the economic benefits of high-speed rail. Bizarrely it has been suggested that HS2 might disadvantage the regions by sucking more economic activity into the south-east than it generates in the regions—a view which has even been expressed in the West Midlands, a telling commentary on the lack of confidence there is in the regional economy. In fact, the evidence is of a fairly clear and positive relationship, among cities and large towns, between journey time to London and productivity. The shorter the journey time to London, the higher tends to be productivity. By bringing Birmingham closer to London, its productivity should rise, which is good for jobs, good for business and potentially transformational for Birmingham’s future” (2011: <http://www.opendemocracy.net/ourkingdom/andrew-adonis/birmingham-unleashed-elected-mayor-high-speed-rail-and-academies#>).

1.4 It is noticeable that although evidence is referred to, little of it is in fact deployed in support of these arguments. The aim of this report is to examine the basis for these claims by assembling the available evidence. In this report we scrutinise the international and national academic literature and other evidence to assess how

¹ In his Foreword to the Department for Transport’s *High Speed Rail: Investing in Britain’s Future* Consultation (February 2011) Hammond reiterates: “By slashing journey times and linking to our major international gateways, it has the potential to help bridge the North-South divide that has for too long limited growth outside London and the South East (Hammond, “Foreword” in DFT 2011: 5).

well-founded the claims are. In Section 2, we outline the case made by the proponents. In Section 3 we examine the international evidence—theoretical and empirical—about the local and regional impacts of HSR. In Section 4 we look at the little available UK evidence about the local and regional impacts of HS2 and outline the regional rebalancing challenge and the potential role of transport in this, paying attention to alternative transport proposals. Finally, we draw some conclusions. We conclude that it's difficult to find robust evidence that HS2 will have a transformative impact on the economic geography of the UK.

3. *HS2 and regional development: the nature of the claims*

3.1 Claims that HS2 can lead to “strategic change in the economic geography of Britain, supporting sustainable long-term growth and reducing regional disparities” (DFT, 2011: 12) have become increasingly central to the HSR proposition. These claims are related to the Government’s commitment to the objective of “rebalancing” the UK economy. In their Foreword to the Coalition Programme David Cameron and Nick Clegg stated “...we both want to build a new economy from the rubble of the old. We will support sustainable growth and enterprise, balanced across all regions and all industries” (Cabinet Office, 2010: 7). The term rebalancing has become central to government rhetoric although it is used in multiple and, at times, contradictory ways. Amidst this confusion, however, it has tended to refer fairly consistently to the notion of an economy less reliant on the contribution of financial services and less concentrated in London and the South East. The Coalition Programme for Government states: “We want to create a fairer and more balanced economy, where we are not so dependent on a narrow range of economic sectors, and where new businesses and economic opportunities are more evenly shared between regions and industries” (HMG, 2010a: 9). This perspective underpins the “Local Growth” agenda, which has been outlined by the Government (HMG, 2010b).

3.2 Recent commentary has emphasised the scale of the rebalancing challenge (eg BIS, 2010; Ward, 2011; PwC, 2010; SQW Ltd., Cambridge Econometrics Ltd., Centre for Urban and Regional Development Studies and Institute of Employment Research, 2011). Regional inequalities in the UK are longstanding, comparatively wide and entrenched. Moreover, the nature of the Government’s deficit reduction plan focused on historically unprecedented and rapid reductions in public expenditure, according to most analyses, will impact heavily on employment, output and income in the northern regions, which have tended to rely disproportionately on public sector jobs (see especially SQW Ltd., Cambridge Econometrics Ltd., Centre for Urban and Regional Development Studies and Institute of Employment Research, 2011.)

3.3 The Department for Transport’s consultation document *High Speed Rail: Investing in Britain’s Future* places heavy emphasis on the contribution that HSR can make to the objective of rebalancing—although it does not use this term directly (see DFT, 2011, especially Chapter 2). Among other things, it argues: “By bringing the major cities of the Midlands and the North closer to the capital, and by ensuring that capacity is available to handle high levels of demand growth, high speed rail could benefit thousands of businesses by improving access to the huge and internationally-competitive markets of London and the South East—just as service sector firms in Lyon have benefited from enhanced access to Paris. And by bringing the major regional conurbations closer together, boosting productivity and enabling greater economic specialisation, high speed rail could put them in a strong position to compete effectively in those markets. High speed rail would also act as a catalyst for regeneration, as has been seen in cities across Europe, such as Lille, where the arrival of high speed rail drove the development of the major Euralille complex. A British high speed rail network could contribute strongly to regeneration in our major cities, for example at Old Oak Common in West London and in the Eastside district of Birmingham. A London–West Midlands line alone could support the creation of around 40,000 jobs” (DFT, 2011).²

3.4 In total, the DFT analysis predicts that HS2 would generate benefits worth £43.7 billion at present value. Since capital and operating costs are expected to be £44.3 billion over the next 60 years (partially offset by forecasted £27.2 billion in fares revenue) the result, according to the government’s calculations is a benefit: subsidy ratio of 2.6. In a study prepared by KPMG (2010) it is claimed that HS2 would create a single market for services and knowledge based activities, through a better connection between core cities in the UK. As a result, GVA would receive by 2040 a boost between £17 billion and £29 billion. Due to increased economic activity, HS2 would also generate additional tax receipts valued between £6 billion and £10 billion. This impact, according to KPMG (2010) would be felt more strongly in the North of the country, thereby effectively contributing to the spatial rebalancing of the UK economy.

3.5 The DFT (2011) provides European examples to support its argument, although it is unclear what its sources of its evidence are:

“International experience supports this view. In Lyon, the high speed rail link to Paris has enabled firms from the city to benefit from improved access to the French capital. The area around Lyon’s Part Dieu high speed rail station now hosts 5.3 million square feet of office space and around 20,000 jobs. Similar patterns have been observed in Japan, where high speed rail has seen a dispersal of investment and economic activity from the main ‘developed region’ towards the periphery. And in Spain, a number of towns and cities have benefited from improved links to the capital—for example, Lleida, whose high speed rail links have helped to attract investment from Microsoft and other high-tech companies.”

² It should be noted that 10,000 of these jobs are anticipated to be construction jobs, while 22,000 of the permanent jobs will accrue to London and 8,000 to Birmingham.

3.6 The Government's main statement on its approach to rebalancing the economy spatially is its White Paper *Local Growth* (HMG, 2010b). This document refers to rail only once as a means of encouraging local growth and this reference is to Crossrail, although there are some generic references to the importance of transport investments. Similarly the accompanying technical paper makes no reference at all to the role of rail (and only two references to transport) as a source of local growth, and here the focus is on the importance of intra-urban transport systems in underpinning agglomeration economies rather than addressing inter-regional imbalances (BIS, 2010).

3.7 In summary, the current government is presenting high speed rail as a crucial policy instrument that will help address regional inequalities and boost the UK economy. The government also claims that total economic and social benefits will be significantly larger than the subsidy they will require, which will guarantee a positive rate of return in these terms. However as we will discuss next, based on theoretical and empirical arguments, these predictions about the impact of HSR on regional inequalities are founded on assumptions that are difficult to sustain.

4. High speed rail and regional development

4.1 The "new economic geography" (NEG) (Krugman, 1993) seeks to explain the persistence of regional disparities assigning a critical role to the productivity advantages accruing from the agglomeration of economic activity in major cities which are able to attract firms and workers. NEG is a globally influential theoretical framework for understanding the economic processes that produce regional inequalities. It is worth paying particular attention to, because this theoretical framework figured prominently in the technical paper which accompanied the current UK Government's white paper on *Local Growth*, which set out its approach to rebalancing the UK economy spatially (HMG, 2010b, BIS, 2010). According to NEG the location of each individual business is the result of a trade-off between transportation costs and increasing returns to scale. The latter suggests that the marginal cost of production decreases as total production increases. In other words, once a firm invests in the necessary physical and human infrastructure the more it produces the cheaper the cost of each individual good or service. Therefore the firm has an incentive to locate its activities in the same place, even if that implies transporting some of its output. Naturally the benefits of increasing returns to scale disappear once transportation costs exceed its benefits.

4.2 This is an important principle but it still does not explain why firms tend to locate in cities, where land and labour are more expensive, instead of locating in isolated or rural areas. The emergence of cities is the product of localisation and/or agglomeration economies. Both are based on the same three principles, but the former explains the concentration of firms in specialised clusters, whereas the latter explains their presence in cities with a diversified economy. The three principles are: scale economies in intermediate outputs, labour market pooling, and knowledge spillovers. These principles are mutually reinforcing and therefore they lead to exponential gains in productivity and competitiveness. The combination between the benefits of agglomeration and the principles underlying the location of businesses explains the pull effect exerted by core cities. This pull effect has remained strong (and according to some authors has even increased) despite the proliferation of information and communication technologies and an overall decrease in transportation costs. It explains why cities such as London and the South East region of England continue to prosper and diverge from the rest of the country, despite higher land and property prices (plus other costs, such as increasing commuting times or pollution).

4.3 Much of the NEG literature surveyed for this report does not focus specifically on high speed rail but its conclusions are nonetheless relevant. A recent paper by Lafourcade and Thisse (2008) for example develops the theoretical elements in NEG theory concerning the mobility of capital and labour, increasing returns to scale and transport costs to understand the potential impact of infrastructure investment. The authors argue that lower transport costs are likely to benefit core regions to the detriment of poorer ones. The positive externalities generated by agglomeration economies are mutually reinforcing and therefore the more productive cities or regions are likely to provide a more competitive business environment. As a result, when firms located in the core city compete with those located in peripheral ones the former have a comparative advantage. This is particularly the case for isolated areas, which are the most likely to suffer from transport improvements, even if this assumption is counterintuitive.

4.4 There is nevertheless an assumption that the impact of transport costs on the regional economies follows a bell curve ie after a first period, when a fall in transportation costs leads to concentration of economic activity in the major agglomerations, lower transportation costs are likely to facilitate a redistribution of economic activity towards the periphery, particularly of manufacturing activities. This would however imply that transportation costs became almost negligible.

4.5 A similar argument is developed by Puga (2002) who has drawn on these insights to examine the trends in regional inequalities and regional disparities in the EU who notes that:

"A better connection between two regions with different development levels not only gives a less developed region better access to the inputs and markets of more developed regions. It also makes it easier for firms in richer regions to supply poorer regions at a distance, and can thus harm the industrialisation prospects of less developed areas. New economic geography models not only point out this potential ambiguity of lower transport costs on less developed regions, they also tells us that the overall effects depends not just on the characteristics of the projects, but also on certain aspects of the

economic environment. For instance, if there is little interregional migration, and if wages do not vary much between regions—even when regions differ widely in their attractiveness to firms—then investment in infrastructure can do little to help poorer regions catch up, and may even widen their lag with respect to richer regions.” (2002)

4.6 Puga (2002) suggests that the main (potential) impact of high speed rail is on the location of business services and headquarters suggesting that an increased ability of business service providers and headquarters’ operation to serve remote locations leads to a further concentration of these activities in fewer, larger cities. One effect of this can be to raise costs in those cities which make them less attractive to manufacturing firms. This accelerates the shift in economic geography from a specialisation by sector to a specialisation by function. Puga provides evidence of this shift in US and of the emergence of this trend in France, where the construction of the Lyon-Paris TGV led to the relocation of headquarters activities from Lyon to Paris in contradiction to the claims made in the DfT consultation document (DfT 2011; see section 2 above). DfT claims that the development of a new office complex adjacent to the Part-Dieu station in Lyon points to the positive effects of HSR, but this statement does not address the net impacts on growth and employment. The balance of evidence assessed here and below in section 3.2 points to a negative net impacts for Lyon. De Reus therefore concludes:

“New economic geography models not only point out this potential ambiguity in the impact of lower transport costs on less developed regions, they also tell us that the overall effect depends on certain aspects of the economic environment (such as mobility and wage rigidities) and on the characteristics of the projects. On this respect, the Trans-European Transport Network will give much of the EU better access to the main activity centres. However, the gap in relative accessibility between core and peripheral areas is likely to increase as a result of the new infrastructure, which reinforces the position of core regions as transport hubs. The emphasis on high speed rail links is also likely to favour the main nodes of the network, and is unlikely to promote the development of new activity centres in minor nodes or in locations in between nodes” (2008: 14).

4.7 Puga distinguishes between different types of rail investment, for instance between those that facilitate trade between regions and those that facilitate trade within regions (see also Martin and Rogers, 1995). He concludes that while improvements in the former may harm rather than help peripheral regions, improvements in local infrastructure appear to have no negative impacts. Similarly hub-and-spoke type high speed rail systems appear to produce particular effects. Multiple spokes connected to a single hub tend “to promote agglomeration in the hub of the network, as firms located there face lower transport costs to spoke locations than firms in one spoke to another. Furthermore, they also tend to trigger disparities between spoke regions” (Puga, 2002: 397; see also Puga and Venables, 1997; Fujita and Mori, 1996).

4.8 This phenomenon is demonstrated clearly in the work of Vickerman *et al* (1999) which shows that the development of the European high speed rail network has tended to increase the accessibility of core cities within Europe whereas peripheral regions gain some improved accessibility but markedly less than core cities. Nodal cities gain the most from improvements to the high speed network while places between nodes or on the edge of the network do not make gains as might be predicted by the new economic geography (see also Lafourcade and Thisse 2008).

4.9 In a highly cited and influential study, which used cross-sectional and panel data to assess the impact of European Structural Funds expenditure on Objective 1 regions, Rodríguez-Pose and Fratesi (2004) show that despite the concentration of EU investments in new infrastructure (notably roads, high speed rail, etc) there was no noticeable impact on regional convergence. Only in the case of investments in education and human capital—which represented about one eighth of the total commitments in the period under review—was it possible to identify positive and significant returns. Rodríguez-Pose and Fratesi consider a number of reasons for this disappointing performance but conclude that the main reason is that the relationship between infrastructure investments and regional convergence is inherently weak. They suggest:

“Since ... roads, railways, and telecommunication networks run in two directions, a strategy strongly skewed towards specific regional characteristics that are at the root of the development of infrastructure in regions with relatively vulnerable local production structures, weak entrepreneurship levels and technological base, and an often weaker human capital endowment, may solve an important development bottleneck and reduce the infrastructural gap with the rest of the EU, but may leave these regions more exposed to competition from stronger and more technologically advanced firms in core areas. Spain provides an example of where this mechanism may already be at work. The strong recent investment on transport infrastructure in Objective 1 regions devoted to the construction of road and high-speed rail links between the periphery of the country and Madrid—has probably helped to boost the phenomenal growth rates that Madrid has experienced in the second half of the 1990s, but has left many of the Objective 1 regions, whose economic prospects rail-links were supposed to increase, struggling to catch-up” (2004: 109).

4.10 One of the factors contributing to these outcomes is that rail in general—and high speed rail in particular—is generally patronised by higher income groups, as demonstrated by the Sustainable Development Commission, using UK data. These groups are overrepresented in London and the South East and underrepresented in the Midlands and the North. Regional income inequalities and the relatively high costs of using high speed rail are therefore likely to shape the net regional benefits of HSR:

“There are potential fairness benefits for regional economies. It is argued that a high speed rail network would help to rebalance the UK economy and could allow existing rail lines to be dedicated to improved local rail services. However, others have suggested that rather than bolstering the economies of the Midlands and the North it will further imbalance the national economy towards London. High speed rail could also divert funds away from investment in local rail services ... those in the highest income quintile are the greatest users of rail. Despite commitments to ensure that new high speed services would not be offered at premium prices it could therefore be argued that higher income groups would stand to benefit most from large scale investment in a high speed rail network. Ultimately, the fairness impacts of a high speed rail network will depend on the detail of implementation plans, how it is integrated into the existing transport network and what complementary transport policies are included” (SDC, 2011: 59).

Taking these arguments into consideration, it further emphasises the need to consider carefully whether high value, high-speed inter-city rail investments represent the best means of addressing regional inequalities.

4.11 There are six countries worldwide (other than the UK) where high speed rail lines have received a significant amount of investment: Japan, France, Germany, Spain and, more recently, Italy and China. Italy completed its first high speed line in 2006 and rail’s share there remains well below the EU average so it is difficult to evaluate its impact for the purposes of this study. China is currently investing heavily in this mode of transportation (the first line opened in 2008) and is en route to have the most extensive HSR network in the entire world by 2012. Despite the size of its network and of its investments, the fact that is a rather recent development also makes it difficult to assess its impacts on the economic geography of this country.³ Therefore we will focus on the remaining five aforementioned examples.⁴

4.12 Japan was the first country to build a HSR line between Tokyo and Osaka in 1964. Since then three more lines have been built and the system currently serves over 300 million passengers per year, a value above demand forecasts. The time savings generated by the existence of HSR are estimated to be 400 million hours a year. Nevertheless, original expectations about economic benefits from these lines led to political pressure for the creation of more stations, which in turn endangered the economic viability of the Japanese HSR system. By 1987 debt was so high (\$US 200 billion) that the Japanese government decided to privatise the system. At the same time evidence from 1997 indicated that HSR had not necessarily contributed to long-term regional dispersion of economic activities (Sasaki et al. 1997). It is true that the cities served by it grew at a faster pace than those excluded, but the HSR routes had been designed taking into consideration expected growth, independently of its impacts. Therefore faster growth happened where it was already expected, even before the line was built.

4.13 The French high speed rail system is one of the most successful in financial terms and in the impact it has had on the cities served. It was built under strong governmental intervention and had from the beginning a strong focus on cost containment and commercial viability. For that reason it is mostly a mixed system: the construction of new separate rails was restricted to congested areas, while in the rest of the service conventional lines were upgraded to accommodate higher speeds. HSR lines account for only 37% of the total network. Regarding its impact on regional development, there is some evidence that cities such as Lyon and Lille have benefited from the creation of a HSR line. The former, for instance, was capable of attracting several regional offices of firms headquartered in Paris. Nevertheless, the French capital has gained the most from the creation of a network that has Paris as its central node. For instance, according to Albalade and Bell (2010) on the Paris-Rhône-Alpes route, flight and train journeys to Paris increased 144%; those in the opposite direction have increased 54%. Intra-organisational trips that have Paris as their destination increased 156%, while trips originating in Paris increased by 21%. Survey based analysis also indicates that the impact of HSR on business location was negligible, according to the same authors (Albalade and Bell 2010). Therefore, despite some business creation, there is no evidence that HSR led to overall economic decentralisation from Paris (Marti Hennenberg 2000 cited in Albalade and Bell 2010). Furthermore, as in other countries, there is evidence that HSR reduces the number of overnight stays from business travellers. This has a negative impact on one of the industries that is usually most likely to benefit from HSR: tourism.⁵

4.14 In Germany the construction of HSR had two objectives: 1) to improve the North South connections, that had been neglected in the period before WWII, when the priority were west-east links; 2) to combine freight and passenger service in order to serve the industrial centres. According to Heinisch (1992) the main concern in Germany was not faster passenger traffic but better connections between the North Sea ports and

³ Recent commentary has suggested that the main driver behind the growth of the Chinese high speed rail has been the pursuit of prestige and the desire to develop a railway export industry. Moreover there are signs that the rate of investment in high-speed new lines is likely to slow (“China: Off the rails? High-speed trains might be forced to go a little more slowly”, *The Economist*, 31 March 2010.)

⁴ US literature is sometimes cited in the debate about HSR in the UK, but given the absence of any meaningful investments in this technology this literature tends to have a speculative character.

⁵ DfT (2011) offers the development of the EURALILLE business district as further evidence of the development impact of the TGV. EURALILLE certainly represents a major property development and Lille benefitted from its strategic location in northern Europe and as potential node between Paris and London close to the Channel Tunnel. However, even in these apparently favourable conditions, Moulaert *et al* (2001) highlight the ambiguous local impact of these developments suggesting they have accelerated intra-regional inequalities as neighbouring towns such as Roubaix, Tourcoing and Villeneuve d’Ascq experienced few development gains and may have lost economic activities to EURALILLE. It should be noted, Moulaert *et al* observe, that to produce the observable effects, the construction of EURALILLE was supported by very large public investments. This is also true of Part-Dieu in Lyon.

the industrial and consumer markets in South Germany. The end result is that the German HSR network is mostly based on the upgrade of previously existing lines, with commercial speeds remaining lower than in other countries. Also, due to high costs resulting from a difficult terrain, the country's urban structure, political and legal obstacles and low ridership, there have been questions about the financial and environmental justification for investing in high speed rail (Albalade and Bell 2010). There have been no significant impacts on the economic geography of Germany resulting from HSR, partly because there is not a central city dominating the urban system, but also because it transports less people than HSR systems in France or Japan, making it a less relevant factor in influencing regional development.

4.16 In Spain the first HSR line between Seville and Madrid was finished in 1992. It was built mostly as a tool to achieve territorial cohesion since this was not a heavily congested route. Later the country inaugurated the Madrid-Barcelona line that links the two major cities in this country, plus lines linking Cordoba to Malaga, and Madrid to Valladolid. Due to the small size of Spain's urban agglomerations, ridership has remained low in comparison with France and Japan. These lines have therefore been deemed to deliver negative economic results. Moreover, there is some evidence that Madrid has benefited the most from the connection to Seville (Gourvish 2010), contributing to a greater centralisation of businesses and population in the Spanish capital. According to Gourvish (2010), there are concerns that a similar process might happen between Madrid and Barcelona, with the latter losing out to the former. Nevertheless Spanish governments have repeatedly vowed to continue expanding the HSR network, mostly because it has a very positive image with the country's population, as a sign of progress and modernity (Albalade and Bel 2010).

4.17 In general, evidence from these countries suggests that HSR is likely to generate or reinforce territorial polarisation (Albalade and Bel 2010). This fact is acknowledged in at least two of the documents requested by HS2 Ltd as part of its project development (Gourvish 2010; Urban and Regional Policy 2009). Both admit the paucity of evidence to support the contention that high speed rail infrastructure tends to contribute to the rebalancing of regional economies. Additionally, the prediction that HSR will generate growth in peripheral cities (supported by data from KPMG 2010) is mostly based on assumptions which are difficult to sustain after close scrutiny. The report prepared by KPMG in 2010 indicated that rail makes places more productive and on this basis the construction of HS2 would lead to economic growth in London and the other UK cities. But on the one hand this impact is difficult to prove, because it is almost impossible to isolate the impact that rail has in a city's productivity, from the impact exerted by other means of transportation, or even by the other elements that sustain agglomeration economies (such as active labour markets, positive knowledge externalities, increasing returns to scale). On the other hand this line of causality itself is problematic: when KPMG suggests that rail makes cities more productive, it may only be capturing the fact that the more productive places have better transport connections, including rail (Laird and Mackie 2010).

4.18 Taking this evidence in the round it is very difficult to substantiate the argument that high speed rail is likely to have a positive impact on regional inequalities. Cities which are the location of HSR stations may gain some benefits, but distribution of net benefits needs careful analysis. Some of the benefits accruing to regional cities may be at the expense of neighbouring cities, while in countries with dominant capital cities net benefits tend to accrue to these. In the German case the evolution of a high speed system based on the existing rail network may have underpinned and already dispersed the German settlement structure (Ahlfeldt and Pedersen, 2010).

5. Implications for the UK

5.1 Turning directly to the situation in the UK, the most authoritative recent review of transport policy, the Eddington Review, questions whether so-called "step change measures", such as HS2, would have major transformational economic impacts:

"Step-change measures intended to transform the economy are not, in a world of constrained resources, likely to be a priority. The available evidence for step-change projects in the UK, such as a new high-speed North-South rail line, shows wider BCRs [benefit-cost ratios] at the lower end of the distribution before accounting for landscape and carbon effects. Furthermore, BCRs of alternative options to solve these problems are not available. However, it is often argued that such measures miss transformational economic impacts, such as a radical shift in the economic geography of the UK brought about by new levels of connectivity. The evidence for transformational benefits is at best unproven, and ... the UK's urban areas and regions are already well connected. Another potential benefit (which should be included in the wider BCR) is that of freeing up capacity on existing rail lines. Whilst this is true, it is not at all clear that creating new networks is the most appropriate or cost-effective method to achieve increased capacity: high speed options should be assessed coldly alongside other policies for achieving the same objective. Other transport investments are very likely to offer superior returns compared to where projects rely on new and largely untested technologies" (Eddington, 2006a: Vol. 3: 133).

5.2 Eddington maintained instead that a greater priority should be attached to investments in urban transport systems where it is possible to demonstrate clearer returns:

"Given that agglomerations in a service-based economy tend to be found in major urban areas; that urban networks are particularly heavily used and shared by a wide range of users; and that economic growth and congestion are disproportionately represented in urban areas, projects in urban areas might have been expected to offer very high returns. It is not unreasonable, at the strategic level, to consider that the costs

of congestion and unreliability are likely to have a far greater direct impact on the economic success of the UK than might be the case for some other parts of the transport system” (Eddington, 2006a: Vol. 3: Fig 1.9).⁶

5.3 Although not yet meeting EU interoperability standards, the UK already has a high speed rail system based on upgrades to the West Coast Main Line and the East Coast Main Line, the experience of which is worth considering. The objective of the current government is to invest in a new purposely built high speed line called HS2. There are therefore two elements that need to be discussed: the first is the impact of the current high speed lines on the UK’s economic geography, and the second is the expected impact of the new HS2.

5.4 According to research by Chen and Hall (2009) high speed rail in Britain had the positive effect of integrating the economy of London with some cities located within a two hour range. This was particularly the case for Bristol, Leeds, Cardiff and York, that witnessed an improvement in their relative GVA. As a result the authors ask if allowing more cities to be within a two hour distance of London would allow them to achieve similar results. Some questions, however, remain unresolved: did places such as Leeds and York grow at the expense of places like Newcastle or Middlesbrough? If they did what opportunities are there for the latter to benefit from a similar process if their travel times to London were reduced? Another question is whether these cities benefited from better rail connections due to their specific economic structure (eg financial services in Leeds, tourism in York, centralisation of public services in Cardiff)? If this was the case then a similar process might not happen in other urban centres without the same characteristics. Finally, despite the results presented by Chen and Hall (2009) regional data for the UK shows a consistent divergence between London and the South East in relation to the rest of the country. This would indicate that whatever positive benefits have been gained from high speed train, they have not been sufficient to reverse the long term trend of increasing regional inequalities, especially given the evidence cited earlier that current economic trends point in the direction of accelerating regional inequalities.

5.5 Regarding the future impacts of HS2 in the UK, the expected benefits announced by the UK government are mostly based on economic growth resulting from a more integrated economy. However as argued above, these benefits are calculated on the basis that cities with good rail links are more productive, which as we have demonstrated is difficult to prove. Based on previous experiences from other countries, the most likely outcome is that economic growth at the national level would result from an increasing concentration of population and economic activity in London and the South East. The overall objective of higher growth would still be attained, but not the one of reconfiguring the UK’s regional economic disparities. The only possible solution to guarantee a more equal distribution of resources, as argued by Urban and Regional Policy (2009), would be to put in place effective governance mechanisms that would complement the existence of a better infrastructure. This is however unlikely to happen as a result of current constraints on the public budget, nor is it likely that such governance mechanisms as exist currently in the UK would be capable of reversing the powerful agglomeration effects of London and the South East. Following Puga (2002), the proposed UK model is a clearly a hub and spoke one centred on London. According to this analysis, there is therefore a high probability that London will accrue the majority of the benefits of the investment.

5.6 We have noted several analyses which suggest that intra-regional or intra-urban transport systems have tended to have positive impacts than faster inter-regional connections, especially as far as lagging regions are concerned. Drawing on work by the London School of Economics, the Manchester Independent Economic Review endorsed this perspective:

“Turning to national links, in particular high-speed train links, the LSE study contains strong evidence that the greatest economic benefits are to be gained from focus on improving transport within the travel-to-work areas of cities themselves, rather than between them—and this is the case for Manchester. Thus, transport within MCR is the first and much more important priority.

Proposals for expensive enhancements to external links should undergo a thorough benefit-cost analysis (including environmental costs). For additional investments within the North of England as a whole, including Leeds-Manchester, the case is stronger than for additional investments on the route to London. However, there still needs to be clarity about the benefits and costs” (2009: 26).

5.7 Steer Davis Gleave (2009) for the Northern Way argued that to improve the productivity gap between the North and the rest of the UK, northern cities needed to work together more effectively, and highlighted investment in transport infrastructure within the North as a priority. The Northern Way work suggests that improved cross-Pennine rail links would be necessary to derive benefits from improved North-South links. Moreover, removing bottlenecks, providing increased capacity and reducing journey times would all deliver benefits to large and small cities across the North. Mann (2006) concludes that improvements to commuter services also have the potential to deliver significant economic benefits, highlighting the advantages of wider labour market catchment and agglomeration benefits. For the Northern Way, improving the Leeds-Manchester

⁶ Eddington also argues: “... the UK’s economic geography means that the principal task of the UK transport system is not, in comparison to the needs of France or Spain, to put in place very high-speed networks to bring distant cities and regions closer together, in order to enable trading and facilitate economies of scale. Instead, because the UK’s economic activity is in fact densely located in and around urban areas, domestic freight routes and international gateways, the greater task is to deal with the resulting density of transport demand” (2006b: 22).

rail corridor is a priority and it could be argued that it is packages of schemes such as this which form the real alternative to HS2.⁷

6. Conclusions

6.1 Puga has noted:

“Road and rail tracks can be used to travel both ways. A better connection between two regions with different development levels not only gives firms in a less developed region better access to the inputs and markets of more developed regions, it also makes it easier for firms in richer regions to supply poorer regions at a distance, and can thus harm the industrialisation prospects of less developed areas” (Puga, 2002: 401).

6.2 Our aim in this report has been to assess the claims concerning the local and regional impacts of high speed rail in general and HS2 in particular. We noted that claims about the “transformational impact” of HS2 on the UK’s economic geography have become increasingly central to the government’s case. However, we observed contradictions in the government’s argument and its use of theory and evidence, with barely any weight given to the role of inter-regional rail investments in contributing to local growth in the analyses of BIS, while they appear central in the arguments of DfT. We reviewed the theoretical and empirical literature on the local and regional impact of high speed rail around the world. The clear balance of this literature suggests that these impacts are ambiguous at best and negative at worst. It is very difficult to find unambiguous evidence in support of the contentions that are being made about the potential impacts of HS2 on the cities and regions of the UK. We noted the theoretical and empirical evidence that suggests investments in intra-urban and intra-regional transport systems may provide more local benefits than high-speed North-South links.

6.3 Following our review of the international peer-reviewed and other literature, far from it being “bizarre”, as suggested, by Lord Adonis (see Section 2 above) there are compelling reasons to doubt whether HSR will contribute to “rebalancing regional economies”. In fact as we noted above, the two substantive treatments of this issue in HS2’s documentation raise broadly similar questions (Gourvish, 2010; Urban and Regional Policy, 2009).

6.4 This report has restricted itself to a review of the evidence on the urban and regional impacts of high speed rail. We have not presented a general critique of HS2, but have raised serious questions about the evidence upon which the case is being made about the HS2’s transformational impact of the economic geography of the UK.

May 2011

Written evidence from the North West Business Leadership Team (HSR 23)

1. INTRODUCTION

The North West Business Leadership Team (NWBLT) is an independent group of senior executives from leading businesses in North West England, working together to promote the long-term well-being of this part of the country. NWBLT was founded by HRH The Prince of Wales in 1989 and has played a major role for more than 20 years in influencing and supporting the economic, social, cultural and sustainable development of the North West.

NWBLT exercises a leadership role for the North West’s business community by focusing on a small number of the specific issues and projects which it believes are of greatest importance to the long-term well-being of the North West. These currently include developing the capabilities of the region’s young people through support for education and skills initiatives; promoting the North West’s world-class research, science and innovation capability and its low carbon energy offer; and supporting the development of its digital, high speed rail and international air and sea connectivity.

We have therefore studied the case for investment in a High Speed Rail Network with considerable interest, particularly in relation to High Speed 2 and its potential for providing a much needed additional rail link between the North West and its principal markets in London, the South East and the European mainland. In particular we have noted that it meets the Government’s stated priority of rebalancing the economy outside of the South East by creating the capacity to meet passenger demand- an increasingly critical issue as the West Coast mainline is projected to be full by the 2020s.

2. THE ECONOMIC CASE FOR HIGH SPEED 2

The Government places a high priority upon the economic regeneration of the North of England, so as to close the regional “wealth gap” through a more competitive and effective northern economy which makes a much greater contribution to UK national prosperity.

⁷ In transport terms, HS2 will deliver the Government’s objectives for the London—West Midlands corridor. However, investment on the scale required to deliver HS2 could be utilised to deliver a wide range of interventions which would provide significant improvements to the UK’s transport infrastructure, improving reliability, capacity and safety. Arguably, these have the potential to deliver equivalent or higher benefits for outlying regions at lower cost, and an in-depth study of a much wider range of alternatives would have been justified.

Recent measures such as the establishment of a Regional Growth Fund and the re-introduction of Enterprise Zones are seen as important elements in a national strategy to achieve the re-balancing of the UK economy. These are welcome measures for regions such as the North West but, in our opinion, are unlikely in the long run to have more than a marginal impact on the overall performance of the North West's economy. They are, by their very nature, liable to have only a relatively temporary, short-term impact. On the other hand a major transport infrastructure investment such as High Speed Rail could achieve really significant and lasting benefits by creating much-needed additional capacity for businesses to reach their key markets in the South of England and Europe.

The North West has the largest economy, the highest value of manufacturing output and the greatest population of any UK region outside London, yet it has received very little investment in new transport capacity in recent times. Its principal North-South communications (the M6 motorway and the West Coast Main Line) are already seriously and unpredictably stressed. The West Coast Main Line, which includes the busiest stretch of Inter-City railway in Europe, is expected to be full to capacity by the early 2020s and there is already a shortage of passenger and freight rail capacity at certain times.

Over the past ten years successive detailed studies of the business case for High Speed Rail have demonstrated that the likely economic benefits considerably outweigh the anticipated cost. In 2002–03 a major feasibility study carried out by WS Atkins concluded that not only was there a need for substantial additional North-South transport capacity in the future but that a new high speed line was the best way of providing this. Subsequent studies carried out by Network Rail and Greengauge 21 came to the same conclusion.

Meanwhile NWBLT has itself regularly consulted, and debated the issue with, the North West's senior business leaders over the past six years. During this time, the business community has become increasingly clear that High Speed Rail, preceded by essential investment in related projects such as the Northern Hub and the Liverpool-Manchester electrification, is not only vital for the long-term future prosperity of the region but is increasingly urgent in meeting its needs in the next decade.

3. THE SPECIFIC BENEFITS OF HIGH SPEED 2

An affordable and deliverable High Speed Rail link between London, the West Midlands and the North West of England—and eventually beyond—is essential for promoting future private sector investment in the North.

The benefits of building High Speed 2 to Manchester in particular, where it would connect with the proposed “Northern Hub” regional rail scheme and an expanded Metrolink network, would cascade across the entire North of England and enable the region to drive forward economic recovery. A subsequent future extension of High Speed 2 to Liverpool, where it could connect with a modernised Merseyrail, and Preston, where there are good rail and road links to the Fylde Coast and East Lancashire, would further boost economic growth and productivity across the North West.

In time terms, High Speed 2 will “move Manchester and Manchester Airport to Birmingham”, cutting journey times to London to just over an hour—comparable to Birmingham's present journey time to London via the existing West Coast Main Line.

High Speed 2 can then bring about very significant productivity improvements, beneficial changes in the employment mix, and major employment growth and relocation. The consequently-improved regional and national connectivity would go a long way towards driving a sustainable long-term economic recovery.

In successive phases, High Speed 2 could therefore serve the North West of England, as follows:

- Serve Manchester city centre as the top priority.
- Serve Manchester Airport en route, relieving Heathrow and boosting North West employment.
- At its southern end, serve Crossrail, serving Heathrow via connections at Old Oak Common into the Heathrow Express, and terminating at London Euston (with some trains serving Birmingham International).
- Subsequently extend a spur from South Cheshire to Liverpool city centre, serving Runcorn/Widnes or Warrington en route.
- Later extend from Manchester to Lancashire, probably Preston.
- Link via the existing classic network into other key North West centres.
- Eventually extend to Scotland, placing Manchester and Manchester Airport as the key mid-point stations on a high-speed route between London and Scotland.
- Relieve pressure on the existing West Coast Main Line, permitting its increased use by freight and providing more regular inter-regional semi-fast services.

No other infrastructure investment can deliver such an impact in terms of connectivity. A dramatic reduction in journey times, delivering highly reliable all-weather transport and freeing up much-needed capacity on the existing West Coast Main Line for freight (see 4 below) will immensely benefit the entire North West region and beyond.

4. THE IMPORTANCE OF HIGH SPEED 2 FOR FREIGHT

Although obviously strongly characterized in the public mind as primarily a passenger proposal, High Speed 2 will have a major strategic benefit for freight in terms of removing many fast passenger services from the existing West Coast Main Line, thus freeing up vital capacity for future expanded freight and regional semi-fast passenger services.

In addition, the new High Speed 2 route would be accessible to European-gauge freight, including piggyback. Whilst freight obviously cannot be mixed in with high speed passenger services during passenger operating hours, High Speed 2 could also offer the opportunity for a small number of premium piggyback and larger-clearance freight services to operate over the new line.

There is also an opportunity for High Speed 2 to convey domestic long distance mails, other freight that either currently goes by air or which might be attracted to using both rail and air by interchange (such as at Manchester Airport), and premium parcels traffic.

The existence of both High Speed 2 and the classic West Coast Main Line routes will make north-south railborne mails (and passenger travel) much more reliable during heavy weekend or night

maintenance of one or other route.

5. CONCLUSION

In summary, the principal advantages of High Speed 2 are:

1. It greatly improves business connectivity and productivity.
2. It brings the North West of England much closer to the South East, as well as speeding journeys between the West Midlands and the North West or London.
3. It will trigger a major step-change in regional economic performance.
4. It greatly increases North-South route capacity, with much faster trains and with far more seats.
5. It brings a European gauge-clearance passenger and freight route to the North.
6. It relieves pressure on Heathrow by supporting an enhanced international air gateway at Manchester.
7. It will eventually help to contain and reduce carbon emissions, by attracting users from motorways and domestic air travel.

Bearing all the above in mind, NWBLT considers that the strategic importance of High Speed 2 cannot be over-stated. It will be essential in the 2020s and beyond if the North West (along with a number of other UK regions) is to continue competing effectively for investment and employment. A high-quality spine route linking the North of England, and eventually Scotland, with London and mainland Europe, will offer the UK permanent economic, social, employment and environmental benefits. In short, High Speed 2 will be a once-in-a-century investment to meet the needs of generations to come. We owe it to those future generations to find a way now to enable the UK as a whole to catch up with other leading industrial economies in relation to the capacity of its rail transport links.

9 May 2011

Written evidence from Prof Chris Nash, Institute for Transport Studies, University of Leeds (HSR 27)

1. I have been a professor at the Institute for Transport Studies at the University of Leeds for 22 years, and have specialised in rail policy and appraisal. In recent years I have advised Network Rail, OECD and the Australian Department of Infrastructure and Transport on the appraisal of high speed rail, and this evidence draws heavily on a review commissioned for a conference by the University of California.

2. The main argument for building a new high speed line between London and Northern England, as shown by the HS2 appraisal and earlier appraisals (for instance in the Network Rail "new lines" study) is that it simultaneously provides a major increase in capacity and substantial savings in journey time (other ways of increasing capacity do not have this advantage, and the best evidence from the HS2 study and the earlier Network Rail study is that the additional cost of a new high speed line over other ways of providing equivalent capacity is easily outweighed by the value of the time savings). By relieving existing networks of faster trains, a new high speed line will free up a large amount of capacity on the main lines into London, and relieve bottlenecks at key stations outside London, such as Birmingham New St and Leeds, permitting expansion of commuter services into London, Birmingham and Leeds, as well as long distance freight. A new line from London to Birmingham and Leeds would relieve not just the West Coast Main Line but the Midland and East Coast main lines as well. On the other hand, it will be impossible to find such profitable traffic to replace the lost inter city traffic on the classic network; it is the increased subsidy necessary for the classic network rather than the difference between revenue and costs on the high speed line itself which make up a large part of the requirement for government finance.

3. By contrast to the issues of capacity and time savings, any CO2 savings are likely to be relatively marginal (as shown by the HS2 report on the subject), and the evidence for a major wider economic impact beyond

what is measured in a standard appraisal as cost reductions for businesses is uncertain. Whilst there is evidence from other schemes that high speed rail tends to raise property values in the vicinity of stations, and some evidence of local impacts on employment and GDP, the difficulty is always in distinguishing what is a net impact from a transfer of benefits from elsewhere (Nash, 2010).

4. It has become generally accepted that transport improvements may provide additional economic benefits to those measured in a conventional transport appraisal through the medium of agglomeration externalities, which are benefits to the firm from improved access to suppliers, workforce, competitors and customers over and above simple time and cost savings. These effects are generally thought to be largely found from improvements within conurbations, although to the extent that rail provides for a large share of long distance commuting and inter urban business travel for those sections of the population which one might speculate were more important for agglomeration effects, namely professional and managerial employees, this could be an issue for high speed rail as well. The work undertaken on this for HS2 is not totally convincing since it simply took the rail share of the total market for passenger travel in estimating the potential impact, although the result would have to be orders of magnitude greater than that study showed to have a major impact on the appraisal. The HS2 appraisal does not depend on such wider economic effects; they form less than 10% of the total benefits and are estimated to arise because of improvements to transport within the major conurbations and particularly London. It is certainly possible that these effects are underestimated.

5. Other benefits of high speed rail are reduced crowding and increased reliability compared with existing services, and reduction of congestion and pollution (and in the case of cars accidents) from diversion of traffic from cars and aircraft. Again most appraisals show these effects to be small relative to time savings and increased capacity.

6. The business case for HS2 is generally built on strong evidence, and demand forecasts are consistent with past trends, although obviously when projecting so far ahead there is a considerable degree of uncertainty. This makes the question of phasing construction in order to learn from how circumstances, and particularly demand, develop important. The estimated costs per kilometre of this line are well in excess of the costs of building any other line elsewhere in the world, reflecting both the difficult terrain and high population density in England and the relative high unit costs of British construction (Nash, 2010). This provides some assurance that costs should not have been underestimated.

7. The most suspect part of current appraisal methods as applied to HSR is the valuation of business travel time. The point is not simply that business travellers can and do spend part of the time on board train working (though not necessarily at the same level of productivity as in the office), but also that many intercity business journeys start or finish at unsocial hours. Also, faster journeys may enable more to be accomplished in a single day, saving the need to stay overnight or to make a second journey. These various factors do not all point in the same direction in terms of any bias in the existing valuation method, and it has been pointed out that current procedures probably understate the value of diverting business travellers from other modes where it is less easy to work en route, and of relieving them of the impact of overcrowding which will disrupt the ability to work. Nevertheless they do indicate that valuing business travel time at the wage rate plus overheads is a crude approach. Given that business travel time savings form such a large part (around a half) of the benefits of high speed rail, a more accurate approach to valuing them based on studies of what employers are actually willing to pay for their staff to save time needs to be developed. What evidence there is suggests that this value is typically high, again shedding doubt on the argument that existing practice overstates the importance of these time savings (Nash, 2010).

8. From the published appraisals, it appears that a route from London to Leeds via Birmingham gives the best value for money, with the Birmingham-Manchester section also desirable but of lesser importance than the line to Leeds. The latest appraisal does not separately consider the value of the links to Heathrow and to HS1; an assessment of the incremental costs and benefits of these links should be published in order to see how strong the case for them is. Earlier work found the case for these links very doubtful. Concentration on providing easy connections between HS2 and Crossrail at Old Oak Common and providing a good quality shuttle between Euston and St Pancras may be a more cost effective way of providing for these flows of traffic.

9. The new line will have a very large capacity, so the best way of reconciling the need to get good utilisation and for users to make a contribution towards its costs is the use of yield management systems, as for instance on Eurostar and the French TGV network. This means that, whilst peak travellers who desire flexibility will pay a very high fare, low fares will be available for those able to book ahead and travel off peak. This should enable some sharing of the benefits of the line across income groups, whilst as noted above users of local and commuter services will also benefit. Inevitably though the poorest in the community, who travel little and that little not generally by rail, will benefit the least.

10. Appraisals have been undertaken of the impact of high speed rail on carbon emissions both for HS2 and for the earlier Network Rail study of new lines. To the extent that traffic is diverted from air or car, there is some benefit; to the extent construction and maintenance of the new line involves the release of carbon, that higher speeds raise energy consumption and additional traffic is generated, there is a cost (although if the materials used in production and the electricity used for traction are part of the emissions trading scheme, increases in these areas have to be offset by the purchase of permits, resulting in equivalent reductions in emissions elsewhere). Also, because of the use of yield management systems and compulsory reservations, high

speed trains tend to run at higher load factors than ordinary trains: eurostar and the French TGV network both claim load factors of the order of 70%). As noted above, the conclusion of most studies is that the net effect will be small. Obviously the net outcome is more favourable if the incremental electricity required is generated from low carbon sources. But in any event, at the sort of shadow prices of carbon generally regarded as reasonable in appraisals, carbon savings will not contribute a lot to justifying the cost of a high speed line.

11. In conclusion, then, there does seem to be a strong case for the construction of HS2. Given the enormous volume of traffic (an estimated 40 million trips per annum on the line from when it opens, making it one of the busiest high speed lines in Europe) this is in line with experience abroad, and is to be expected despite the high cost of construction in Britain. France has undertaken ex post appraisals of its high speed rail investment and found that, with 15 million or more trips per day on each line from when it opened, its major high speed rail projects to date have been well worthwhile (by contrast, the Spanish schemes, with three to five million trips per annum, look very much less worthwhile). It might be mentioned also that there is strong evidence of diversion from air whenever rail journey times fall below four hours, and rail dominates the rail-air market when journey times are below three hours (Nash, 2010).

12. As is inevitable with such a long term project, the business case is surrounded by considerable uncertainty, with the future growth in demand the key issue. It is therefore desirable to look for optimal phasing of the project, starting on the most valuable section, so that the entire project need not be completed if trends change, and ensuring that low value incremental investments are considered separately and not hidden in the overall appraisal.

May 2011

REFERENCE

Nash, Chris (2010). Enhancing the Cost Benefit Analysis of high speed rail. Paper given at the symposium on the environmental and other co-benefits of developing a high speed rail network in Berkeley California, 3 December 2010.

Written evidence from the National Trust (HSR 32)

INTRODUCTION

1. The National Trust welcomes the Committee's inquiry and we are pleased to offer this response to your consultation.

2. The National Trust looks after special places "for ever, for everyone". We protect and manage, on behalf of the nation, over 270,000 ha of countryside and over 700 miles of unspoilt coastline and estuary. Our coast and countryside open spaces attract more than 100 million visits per year. We are also responsible for many hundreds of buildings and gardens of historic or cultural significance. The Trust is a major business, with an annual operating budget of more than £350 million and some 5,500 employees. We are a major provider of tourist facilities, and own Europe's largest network of holiday cottages and gift shops. Over 3.8 million people are now members of the National Trust which is over 5% of the UK population.

THE NATIONAL TRUST'S BROAD POSITION

3. The Trust is directly affected by a range of transport issues such as aircraft noise which blights some of our sites, the quality of local road and rail services and in the past we have been heavily affected by road building programmes. The current HS2 proposals directly affect the Trust through a requirement to take land at Hartwell House which is held inalienably under our acts of parliament. There is also potential that an expanded network north of Birmingham or any other HSR scheme would impact our property.

4. Having said this, the Trust is not in principle opposed to investment in a high quality rail network which could provide benefits in terms of delivering a low carbon transport system.

5. Whilst not opposed to HSR the National Trust believes there are some key principle that should be at the heart of any HSR programme:

- (a) It should be part of a wider transport strategy that seeks to reduce travel where possible and to decarbonise the network. It would be helpful if the Government more clearly articulated how HSR relates to the future management of the road, air and wider rail network. Starting from the principle of the need to decarbonise the network also means that the measures of success and therefore the design criteria of any scheme would not be based on in principle decisions to run at a predetermined speed. Instead the design criteria would be based on delivering the optimum outcome for a range of indicators including carbon emissions, speed, noise, economic regeneration and critically from the National Trust's perspective the impacts on natural and historic landscapes. We believe that by applying this principle from the start any scheme would be more adaptable and more acceptable to the general public.
- (b) Any HSR programme should have a range of options which should be assessed against the criteria of sustainable development. This means that an overall judgement on the social, environmental and

economic benefits and impacts of each option should determine decisions around the scheme rather than narrow economic perspectives.

- (c) It is a long held principle that public involvement is a critical factor in making sustainable decisions. Any HSR proposals should therefore involve genuine and early public participation. Whilst major rail projects will always generate some “losers”, in our experience a truly participatory approach almost always leads to improved proposals and greater public support. Whilst we recognise the issues of blight, the first phase of the current proposals have fallen well short in this respect. However, we are encouraged by the relationship we now have with HS2 Ltd and the indication that the Government will approach the second phase of the scheme differently.
- (d) Finally, we believe that any HSR scheme should be the greenest possible which means the impacts should be mitigated to the greatest degree possible. Whilst this might have an adverse impact on the narrow economic case the adoption of the principles of sustainability means that this can be justified because of the value that should be attached to the protection and enhancement of the environment and people’s quality of life.

RESPONSES TO THE COMMITTEE’S SPECIFIC QUESTIONS

1. *What are the main arguments either for or against HSR?*

6. The National Trust has in the past argued that it is unsustainable on both environmental and social grounds to have significant amounts of domestic air travel. A high quality rail network could be a valuable contribution to a low carbon transport system. The aim of decarbonising transport more generally and of minimising other environmental and social impacts such as the impacts on designated landscapes, noise or habitat loss should be reflected in any success measures and should inform the route, detailed design and operational parameters of any scheme.

7. Not least because of the direct impact on our own property and that of communities in the Chilterns, we are acutely aware that there are always losers in schemes of this nature. One of the key disadvantages of any HSR programme is the impact on places where property, habitat, livelihoods or precious tranquillity is to be lost. We sympathise with the natural reaction of individuals and local groups and believe that they are unhelpfully characterised as NIMBYs. This is generally a result of a lack of engagement at the early stages and a sense of being disenfranchised from the decision making process.

2. *How does HSR fit with the Government’s transport policy objectives?*

8. The lack of a national strategic plan for transport means it is difficult to determine the inter-relationships between the Government’s transport objectives. However the Government’s vision for “*a transport system that is an engine for economic growth but one that is also greener and safer and improves quality of life in our communities*” is to be broadly welcomed, in particular the emphasis on a system that is greener which clearly implies they will be seeking environmental gains. Is it clear from the Government’s vision statement that the rail system and HSR in particular is a key priority for delivering their ambition.

9. Having said this, the current HSR proposals have not been framed in such a way as to deliver the outcomes that the Government is seeking. For example, the Government’s own consultation document on HS2 makes clear that the scheme may in fact be a net contributor to carbon emissions and it is clear that there are unacceptable impacts on important natural and historic designated landscapes. This appears to be because an operating speed was set as an outcome of the project rather than the outcome being framed in line with the Government’s overall vision to deliver environmental as well as economic gains which means the line cannot be finessed sufficiently to minimise local environmental impacts.

10. If the decisions around HSR were taken in line with the principles of sustainable development it could be entirely justifiable to reduce the speed, reduce the return on investment, reduce the impact in carbon and wider environmental and social terms and still deliver a project with significant benefits.

3. *Business case*

11. The National Trust is not best placed to comment on the details of the business case, however, we would reiterate the point made above that any scheme should be based on a much broader set of economic, social and environmental factors.

12. In addition to this we would argue that a marginal economic case increases the importance of ensuring environmental and social gains are maximised.

4. *The strategic route*

13. The National Trust has only a peripheral interest in the choice of stations along the route. However, we are in principle opposed to the route passing through the Chilterns AONB. We also believe that the impacts on the built and natural environment and the potential to improve these should be central criteria in any decisions.

5. *Economic rebalancing and equity*

14. The National Trust does not have the expertise to answer this question.

6. *Impact*

15. It is very clear that whilst the current proposals recognise that there are environmental and social impacts these have not been accounted for in a robust way. There is no thorough assessment of the impacts on social and environmental capital both positive and negative.

16. We believe that if HSR is to proceed the environmental and social impacts should be mitigated to the greatest possible degree especially if the economic case is considered marginal.

17. We are encouraged by the approach of the Department for Transport and HS2Ltd in terms of engaging over mitigation measures and an apparent desire to use mitigation to deliver environmental gains where possible. However we believe they could go further and we would encourage the committee to recommend bold and innovative approaches to mitigation and where the most sensitive historic and natural environments are impacted an increased use of tunnels which are the most effective way of mitigating the impacts.

May 2011

Written evidence from Hammersmith and Fulham Council (HSR 38)

1. *What are the main arguments either for or against HSR?*

Bringing London closer to other cities—Birmingham 49 mins, Manchester/Leeds 80 mins, Glasgow/Edinburgh 3.5 hours—will help to maintain London’s prosperity by giving it better access to the UK’s varied markets for labour, goods and specialist services. As well as helping to bridge the north south economic divide, HS2 will also ensure London’s competitiveness with other major European cities such as Paris, Frankfurt and Madrid, which are all already at the centre of high speed networks.

The creation of a new destination in Old Oak Common will provide a global employment destination closely linked to Central London, Heathrow and the Greater London transport network, reducing strain on the Central London transport network. The development will be capable of attracting national and global inward investment that will both develop the local labour supply and skills base and provide enhanced access to employment for socially excluded groups. The value this will bring to the immediate vicinity will help enhance important industrial locations, such as Park Royal, as an investment location and natural home to major blue-chip companies.

As well as revitalising the local economy, this will help to rebalance London by providing new employment opportunities where they are most needed. HS2 will be the catalyst for regenerating an area of London containing some of the most deprived communities in England, supporting the creation of an estimated 20,000⁸ new jobs in west London and 10,000 new homes.⁹

2. *How does HSR fit with the Government’s transport policy objectives?*

2.1 *HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?*

Cities have become fundamental to the UK economy as traditional industries such as manufacturing decline and sectors such as finance, culture, tourism and higher education, concentrate within city centres have become more important. HSR offers unrivalled possibilities to strengthen inter-urban connectivity and support economic growth in these services, knowledge and consumption sectors.

It is vital that the strategic road network operates efficiently, but investment in this network without corresponding investment in rail would be likely to attract more road traffic, negating any reductions in congestion resulting from the investment. HSR can release capacity on the classic rail network, allowing more freight trains to operate, thereby removing some lorry movements from the strategic road network and improving the efficiency of that network.

2.2 *Focusing on rail, what would be the implications of expenditure on HSR on funding for the “classic” network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?*

HSR in itself can be an effective method of increasing capacity on the classic rail network, by removing some longer distance trains. For example, towns such as Rugby and Milton Keynes will benefit from the first phase of HS2, having more trains and less crowded trains. Towns and cities on the classic network beyond HS2 will benefit, with significant time savings on journeys between, for example, Lancaster, Warrington, Preston and London, with further benefits when the full Y-shaped network is introduced. HSR can also release

⁸ Source—Department for Transport “HS2 Consultation Summary”, p18

⁹ Source—AECOM Design and Planning, 2009, “Old Oak Common: Regeneration Case for a High Speed 2 Interchange”, p114

capacity for freight traffic (see response to Q6.3 below). HSR complements the classic rail network, and will reduce the need for some of the investment in the latter, but it will not eliminate it.

2.3 *What are the implications for domestic aviation?*

High speed rail travel is a viable alternative to short haul aviation routes and accordingly would benefit both those travelling between the UK's major cities, and people living close to air traffic hubs. For many years, for example, people living on the west London flight paths to Heathrow have suffered from significant noise pollution problems.

In the wake of recent decisions to limit the expansion of both Heathrow and Stansted airports, and the impact of austerity measures on the development of the road network, HS2 is the right option for the future of long distance travel in the UK. Forecasts¹⁰ indicate that the total number of long distance (over 100 miles) road, rail and air trips per person will increase by 36% between 2008 and 2043.

Being the UK's only international hub airport, the direct link to Heathrow via HS2 will provide a viable alternative for those in the north to access long haul flights.

3. *Business case*

3.1 *How robust are the assumptions and methodology—for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the “classic” network?*

We believe that the methodology used by the Department for Transport is robust and conservative. Direct benefits of £32 billion have been identified with a further £1.6 billion of wider benefits. This is a conservative estimate, as due to the uncertain nature of the wider effects on the economy these benefits are difficult to quantify. It is sometimes claimed that people use time spent on trains productively (eg working with laptops) and therefore the pursuit of shorter journey times is not worthwhile. However, this is only true up to a point. Studies in Europe have shown that a journey time of three hours or less is necessary to enable rail to compete with air transport.

In any case, by enabling some people to transfer from car to train, and enabling some existing rail passengers who have to stand, where they cannot work, to have a seat, where they can HS2 will increase the amount of productive use of travel time.¹¹

A conservative estimates of £2 billion for agglomeration benefits. Businesses benefit financially from clustering together, both in terms of actual distance and time. HS2 will bring businesses in the north and Midlands closer to each other and to those in London. Experience has shown from HSR in other countries that the weaker economic regions gain more from this than the stronger ones, for example the arrival of TGV in Lyon, significantly enhanced the economic competitiveness of the city and wider region.¹²

Businesses that currently wish to tap into the London markets tend to congregate within 60 to 80 minutes of London, with back office functions of London firms being displaced to areas within the same time. Bringing northern businesses within these times will mean that they are better able to access London markets while London businesses will have a greater range and choice of service suppliers.

Gross Value Added (GVA), a key indicator of local economic performance, is greater in areas closer to London, by bringing more areas closer to London, HS2 will increase GVA.¹³

3.2 *What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?*

Upgrading the West Coast Main Line is likely to cause prolonged disruption to travellers, as was demonstrated by the line's recent upgrade, which took much longer to complete and cost much more than initial estimates suggested. Providing a new conventional line would be unlikely to give the time savings for longer journeys (London to Manchester, Newcastle, Edinburgh and Glasgow) necessary to affect a significant transfer from air to rail. Advanced rail technologies mean that High Speed Rail need not consume more fuel than conventional rail. For example, the latest Japanese Shinkansen trains (series 700) uses less energy per seat than a West Coast Main Line Pendolino travelling 100 kilometres per hour slower.

3.3 *What would be the pros and cons of alternative means of managing demand for rail travel, for example by price?*

Managing demand for rail travel by price would be likely to increase travel by less environmentally sustainable modes, ie car and air, and would have negative distributive effects in that lower and middle income people would have less opportunity to travel by train. The north/south divide would become more pronounced

¹⁰ Source—Department for Transport “Economic Case for HS2”, p16

¹¹ Source—Urena, J, Menerault, P and Garmendia, M (2009). “The high speed rail challenge for big intermediate cities: a national, regional and local perspective” Cities

¹² Source—Chia-Lin Chen, Peter Hall, (2009) The Impacts of High-Speed Trains on British Economic Geography, UCL

¹³ Source—Chia-Lin Chen, Peter Hall, (2009) The Impacts of High-Speed Trains on British Economic Geography, UCL

as businesses in the northern regions would be less able to take advantage of London's economic strengths, and resulting overcrowding and congestion in London may in turn adversely affect the latter's economic vitality.

3.4 What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?

The government should study other major transport projects, both in the UK and abroad, to see which ones have been on time and on budget, and which ones haven't and why. This will help them determine the common causal factors in each and follow best practice. The West Coast Main Line upgrade is an example of a project that ran over time and over budget, which may be related to the fact that it involved working with an existing, heavily-used railway. HSR, by providing new lines, will avoid this difficulty. HS1 is a very relevant example of a project which was delivered on time and on budget.

4. The strategic route

4.1 The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?

The case for Old Oak Common station is overwhelming given the unrivalled transport connections (Crossrail, Great Western Main Line, Heathrow Express, with further links to the West London Line, North London Line and Bakerloo tube). The interchange will allow passengers to disperse—taking pressure off the main London terminal at Euston—which is vital for a Central London HS2 terminus to work. Without Old Oak the underground system will not cope given that an HS2 train can carry 1,100 people, with a frequency of 12 trains an hour.

The Old Oak interchange would also properly link Heathrow to the rest of the transport network through the nation's first truly integrated high-speed hub. Journey times to the airport would be just 11 minutes. Approximately 90% of the London rail network would be accessible from Old Oak Common either directly or with just one change. It will be possible to connect to Paddington with one stop on Crossrail thereby creating a link between HS2 and all points west (Bristol, S Wales, S West).¹⁴

Old Oak Common is very close to the West London line, TfL and HS2 are looking at the options for direct connections, including Gatwick and the south. A station at Old Oak Common would also be compatible with a longer term station at Heathrow, which could be served by a spur, and in the very longer term, by an HS3 line to the west of England and South Wales.

4.2 Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?

The Y-shaped network will link the key cities of London, Birmingham, Manchester, Sheffield, Leeds, Glasgow and Edinburgh, as well as direct links to the HS1 line and into Heathrow Airport, this will provide a real alternative to current road, rail and air links. With demand for long-distance rail travel rising, not only will HS2 increase rail capacity, easing overcrowding, but it will slash journey times and enable the UK's key urban economies to improve their productivity, attract new businesses, and access more directly the economic strength of London and the South East.

4.3 Is the Government correct to build the network in stages, moving from London northwards?

Building the network in this way makes sense by capitalising on the existing HS1 line, allowing users travelling from the continent to join up with the new HS2 line, and facilitating people from all over London to access HS2 for direct high speed access to Birmingham and beyond. For example, Canary Wharf to Leeds will take just 1 hour 40 minutes. Given the issues with capacity on the tube lines servicing Euston, the early construction of Old Oak is key.

4.4 The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?

Yes. It makes sense to connect HS2 to the existing HS1 line as part of Phase 1 of the project as connecting the south east (and links to the continent) with the north of the country has to be the priority for HS2. Moreover, demand for a high speed link to Heathrow will naturally be stronger when the second phase of the network—extending to Manchester and Leeds—is in place. This is further supported by the fact that there is still some work to do to agree the construction of the proposed spur into a station at the airport that would allow HS2 services to start at Heathrow and split on route to serve a number of destinations in the Midlands, the North and Scotland.

¹⁴ Reports by Lord Mawhinney (Jul '10) and David Ross et al (Jun '10) concluded a route through Old Oak is the most cost effective and practical solution for the initial London to Birmingham HS2 line.

5. *Economic rebalancing and equity*

5.1 *What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?*

The first phase of HS2 alone would support the creation of more than 40,000 jobs¹⁵ and contribute to major regeneration programmes in Britain's inner cities. None more so than Old Oak Common, which is located at the eastern edge of Park Royal, within the Park Royal Opportunity Area. Park Royal is the largest and most important industrial location in London, employing around 40,000 people in over 2,000 companies across a 649 acre site.

Park Royal is identified in the Mayor of London's planning framework as an Opportunity Area with the potential to provide an attractive location for industry, business and logistics, supported by mixed use developments at the gateways to the site. Park Royal's long term sustainability is critical for the future of London. There is obviously a significant opportunity to develop further businesses across the 90 hectare site, and in the White City and Earls Court Opportunity Areas directly to the south should HS2 bring the Midlands, the North and Heathrow within easy reach.

5.2 *To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?*

HS2 will present an unparalleled regeneration opportunity for Old Oak Common—a major inner city brownfield site in an area greatly affected with employment and housing issues. The fact that the scheme will enhance transport connectivity and exploit the potential of significant underappreciated natural assets such as the Grand Union Canal and Wormwood Scrubs without affecting them adversely only goes to heighten the offer to prospective residents, developers and businesses.

5.3 *Which locations and socio-economic groups will benefit from HSR?*

A new station at Old Oak Common will transform a part of London with employment rates well below national levels and includes communities where over half of residents lack basic qualifications¹⁶ necessary to compete in a modern labour market.

Located in the Western Wedge Growth Corridor (London Plan), Old Oak Common is well positioned for future west London development and urban growth opportunities. An interchange would open up the opportunity of redeveloping 90 hectares of land situated alongside the Grand Union Canal and produce a major increase in accessibility to regeneration and opportunity areas at White City and Earls Court.

While close to a number of prosperous neighbourhoods, Old Oak contains some of the most deprived communities in England. At the time of the last census only 55% of 16–74 year olds living within 2km of the Old Oak site were in employment, falling to 47% for those living within 1km. Across much of the 2km zone between 20–39% of people aged between 16–79 did not hold level 2 qualifications and overall Old Oak is in the bottom fifth of the most deprived areas in Britain with one part of Old Oak falling within the 1% of most deprived areas nationally¹⁷ It goes without saying that the projected 10,000 new homes and 20,000 new jobs created by the high speed rail station would have a significant positive affect on the area.

5.4 *How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?*

The EU's TEN-T programme would seem to be a logical source of funding for the project. A CIL (Capital Infrastructure Levy) should be devised to capture development gains from the project, although this should not be set at such a high rate as to threaten the viability of the development.

6. *Impact*

6.1 *What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?*

The overall impact of HS2 on UK carbon emissions is estimated to be between 24 and 28 million tonnes over 60 years.¹⁸ This is dependent upon the level of reduction of car journeys and flights that HS2 encourages and facilitates. The latter is particularly relevant to journeys made from the North and Scotland to London, and visa versa.

The extent to which the electricity powering the high speed trains can be generated through low carbon technologies such as nuclear and renewable sources is also a significant factor. The lower figure of 24 million

¹⁵ Source—Department for Transport "HS2 Consultation Summary," p3

¹⁶ Source—Census 2001

¹⁷ Source—Census 2001

¹⁸ Source—Department for Transport "HS2 Consultation Carbon Factsheet", p2

tonnes is based upon the most pessimistic scenario of no improvement in the carbon efficiency of electricity generation and no reduction in flights. Needless to say, given transport accounts for 21% of UK carbon emissions and bearing in mind high speed trains give rise to low CO₂ emissions compared to other transport, HS2 can only have a positive impact.

6.2 *Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?*

Yes, although it is worth making the point that the business case naturally concentrates on the noise generated by the high speed trains, but there should also be some consideration given to the noise generated by road and air traffic that will be moderated as a result of HS2. Residents in Hammersmith and Fulham, and other areas close to major airports such as Heathrow, have long complained of noise pollution. Given HS2 will undoubtedly persuade more people out of planes by providing an excellent alternative, it should be recognised as part of the environmental benefit to the country.

6.3 *What would be the impact on freight services on the “classic” network?*

We believe that the impact on freight service on the “classic” network will be positive, particularly on the West Coast Main Line, which is Britain’s busiest freight route. By removing some of the longer distance passenger trains from the WCML, HS2 will enable greater use of that line by freight trains as well as medium distance passenger trains. In particular, this could result in the growth of intermodal traffic which could achieve a major switch away from road haulage.¹⁹

6.4 *How much disruption will there be to services on the “classic” network during construction, particularly during the rebuilding of Euston?*

This would depend on the detailed construction plan, but one great advantage of a completely new line, as opposed to piecemeal improvements to the “classic” rail network, is less disruption. An example is the recent upgrading of the West Coast Main Line, which caused major disruption to the classic network.

There are several options to minimise the disruption caused by the building of Euston, notably diverting some of its services to other termini during the building works. The LSE RUS recommends a second branch of Crossrail along the west coast main line, eg via a connection in the Willesden Junction/Old Oak Common area and if this were provided in advance of the HS2 works at Euston, it could remove a large number of shorter distance services, eg from Northampton and Milton Keynes, from Euston, enabling building works to take place. Other options could include diverting some of these trains into Waterloo via the West London Line, making use of the disused international platforms there, or diverting trains into Marylebone or Paddington via the Chiltern Line, or St Pancras or Kings Cross via the North London Line.

May 2011

Written evidence from West Coast Rail 250 (HSR 39)

1. West Coast Rail 250 is a non-party political organisation, which has long-established and excellent working relationships with Network Rail, the relevant Train Operating Companies, and the Department for Transport, and:

“campaigns for improved and environmentally sustainable rail services along the West Coast Main Line to support the economic development and social cohesion of communities along the WCML rail corridor.”

2. These aims are supported by the following key objectives:

- (1) Increased capacity for passenger and freight services.
- (2) Faster and more frequent long distance services.
- (3) Improved links between local and regional centres and cross-border services.
- (4) Improved facilities for passengers including access to local bus services.

3. When our Campaign started in 1992 train services on the West Coast were amongst the most unreliable in the country. Our campaigning inside and outside of Parliament was crucial in delivering the success that is the West Coast today. We were instrumental in securing the option of a full route upgrade and new tilting trains when the first franchise was let in 1997.

4. We were, and still are, the only nationwide Campaign focussed on the West Coast Main Line and its crucial role to our local economies. We represent over 40 local authorities along the WCML and have strong links with both Houses of Parliament through the All-Party Group for the West Coast Main Line. This is a formally registered Group, sponsored by WCR250 and its activities complement those of the wider campaign. We also benefit from links to the Welsh Assembly via the membership of the North Wales local authorities.

¹⁹ Source—Greengauge 21 report “High Speed Rail: Capturing the Benefits of HS2 on Existing Lines”, p15

5. West Coast Rail 250 is a strong advocate of new High Speed Rail Line services between London, the West Midlands, North West England and Scotland.

6. Our commitment to a new High Speed Line recognises the importance of reducing journey times to and from Scotland, northern England and the regions as well as providing important extra capacity on the existing WCML.

7. We strongly endorsed the Network Rail “New Lines” report of August 2009 recommending top priority for a new high-speed line along the current West Coast route. The Greengauge 21 Report published in September 2009 also supports this strategy and underlines the role of high-speed rail in accommodating future growth, and allowing the current WCML to offer improved local and regional rail services. Subsequent studies from these organisations and HS2 Ltd all confirm the need for extra capacity.

8. The recent WCML RUS and other evidence from NWR and Virgin Trains all indicates that the capacity of the existing line will be exhausted within six to 10 years depending on growth forecasts. What does not appear to be in doubt is a shared recognition that growth in national rail travel will continue at historically high levels—the only doubt is around the rate of growth.

9. WCR 250 is committed to campaigning for a new high speed route between Scotland and London, with new high-speed lines to the centres of Birmingham, Manchester, Liverpool, Glasgow and Edinburgh, with stops at important calling points along the route such as Preston and Carlisle.

10. Such a new high-speed line offers enormous benefits to cities and towns located on the existing or “classic” line, as the switch of long-distance non-stop services will allow substantial capacity to be released which will deliver:

- a recast timetable to enable more services between major towns on the route;
- new capacity for freight services;
- new, faster journeys to and from larger regional centres such as Lichfield Trent Valley, Tamworth, Nuneaton, Rugby, Northampton, and Milton Keynes;
- reductions in overcrowding; and
- immediate improvements to all services north of Birmingham from day one of the opening of the first phase.

11. We also wish to secure benefits to communities in North Wales as soon as the first phase has been opened. Even if London to North Wales services have to remain on the classic WCML until the North Wales Coast line is electrified, there should be some combination of reduced journey times, increased frequencies and a better range of through services for North Wales. It could also open up the prospect of through services being reintroduced between London and Shrewsbury via the classic WCML and Birmingham, maybe even onto the Cambrian line.

12. We recognise the economic importance of high speed rail to Scottish regional centres and the cities of Glasgow and Edinburgh, and it is therefore important that high speed rail is not just considered as a link to London but is also considered in terms of improved links between Scotland and the North-West and West Midlands. A high speed line to Scotland, or starting in Scotland as well as at the London end, gives the opportunity for Birmingham—Scotland and Manchester/Liverpool—Scotland services to use the new line.

13. We understand there are arguments for commencing simultaneous construction of a new high speed line in Scotland and we look to the Scottish Parliament and Transport Scotland to make the detailed economic case in a way that has not so far been evident.

14. It is accepted by NWR that the interim period—between now and the opening of the first phase of HS2—will see a major capacity shortfall on the WCML. We would therefore urge Network Rail and the DfT to explore all options for further infrastructure improvements and schemes that deliver extra capacity on the existing WCML.

15. We do not support those groups or individuals who believe that there is no case for a new high speed line based on assertions that there is still much extra capacity to be provided on the existing WCML through a further major “upgrade”. We reject this view and would remind the Select Committee that the recent West Coast Route Modernisation, resulting in only a partial upgrade of the line, caused huge disruption to services and the public, particularly with weekend blockades. A repeat of this would not be worth the upheaval for what would be a relatively small increase in capacity compared with that arising from a new high speed line.

Written evidence from Manchester Airports Group (HSR 68)

1.1 This submission is made by the Manchester Airports Group (MAG) in response to the Transport Select Committee's call for evidence. MAG welcomes the opportunity to respond. This submission acts as a group-wide MAG response on behalf of MAG's four airports.

1.2 MAG is the second largest UK airport operator and comprises the airports of Manchester, East Midlands, Humberside and Bournemouth. 24 million passengers travelled through MAG airports in 2009–10 (across all four airports) and the Group handled 409,000 tonnes of air freight. MAG generates around £3.2 billion for the UK economy and supports over 130,000 jobs nationwide.

1.3 MAG firmly supports proposals for HS2. We believe that if HS2 is to really deliver for the UK economy, and achieve its core objectives, then it must continue beyond the West Midlands. Indeed we believe that the economic case for HS2 is most persuasive when the high speed network serves Manchester.

Question 1: *What are the main arguments either for or against HSR?*

2.1 We believe that HS2 has a vital role to play in the economic regeneration of the UK regions outside the South East, and will greatly assist the Government's commitment to rebalancing the UK economy.

2.2 The North West has the largest economy, the highest value of manufacturing output and the greatest population of any region outside of London. With the current transport links to the capital (M6, M1, West Coast Main Line) already stretched (and the West Coast Main Line expected to be at full capacity by 2025), it is essential that the North West improve its connectivity to the South East and beyond.

2.3 We endorse the research by the Northern Way which concluded that benefits to the economy will be significantly greater than the Government's initial £44 billion estimate (Northern Way, March 2011). The Northern Way also argue that High Speed Rail will accelerate the North's economic growth and help rebalance the economy North South.

2.4 The potential agglomeration benefits (the increase in productivity due to improved connectivity) are worth in excess of £6 billion. Northern Way's research indicates that, proportionally, the North will receive a greater agglomeration uplift than London and the South East.

2.5 The economic case is further endorsed by the North West Business Leadership Team's analysis which argues that HS2 is essential for promoting investment and employment in the North of England. Reduced journey times, more capacity and more frequent services will benefit residents and businesses across the Midlands and the North.

Question 2: *How does HSR fit with the Government's transport policy objectives*

3.1 HSR is crucial not just to transport, but, more importantly, wider economic policy; particularly the Government's broader ambition of rebalancing the UK economy. Strategic transport networks and gateways are a basic building block for regional growth. We believe that HSR has a vital role to play in connecting major conurbations, gateways and London.

3.2 Linking Manchester Airport to High Speed Rail boosts the attractiveness of the recently declared Manchester Airport Enterprise Zone as a major new business destination. This proposal is critically dependant on capitalising on high quality regional, national and international transport links. Given the Government's commitment to putting Enterprise Zones at the heart of its economic strategy for UK cities, it makes sense to ensure that the Zone is properly linked with the wider transport network.

3.3 In line with the Government's aspiration of constraining the South East airports and encouraging other UK airports to take the strain, HS2 would offer greater and more efficient access to Manchester Airport. It would allow the airport's catchment area to extend, thus attracting more passengers and so helping make viable additional direct air routes and increased frequencies that business in the region needs, whilst making the airport a more attractive proposition for airlines, since journey times would be reduced.

2(a) *HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?*

3.4 MAG has no comment to make on this specific issue.

2(b) *Focusing on rail, what would be the implications of expenditure on HSR on funding for the "classic" network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?*

3.5 The committee will be familiar with the "Northern Hub" proposals to address the bottle-necks in the rail network, especially around Manchester. Our view is that both the Northern Hub and HS2 are needed, and that the Northern Hub proposals should be progressed as a matter of urgency—within the next five years. It is no good having high speed connections in and out of major cities, if travellers are then faced with a congested

and inefficient network at the local level. Onward connections and integration with the rest of the transport system is a prerequisite for HS2 delivering benefits across the North.

2(c) *What are the implications for domestic aviation?*

3.6 HS2 should be seen as complementary to domestic aviation, not a replacement for it. Both are needed.

3.7 HS2 does have the potential to reduce the need for flights from Manchester to Heathrow, in that it helps facilitate more direct services from Manchester. As mentioned above, if HS2 shortens journey times for a greater number of passengers, it effectively gives Manchester a wider catchment to serve, and with it the potential to enhance the range and number of direct flights. This in turn would help avoid the leakage to London of passengers who cannot yet get direct flights from their local airport. Anything that can help “thicken” our thinnest routes and encourage new ones should therefore reduce the need for passengers to fly to/out of London.

3.8 However, it should be remembered that most travellers flying from Manchester to Heathrow (75% in 2009) are doing so to catch a connecting flight. Since connecting to LHR is likely to involve at least one change, HS2 will remain an unattractive option for connecting passengers.

3.9 In addition, HS2 will only really compete with flights on services between London and Manchester or Newcastle, and even on these routes passengers will want the benefit of choice in their mode of transport. HS2 will not remove the need for domestic air links to and from cities such as Belfast or Aberdeen.

Question 3: *Business case*

3(a) *How robust are the assumptions and methodology—for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the “classic” network?*

4.1 We have no reason to disagree with the case put forward by HS2.

3(b) *What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?*

4.2 We agree that there would be harmful impacts that would result from another period of sustained disruption caused by upgrading the existing heavily used West Coast Main Line.

3(c) *What would be the pros and cons of alternative means of managing demand for rail travel, for example by price?*

4.3 We do not support further price rises which increase costs for passengers and business if this is motivated by a desire to suppress increased demand.

3(d) *What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?*

4.4 MAG would draw the committee’s attention to the recent David Ross report, *High Speed Rail, How to Get Started* (February 2010). As David Ross reports, major public infrastructure projects are generally plagued by overly long processes, lack of clear direction, poor project management, rethinks and reviews, which add risk and uncertainty and greatly inflate costs. Typical characteristics of the current process are over specification, over elaborate design, risk aversion, over complex front end processes, and front end costs which appear much higher than they should be.

4.5 Ross also argued that In addition to the issues raised above, the first phase line should be kept as simple as possible (more stops means a slower service and greater complexity), linking Old Oak Common on the Crossrail route with Birmingham and Manchester Airports. Following these recommendations could see HS2 delivered for around £6 billion instead of £20 billion. We strongly support both his analysis and recommendations.

Question 4: *The strategic route*

4(a) *The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?*

5.1 As mentioned above, MAG believes that the most compelling case for high speed rail is the London-Manchester link, and that HS2 should go at least as far as Manchester. We suggest that the first priority should be to construct the route from Old Oak Common to an out of centre Manchester station, with an intermediate stop. That will be the cheapest per mile; most cost effective, easiest and quickest to construct and allow for early realisation of benefits. The more complex, expensive, disruptive sections into the heart of city centres should then follow in line with their own individual business cases. This is similar to the way that the UK’s motorway network was first developed.

4(b) *Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?*

5.2 MAG is comfortable with the cities and configuration proposed.

4(c) *Is the Government correct to build the network in stages, moving from London northwards?*

5.3 MAG would ideally like to see HS2 extended as far as Manchester in the first Phase. We believe that priority should be given to the Old Oak Common to Manchester Airport link in the first phase, as this is where the line adds most value most quickly. Penetrating city centres should be a lower priority (Phase 2), and should proceed at a later date and as and when the business case supports it.

4(d) *The Government proposes a link to HSI as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?*

5.4 We believe that the Heathrow spur of HS2 presents considerable physical and economic challenges, and we are not fully persuaded of the need for it. Our understanding is that passengers will still need to change at the new Heathrow terminus HS2 station onto the Heathrow Express to then connect to their respective one of five terminals (as through running HS2 trains are not considered viable). If this is the case, then we would suggest the same single change can be achieved at the Old Oak Common interchange, linked to the existing Heathrow Express, which already serves all five terminals.

Question 5: *Economic rebalancing and equity*

5(a) *What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?*

5(b) *To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?*

6.1 See responses to Questions 1 and 2 above.

5(c) *Which locations and socio-economic groups will benefit from HSR?*

6.2 This will be dependant on pricing to an extent, but all groups should benefit from the expected regeneration.

5(d) *How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?*

6.3 We believe that the Government should certainly seek support from the TEN-T programme.

Question 6: *Impact*

6(a) *What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?*

7.1 We have not done any modelling on the likely impact of HSR on carbon emissions, but would make the point that, as argued above, HSR could help Manchester Airport attract and maintain direct long haul services. Direct flights are a more carbon efficient means of reaching long haul destinations than hubbing, since they involve fewer landing and take-off cycles.

6(b) *Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?*

7.2 MAG has no comment to make on this specific issue.

6(c) *What would be the impact on freight services on the "classic" network?*

7.3 We believe it should help in capacity terms, but otherwise MAG has no comment to make on this specific issue.

6(d) *How much disruption will there be to services on the "classic" network during construction, particularly during the rebuilding of Euston?*

7.4 MAG has no comment to make on this specific issue.

May 2011

Written evidence from the Core Cities Group (HSR 76)

1. THE CORE CITIES GROUP

1.1 The Core Cities Group is a network of the local authorities of England's eight largest city economies outside London: Birmingham; Bristol; Leeds; Liverpool; Manchester; Newcastle; Nottingham; and Sheffield. These cities drive their local economic areas and make a very significant contribution to the national economy. Working in partnership, we aim to enable each Core City to enhance its economic performance and make them better places to live, work, visit and do business. We work in partnership with Government both to influence policy and to develop new ideas, based on knowledge of what works on the ground, to improve economic performance and reduce dependency. The Core Cities Group has a track record of more than 10 years, led by the City Leaders across all parties.

1.2 England's Core Cities are the main drivers of the country's economy outside London and the South East. Together their primary urban areas deliver 27% of the national economy,²⁰ more than London, and contain 16 million residents.

1.3 All eight Core Cities have expressed strong support for High Speed Rail (HSR) as being in the national economic interest, including those that are not completely central to the proposed route, because they see clear benefits in terms of rebalancing the national economy, and related benefits to their cities from the release of capacity on the classic network.

1.4 The Core Cities therefore see HSR as a central component of a coherent national rail strategy, which will release capacity, rebalance the economy and support growth in important economic sectors, which would otherwise be constrained through a lack of connectivity.

2. THE ROLE OF CORE CITIES IN DRIVING GROWTH AND REDUCING DEPENDENCY

2.1 The role of cities and other urban areas is central to delivering national economic outcomes, reducing dependency (and therefore public spending), and in driving growth and increasing productivity (and tax revenues). The Core Cities have repeatedly demonstrated their commitment to these objectives and are able to drive faster, increased growth in private sector jobs if given the tools to do so. Supporting growth in the Core Cities is vital to help in rebalancing the UK economy.

2.2 With more decentralised institutional arrangements around governance and public finances, England's Core Cities would be able to deliver greater economic outcomes for the UK. Other European and international cities have far greater powers, local autonomy and ability to raise revenue locally than UK cities, and even our counterparts in Scotland have enjoyed greater freedoms, evidenced by the early introduction of Tax Increment Financing by the Scottish Parliament. The impetus to devolve powers, localise spending and revenue raising and extend the influence over wider functional economic areas must continue and this will only enhance the ability of cities and their economic areas to achieve faster economic growth outside of London.

2.3 Recent independent forecasts²¹ have demonstrated that the new Core Cities' Local Enterprise Partnership areas are capable of producing an additional one million jobs and £44 billion of GVA over the next 10 years, dependent on a number of factors that will influence competitiveness and growth. A vital factor in supporting growth and competitiveness is investment in infrastructure, including transport, both within and between the Core Cities.

2.4 The evidence from the modelling that has been done strongly suggests that economic growth will occur as a result of such investment. We are initiating work to review the evidence base for investment in transport infrastructure both within and between Core Cities, in work led by Volterra and Arup, and including Oxford Economics, Greengauge²¹ and KPMG. We would be glad to make this available to the Transport Select Committee upon its completion, which for the initial stage of work will be mid June.

3. SUMMARY OF OUR POSITION ON HSR AND HIGH SPEED 2 (HS2)

3.1 Our business partners and councils believe that there is a compelling economic and environmental case for HSR and we are committed to bringing it to our cities. A national HSR system is currently (perhaps conservatively) estimated to:

- (a) directly create 30–40,000²² jobs and support up to a million more;²³
- (b) reshape and rebalance the economic geography of Britain, closing the gap between the South East and the rest of the country;
- (c) deliver £125 billion²⁴ of economic benefits over 60 years (£111 billion direct benefits, £14 billion wider economic impacts);

²⁰ NUTS3 data

²¹ Oxford Economics in, Our Cities, Our Future, Core Cities 2011

²² "HSR in Britain: Consequences for employment and economic growth", KPMG for Greengauge 21, 2010

²³ "Our Cities, Our Future", Core Cities Group 2011 www.corecities.com NB, dependent on local and global economic influences

²⁴ "Fast Forward: A High-Speed Rail Network for Britain" Greengauge21, 2009

- (d) cut carbon by 1 million tonnes a year and safeguard the environment;²⁵ and
- (e) allow Britain's economic infrastructure to compete with the rest of the world for business.

3.2 A scheme of this ambition means there will be some tough decisions, but this is a moment to think big about the future of our country and economy. If we want growth for the long term, we need this infrastructure to deliver.

3.3 The Core Cities will drive Britain's economic recovery, but need to have the infrastructure to be able to do so. Businesses will lead the economic recovery and they need good connectivity to reach their markets. For major business to prosper it needs speedy, reliable access to other cities, London and international gateways. Businesses serving the local economy need access to more broadly focused companies in other cities if they too are to prosper. Business location and expansion decisions are based on a long term view; there is value to business in knowing that there is an agreed plan for the future, and this is highly likely to influence investment decisions by global companies prior to HSR completion.

3.4 HSR and as an initial step HS2 are critical components of achieving our "best case" growth scenarios. Our collective view is that this investment should take place, but that two additional elements of investment need to be explicitly factored in to the national strategy.

3.5 Firstly, the network must also make significant improvements in the connectivity to those Core Cities that will not initially be served by HSR, both through electrification where it does not currently exist, and through improved capacity and rolling stock between them and the other Core Cities / London.

3.6 Secondly, local transport investment within the Core Cities urban areas must not be jeopardised by HSR and should continue in such a way as to make the improvements that will be necessary both to deal with improved links to and from HSR hubs, and to greatly improved commuting capacity within the travel to work area. Investment in city region transport networks is vital in order to ensure that the benefits of HSR are maximised and spread across each city region. This investment will also benefit the majority of journeys that take place principally within city regions, and which are the lifeblood of these economies. HSR needs to be part of an on-going improvement in the UK national rail network.

3.7 This will require a creative approach to investment, exploring the use of new financial instruments like Tax Increment Financing, the devolution of transport funding and the pooling of capital finance at the local level to create greater efficiency and greater leverage on private sector investment to generate economic growth. It also means that the available investment should be focused on those places that can deliver economic growth, using the potential for jobs and increased economic output as a clear metric in investment decisions.

3.8 Tax Increment Financing has been linked to the Local Government Resource Review. Although we understand the reasoning behind this, we believe that there is no reason why we should wait to implement a first wave of TIF projects, some of which will include a local transport element.

3.9 The Core Cities Group is tabling an amendment to the Localism Bill which would provide a route for ministerial delegation that could be used for a number of purposes, including the delegation of elements of transport funding to local areas. This is an enabling amendment which creates reserved powers expressly for decentralisation. We would be happy to share further information on this and will make it available to the Department for Transport.

3.10 The decision making process for local transport investment will also need to be simplified. We give as an example the tram system in the city of Nottingham. It is an excellent example of how transport investment can help to transform local economic prospects. However, it has taken more than 14 years to build one and approve a second tram route in Nottingham, whilst its twin city, Karlsruhe in Germany, has built 11 tram routes within the same period around an existing system, due to the greater levels of local freedom in decision making and investment in transport infrastructure. If we want our cities to compete on a level playing field internationally, this situation cannot continue.

4. A NATIONAL CHALLENGE: IMPROVING COMPETITIVENESS FOR THE LONG TERM

4.1 Britain faces a long term economic challenge to move into recovery and growth, and in creating a sustainable economy for the future. The UK is competing on an international stage under increasing pressures from both EU and new emerging economies, who have more decentralised public finances and see investment in infrastructure as critical to their success. Reduced funding to the public sector in the UK places an emphasis on private sector jobs and growth, which our cities can deliver. Britain needs the South East's economic contribution, but we can also unlock greater growth elsewhere by investing in HSR. These are important local and national issues, but the importance of investment in HSR can only really be understood in a global context; if we do not invest, we will quickly fall even further behind the current leaders.

4.2 It is our cities that will drive this growth outside the South East and underpin the national economy. The Core Cities and their primary urban areas alone produce 27% of England's economic output, more than London. They could do more with the right infrastructure in place. Our view is based on evidence, set out below.

²⁵ "Fast Forward: A High-Speed Rail Network for Britain" Greengauge21, 2009

4.3 Nations across Europe are investing in HSR, and this is both a threat and an opportunity: it makes other countries a better location for investment, but it offers the prospect of getting multiplier benefits from our own investment by linking to European networks.

4.4 The nation has a massive infrastructure deficit—£500 billion²⁶ over the next decade on Government estimates—and we lag behind our closest competitors. The UK ranks only 34th in the world for its infrastructure, behind Saudi Arabia and Malaysia, and 6th amongst the G8 countries.²⁷ 1.5% of UK GDP is spent on infrastructure compared to 6% in Japan and 3% in France, contributing toward France having 20% greater productivity despite its less flexible labour markets.²⁸

4.5 This is not a situation that can continue if we want to be globally competitive. The OECD states that infrastructure investment should be one of the top three priorities for the UK over the medium term, and this has been highlighted as a priority for many years. The Centre for Policy Studies' "Conditions for Growth" report focuses on how government policy can help to improve the UK's emergence from the recession. It identifies infrastructure as one of the most important areas where continued investment can support future economic growth and recovery. The CBI has repeatedly called for continued investment in infrastructure, and particularly transport, to help drive private sector growth and wider economic growth. Other economies are quickly catching up and we stand to lose out in an economically critical period.

5. THE EVIDENCE

5.1 A recent study by Oxford Economics²⁹ showed that the newly designated "Local Enterprise Partnership" areas around the eight Core Cities alone could produce an additional one million jobs and £44 billion economic output over the next two years, dependant on a number of growth factors, including infrastructure investment. Congestion costs business £23.3 billion a year. HS2 is an important first step to avoiding this costly problem. An additional £125 billion in growth will result from a national HSR network.

5.2 Carbon emissions are growing and oil prices are rising, with "peak oil", the moment at which production will decline, around the corner. HSR will move 30 million journeys from other modes to rail and save one million tonnes of carbon, every year.

5.3 Therefore HS2 is a vital first step to unlocking massive economic and environmental improvements locally and nationally, making us globally more competitive. We will shortly reach capacity on existing lines and simply upgrading what we have is not sustainable, and neither is just building more roads; there is no plan B.

5.4 Investment in a national HSR network will:

- (a) strengthen existing and generate new economic and business flows and interactions, worth £125 billion³⁰ to the economy over 60 years (£111 billion direct benefits, £14 billion wider economic impacts);
- (b) at £69 billion, more than pay for itself in a relatively short period of time;
- (c) decrease congestion and travel-time wasted, which costs £23.3 billion³¹ a year, improving productivity and performance;
- (d) increase rail and decrease air and car journeys respectively by 30 million passenger trips and 13 million car journeys by 2055;³²
- (e) widen labour pools and increase employment opportunities, creating 30–40,000 jobs directly and supporting a million more;^{33,34}
- (f) provide a catalyst to improve local public transport networks;
- (g) enable new business and economic flows between cities;
- (h) reduce carbon emissions by 1 million tonnes a year, improve air quality and achieve targets;³⁵ and
- (i) bring UK infrastructure up to competitive international standards.

5.5 We are calling for the UK to follow China, Spain, Japan and France—world leaders in HSR—and implement a comprehensive high speed network serving the whole of the country. Earlier this year President Obama made a commitment to improving America's transport system through promoting a HSR network and earlier this week the transportation secretary has re-emphasised the commitment to modernising the nation's infrastructure. A new high speed line serving the length of the UK is capable of providing capacity for 15,000 passengers an hour each way: twice the capacity of the West Coast, East Coast and Midland mainlines together.

²⁶ "Delivering a 21st Century infrastructure for Britain", Helm, D, Wardlaw, J & Caldecott B, Policy Exchange, 2009

²⁷ World Economic Forum's Global Competitiveness Report (WEF 2009–2010)

²⁸ "Avoiding the Infrastructure Crunch", Association for Consultancy and Engineering, 2010

²⁹ "Our Cities, Our Future", Core Cities Group 2011 www.corecities.com

³⁰ "Fast Forward: A High-Speed Rail Network for Britain" Greengauge21, 2009

³¹ British Chamber of Commerce

³² "Fast Forward: A High-Speed Rail Network for Britain" Greengauge21, 2009

³³ HSR in Britain: "Consequences for employment and economic growth", KPMG for Greengauge 21, 2010

³⁴ "Our Cities, Our Future", Core Cities Group 2011 www.corecities.com

³⁵ High Speed Rail Development Programme Principal Consultant Final Report, SYSTRA-MVA, August 2009 for Greengauge21.

The use of double-deck trains would also increase the capacity of the line by 40%. A new high-speed line would not only significantly boost the national infrastructure itself, but also release capacity on the existing network when long distance services transfer to the new line. This radically opens up the opportunity to provide new services where previously there were none and to improve the quality of existing services, expanding business and employment potential through improved commuter networks.

6. HSR AND REBALANCING THE ECONOMY

6.1 The Prime Minister has stated that the rebalancing of the economy, by geography and by sector, is a top Government priority. The South East has benefitted from significant transport investment, above and beyond that in the Core Cities when measured either by population or by GVA output per head of population.³⁶ England's Core Cities require an improved national transport network in order to complete their economic restructuring away from more manufacturing based economies toward knowledge and service based industry. London has had specific advantages in this respect, and although we all need London to succeed, HSR would support the move toward a more "multi-centric" national economic model, supporting further growth in sectors and geographies that require improved connectivity. This is fundamentally an issue of greater national competitiveness, achieved through the improved competitiveness of our big wealth producing urban areas. Understanding which sectors of the economy are likely to grow in different cities and in which parts of the city regions this growth is likely to take place, will all be crucial factors in planning appropriate transport investment.

6.2 HSR has the potential to radically transform the economies not just of major cities, but also of surrounding connected towns and cities, extending advantages far beyond the stations that it directly serves. Ensuring that HSR is properly integrated into the classic rail and public transport networks in the city regions will mean that the maximum number of people benefit from the advantages of the network, reducing journey times for business and leisure. The regeneration benefits of HS2, the first stages of a full network, will ripple out into a much wider catchment area, creating jobs for people living in towns, villages and cities in the surrounding areas.

6.3 The country's existing rail infrastructure is currently reaching capacity; to date we have responded by upgrading what is already there. This is no longer sustainable, nor is it good value for money. Modernisation of the West Coast Mainline was due to cost £2 billion, take six years, and deliver maximum speeds of 140mph. In fact the final scheme cost £8.8 billion, took nine years, and provided for maximum speeds of 125mph. Despite this work, the line is expected to reach full capacity by the early 2020s, and some sections much earlier than this. In addition to the West Coast Mainline there are capacity problems on the East Coast, Midland and Great Western Mainlines. It is clear that given the strategic importance of these lines to the economy, we cannot suffer years of disruption and delay for upgrades which will not deliver what is needed, and must instead plan for a new high speed rail line which runs in addition to the existing classic network.

6.4 According to The British Chamber of Commerce, congestion costs business £23.3 billion a year. A full HSR network linking the major cities of the UK would cost up to £69 billion and would generate over £125 billion of economic benefits. These benefits are derived from improvements in journey times, and crowding, reductions in road congestion, environmental improvements and the economic benefits arising in the release of capacity on the conventional rail network. It also includes the beneficial effect on the productivity of businesses through changes to employment patterns and agglomeration effects.

6.5 Furthermore, we believe that the existing methods of appraisal are likely to underestimate the potential benefits of HSR to the UK economy. Analysis of the economic impact of High Speed One (HS1)³⁷ showed that even if only 5% of the regeneration benefits and growth around stations on the HS1 route were considered to be additional and as a direct result of the HS1 investment, then this would amount to £10bn of regeneration benefits which would more than double the estimates based on existing evaluation guidance (which arrived at estimates of £7.6 billion of benefits), highlighting the potential scale and scope of benefits associated with HSR in this country. This is mission critical to UK PLC, seeking to compete in a global market place in the 21st Century with a currently fragmented infrastructure that will not match that of our closest economic competitors.

7. CLIMATE CHANGE

7.1 We believe that HSR, and HS2 as a first step, has considerable environmental as well as economic advantages. At a time of increasing concern over climate change and carbon emissions, HSR has the potential to assist in the meeting of the UK's carbon reduction and air quality targets by attracting passengers from domestic air services and private car journeys.

7.2 At average loadings, high speed rail emits 30g of carbon per passenger kilometre, compared to 120g for aviation, and 105g for car (new car average) meaning that for every journey transferred from plane to rail CO2 emissions are reduced by 75%, and 71% for car to train transfers. However, rail, being electrically powered, is only as clean as its energy source; which at present is some of the most carbon intensive in Europe. The Climate Change Act 2008 committed the country to an 80% reduction in greenhouse gases by 2050 on 1990 levels. With these proposals put in place it is conceivable that HSR could reduce its carbon output by 96% by

³⁶ The pteg Funding Gap Report, 2010

³⁷ The Economic Impact of High Speed One, Colin Buchanan and Volterra Consulting, January 2009

2055 to 1.3g of carbon per passenger kilometre. Measures to reduce the environmental impact of plane, and improvements in electric car technology could see their carbon emissions reduced to 51g for planes and 4g for car.

7.3 Forecasts suggest that by 2055 a full HSR network could be carrying 30 million journeys which would otherwise be made by air, and 13 million from car journeys. This would indicate that high speed rail could deliver carbon saving of around one million tonnes per year, but a full national network is needed to create this modal shift.

7.4 Our final point is that high speed railways are high capacity railways (for example the TGV offers up to 1090 seats in twenty coaches compared with the 439 seats that the nine-cars of a Pendolino can offer) and this will result in significant carbon savings.

8. JOURNEY TIMES

8.1 Evidence from elsewhere in Europe has shown that where a journey can be made in under three hours, rail can capture 50–60% of the market from airlines—a figure that grows to 90% if the journey takes less than two hours. And in a country the size of the UK, no two major cities need be more than three hours apart via high speed rail. In Europe, the introduction of a high speed service between Madrid and Barcelona saw rail increase its share of the market from 16% to 48%, with a further rise to 70% forecast.³⁸ High speed services between Paris and Brussels quickly took a 95% market share.³⁹

8.2 Whilst aviation will always have an important role in economic development; significant modal shift from plane to train will also free up slots at airports which can then be used for more valuable international journeys, reducing development requirements at and around airports, and strengthening the UK's competitive position.

9. CONCLUSION

9.1 Our cities and business partners believe the time has come to recognise the step change in economic and environmental performance that can be brought about through high speed rail. We are supporting the implementation of HS2 as a first step toward a comprehensive high speed rail network linking all our cities, to provide the UK with the domestic infrastructure necessary to compete in the international marketplace. HSR has already demonstrably achieved the required results elsewhere in Europe and across the globe, and can work here in Britain.

9.2 With HSR the goal of a united, strong and sustainable British economy, allowing growth to happen in many places and delivering benefits across the whole of the country can be realised. Although only part of the economic and environmental solution, the view of these cities is that without it we will fall short of meeting both our ambitions and our needs, and increasingly be perceived as a less attractive international business location.

May 2011

Written evidence from Greengauge 21 (HSR 88)

INTRODUCTION

1. Greengauge 21 is an independent not-for-profit company which carries out research and planning on high-speed rail (HSR) in Britain. Greengauge 21 has no vested interest in High Speed Two and is not seeking to be part of any direct beneficiary (construction company, operating company etc). The company seeks to act in the national and the public interest, by carrying out research and bringing forward evidence so that a full and open debate on high-speed rail can take place.

2. Since 2008, most of Greengauge 21's research has been supported and funded by an HSR Public Interest Group which includes city councils, regional development agencies, transport authorities and rail organisations.⁴⁰ The research and policy positions developed by Greengauge 21 have been the subject of extended discussion and debate with the Public Interest Group members.

What are the main arguments either for or against HSR?

3. High-speed rail is needed to provide additional transport capacity for Britain. Evidence, in particular from Network Rail's Route Utilisation Strategy programme, shows that the rail network continues to get busier and

³⁸ "Fast Forward: A High-Speed Rail Network for Britain" Greengauge21, 2009

³⁹ "Threats and opportunities for High Speed Rail transport in competition with the low cost air operators", CENIT (Center for Innovation in Transport, Barcelona, Spain 2003

⁴⁰ The Public Interest Group membership for 2010–11 comprised: Advantage West Midlands, Association of North East Councils, ATOC, Birmingham City Council, City of London Corporation, East of England Development Agency, East Midlands Development Agency, Glasgow–Edinburgh Collaboration Initiative, Great Western Partnership, Newcastle City Council, Northern Way (the partnership led by the three northern RDAs), Nottingham City/Nottinghamshire County Councils, PTE Group, Railway Industry Association, SEStran, Sheffield City Region, Transport for London.

unless action is taken the major rail routes will be overcrowded and congested by the 2020s. By 2024, Network Rail estimates that 12% of long-distance services operating on the West Coast Main Line will be carrying standing passengers to/from London Euston. There will also be serious overcrowding on commuter services on the route. This is despite an assumed programme of continuing investment to increase capacity over the intervening years. Network Rail concludes that “thereafter the WCML, particularly at the south end of the route, is effectively full and any interventions will be disproportionately expensive compared with the benefits gained.”⁴¹

4. Other modes of transport—air and road—are also facing worsening congestion but cannot deliver the additional capacity needed without unacceptable environmental costs and increased carbon emissions. Travel by high-speed rail is considerably more carbon efficient than travel by car or by air. Developing a high-speed rail network is the most effective way of delivering the required increase in transport capacity.

5. While the initial driver of the need for new high-speed railway lines is capacity, the economic benefits they bring are wider and include the effects of improved connectivity between towns and cities, with improved reliability and reduced journey times. The Eddington Transport Study⁴² provides extensive evidence on the need for improved connectivity to build economic growth. By providing sufficient long-term capacity and improving connectivity and journey times, Britain’s international competitiveness will be enhanced, particularly with direct HSR services between Britain’s major cities (including London, of course) and between them and European cities such as Paris, Brussels, Amsterdam and Frankfurt and international gateway airports, including Heathrow.

6. The Coalition Government has spoken of the need to re-balance the national economy. This will not happen without significant policy intervention: market forces favour development in the South East. High-speed rail brings a radical re-profiling of the national accessibility map, increasing the appeal of development outside the South East. Investment in HSR creates the real possibility that private sector investment decisions over the decades ahead will lead to a re-balancing of the economy and to substantial uplifts in productivity across the English regions and Scotland and Wales.

How does HSR fit with the Government’s transport policy objectives?

7. The development of HS2 was supported by all of the main political parties in the 2010 General Election, appearing in Party Manifestos.

8. A high-speed rail network has to be seen as part of the national transport system and it fits well with Government’s vision for “a transport system that is an engine for economic growth but one that is also greener and safer and improves quality of life in our communities.”⁴³ The timescale for delivery of a national HSR network we estimate to be 30–35 years and this corresponds to the commitment to reduce carbon emissions by 80% by 2050. Alongside this obligation, to which HSR can make a major contribution, is the policy aim of reducing dependence on imported oil, and enhancing energy security as a consequence.

9. The role of the high-speed rail network within the national transport system is to provide for efficient longer distance journeys between urban centres and to liberate capacity for the expansion of other rail services on the existing network. With HSR in service, the existing main lines can play an expanded role in providing for regional, local and freight services. These benefits are just as much a part of the case for HS2 as are the advantages conferred by the new HSR services themselves. They represent a highly cost effective way of securing improvements in commuting conditions, with less reliance on the use of private cars—and achieving reductions in lorry miles.

10. Greengauge 21’s recent report, *Capturing the Benefits of HS2 on Existing Lines*,⁴⁴ put forward a possible post-HS2 timetable for the West Coast Main Line (WCML), to highlight the potential wider benefits of HS2. This demonstrated that the capacity relief provided by HS2 brings substantial opportunities, especially to places between London and the West Midlands that have poor rail services today, squeezed out by the non-stopping Pendolino services on the WCML. It allows for a considerable expansion of freight services on the WCML (the busiest rail freight corridor in the country) to three trains per hour throughout the day. Services at Watford, Milton Keynes, Rugby, Nuneaton, Tamworth and Lichfield would be transformed into a pattern of frequent regular interval services, allowing them to act as major transport interchanges. Substantial increases in commuting capacity into both London and Birmingham become possible, relieving what will otherwise be conditions of severe over-crowding. New and improved services would also become possible at Northampton, Stoke-on-Trent, Coventry and the Black Country. The feasibility and value of new connections to the West Coast Main Line will be enhanced, improving the case for the East West Rail link, the Croxley Link and new services over the line between Leamington and Coventry serving Kenilworth. Ambitions for services which cannot be accommodated on the West Coast Main line today because of capacity constraints—such as from Mid/NE Wales and Shropshire and Walsall—all become feasible.

11. High-speed rail stations will need to be planned so that they integrate well with local public transport services—rail, metro, tram, bus—in order to ensure that passengers can access HSR services effectively and

⁴¹ Network Rail, *West Coast Main Line Route Utilisation Strategy Draft for Consultation*, December 2010, p 8.

⁴² Sir Rod Eddington, *Eddington Transport Study*, December 2006.

⁴³ Department for Transport (DfT), *Business Plan 2011–2015*, May 2011.

⁴⁴ Greengauge 21, *Capturing the benefits of HS2 on existing lines*, February 2011.

on sustainable modes of transport. The relevant local authorities and PTEs affected by the HSR proposals will therefore need to develop long-term strategies that take into account the impact of HSR. It is quite possible that the additional volumes of passengers attracted to high-speed rail stations will improve the case for local public transport schemes that might not otherwise be viable. High-speed rail should be seen as part of the transformation of the nation's public transport networks that is needed to meet the expectations of demand growth, given the disadvantages of attempting to expand the road network to accommodate it.

12. High-speed rail can also help the aviation sector. The global connectivity of Heathrow in particular is important to the whole of the UK and to international business competitiveness. In recent years, however, Heathrow's domestic air service network has been shrinking. To access long haul destinations, northern business travellers increasingly use the nearest available hub airports such as Amsterdam Schiphol or Paris Charles de Gaulle—and the evidence is that this leads to a further worsening in the carbon impacts from air travel. With a direct link to Heathrow Airport, as is proposed by Government in the second phase of development of HS2, high-speed rail can provide the domestic connections that are currently getting squeezed out. It may be that the experience on Britain will differ from that of other countries where the introduction of HSR led to the demise (or major cut-back) of domestic air travel: in the British case, much of the air demand is already being displaced into short-haul European feeder flights because of the constraints on runway slots at Heathrow. It will be these environmentally damaging short-haul flights that will be replaced by HSR services to Heathrow. HSR will therefore re-connect Heathrow with its wider national catchment, enhancing its role as an international hub, and reducing carbon emissions at the same time.

13. There is an excellent fit between high-speed rail and the Government's wider objectives for sustainable development. Railways have the effect of encouraging more sustainable patterns of land-use development than highways. High-density—and hence sustainable—commercial and residential development is encouraged around stations in urban centres (the Kings Cross lands and Stratford City examples being two contemporaneous HSR examples in Britain), whereas the construction of new roads (and airport expansion) virtually without exception encourages suburban and edge-city development, leading to pressure for incursions into the green belt and other protected and vulnerable greenfield sites.

14. The last Government's transport policy was very much influenced by the Eddington Transport Report. Greengauge 21 notes that the Transport Select Committee considered the case for high-speed rail in 2007 in the light of the Eddington Transport Report.⁴⁵ Contrary to the understanding of most commentators who had presumed, based on an interpretation of his report, that he was opposed to HSR, Sir Rod Eddington made it very clear to the Transport Select Committee that he was in fact in favour. His report, he explained, was sceptical of new technologies such as Maglev, which at that time was the subject of a significant private sector lobbying effort. He had visited the Maglev system in China and rejected it for Britain: he saw it as being far too risky. But Sir Rod's evidence to the Committee was that high-speed rail would have a strong business case in the London/Birmingham/Manchester corridor, and should be progressed.⁴⁶

Business case

15. The HSR business case prepared by HS2 Ltd is based on standard methodology and assumptions used across the transport sector and by the Department for Transport for all major transport schemes. As such, Greengauge 21 considers the forecasts and appraisal assumptions to be (appropriately) cautious.

16. The HS2 Ltd projections of passenger demand for HS2 are based on forecasts of background growth in long-distance rail trips of 95% between 2008 and 2043, or 1.9% per annum.⁴⁷ This is considerably lower than historic growth in long-distance rail trips, which has averaged 5% per annum since 1995 and shows no sign of market saturation, unlike long-distance car travel which has been relatively static for the last decade or so. On the WCML, the number of long-distance passengers travelling to/from London is forecast to increase by 127%, or 2.3% per annum. This is below the mid-point of the range of forecasts prepared by Network Rail in its draft West Coast Main Line Route Utilisation Strategy⁴⁸ which suggests that that the WCML inter-regional market will grow at between 1.1% and 5.0% per annum up to 2024 (under different scenarios). Growth rates on individual city-to-city flows to/from London are forecast by both Network Rail and HS2 Ltd to be somewhat higher: for example, London-Manchester demand is forecast to increase by 3.0–3.2% per annum by Network Rail and by 2.6% per annum by HS2 Ltd.

17. With HS2 services in operation, HS2 Ltd forecasts that it will carry 150,000 passenger trips per day in 2043, a net increase of 53,000 passengers/day on the British railway network. We consider these forecasts to be conservative, and Greengauge 21's own forecasts suggest much higher demand is possible: for example, we forecast approximately 250,000 daily trips on a London-Birmingham-Manchester HSR network⁴⁹ by 2055 (HS2 Ltd assumes that there will be no growth anywhere after 2043).

⁴⁵ Eddington, *op cit*.

⁴⁶ House of Commons, *Oral Evidence given by Sir Rod Eddington, Government Specialist Transport Advisor*, 2 August 2007.

⁴⁷ HS2 Ltd, *Demand for long-distance travel*, April 2011.

⁴⁸ Network Rail, *op cit*.

⁴⁹ SYSTRA/MVA (for Greengauge 21), *High-Speed Rail Development Programme 2008–09—Principal Consultant Final Report*, October 2009, p 46.

Unfortunately, demand forecasts were not prepared for a network exactly comparable to the proposed HS2 line.

18. Greengauge 21 considers the economic case for high-speed rail in Britain to be strong. The Government estimates that the economic benefits of the first phase HS2 scheme will exceed costs by a ratio of 2.0:1 (or 1.6:1 excluding “wider impacts”)—a level judged to be “good” under DfT criteria.

19. Greengauge 21’s own work from 2008–09, using assumptions consistent with standard DfT methodology—and carried out by the consultants now responsible for forecasts and appraisals for HS2 Ltd—estimated a benefit:cost ratio for a comprehensive national high-speed rail network of 3.5:1.⁵⁰ While we did not assess the business case for a scheme identical to HS2, a high-speed railway line from London to Birmingham and Manchester was assessed to have a benefit:cost ratio of 2.9:1 (excluding wider impacts). Overall, we believe the HS2 Ltd demand forecasts and economic appraisal to be consistent with current accepted practice and prudent in approach, but cautious.

20. Greengauge 21 has considered the argument put up by anti-HS2 campaigners that the journey time benefits are overstated because business travellers work on trains and so time savings achieved by HS2 have reduced value. We agree with the point that the treatment of travel times is simplified. But Greengauge 21 countered this argument,⁵¹ explaining that the objectors’ thesis ignores the possibility that for those choosing HSR who would not otherwise travel by car or by air, the creation of HSR creates opportunities to work which in general are not otherwise available at all. It has also been demonstrated by HS2 Ltd that the combination of effects of the simplified treatment of travel times and the ability to work while travelling does not weaken the case for HSR—if anything the economic case is strengthened.⁵² The HS2 Ltd response also points to the issue of crowding levels and its impact on passengers’ productivity while travelling. Without HS2, crowding levels on West Coast Main Line services will worsen, and passengers will find it impossible to work while travelling.

21. While the economic case is very important it does not look specifically at effects on national productivity, or GVA (gross value added—a measure of economic output). Work carried out for Greengauge 21 by KPMG⁵³ drew on the limited data available on GVA performance at a local level to estimate the relationships between accessibility and productivity. The KPMG analysis suggested that a comprehensive national network of high speed services could boost Britain’s annual GVA in 2040 by up to £29 billion, including the impacts of re-using the capacity released on existing lines. The service sector and knowledge-based businesses would particularly be expected to gain from HSR. Additional annual economic impacts on this scale could increase annual tax receipts by between £6 and £10 billion in 2040 (in 2010 prices). On this basis, HSR is an investment that delivers a good return to the Treasury and the taxpayer.

22. New high-speed rail stations can stimulate economic development and regeneration. Research carried out by Greengauge 21⁵⁴ on international high-speed rail experience suggests that effects have been positive, but not uniformly so. Much depends on the relevant local authority’s appetite for redevelopment and regeneration to make the most of the opportunities high-speed rail creates. The European evidence suggests that HSR stations need to be planned as part of city-wide masterplans and well integrated with local transport networks.

23. Alternatives to the national HSR network that rely on upgrades to existing lines and operation at broadly existing speeds fail to provide much of the benefit of high-speed rail and should be rejected. “Rail Package 2”, the alternative package of rail upgrades analysed by Atkins and supported by many of those opposed to HS2, only delivers an additional three peak train paths per hour (compared with up to 16 train paths provided by HS2) and does not improve services to the intermediate centres between Birmingham and London such as Northampton and Milton Keynes. Rail Package 2 also worsens services in some cases (Rugby loses its fast trains to Euston, Coventry loses one of its fast trains to London Euston), impacts adversely on the reliability of the WCML, provides no extra capacity for railfreight and would subject passengers and freight consignors to another line-of-route upgrade programme with high levels of disruption.⁵⁵

The strategic route

24. Greengauge 21 supports the Government’s proposals to develop a high-speed rail network in phases, and for HS2 to be the first stage. According to our research, there is an excellent case for a national high-speed rail network to deliver economic benefits and improve connectivity across Britain. We proposed a full national network in the *Fast Forward* strategy published in September 2009.⁵⁶ Ultimately, the national HSR network should link London, each of the eight “core cities” in England (Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield), together with Glasgow, Edinburgh and Cardiff. It should also have direct connections to Heathrow, to HS1 and to the classic network so that many more places can benefit from direct HSR services.

⁵⁰ Greengauge 21, *Fast Forward: A high-speed rail strategy for Britain*, September 2009.

⁵¹ Greengauge 21, *Fresh light on a key issue—why it’s worth saving time for business travellers*, 10 March 2011 (published at <http://www.greengauge21.net/blog/fresh-light-on-a-key-issue-why-it%E2%80%99s-worth-saving-time-for-business-travellers-2/>).

⁵² Department for Transport/HS2 Ltd, *Economic Case for HS2*, February 2011, p 51.

⁵³ Greengauge 21, *Consequences for Employment and Economic Growth*, February 2010.

⁵⁴ Greengauge 21, *High speed trains and the development and regeneration of cities*, June 2006.

⁵⁵ Atkins, *HS2 Strategic Alternatives Study, London—West Midlands Rail alternatives—update of Economic Appraisal*, Appendix A, February 2011.

⁵⁶ Greengauge 21 (*Fast Forward*), *op cit*.

25. In 2007, Greengauge 21 published a report⁵⁷ setting out the reasons why there is a strong case for the first stage of the HSR network to be a new route between London and the West Midlands, and these include the capacity constraints on the WCML, the route expected to have the most severe capacity problems within the next 15 years.

26. The Government's proposed configuration of the route for HS2 is welcomed. Our own research highlights the importance of high-speed railway lines serving city centres directly, as achieved by the Government's proposals for both London and Birmingham. This allows passengers to access HSR easily by public transport and other sustainable modes, and has the potential to deliver economic regeneration benefits in the city centres. The proposed route rightly, in our view, does not incorporate intermediate stations between the London and West Midlands areas; to do otherwise would compromise local planning policy and guidance, and threaten unwanted large scale development across rural areas.

27. The proposed connection between the high-speed rail network and Heathrow Airport is welcomed, although Greengauge 21 considers that a through station at the airport allowing services from the Midlands and the North to connect to the South East and South West would provide a more effective solution than a simple spur. Greengauge 21's February 2010 report *The Heathrow Opportunity*⁵⁸ sets out how a high-speed rail connection to Heathrow could be developed in a way that delivers best value for money and provides wider benefits across the South East, South West and South Wales.

28. Greengauge 21's Public Interest Group has consistently highlighted the importance of operating direct HSR services between cities in the Midlands and the North of England to continental Europe, and we welcome the proposed direct connection between HS2 and HS1. Such a link should allow better use to be made of the currently under-used Stratford International station: these opportunities have not yet been examined by HS2 Ltd.

29. While there are sound reasons in the first instance for the Government to seek Parliamentary Powers for HS2 rather than for the more extensive Y-shaped network, Greengauge 21 urges that consideration is given to ensuring that along with the powers sought for HS2 there is an appropriate commitment to the development of a "truly national HSR network", as set out in the Coalition Agreement. This may be achieved through, for example, a National Policy Statement for transport infrastructure, through appropriate wording and provisions in the Parliamentary Bill for HS2 and through appropriate arrangements under the rail industry's forward planning programme.

30. One addition to the currently proposed HS2 scheme that Greengauge 21 considers would be of substantial value is a connection to the existing Birmingham to Derby railway and onwards to the Midland Main Line. This short connection would allow through high-speed services to operate to London from the East Midlands, Sheffield, Leeds and Newcastle, further widening the benefits from the first stage of HS2 and ensuring that cities in the eastern half of the country do not need to wait until the second phase to achieve the benefits of HSR. Sheffield and Derby would have their London services speeded up by half an hour—and this could be achieved when HS2 opens in 2026.

31. There should be a long-term high-speed rail strategy for the delivery and implementation of the national HSR network. There are parallels with the planning and development of the national motorway network from the 1950s to the 1980s. In order to ensure that Britain's HSR network is developed and implemented effectively, an organisation needs to be tasked with long-term planning of HSR, developing a national long-term strategy that addresses strategic network issues and ensuring it is integrated with local and regional spatial development plans, local transport, infrastructure and communication networks. This needs to take place alongside the detailed route planning and development work currently being undertaken by HS2 Ltd.

Economic rebalancing and equity

32. The development of a high-speed rail network has a valuable role to play in redressing the north-south divide, by better connecting the cities of the Midlands, the North and Scotland with each other as well as with London. A recent study by Chen and Hall on the impact of the Intercity 125/225 trains on Britain's economic geography⁵⁹ found that where enhanced rail services brought cities within a two-hour journey time from London, cities' economic competitiveness was improved, unemployment rates were arrested and average incomes increased. The researchers concluded that reducing rail journey times had a positive impact on developing local knowledge-based service economies, as long as this was accompanied by local strategies to capture the development opportunities. This economic re-balancing would contribute to addressing the inequality of opportunity, prosperity and well-being visible in the current north-south comparative statistics. In addition, the economic modelling carried out for Greengauge 21 by KPMG⁶⁰ forecast that a national high-speed rail network would deliver larger economic impacts in the north of the country with the largest productivity and employment gains in Yorkshire and the Humber, Scotland, the North East and North West

⁵⁷ Greengauge 21, *High Speed Two—a Greengauge 21 proposition*, June 2007.

⁵⁸ Greengauge 21, *The Heathrow Opportunity*, February 2010.

⁵⁹ Chen, C-L, Hall, P. *The impacts of high-speed trains on British economic geography: a study of the UK's InterCity 125/225 and its effects*. J. Transp. Geogr. (2010), doi:10.1016/j.jtrangeo.2010.08.010

⁶⁰ Greengauge 21 (*Consequences*, 2010), *op cit*.

and East and West Midlands. HSR has the potential to help to spread prosperity outside beyond the South East and contribute to closing the North-South divide.

33. While the effects of HSR on the tourism sector have not yet been studied in any detail, so far as we are aware, it is clear that HSR could contribute hugely to relieving the concentration on London and spread international visitors to other parts of the country, helping in the process to create new opportunities in this significant employment sector.

34. Greengauge 21 notes that the Government’s commitment of £750 million to develop plans for HS2 has not been at the expense of other rail investments that also offer value for money. Electrification and regional schemes such as the Northern Hub are natural complements to high-speed rail, not alternatives to it.

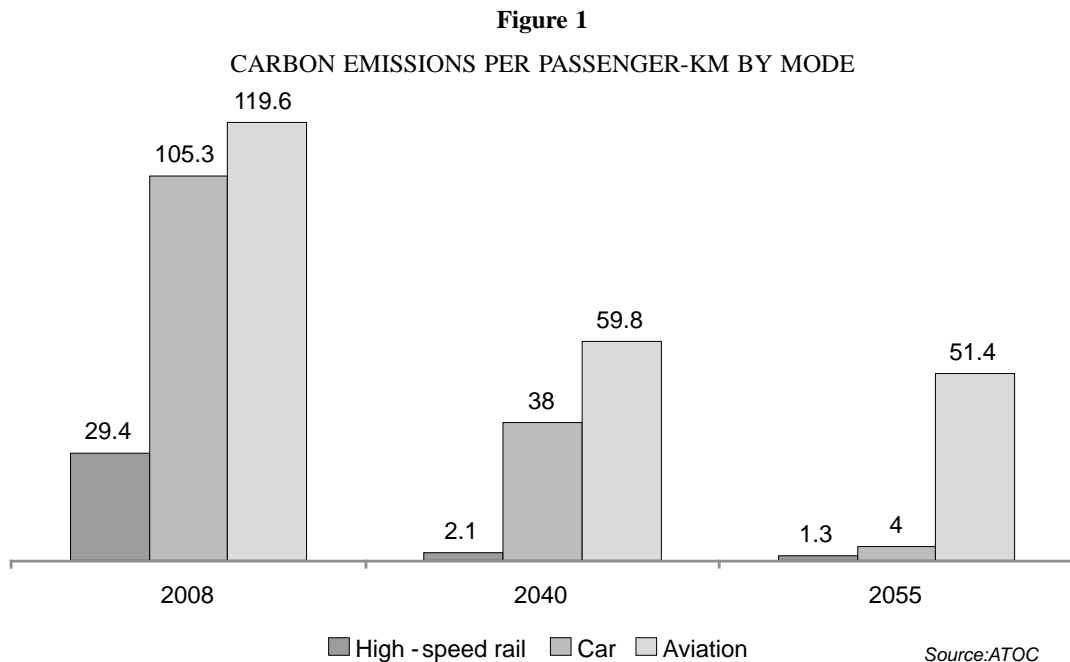
35. Concerns have been expressed over whether passengers will be able to afford to travel by high-speed rail or whether it will be a transport system suitable only for wealthy business travellers. However, Greengauge 21’s business case analysis, in common with HS2 Ltd’s, is based on assumptions that fares paid for HSR travel will be no higher than fares paid for travel on conventional rail services. In today’s prices, this means that the average fare paid for a single journey could be £40–45, which is the average fare paid today for journeys that will be typically on offer in future on high-speed rail.⁶¹ As with all competitive transport systems, much lower fares, perhaps £20–25 one-way, would most likely be available on HSR services for those willing to forgo some flexibility on travel times or able to take advantage of discounts such as from railcards.

36. Rail usage is not restricted to people with higher incomes,⁶² as some have argued. Even those on lowest incomes make a significant number of rail journeys, with little difference between rail usage in the lowest 20% income band and the next two income groups. With fares for high-speed rail expected to be (on average) at the same level as those on the existing rail network, we can expect the same broad level of usage, right across the social spectrum and across all income levels.

37. HSR can also make a positive contribution to social inclusion by offering high standards of accessibility, including to the mobility-impaired, connecting seamlessly with local transport networks and offering a reliable, safe and high-quality passenger experience at an affordable price. As with today’s rail services, HSR should be available to all, including those who for whatever reason are unable to drive or are reluctant to use short-haul air services.

Impact

38. HSR will make a valuable contribution to a low-carbon transport system. An average HSR trip generates one-third of the carbon emissions of a comparable car journey and one-quarter of the carbon emissions of a trip by plane. As Britain’s electricity generation supply becomes progressively decarbonised in future years, the environmental advantages of HSR travel will increase, as Figure 1 below illustrates.⁶³ Greengauge 21’s work suggests that a HSR network could result in a significant reduction in carbon emissions, of up to one million tonnes of CO₂ per annum.⁶⁴



⁶¹ Greengauge 21, *High-Speed Rail: Fair and Affordable*, October 2010, p 10.

⁶² HS2 Ltd, *op cit*, p 4.

⁶³ ATOC, *Energy Consumption and CO2 impacts of high-speed rail: ATOC analysis for Greengauge 21*, April 2009.

⁶⁴ Greengauge 21 (*Fast Forward*), *op cit*, p 22.

39. HS2 Ltd's work on this area is relatively cautious, focusing only on the impacts from the first stage of HS2 (which does not deliver the full potential air-rail mode shift) and not incorporating decarbonisation of the electricity supply.

CONCLUSION

40. Demand for rail travel continues to exhibit a trend apparent since the mid 1990s: it is out-pacing growth on the road sector. But the scope to accommodate ever more passengers through measures such as train lengthening is reaching an inevitable limit. Without the capacity uplift that HS2 provides, there can be expected to be widespread crowding on rail services, unless fares are increased substantially (perhaps doubled)⁶⁵ to choke off demand.

41. A national high-speed rail network will improve Britain's economic productivity and international competitiveness. It will particularly strengthen the economies of the Midlands, the North, Wales and Scotland, where there is most need, and provides the potential for inner-city regeneration around the new stations.

42. The costs of the project should be subject to continuing challenge, and Greengauge 21 believes there is scope for some reduction and efficiencies. But the overall costs involved are manageable and represent no more than a continuation of the current levels of capital spend on the rail network which will otherwise subside to much lower levels post 2014.⁶⁶

43. High-speed rail has been under serious study in Britain for 10 years. The evidence points consistently towards the need for HSR and the considerable wisdom of proceeding with its development. Delaying now will jeopardise progressing HS2 through the statutory consultation and parliamentary phases with no good reason.

16 May 2011

Further written evidence from Greengauge 21 (HSR 88A)

INTRODUCTION

1. This report is concerned with the question of access arrangements at the London end of HS2. We wish to draw to the attention of the Committee evidence that indicates that the case for HS2 can be greatly strengthened while the alignment is left unchanged from that proposed.

2. Since Greengauge 21's submission to the Transport Committee's inquiry into high-speed rail, Network Rail published the conclusion of their work on the future of the London area rail network at the end of July. It provides evidence that points to how significant cost savings could be achieved in the implementation of HS2, while protecting and enhancing the benefits it will bring. We have made this known to the Department for Transport in Greengauge 21's Supplementary Response⁶⁷ to the HS2 consultation.

3. We also provide a short response to evidence that the Committee received on the economic and employment impact of HS2 on Wales, which drew on Greengauge 21 research commissioned from KPMG.

LONDON CONNECTIONS AND OLD OAK COMMON INTERCHANGE

4. The plans for HS2 include two substantial stations in London. A rebuilt Euston station will have 10 platforms for new high-speed services and 14 for existing rail services (reduced from today's 18). This station is already connected into the Underground and bus networks and also provides for ready onward access to central London by taxi or on foot or cycle.

5. There is also proposed to be a very substantial station—with up to 15 platforms—at Old Oak Common in inner West London. Access to/from this station would be restricted to Great Western Main Line services into Paddington which will in future include Crossrail services. There is no connection to any London Underground line or to the bus network and it would also be difficult to provide access for private transport. The Old Oak Common interchange design was developed in response to the remit set HS2 Ltd by the last Government in January 2009.

6. Given the levels of cost involved, it is critical that the station solutions adopted for HS2 both deliver value for money and allow passengers to access HS2 services effectively without overloading London's transport network.

7. The HS2 Ltd reports suggest that Old Oak Common interchange is crucial to HS2—not to its originally intended purpose, to provide access to Heathrow—but to relocate the access point for a substantial number of HS2 passengers who would otherwise add to pressures on Euston station and the surrounding London Underground network. However, Old Oak Common interchange imposes time penalties on both GWML and HS2 passengers, and costs around £750 million excluding property costs and risk. Network Rail's London and

⁶⁵ HS2 Ltd, *op cit*, p 10. A 2% annual increase in real fares would be required to choke off demand without new capacity.

⁶⁶ New Civil Engineer, 21 April 2011, p 19 quotes David Higgins, CEO Network Rail: "The next three to four years will be our peak capacity. We'll be spending £3.5 billion a year on major projects. In 10 years we won't be."

⁶⁷ Greengauge 21, *Greengauge 21 Consultation Supplementary Response*, 28 July 2011. Available at: <http://www.greengauge21.net/publications/hs2-consultation-supplementary-response/>

South East Route Utilisation Strategy (L&SE RUS)⁶⁸ report, published in July 2011, contains a business case analysis of a quite separate project which we believe would allow the problem of congestion at Euston to be tackled in a better way.

8. The Network Rail proposition is that services that currently use the slow pair of tracks on the West Coast Main Lines into Euston should instead be connected to Crossrail in the Willesden/Old Oak area. These services would then operate over a WCML branch of Crossrail out as far as Milton Keynes. Just as Crossrail has on its eastern side, there would be two balanced Crossrail limbs on the western side—the Great Western Main Line (Heathrow/Reading) and the West Coast Main Line (Milton Keynes). Stations such as Tring and Berkhamsted in the Chilterns would become stations on the (extended) Crossrail network.⁶⁹

9. Network Rail makes clear that the WCML extension option appears to have a good business case and detailed development is recommended. The option would provide new direct routes from WCML stations to the West End, the City of London and Docklands, with over 75% of existing passengers benefiting from significant time savings. The estimated benefit:cost ratio is between 2.2:1 and 2.6:1.⁷⁰

10. It would substantially reduce the number of trains and passengers at Euston station especially in peak periods. It would also free up capacity on the Northern and Victoria lines. It should allow the redevelopment of Euston to take place on a shorter timescale with less disruption. This proposition both saves cost and adds to the overall value of the HS2 investment. The option requires a new chord to connect the GWML slow lines with the WCML slow lines in the Old Oak Common area. Network Rail estimates the cost of the WCML Crossrail connection at between £436 million and £489 million, or about half the cost of the Old Oak Common interchange.

11. The London Borough of Hammersmith and Fulham has supported the creation of the Old Oak Common interchange because of its regeneration potential. There is a large tract of railway land at Old Oak Common, much of it now out of use. But this is the site of the planned Crossrail depot on which construction has started. This facility, together with the current HS2 Ltd plans at Old Oak Common, in combination has the effect of removing much of the developable land needed to regenerate the area.

12. A better approach would be to provide a surface station on the Crossrail link to the West Coast Main Line, and this can be done with far less land-take. The loss of developable land that the HS2 interchange station entails would be avoided. In short, Old Oak Common should be considered for a Crossrail station, but it would not be needed for HS2. Access to Canary Wharf from HS2 could be provided via Stratford to which some HS2 services from the Midlands and the North should be extended. Indeed, the combination of a ‘decongested’ Euston and Stratford would in practice deliver faster access from HS2 to the West End, Westminster, the City and the financial districts in Docklands than a combination of Old Oak Common and Euston. Clearly this depends in part on developing a suitable service plan so that Stratford has a regular set of connections to the Midlands and the North using the new HS2—HS1 connection.⁷¹

13. In summary, a connection from the WCML into Crossrail rather than the development of Old Oak Common interchange would:

- (a) improve the business case for HS2;
- (b) add value to Crossrail;
- (c) remove the journey time penalty and disruption to services on the Great Western Main Line;
- (d) increase the scope for regeneration at Old Oak Common; and
- (e) mitigate fully the passenger dispersion challenge arising at Euston and simplify the task of rebuilding Euston.

14. While the WCML—Crossrail connection is not yet committed, neither is the work needed to extend the Crossrail proposals (including additional rolling stock) to make the proposed Old Oak Common HS2 interchange work. A sensible and more consistent approach for HS2 might be that the WCML connection to Crossrail is provided in the period between 2017 and 2021, after Crossrail as now authorised is built, and before the main, and potentially scaled-down, works for HS2 at Euston commence.

IMPACTS OF HS2 ON WALES

15. In evidence given to the Transport Committee on September 6th, Mark Barry referred to the work that KPMG carried out for Greengauge 21.⁷² He pointed out that this work identified not only net gains in employment from high-speed rail, but also significant distributional effects, and he highlighted a 21,000 projected employment loss in Wales (together with a further loss in South West England) in the KPMG analysis.

⁶⁸ Network Rail, *London and South East: Route Utilisation Strategy*, 28 July 2011.

⁶⁹ The full list of stations that would be added to the Crossrail network would be: Wembley Central, Harrow & Wealdstone, Bushey, Watford Junction, Kings Langley, Apsley, Hemel Hempstead, Berkhamsted, Tring, Cheddington, Leighton Buzzard, Bletchley and Milton Keynes.

⁷⁰ *Ibid* p 150.

⁷¹ This was suggested in paragraph 28 of Greengauge 21’s initial submission to the Transport Committee and has been detailed further in Greengauge 21’s supplementary response to the HS2 consultation.

⁷² Greengauge 21, *Consequences for employment and economic growth*, February 2010. Available at: <http://www.greengauge21.net/publications/consequences-for-employment-and-economic-growth/>

16. We felt we should draw to the Committee's attention that this projection was made assuming that a full national network of high-speed rail lines was built, with two north-south routes, high-speed rail in Scotland and a new trans-Pennine route too. It was not an appraisal of HS2 (or of the Y-network) both of which are much more limited in scope than the full national network developed by Greengauge 21. It shows an impact that might be expected from much bigger HSR network than HS2.

17. Moreover, the analysis does not suggest that 21,000 current jobs will be lost from Wales, rather that the growth in jobs expected between now and 2040 (the year used for the forecasts) might be lower in Wales than would otherwise be the case without a national HSR network. KPMG forecast that the background increase in jobs between now and 2040 would be 90,000 so that if a national HSR network is built without a line to Wales, the growth will only be 69,000.

18. So it would be wrong for the Committee to conclude that this KPMG estimate represents an assessment of the effects of current Government/HS2 Ltd thinking on high-speed rail.

19 September 2011

Written evidence from Centro (HSR 92)

1. This paper focuses on the West Midlands Metropolitan Area with due regard to national considerations as appropriate. Only questions to which Centro wishes to submit evidence have been addressed.

1. *What are the main arguments either for or against HSR*

2. Centro has assessed the evidence towards High Speed Rail (HSR) and concludes that the two headline arguments for HSR are:

- (A) *Rail Capacity and Connectivity*: HSR will provide the UK with the rail capacity required to meet existing and future growth on both national and regional rail networks whilst addressing the poor rail connectivity and journey times between the West Midlands and the north. This will provide the generational opportunity to enhance local rail networks to revolutionise the way people travel whether it be everyday commuting, business travel or leisure.
- (B) *Economy*: by providing enhanced national connectivity; new international connectivity and; reduced journey times, HSR will allow for a step-change in the economic geography of the UK, supporting sustainable economic growth across the regions of UK to the benefit of the entire UK economy reducing the UK's reliance on London to compete in the global economy.

3. These two arguments are supported by the long term benefits of HSR towards reducing Carbon emissions which with the completion of the Y-Network will allow modal transfer onto rail particularly away from aviation and road based freight movements.

4. To do nothing about the rail capacity and connectivity challenge facing the UK cannot be an option and instead debate must focus on the benefits of HSR against the alternative solutions to the rail capacity and connectivity challenges. The DfT's Economic Case for High Speed Two (HS2) shows clearly that that investment in a high speed network provides a higher return than that achieved from a new conventional line or upgraded network. Centro believes that this should be the key criterion for investment if the scheme is affordable which as demonstrated below is clearly the case. The supporting evidence for each argument is outlined below:

(A) RAIL CAPACITY AND CONNECTIVITY

5. Capacity to meet existing and future demand is a critical challenge facing the entire UK rail network. Rail is an overwhelming success with 1.25 billion passenger journeys per annum whilst rail freight volumes have increased 50% since 1995. To do nothing in meeting the national capacity challenge cannot be an option. The West Coast Main Line (WCML) and West Midlands rail networks are acute examples of the rail capacity challenge but similar challenges are also prevalent on key networks such as the East Coast Main Line and other regional rail networks.

National Rail

6. Long distance rail travel has doubled since 1994-95 whilst the WCML supports 31 million journeys today double the 16 million made in 1999. London, as heart of UK economy, will continue to drive long distance travel patronage growth with for example Birmingham to London patronage forecasted to increase by 35% by 2024-25.⁷³ However the problems attached to capacity are not restricted to future growth. Today, the problem of capacity is starkly demonstrated by the common place overcrowding on services and the over subscription and police stewardship of passengers attempting to access services from London Euston during peak travel times.

⁷³ Source: Network Rail (Draft) West Coast Main Line Route Utilisation Strategy

7. Current rail industry approach to meeting existing/ future growth is focused on running longer trains and incremental infrastructure enhancements. However there is a finite ability to meet rail growth with this approach whilst delivery is extremely disruptive to existing rail network.

Local Rail

8. The West Midlands Local Rail network has enjoyed sustained long term growth and in 2009–10 supported 40M journeys per annum, double the number carried in 1994. The (draft) West Midlands & Chiltern Route Utilisation Strategy (WM&C RUS) predicts future growth of 32% between 2009–10 and 2019–20. During 2009–10 Rail travel accounted for 27% of all AM peak commuter journeys into central Birmingham.

9. The West Midlands, despite being at the central point of rail network suffers from poor connectivity, frequency and journey speeds to major urban/economic areas of the UK:

Table 1

EXISTING RAIL CONNECTIVITY BETWEEN BIRMINGHAM AND MAJOR UK CITIES

<i>Birmingham to...</i>	<i>Distance (straight line; miles approx)</i>	<i>Journey Time (Hr:Min)</i>	<i>Average Speed (Distance/ Journey Time)</i>	<i>Fast Direct Trains Per Hour (AM Peak)</i>
Nottingham	40	1:16	32 mph	2
Sheffield	50	1:13	41 mph	2
Liverpool	60	1:42	35 mph	2
Manchester	60	1:42	35 mph	2
Leeds	100	1:59	50 mph	1
London Euston	110	1:24	79 mph	3
Newcastle	160	3:19	48 mph	2
Edinburgh	250	4:01	62 mph	1
Glasgow	250	3:57	63 mph	1

10. High Speed Rail will provide the opportunity to segregate Intercity services away from existing network releasing significant levels of rail capacity to meet demand on the existing network.

Alternative Options

11. The alternative conventional rail enhancement options have been accessed by Centro and do not demonstrate the ability to tackle rail capacity and connectivity challenges faced by the UK on national and local rail networks to meet national travel as well as local commuter and rail freight growth. The HS2 route built as a conventional rail route would cost £15 billion whilst upgrades to the WCML (such as those proposed in Rail Package 2) could cost £5 billion but would only provide for growth on the WCML at the expense of West Midlands Local Rail and freight services whilst not addressing capacity challenges on key national rail corridors such as the East Coast Main Line nor addressing the poor connectivity between the West Midlands and the major cities across the UK, especially to the north. No international connectivity is provided by the alternative options.

B. ECONOMY

12. The West Midlands economy suffers from the lowest productivity of the UK major economic centres compounded by road congestion, high unemployment and; unrepresentation of high value business sectors. HSR provides the opportunity to expand rail capacity and connectivity providing businesses with access to new or enhanced local, regional, national and increasingly international destinations whilst providing connectivity between people and employment to the benefit of the economy. Providing the capacity to meet rail freight growth would also provide further economic benefits to the UK with rail freight already contributing £6 billion benefits per annum to the UK economy.

13. The subsequent economic benefits of HSR, combined with enhancements to the existing rail network, demonstrated that the West Midlands would benefit from: an additional 22,000 jobs; £1.5 billion GVA benefits and; with the attraction of higher value business sectors an increase in average wages of £300 per annum.⁷⁴ HS2 operationally will create 1,500 permanent jobs including 300 jobs at the HSR rolling stock depot at Washwood Heath in Birmingham, one the West Midlands most socially deprived areas.

14. HSR provides rail based national and international connectivity for businesses providing access to new/ expanded markets; HSR reduces journey times between major economic centres such as London, Manchester, Leeds and Newcastle with international connectivity to cities such as Paris, Lyon or Frankfurt. This connectivity will attract national and global companies to invest in the West Midlands ensuring benefits beyond Birmingham including Wolverhampton and Coventry.

⁷⁴ Source: Centro Commissioned Report by KPMG “High Speed Rail and supporting investments in the West Midlands Consequences for employment and economic growth”.

C. CARBON

15. The full Y-Network will provide the national and international connectivity and fast journey times that will encourage people to undertake journeys by rail rather than car/ aviation. By maximising the opportunities of the released capacity on the existing network, carbon savings can be made by inducing modal shift onto rail for people making journeys on the West Midlands rail network.

2. *How does HSR fit with the Government's transport policy objectives*

Q. HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?

16. Centro believes that HSR, covering HS2 and the full Y-Network, is consistent with the Governments objectives for transport to support sustainable economic growth and reduce carbon emissions.

Q. Focusing on rail, what would be the implications of expenditure on HSR on funding for the "classic" network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?

17. Centro is of the view that traditionally the funding of major transport infrastructure which provides national economic benefits has been funded outside of national rail budgets and there is no evidence to suggest the delivery of HS2 would be different. The funding of Crossrail requires £2 billion per annum up to 2015–16 from which point the funding can simply be allocated to HSR without impact to public services or planned/ future investment in the existing rail network. Indeed, the opportunity to maximise the released capacity on the existing rail network and revolutionise the way people travel will be intrinsically linked to continued and sustained investment in the existing rail network and rolling stock.

Q. What are the implications for domestic aviation?

18. HSR can provide the connectivity and journey times which can reduce demand for domestic aviation and international aviation to destinations such as Paris. However, crucially, HSR can also provide the journey times and connectivity to Birmingham Airport from London which would prove attractive as an alternative for people making flights from major airports such as Heathrow. Major carbon savings are realised from the full Y-Network.

3. *Business Case*

Q. How robust are the assumptions and methodology—for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the "classic" network?

19. Centro believes that the business case methodology and assumptions used by HS2 are robust and in alignment with standard Treasury Appraisal. However, Centro's assessment of the Business Case provides evidence to suggest that the business case understates HSR because:

Future Growth

20. The future patronage forecasts used by HS2 for growth on the rail network appear to be conservative when compared to historical and actual passenger growth especially on the WCML and West Midlands Rail Network. The demand forecasting work undertaken by HS2 Ltd uses an estimate of underlying growth in rail demand of +3.4% per annum across the entire UK rail network.

21. The key drivers of rail patronage growth include increased economic and population growth. Future growth levels of both are projected to be in broad alignment with historical trends meaning that unless the rail industry introduces policy tools such as pricing to reduce demand, future rail demand is likely to be consistent with historical growth levels.

22. Therefore, the future growth outlined by HS2 needs to be assessed against actual and historical growth in rail travel demand. The (draft) WM&C RUS states that passenger journeys on the West Midlands rail network will grow by 30% by 2019–20 equating to a 2.4% per annum growth whilst journeys to Birmingham are predicted to increase by 32% in the peak by 2019 and broadly the same for off-peak travel. However rail patronage in the West Midlands has increased by 6.4% during 2009–10 to 40 MILLION, nearly 3% above the average 2.4% increase predicted by the WM&C RUS. Table 2 outlines historical rail growth in the West Midlands whilst Table 3 outlines growth in long distance rail journeys from London 1999–2000 to 2009–10.

Table 2
HISTORICAL WEST MIDLANDS RAIL NETWORK PATRONAGE GROWTH⁷⁵

Year	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Patronage (million)	29.3	30.9	32.8	35.5	37.6	40
% change per annum	6.9	5.5	6.1	8.2	5.9	6.4

Table 3
HISTORICAL GROWTH LONG DISTANCE RAIL TRAVEL⁷⁶

London to	Total Growth	Average Annual Growth Rate
Manchester	70%	5.4%
Birmingham	58%	4.7%
Liverpool	41%	3.5%
Glasgow	23%	2.1%

23. By 2043 HS2 Ltd have estimated that 136,000 passengers per day will use HS2. This represents an additional 53,000 passengers per day, with the majority of HS2 passengers coming from the existing rail network. Whilst this appears to be significant increase in rail users overall it is in fact a very small increase in additional passengers per annum over a 30 year period (circa 1.5% per annum).

24. HS2 (London to Birmingham) has a BCR of 2:1 (1.6:1 Without Wider Impacts). Centro believes that this could be higher if further work is undertaken on maximising the benefits of capacity freed on the existing rail network. These additional benefits would be spread across the country and generate a significant non-rail user benefit stream as trips from private car users transfer to the improved existing rail network.

Wider Impacts

25. Centro believes that while the Wider Impacts included in the HS2 appraisal are significant they are still an underrepresentation of the impact that HSR could have on the UK economy. If a more dynamic approach to modelling the interaction between changes in accessibility and land use were employed, that reflected changes in the location and mix of businesses in an area as a result of improved transport connections, then this would represent a more realistic estimate of the economic impact of HS2. The Department for Transport have assumed no changes to land use will occur as a result of HSR which is not consistent with international case studies of HSR as outlined in para 36.

Wider Network Benefits

26. The appraisal of the completed “Y” Network estimates a BCR of 2.6:1 (2.2:1 without wider impacts) which Centro believes is understated as the appraisal excludes the benefits of stopping in Carlisle and Edinburgh. Again Centro believes that wider impacts are an under estimate not only because of the methodological approach but also because the current figure is based on work carried out for the London to Birmingham business case.

Q. What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?

27. Whilst High Speed rail is marginally more expensive than upgrading the existing infrastructure it offers a number of significant advantages in terms of additional capacity and reduced disruption to passengers. The experience of a previous upgrade to the existing “live” rail infrastructure is relevant. The WCML Route Modernisation project costs were estimated at £2.1 billion. The outturn cost was £9 billion and it entailed a decade of on-line works, which was hugely disruptive to rail users. There is much greater risk and uncertainty around early line of route cost estimates than those made for new-build. Upgrades also typically take longer than originally programmed.

28. Such an approach to tackling capacity challenges would do very little for the West Midlands in terms of improving connectivity (as demonstrated in Table 1) to key cities served by the East Coast Main Line such as Nottingham, Sheffield, Leeds and Newcastle compared to what would be delivered by the “Y” network. Improvements to the WCML to facilitate additional long distance services would also reduce the ability to improve local services as the railway would remain an inefficient mixture of fast long distance and slow local and regional services.

29. Building a new conventional rail line would save only around 9% of the cost of HS2 but without the international/ national connectivity and journeys times savings delivered by HSR meaning fewer quantifiable benefits, especially economic benefits, and is therefore not considered by Centro to be a credible alternative to HS2.

⁷⁵ Source: Centro Annual Statistics Report 2010.

⁷⁶ Source: Network Rail (draft) West Coast Main Line Route Utilisation Strategy.

Q. What would be the pros and cons of alternative means of managing demand for rail travel, for example by price?

30. Centro has previously undertaken studies into the impacts of pricing to reduce travel demand which provides evidence that pricing would result in:

- *Lower economic growth and jobs.* These stem from faster and expanded travel opportunities and if these do not materialise then the economic benefits do not occur or will be constrained by the extent to which benefits can be achieved on the conventional network.
- *Social Exclusion.* A policy of pricing to manage demand will result in rail only being affordable to selected socio-economic groups which would have major impacts on social inclusion and create barriers for people, especially from lower income groups, to use rail in accessing jobs and educational opportunities. Centro's Local Transport Plan promotes social inclusion and therefore pricing would counter to this objective.
- *Increased Carbon Emissions.* Those unable to afford to travel by rail would be forced to travel by road or air increasing carbon emissions. Demand in these areas would ultimately increase the case for expanded roads/ airports which have high costs and would be counter to many Government objectives.

4. The Strategic Route

Q. The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?

31. Centro believes that the proposed stations on the West Midlands to London route are in the best possible locations. A key issue in determining their success will be ability to interchange with other modes and in particular at Birmingham Interchange it will be necessary to ensure that the HSR Interchange Station, the existing Birmingham International rail station, Birmingham Airport/ NEC are as closely located as possible.

Q. Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?

32. Centro supports the proposed Y network as it creates significantly improved connectivity between the West Midlands and the North, with both Manchester and Leeds being the key locations needing access. It will be important to consider how improved connectivity to Newcastle and Scotland beyond the proposed Y network can be delivered as part of the HSR strategy, and whether the current network can be sufficiently upgraded to deliver the capacity and journey time benefits needed for High Speed services.

Q. Is the Government correct to build the network in stages, moving from London northwards?

33. The scale of the project will inevitably require delivery in stages, although it would clearly be highly desirable for the northern legs of the Y to be constructed as soon as possible after the phase from London to the West Midlands, as the interim situation with HSR services operating on the West Coast Main Line north of Lichfield will create considerable capacity problems for the existing network. Given that a key driver for the project is the relieving of capacity on the WCML at its southern end, it is imperative that the London—West Midlands HS2 route is delivered in time to achieve this.

Q. The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?

34. Centro believes that these are the right decisions, as the Old Oak Common Interchange will provide excellent connectivity to Heathrow as part of Phase 1, while the link to HS1 needs to be delivered as part of Phase 1 both for practical construction reasons, but also to deliver the international connectivity benefits of the route as soon as possible. When (or whether) the Heathrow connection is delivered ought to be reviewed as part of how effectively the Old Oak Common Interchange can deal with Heathrow traffic, given that it will have a far better HSR service than could ever be justified for Heathrow alone.

5. Economic Rebalancing and Equity

Q. What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?

35. Centro believes that the dramatic change in accessibility brought about by HSR will support economic regeneration and growth in UK regions by bringing major employment and population centres close together. This change in accessibility will offer greater opportunities to reach new markets, suppliers and employees for businesses and jobs and services for residents. International examples of HSR provide evidence to support this view.

36. For example, Lyon is on France's HSR network with a population of three million people, providing similarities with the West Midlands. As a result of HSR, Lyon is now recognised as France's second largest

economic centre with domestic HSR connectivity to economic centres such as Paris, Lille and Marseilles with international connectivity to Brussels and Frankfurt. The Lyon Part Dieu high speed rail station has underpinned wider regeneration of Lyon city centre and the area hosts 5.3 million square feet of office space and around 20,000 jobs. Lyon is home to five high value business sector clusters, driving economic growth and attracting greater inward investment. A similar story is seen in Lille where the opening of HSR in 1993 has led to the creation of 50,000 jobs in the Lille metropolitan area.

Q. To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?

37. Centro believes that the Y-Network has been fully influenced by the need to support local and regional economies. To remain competitive globally the UK cannot simply rely on the London economy alone. The benefits of HSR will spread prosperity across the regions to the benefit of the UK economy as a whole.

38. HSR stations in Birmingham and Solihull are expected to act as a catalyst for significant private sector development. Development focused on strong regional centres, supported by HSR, will generate benefits that are spread across the wider hinterland of these locations supporting large areas of population and employment outside the South East.

Q. Which locations and socio-economic groups will benefit from HSR?

39. As discussed in paragraph 30, Centro believes all socio-economic groups will benefit from HSR either:

- *directly* through the HSR journey speed and connectivity benefits or by the released capacity on the existing network been used to improve local rail service provisions and connectivity; or
- *indirectly* through a more prosperous economy creating jobs and wealth for all residents to enjoy.

40. Greater capacity in the rail travel market is also likely to have a positive impact on rail fares ensuring all socio-economic groups can access the rail network and particularly ensuring that rail doesn't becoming a "mode of the few" for long distance trips post 2026.

Q. How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?

41. Centro believes that it is fair that those who benefit from HSR should contribute towards its cost but only if the appropriate financial regulations and tools are in place. For example, if Local Authorities are allowed to keep the additional business rates generated by HSR (using mechanisms such as Tax Incremental Financing) then these areas should contribute towards appropriate HSR infrastructure eg stations. However, if the Treasury keeps the additional tax raised from HSR then it's appropriate that the Government and major private sector developers pay for HSR.

May 2011

Further written evidence from Centro (HSR 92A)

1. This submission provides further details of the West Midlands regional rail enhancements referred to in Centro's previous submission and oral evidence.

THE ECONOMIC BENEFITS OF HS2 TO THE WEST MIDLANDS

2. Based on research undertaken for Centro by KPMG⁷⁷ in June 2010 HS2 alone will generate sustainable growth in the West Midlands economy bringing 10,000 additional jobs and £880 million of economic benefits.

3. However, crucially, KPMG demonstrated that enhancements to the existing rail network utilising the released capacity on the existing rail network would expand rail connectivity and accessibility. By doing so, this more than doubles the benefits of HS2, providing 22,000 additional jobs and £1.5 billion of economic benefits.

4. The methodology to the study is outlined in the KPMG Report which has been submitted to the Committee for their consideration.

WEST MIDLANDS RAIL NETWORK ENHANCEMENTS

6. In order to ascertain the benefits of HS2 when rail connectivity and accessibility enhancements were included, Centro developed an opportunity led theoretical timetable for the West Midlands. Certain assumptions were made in order to formulate the timetable:

- Various committed infrastructure improvements were delivered.

⁷⁷ High Speed Rail and Supporting Investments in the West Midlands—KPMG—June 2010
<http://www.centro.org.uk/nmsruntime/saveasdialog.aspx?IID=4270&SID=5568>

- A package of further infrastructure enhancements was delivered (see below).
- Suitable rolling stock is available for the services.

7. With this base network assumption, Centro has developed the “with HS2 Timetable Scenario” based on meeting the following connectivity/ rail service gaps as identified on the West Midlands Rail Network:

- Black Country connectivity to Birmingham Airport (Centro and Black Country Local Enterprise Partnership priority).
- Walsall to the national rail network connectivity gap—(Centro priority and acknowledged by West Midlands Route Utilisation Strategy).
- Poor connectivity to the north from the West Midlands (Centro priority, identified by Centro in our previous evidence submission to the Transport Select Committee).
- Expanding West Midlands connectivity to London (Centro priority).
- Expanding Birmingham connectivity within the wider economic area (Centro priority, Birmingham City Council priority and; Greater Birmingham LEP priority).
- Enhancing rail connectivity between Nuneaton-Coventry- Leamington (Centro priority; Coventry City Council priority).

A summary of the timetable is attached as Appendix 1:

REQUIRED RAIL NETWORK INFRASTRUCTURE

8. Centro has identified the following rail infrastructure which would be required to deliver Centro’s aspired “With HS2 West Midlands rail network”:

<i>Scheme</i>	<i>Status</i>	<i>Cost</i>	<i>Delivery</i>
Coventry to Leamington partial redoubling (currently single track)	Coventry (Milverton Jnc) to Kenilworth redoubling supported by RUS. Feasibility study is currently being undertaken by Network Rail to consider inclusion in CP5 plan	£41m	CP5 (2014–19)
Coventry to Leamington full doubling and electrification, plus new station at Kenilworth	Aspirational scheme to double remaining single track section and electrify route. Kenilworth station being pursued separately by Warks CC.	c£100m	CP6 (2019–24)
Coventry to Nuneaton Rail Enhancement Scheme	Currently within DfT’s Development Pool	£21m	CP4 (2009–14)
Walsall to Rugeley electrification and line speed improvement	Linespeed improvements ready to deliver if matched funding can be found. Electrification supported by RUS. Centro seeking inclusion in CP5 business plan	£30m	CP5 (2014–19)
Electrification and New station at Aldridge	Electrification supported by RUS for CP6 Delivery	£11m	CP6 (2019–24)
Rugeley Trent Valley junction improvements	Aspirational scheme to facilitate full benefits of Walsall—Rugeley electrification.	Over £100m	CP6/7 (2019–29)
Wolverhampton to Shrewsbury electrification and line speed improvement	Linespeed improvements ready to be delivered if matched funding can be found. Electrification is an aspirational scheme considered in the Electrification RUS.	£40m	CP6 (2019–24)
Camp Hill Chords (Central Birmingham) and associated new stations along Camp Hill line and Tamworth Line	Centro aspiration supported by RUS	£200m	CP5/6 (2014–24)
Reinstated Walsall-Stourbridge Rail Freight Line	Supported by RUS, potential CP5 delivery	£100m	CP5/6 (2014–24)
Snow Hill Lines enhancements including Rowley Regis Turnback and Snow Hill Platform 4 reinstatement	Feasibility work currently underway for potential implementation in CP5	£10m	CP5 (2014–19)

RUS—Route Utilisation Strategy

CP—Control Period (Rail Industry Funding and Planning Period)

8. Centro believes this infrastructure requirement is realistic and the majority of the individual schemes are already recognised and largely supported by the rail industry.

9. The scheme costs are at very high level and indicative at this stage, and should only be considered to give an order of magnitude at present, although some projects are better developed than others.

10. Centro would also expect Network Rail to pursue an on-going policy of re-signalling the West Midlands rail network, and that this programme would deliver incremental capacity improvements.

11. These projects would all deliver benefits with or without HS2, however the full benefits from restructuring the timetable can often only be achieved by the combination the infrastructure improvement plus HS2, as it is HS2 which would allow the existing Pendolino service on the West Coast Main Line to be recast around a regular 30 minute pattern, rather than the inefficient 20 minute pattern which exists today.

12. Appendix 2 summarises the infrastructure requirements against the proposed new service groups, and shows the linkage with HS2.

INVESTMENT IN RAIL INFRASTRUCTURE

13. Centro wishes to reemphasise the point that the economic benefits of HS2 are doubled when combined with enhancements to the Local Rail network. Therefore, in order to maximise the benefits of HS2, investment in the local rail network must not be impacted upon as a result of HS2.

APPENDIX 2

SUPPORTING SERVICES AND INFRASTRUCTURE REQUIREMENTS

<i>Service Proposal</i>	<i>Infrastructure Requirements</i>	<i>Other service requirements</i>	<i>Link with HS2</i>
Aldridge—Walsall— Birmingham— Coventry— Leamington Spa (2tph) Assumed rolling stock— Class 323/350 or other high-performance EMU	— New station at Aldridge plus Walsall—Aldridge Electrification	— For the Birmingham— Coventry— Leamington leg, the Coventry Line Pendolino service needs to be at 30 minute frequency	— 30 minute Pendolino service on Coventry Line only possible with HS2
	— Coventry— Leamington Double tracking plus electrification and track layout changes at Leamington		— Without HS2 the through link between the Walsall and Coventry Lines would be more difficult
Liverpool—Walsall— Birmingham— Coventry— Northampton—Milton Keynes—London Euston (2tph) Assumed rolling stock— Class 350	— New station at Kenilworth		
	— Walsall—Rugeley electrification and linespeed improvements	— Requires Coventry Line Pendolino service to be at 30 minute frequency	— 30 minute Pendolino service on Coventry Line only possible with HS2
Wolverhampton—New Street—International (4tph) Note service extends hourly to Shrewsbury Assumed rolling stock— Class 323 or other high- performance EMU	— Major junction improvements at Rugeley Trent Valley		— Without HS2 the through link between the Walsall and Coventry Lines is not possible
	— May require extra bay platform at Birmingham International	— Requires Coventry Line Pendolino service to be at 30 minute frequency	— 30 minute Pendolino service on Coventry Line only possible with HS2
	— Signalling improvements to allow three minutes headways	— Requires the Birmingham— Liverpool service to be diverted via Walsall	
London Euston— Milton Keynes— Coventry—New Street— Wolverhampton— Shrewsbury/Scotland (2tph) Assumed rolling stock— Pendolino	— Hourly Shrewsbury extension requires electrification and linespeed improvements on Wolverhampton— Shrewsbury Line	— Needs testing against freight capacity requirements on Coventry line	
	— Euston—Shrewsbury Pendolino service requires electrification and linespeed improvements on Wolves— Shrewsbury line		— 30 minute core frequency between Birmingham and London only possible with HS2 removing demand from existing Pendolino service

<i>Service Proposal</i>	<i>Infrastructure Requirements</i>	<i>Other service requirements</i>	<i>Link with HS2</i>
Diversion of Reading— Newcastle service via Coventry	— Requires track doubling at least between Leamington and Kenilworth		— Can happen in advance of HS2, but without HS2 these services can only be accommodated by worsening the already poor spacing of the local services between New St and Coventry
	— Requires Wolverhampton—Shrewsbury linespeed enhancements to change timings of Aberystwyth service between New St and International		
Snow Hill Lines service recast Assumed Rolling Stock—high performance DMU	— Rowley Regis turnback and Snow Hill Platform 4 reinstatement	— Would significantly benefit from the diversion of the Reading—Newcastle service away from the Solihull corridor	— Can happen in advance of HS2, but improving the service on the Snow Hill lines will improve the connectivity to the Birmingham City HS station at Moor Street
	— Track and signalling improvements at Worcester		
Camp Hill Line Local Service Assumed rolling stock—DMU	— New stations and track layout changes at Kings Norton	— Requires the diversion of freight services away from route via re-opened Stourbridge—Walsall line	— Can happen in advance of HS2, although would provide good connectivity into HS2 at Moor Street
	— Camp Hill chord lines and new lines into Moor Street station.		— The more efficient platform occupation possible with HS2 at New Street, might allow the service to run to/ from New Street without need to invest in Camp Hill Chords.

<i>Service Proposal</i>	<i>Infrastructure Requirements</i>	<i>Other service requirements</i>	<i>Link with HS2</i>
Tamworth/Nuneaton Line Local Service Assumed rolling stock— DMU	— New stations.	— Requires the diversion of freight services away from route via re-opened Stourbridge— Walsall line	— Can happen in advance of HS2, although would provide good connectivity into HS2 at Moor Street
	— Turnback siding at Tamworth plus signalling and track improvements in the Water Orton and Kingsbury areas.		— The more efficient platform occupation possible with HS2 at New Street, might allow the service to run to/ from New Street without need to invest in Camp Hill Chords.
	— Camp Hill chord lines and new lines into Moor Street station or other changes to allow operation into New Street		

Written evidence from the RAC Foundation (HSR 96)

1. BACKGROUND

1.1 This document addresses numbers 1, 2 and 3 and parts of 5 and 6 of the issues identified in the Transport Select Committee's Terms of Reference. The government has published a quantity of supporting materials, which contain full accounts of the analysis in support of the particular proposal specified in the HS2 consultation. For the purposes of this document we do not question the proposed physical layout of HS2, the engineering costing, economic assumptions, traffic modeling or economic appraisal.

1.2 High Speed Rail may, or may not be a useful component of the nation's strategic transport infrastructure. But both the previous government and the present one have committed to the present proposal (HS2) prematurely.

1.3 This is for three reasons: the lack of a National Policy Statement on roads and railways, adopted in Parliament; the incomplete state of Infrastructure UK's (IUK) development of their National Infrastructure Plan; and a failure to specify how the funding and economic regulation of HS2 would fit with the current arrangement for the "classic" railway.

1.4 The RAC Foundation is a charity which explores the economic, mobility, safety and environmental issues relating to roads and responsible road users. Independent and authoritative research, carried out for the public benefit, is central to the Foundation's activities.

2. NATIONAL POLICY STATEMENT (NPS) ON SURFACE NETWORKS

2.1 Government has a statutory duty to write an NPS for surface networks and to secure approval in Parliament. The previous government did not do this and the Coalition Government have said that they will not publish one until December 2011—long after the current consultation on HS2 has closed.

2.2 There is no doubt that there is a shortage of surface transport infrastructure—both road and rail—as documented by the Eddington Transport Study. These shortages will become worse in the future as: the economy recovers and the level of economic activity increases; population increases and relocates to particular parts of the country; industry relocates as industrial structure changes. The growing demands on the transport infrastructure will not be geographically uniform: the needs will be different in different places.

2.3 It is the role of an NPS to set out government's view of the magnitudes of these needs and where they will develop. It should set out the government's policy as to how much resource can be made available and how this resource should be deployed.

2.4 The strategy is likely to include a mixture of road and rail measures. In some English Regions (but not all) population is expected to have increased by one fifth soon after the proposed opening date for HS2. Many of these are not on the HS2 line of route. The needs will be for all kinds of local infrastructure, including local roads and public transport services. Plainly, because HS2 serves long distance trips on one line of route it can

only perform a limited set of functions, so if it is to find a place in the strategy it must justify its claim on resources in competition with alternative ways of spending the transport infrastructure budget. Until the NPS has been published, Parliament has not had an opportunity to consider government's assessment of the extent to which HS2 could play a part in the solution to the problems.

3. NATIONAL INFRASTRUCTURE PLAN

3.1 The National Infrastructure Plan is a new initiative by Infrastructure UK (IUK) and emanating from HM Treasury. The first document was published just after the Spending Review in October 2010. This is a welcome exercise. It recognizes the vital importance of all infrastructures and starts with the words "For the economy to flourish, people, goods and information must move freely". The document begins to catalogue the major infrastructure needs in future decades—including roads and railways—and discusses the funding liabilities and how they might be met. The fact that this comes from the perspective of the centre, rather than any one spending department is of some significance.

3.2 The October document is only a beginning and future publications will contain more detail. It is only possible to estimate the future physical and funding needs after one has made an estimate of the size and geographic location of the future demands to be served. The present document refers to the need for the relevant NPS's to guide IUK's work.

3.3 The National Infrastructure Plan (paragraph 4.24) does mention a high-speed rail network as one possible component of future transport infrastructure but there is no attempt to relate it to other transport proposals or to demonstrate its place in the portfolio of transport and other infrastructure investments for the future. Presumably, IUK will express a view on this as the Plan is refined.

4. RELATIONSHIP WITH THE "CLASSIC RAILWAY"

4.1 There is now a stable strategic planning regime for the existing railway. This comprises two statutory documents issued by government every few years: the High Level Output Specification and the Statement of Funds Available. The consistency of these is adjudicated by the independent Office of Rail Regulation. HS2 would represent a major increase in the capital invested in the railway, it would have many physical interfaces with the classic railway and it would abstract revenue from it. Nothing has been said about how HS2 might fit within the strategic planning regime for the railways. But it must be fitted in somehow. One particular concern is that the public funding necessary for HS2 would be so large that it would inevitably crowd out funding for better projects on the classic railway as well as other modes.

5. HS2 IN RELATION TO THE SECRETARY OF STATE'S CRITERIA FOR DECISIONS

5.1 In the absence of an over-arching strategy it is reasonable to test HS2 as proposed against the five criteria for decisions published in April 2011 as policy by the Secretary of State for Transport.⁷⁸

"... This approach ensures decisions are made by taking account of all the relevant information set out in five cases, consistent with the Treasury Green Book, specifically, to show whether schemes:

- are supported by a robust case for change that fits with wider public policy objectives—the "strategic case";
- demonstrate value for money—the "economic case";
- are commercially viable—the "commercial case";
- are financially affordable—the "financial case"; and
- are achievable—the "management case".

5.2 For the purposes of this document we take all the calculations presented in the HS2 Consultation Documents at face value. All appraisals considered in the Spending Review (including HS2, railways and roads) were carried out using the new techniques. Before considering the "strategic case" we discuss the other four "cases"

5.3 Demonstrate value for money—the "economic case": To make benefits that accrue over a long time comparable with capital investment costs incurred much earlier all money values over a 60 year appraisal period are brought to a value today on a common basis (the net present value). The HS2 Consultation shows that London to Birmingham would offer benefits 1.6 times the costs or 2.0 if Wider Economic Impacts (WEI) are included. For the full "Y" scheme the figures are 2.2 and 2.6 respectively.

5.4 These economic returns show much poorer value for money than a large number of transport schemes. This is documented in Chapter 3 of the Eddington Transport Study⁷⁹. We note that when the Secretary of State announced to Parliament approval for 14 Highways Agency in the 2010 Spending Review he remarked that "For every pound invested, there will be over six pounds worth of public benefits. On some schemes this will be higher than ten". These estimates were made in a way that is consistent with the estimates for HS2 and they also suggest that there are a number of schemes that are unfunded but with better returns than HS2.

⁷⁸ "Review of decision making in the Department for Transport", 27 April, 2011

⁷⁹ See also the survey by John Dodgson, *Rates of Return on Public Spending on Transport*, RAC Foundation, June 2009, www.racfoundation.org.

5.5 Are commercially viable—the “commercial case”: For the first phase to Birmingham the value today (that is the discounted present value) of the net capital costs is estimated by HS2 at £17.8 billion and the value today of net operating costs is £6.2 billion. The value today of the net revenues is £13.7 billion. Therefore, the revenues are more than enough to cover the operating costs but they would not be sufficient to cover operating costs, maintenance and renewals and a return on the capital invested. That is why taxpayer support is required to the value today of £10.3 billion.

5.6 For the full “Y” capital costs are £30.4 billion, operating costs £17.0 billion and revenues £27.2 billion, leaving a contribution required from the taxpayer of about £17 billion (after an adjustment for savings on the classic lines).

5.7 The scheme is not commercially viable. In some sectors, such as aviation, shipping, tolled roads and other utilities, infrastructure investment is fully funded from charges and therefore it is commercially viable.

5.8 Are financially affordable—the “financial case”: Affordability is a judgment for ministers. But many people were surprised that they were able to find £750 million in the four years of the Spending Review to fund development work on HS2; money that would have popular alternative uses—for instance in preserving local transport services and roads maintenance.

5.9 The greater part of the taxpayer funding for HS2 would have to be found a number of years into the future. Affordability over that kind of period cannot be considered without the context of an overall transport and other infrastructure strategy which is currently missing. As discussed above it is important to develop and plan for future transport infrastructure, and this needs to be set in the context of an overall transport and infrastructure strategy.

5.10 Are achievable—the “management case”: This requirement can be met: in the past HS1 and the M40 across the Chilterns have been delivered and Cross Rail is in hand. HS2 would be a very large and contentious project, but it is achievable. Whether HS2 can be delivered within the projected timescale and budget is another matter. HS1 required a great deal more public financial support and took longer to deliver than had been anticipated when it was first approved.

5.11 Since three of the other four criteria just discussed work against HS2, if it is to be supported the argument must be a particularly “robust” strategic case:

5.12 Are supported by a robust case for change that fits with wider public policy objectives—the “strategic case”. This might have a number of components.

5.13 *Carbon saving*. The consultation document records that the engineering estimates show that overall HS2 would be broadly carbon neutral. In any case carbon savings have been valued at the new official rate and are already included in the economic case.

5.14 *Road congestion*. The detailed traffic modelling that has been necessary for the engineering, economic and financial appraisals has shown that demand growth will occur on the road network, just as it is forecast for the market for HS2: and that on current plans for the road network significant deterioration in reliability must be expected. But the consultation document also records that in itself HS2 will make a small contribution to traffic congestion and only on the line of route. This is because most road traffic is much shorter distance than the trips that can be served by HS2. The improvements in shorter distance train services will help, but the traffic congestion benefits are still dwarfed by the time saving benefits to rail users from faster travel. They are already included and separately identified in the economic case.

5.15 *Aviation*. The Consultation shows that when the needs of domestic aviation passengers are considered HS2 offers a limited alternative. The economic case for a direct link to Heathrow is poor (as is the economic case for a link between HS2 and HS1).

5.16 *Social inclusion and equity*. Railways are predominantly used by those with higher incomes (see p.4 of the HS2 Equality Impact Screening report) and this seems likely to be the case with HS2: many of the estimated benefits come from time savings for business travelers with high value of time. Whilst HS2 would certainly offer benefits differentially to many groups by different geographical locations, HS2 is not directed towards income inequality or relief of poverty.

5.17 *Regional economic benefits*. Many claims are made and some of them may have validity. However, they are often assertion and, beyond the Wider Economic Impacts already included in the economic assessment, not based on convincing evidence. The Eddington Transport Review, having reviewed the literature, came to the conclusion that it is difficult to adduce firm evidence in support of economic regeneration effectiveness of transport investments.

5.18 When regional claims are made they must always be confronted by the question: could the same benefits have been secured if the same taxpayer monies were spent in some alternative way?

5.19 This is the case with claims for job creation: the Consultation Document makes repeated claims that HS2 would support the creation of jobs. It is certainly true that spending a large quantity of public funds on public projects will create jobs: but HS2 is not the only way to achieve this. An argument for job creation cannot just be made on the direct employment generated by the construction (because any public project would

do that); it must be based on the consequences for employment of the operation of the railway. To the extent that long-term job creation is claimed the distinction must be proven between jobs diverted from other places and genuine net new jobs.

5.20 Statements such as “HS2 offers a unique opportunity to bridge the North-South divide” are particularly ill-defined and unsupported by evidence.

5.21 There is a case for a more systematic and complete account of the true economic regeneration benefits delivered by existing high speed rail projects overseas. Since this seems to be the only substantial “strategic policy” argument potentially applying to HS2, the government should make more effort to discover more systematically what regeneration benefits have resulted in other countries. We need a better understanding of the particular circumstances that enabled them to occur and the extent to which those circumstances obtain in this country.

6. LONDON TO BIRMINGHAM RAIL CAPACITY

6.1 One very simple argument in justification of HS2 is that it solves a problem of shortages of rail capacity in the rail corridor between London and Birmingham.

6.2 If it becomes an absolute case that this must be done whatever the cost then the argument would be “predict and provide” which has long been abandoned as an approach to transport planning.

6.3 A more sensible approach would be to give more serious attention to alternative solutions, or part solutions⁸⁰. The government has published some analyses of alternative mixed road and rail road schemes in studies published at the same time as the March 2010 HS2 report which deliver capacity benefits on the London to Birmingham corridor but at lower cost. Organizations objecting to HS2 are providing their own suggestions.

6.4 One possibility that tends to be neglected is that the capacity problems are managed by significantly more aggressive use of passenger charges for the existing railway. Pricing solutions were ruled out in the initial terms of reference given to HS2. The RAC Foundation has always advocated considering using charges as a means to manage the demands on a congested road network. The same applies on the West Coast Main Line. This would not be popular with rail users who would, of course, prefer to have better, faster, less crowded services at lower fares, with the implied subsidies paid by the taxpayer. But the HS2 appraisals suggest that this could only be achieved at a cost to the generality of taxpayers that would be disproportionate to the benefits generated.

May 2011

Written evidence from 51m (HSR 109)

51m represents the following 13 Local Authorities who are aligned in their response to the HS2 consultation:

- Buckinghamshire County Council
- Aylesbury Vale District Council
- Chiltern District Council
- South Bucks District Council
- Wycombe District Council
- London Borough of Hillingdon
- Cherwell District Council
- Lichfield District Council
- South Northants District Council
- Warwick District Council
- North Warwickshire Borough Council
- Warwickshire County Council
- Stratford-on-Avon District Council

The 51m name represents the equivalent of how much HS2 will cost each and every Parliamentary Constituency...£51 million. The group wants to emphasise the impact this proposed scheme will have on every taxpayer in the country for years to come.

51m are opposed to the current High Speed rail proposals as they are presently outlined and do not believe that they are in the best interests of the UK as a whole in terms of the benefits claimed in the business case.

51m are not opposed to higher speed rail per se and fully acknowledge the need for strategic improvement to the national rail infrastructure. However, we do not believe that all the other alternatives to achieve the transport capacity, regeneration and environmental benefits have been fully explored by the Government and with in excess of E30 billion proposed to be invested, we owe it to the nation to ensure these are fully explored.

⁸⁰ For instance, see J Preston, *The case for high speed rail: an update*, RAC Foundation, December 2010, www.racfoundation.org

Due to the reasons outlined above and in the enclosed report, we cannot support the current proposals suggested by Government and are actively working on a plan to strongly object to them.

This submission has been formatted as a single strategic response to Question 1 (What are the benefits and drawbacks of HSR) together with amplification of the issues raised in the subsequent chapters.

MAIN ARGUMENTS AGAINST HS2—QUESTION 1

INTRODUCTION

1. 51m is a consortium of Local Authorities between London and Birmingham on the HS2 route. The Group is called 51m because £51m is the cost to each Parliamentary constituency in the UK of the HS2 project.

2. This document is 51m's response to Question One, and will set out the overall arguments against HS2. It will cross refer to the supporting evidence, which form the chapters of this report and which in turn cross-refer to the TSC's questions, although not in the same order, so that the Committee can see where we have dealt with the relevant issues.

3. HS2 is an enormously expensive (£30 billion Net Present Value) and environmentally damaging piece of infrastructure, which requires £17 billion (NPV) of public subsidy. Even on the DfT's own case, the Y has a benefit cost ratio ("BCR") of only 2.2 (excluding Wider Economic Impacts—WEI) and 2.6 (including WEI) and this reduces to 1.6 and 2.0 respectively for Phase 1, and these are based on some over optimistic assumptions. HS2 should only be given the go ahead if there is a clear case in the national interest, which has been robustly and independently scrutinised. The DfT case is fundamentally flawed in a large number of respects and has not been adequately scrutinised and tested.

4. 51m is not against high speed rail per se, but it must be the right project and properly justified. The Government should not spend billions, simply because HSR is a modern and glamorous form of infrastructure, particularly where smaller and less expensive transport schemes would give far greater benefits in environmental, social and transport terms. As Sir Rod Eddington said in his 2007 Transport Study:

"because the UK is already well connected, the key economic challenge is therefore to improve the performance of the existing network... There are very high returns from making best use of existing networks [with...large projects with speculative benefits and relying on untested technology, are unlikely to generate attractive returns."

5. The evidence shows that HS2 would largely be used by those in the highest income brackets (and many of those for leisure purposes). In essence HS2 is a massive public subsidy to the well off, with at best some doubtful economic benefits.

6. There is a long history of over optimistic forecasting by the rail industry, both in terms of passenger forecasts and costs. The Committee should bear in mind that schemes such as this are developed by those who have a strong interest in them, as is recognised by international studies.

7. The issues which arise on the DfT's case are:

- (a) There are much cheaper incremental alternatives, which can meet the forecast demand, but in a quicker and more responsive manner.
- (b) Demand forecasts are optimistic.
- (c) The rail industry has a poor record on passenger forecasting.
- (d) HS2 service provision of 18tph is undeliverable.
- (e) It wont reduce overall air travel and will have no climate change benefits
- (f) The benefits assumed are too high, particularly as assumptions about time spent on trains being wasted are out of date.
- (g) The scheme will have little impact in rebalancing the regional economy, in contrast to local and regional schemes that offer practical benefits.
- (h) It creates large disbenefits to many existing rail users.
- (i) Major construction impacts at Euston.
- (j) No justification for Heathrow and HS1 links.
- (k) HS2 is critically different from the European examples DfT rely upon.

Unrealistic Comparators/Better Alternatives—Chapters 1 &10

8. Probably the most fundamental problem with the DfT's economic analysis is that they have not used the best alternative as their comparator with which to test the business case, instead using a wholly unrealistic "do-minimum" comparator with almost no changes over 30 years. The DfT's principal alternative, Rail Package 2 "RP2", fails to optimise the opportunity for extending and reconfiguring trains; includes unnecessary and costly infrastructure; and fails to apply a consistent approach to the infrastructure which is needed between it and HS2. This is contrary to basic principles on carrying out a business case such as this, and has led to a wholly distorted picture as to the need for, and benefits of, HS2.

9. DfT have used different do minimum cases for their evaluation of HS2 and their alternative RP2 which results in the overestimation of the benefits of HS2.

10. Issues about the level of passenger growth, how time is spent and the value of time saved are inevitably open to subjective judgement, and ultimately guesswork. But it is a simple fact that huge increases in capacity can be produced on the relevant parts of the rail network, with relatively simple and far cheaper steps than HS2, and which address crowding issues earlier.

11. There are a series of incremental improvements to the existing network which can deliver more than sufficient to meet the forecast demand. These steps have four major advantages over HS2. Firstly, they can be introduced incrementally so that if the massive demand increases forecast by HS2 do not materialise there is no wasted investment. Secondly, they are far cheaper than HS2. Thirdly, they can be introduced much more quickly than HS2, so can deal with existing overcrowding issues, rather than having to wait until 2026 (at the earliest). Fourthly, they are very low risk.

12. In summary the incremental ways to increase capacity over the DfT base case are:

- (a) Take account of Evergreen 3 (line speed increase from London Marylebone—Birmingham), which will be completed this year and provides journey speeds to Birmingham only a few minutes longer than those on Virgin trains, thereby reducing demand from Euston and increasing capacity including at peak times. This scheme was deliberately ignored in the DfT business case.
- (b) Change the train configuration on Pendolinos to change at least one carriage from first to standard. The overcrowding issues only arise in standard class;
- (c) Lengthen existing Pendolinos, all to 11 car and then most to 12 car. The combination of (b) and (c) produces nine standard cars per train, in contrast with five at the moment;
- (d) Introduce “smart” ticketing and demand management, to reduce peak demand, for example eliminating the artificial peak on Friday after 7pm at Euston;
- (e) Carry out a series of relatively “minor” infrastructure capacity improvements at pinchpoints, including a grade separated junction south of Milton Keynes, to allow improved separation between fast and slow lines.

13. The cumulative capacity increases of these measures over the 2008 base case demand would be in the order of trebling (211%), see table below, at a total capital cost in the region of £2 billion. Of course these steps would not provide the journey time improvements of HS2. But once it is understood that the majority of the benefits from the journey time reductions are dependent on the assumption that business people do not work on trains, it can be seen that spending £30 billion (NPV) for this gain is a very poor use of public money.

<i>Interventions</i>	<i>Daily trains</i>	<i>Daily standard class seats</i>	<i>% increase above 2008 base</i>	<i>Comments</i>
<i>Train investment with no/little infrastructure investment</i>				
HS2 2008 Base		59,298		Base used by DfT for evaluation of HS2. Predates full WCML upgrade timetable
Current timetable	286	81,924	38%	Includes Voyager services (30 daily)
Evergreen 3	[68]	[28,900] ⁸¹	[55%]	Committed scheme—complete in 2011
Committed lengthening project	286	105,924	79%	Committed scheme—implemented from 2012
December 2013 additional services	306	113,769	92%	Additional hourly off-peak train each way
First class reconfiguration	306	134,379	127%	One car converted from first to standard
12 car sets (except Liverpool)	306	166,908	181%	Major physical constraints at Liverpool
<i>Infrastructure Investment</i>				
Additional services	336	184,326	211%	30 additional daily trains following investment to relieve pinchpoints

14. These improvements would cause no disruption at Euston, as opposed to HS2’s disruption which will be massive for seven to eight years. It is also important to stress that the alternative would cause minimal

⁸¹ Illustrative Evergreen 3 figures assume Chiltern trains currently 4 car class 168 units (275 seats), lengthened to 6 car class 168 (425 seats) and this capacity increase is not included in 211%

disruption to the WCML and is in no way comparable with the WCML upgrade which took place a few years ago.

Demand Growth—Chapter 2

15. DfT forecast is for 102% “background” demand growth to 2043, and 209% including the additional growth generated by HS2. The DfT describe this as “conservative”, but that is misleading. They justify this by reference to high levels of growth on long distance rail travel in the last 15 years and a very strong relationship between increased wealth and increased long distance rail trips. But this must be seen in the context of overall long distance trips on all modes per person remaining constant since 1995; no rail growth in the period 1952–95; and rail travel being strongly influenced by investment (including public subsidy) post privatisation. It is wholly unsound to assume that the factors which led to rapid growth post 1995 will continue to 2043.

16. The DfT have used assumptions on growth derived from the rail forecasting manual (PDFH) for the period up to 2043, even though this is contrary to their own normal forecasting practice; to Sir Rod Eddington’s recommendations and to Network Rail’s position. To take a period of exceptionally high growth, based on very particular factors, extrapolate it forward for 35 years, and then to suggest that this is a conservative approach is not justified.

17. Forecasting is inherently uncertain, and in recognition of this DfT’s own Guidance imposes a cap of demand growth in 2026. DfT in its original evaluation extended this to 2033, because of the long lead in time for HS2. However, they have now extended the forecast period to 2043 and then capped the forecast at double the current levels. The DfT has therefore applied its high growth figures for 35 (2008–43) years. This leads to a highly uncertain forecast. The failure to carry out any proper sensitivity testing exacerbates the inadequacies of the forecast.

18. Even if one were to take a half way point between the growth forecast by the DfT and the work carried out on behalf of 51m, the Benefit Cost Ratio would fall to below 1.5 (excl. WEI), and therefore fails any normal test for Government supported projects.

Rail Industry history of poor forecasting—Chapter 3

19. 51m’s concern that the passenger forecasts are seriously over optimistic, is strongly supported by the rail industry’s very poor record on forecasting demand for major rail projects. CTRL (now HS1) predicted demand in 2006 of 25 million passengers, whereas the actual traffic is around nine million. The Public Accounts Committee in 2006 reported that the DfT had told them that they had learnt from their mistakes and next time would factor in more severe downside assumptions, but they have notably failed to do so, on HS2.

20. Comparisons with HSR internationally are often cited, implying that we are a long way behind other countries, however there are fundamental differences between virtually all HSR networks and the UK: elsewhere their rail journey times were much slower pre-HSR than in the UK, where WCML is a modern 125mph railway; post-HSR their journey times are all more than halved; and with the exception of Frankfurt—Cologne the distances are much longer. The table below sets out the impact of HSR routes on journey times for a number of international networks.

	<i>Distance</i>	<i>Pre—HSR</i>	<i>Post—HSR</i>
Tokyo—Osaka	515km	6hrs 30mins	3hrs 10mins (now 2hrs 30mins)
Madrid—Seville	472km	6hrs 30mins	2hrs 45 mins (now 2hrs 30 mins)
Paris—Lyon	431km	4hrs	1hrs 55 mins
Frankfurt—Cologne	180km	2hrs 20 mins	1hr 2 mins
London—Manchester	296km	2hr 08mins	1hr 13 mins proposed (from 2032)
London—Birmingham	182km	1hr 24 mins	49 mins proposed

21. On the face of it, the Cologne—Frankfurt route appears to be equivalent to London—Birmingham, at essentially the same distance. However, Cologne—Frankfurt is part of a much wider network, with almost all trains going to or coming from somewhere else, as part of longer distance routes such as Amsterdam—Basel and Dortmund—Munich. The HSR route also gives proportionately much greater time savings than HS2 to Birmingham, with Cologne—Frankfurt times of 62 minutes, compared with timings on the tortuous classic route of 140 minutes. But London—Birmingham is only 84 minutes today, and Virgin Trains say that they could deliver 70 minutes on the existing track.

22. The DfT has placed great reliance on international examples to support its case, however the evidence does not support this conclusion. The Dutch HSR has financial problems, the President of SNCF has stated that the network is decaying as investment is focused on TGV lines, distances between stations on TGV lines are much greater than in the UK, and in Germany the classic network is slow and not comparable with the UK mainlines.

HS2 Service Provision—Chapter 4

23. The DfT passenger forecasts are reliant upon their assumptions about the number of trains that can be provided, their speed and reliability. However, their entire case rests on assuming 18tph for the full network, which is a figure that has never been achieved anywhere in the world for high speed infrastructure. High speed rail worldwide only has 12–15 tph maximum. Industry experts place no reliance on being able to achieve 18tph in the foreseeable future.

24. In terms of reliability, the DfT assume a very high level of reliability, although even on the full “Y” scheme many of the high speed trains will be coming from the classic network and will be using train paths shared with other users. This raises major doubts over the robustness of the assumptions about reliability.

25. The entire forecasting exercise is therefore based on untried (indeed un-invented) technology and unjustified assumptions about other train operators.

Modal Shift from Air—Chapter 11

26. The DfT forecast only 6% of HS2 passengers are switching from air. Domestic demand to all London airports has fallen by 26% since 2004 and it is therefore very difficult to reconcile this with DfT predictions of 128% growth to 2043. Journey times from Glasgow/Edinburgh to Paris/Brussels will remain over 6 hours and therefore no modal shift can be assumed.

27. It is interesting to note that even on Madrid-Barcelona, where the high speed rail link reduced journey times from around 6 hours to 2 hrs 40mins hours, there remain 25 flights per day, each way, on the route.

Benefits—Chapter 2

28. The key benefit of HS2 in its economic case is the value of shorter journey times, which accounts for £18 billion of the £44 billion benefits. £14 billion of this depends on the assumption that time savings translate into greater productivity for business travellers. This is because in the economic case the DfT have assumed that time spent on trains is wasted, and have taken no account of modern technology which allows business travellers to use train time productively. This is considered in detail in “51m Economic Case”.

29. The DfT seek to rebut this by saying that if one does assume that time on trains is used productively then that is simply recovered by the benefits of reducing overcrowding. But this is flawed. The much cheaper alternative proposals reduce overcrowding more than HS2 (HS2 predicts load factor of 58% in 2043, whereas the Optimised Alternative has about 52% and even the DfT alternative RP2 has 51%), and can provide additional capacity sooner.

30. Given the above concerns, if you undertake a 50% downside sensitivity test on the benefits in the business case (between DfT’s and work done for 51m) the BCR falls to less than 1.0 (excl. WEI) for Phase 1 and about 1.2 (excl. WEI) for the Y.

31. Importantly the DfT in the business case has ignored price competition from the classic network which post HS2 will have much spare capacity. It is difficult to see why those who are getting the benefit from high speed rail should not be paying premium fares for those benefits, or to believe that this will not happen in practice. But the DfT business case rests on there being no premium fares, and the shortfall being made up by public subsidy. Without this assumption the business case would fall much further because the passenger forecasts would reduce significantly.

Economic Rebalancing and Regeneration—Chapters 3 & 5

32. The DfT now places great emphasis on the desirability of “rebalancing the economy”, and “reshaping the economic geography” of the UK. It is well established in the academic literature that the benefits of high speed rail between regional centres and a dominant capital city are likely to accrue significantly more to the capital than to the regions. Essentially the argument is that if you provide very good transport links from the hub to spokes, there is some benefit to spokes but most benefit to the hub. So regional centres will gain something but most of the gain will fall to London and SE, as by far and away the strongest areas of the national economy. Even on the DfT’s case seven out of 10 jobs are created in the South East and twice as many new trips are generated to, compared with from London.

33. If Government wishes to prioritise rebalancing the economy, and regenerating the Northern cities, then the way to achieve this is through significant investment in transport between the northern cities, and within their travel to work areas. This has been the clear aspiration of those regions as set out in the Northern Way strategy and transport priorities.

Impacts Carbon—Chapter 6

34. In terms of carbon emissions the DfT’s own case is that HS2 will only be carbon neutral. Given the massive public investment in the scheme, and the overall contribution of transport to carbon emissions it seems odd that the Government should support a scheme with so little carbon benefit. HS2 also generates a very large number of new trips, ie people who are not currently choosing to travel, and only achieves 7% of HS2

passenger shifting from car use. Emerging Government policy is to encourage people to travel less, and to prioritise schemes which achieve a reduction in carbon emissions. HS2 does neither.

35. But in any event the forecast of HS2 being carbon neutral is itself extremely optimistic. This forecast rests entirely on high assumptions about modal shift from air see above, and most critically on making the assumption that airport slots which are freed up by the reduction in domestic flights would not be re-used. In reality it is quite clear that those slots, particularly at Heathrow will be filled with long haul flights, which are both more profitable for the airlines and much more carbon emitting. Aviation growth is constrained by the number of runways in the SE of England. If HS2 frees up slots at those airports then the inevitable consequence will be a growth in carbon emissions.

Impact on Freight—Chapter 7

36. The current Network Rail freight strategy does envisage freight tonnage growing in the next 30 years with the highest growth in containerised traffic from the ports of Felixstowe, Southampton and Thames Gateway. The current Felixstowe—Nuneaton freight upgrade project will take some 20 trains per day off the southern part of the WCML releasing capacity for freight growth. Other investments are being made in the freight network including Southampton—West Midlands gauge enhancement.

37. Freight almost exclusively uses the slow lines on WCML, so has little impact on fast lines services and capacity except when it has to cross the fast lines on a flat junction or there are short 2 or 3 track sections. This happens at certain pinch points: south of Nuneaton, Colwich and Stafford Infrastructure works currently being delivered or proposed in alternatives would in any event address the pinchpoints for freight.

Impacts on the Classic Network—Chapters 8, 9 & 10

38. The HS2 case is based on no investment beyond those already committed by 2015 on the WCML, MML or ECML, until the completion of HS2, even though they are predicting major growth on these routes in the intervening years. This will lead to major overcrowding issues and is an unsustainable position. Overcrowding currently exists on the commuter route between Northampton/Milton Keynes and London and will not be addressed until 2026 at the earliest when Phase 1 of HS2 is proposed to open.

- (a) HS2 results in the WCML only having an average load factor of 31%. £9 billion has recently been invested in this route to make it the most modern in the UK.
- (b) There will be capacity and/or frequency reduction to some cities, for example Coventry, Wolverhampton, Stoke-on-Trent, Leicester, Chesterfield, Peterborough and Doncaster. These reductions are included in the business case, because there is an assumed saving of around £5bn (NPV) in operating costs. Any promises to maintain existing service levels to these cities would have serious impact on the business case.
- (c) As Heathrow Express (HEX) trains to stop at Old Oak Common, all GWML services will also have to stop otherwise capacity on the route will be reduced. This would add approximately 5mins to all journey times to/from the West and Wales.

39. There will be massive disruption throughout the construction period at Euston station, for about eight years. The scheme involves the reconstruction and lowering of all the existing platforms and major changes to the approach tracks. It is inconceivable that this can be achieved without extensive track closures.

40. The creation of a station at Old Oak Common will have significant impacts on the operation of the GWML, HEX and Crossrail services. The paucity of detail on the Old Oak Common proposals make it impossible to predict what will happen there, but both the Crossrail services and its depot are likely to suffer major disruption.

Links to Heathrow and HSI—Chapters 11 & 12

41. The DfT proposal involves linking HS2 to Heathrow and HSI. It is beyond any possible doubt there is no economic case for providing such links, a view held by the rail industry as well—the passenger forecasts are far too low. Further, there are no train paths available for these services in any event.

42. This merely provides an example of how poorly thought out HS2 is, and how proposals for expenditure of billions of public funds have not been properly appraised.

Environmental Impacts—Chapter 13

43. HS2 have provided little detail on the environmental costs, benefits and mitigation (apart from saying there will be some and allocating funding) for London to Birmingham (Phase 1). No details have been provided for the Y (Phase 2) and the route has not even been identified, although HS2 have indicated that this will be divulged at the end of this year after the consultation has been completed. This is the only opportunity for the benefits and drawbacks to be understood and considered, before the principle is fixed. The lack of information makes any valid consultation or assessment impossible.

44. Any project of this magnitude will inevitably have significant environmental impacts and HS2 will be no different, indeed its Appraisal of Sustainability scores all aspects negatively. Due to the lack of information and the fact that HS2 has not offered any mitigation measure, two authorities south of Birmingham have undertaken their own initial investigations to reach an initial understanding of the impacts. Buckinghamshire have major concerns about impacts upon the AONB, local hydrology, habitats, heritage assets and the wider landscape. Similarly Hillingdon and South Bucks have significant concerns with regard to the Colne Valley Park, a vital local resource.

45. Given that the route goes through four other rural counties, as well as densely populated urban areas, it would not be unreasonable to assume that the number of adverse impacts on environmental assets would be very substantial.

46. It is also important to remember the impact on people's lives, both in terms of noise and disruption, but also the 100s of dwellings to be demolished.

47. HSR has specific noise characteristics compared with classic rail and although HS2 have focused a lot on noise in their road shows with the noise booth, it is clear that this does not provide a true reflection of the impacts. They have provided little detail on the real impacts in the areas either side of the route. Fundamental to understanding the impact of noise on dwellings, business, schools, AONB etc is the production of noise contours.

48. For these reasons it is not possible to understand the real environmental costs and benefits of HS2 as little or no information has been provided.

Government Transport and Environmental Policy—Chapter 14 & 15

49. In the most fundamental aspects this proposal appears to be contrary to key parts of Government policy:

- (a) It involves a major subsidy into rail transport at a point in time when the Government is seeking to reduce subsidy to the rail industry.
- (b) It encourages people to travel more, indeed relies upon them doing so, when Government policy is moving towards encouraging less trips and more use of alternative technology.
- (c) It involves a relatively small modal shift, when Government transport policy is supposed to be focused on sustainable development.
- (d) It has neutral or negative carbon impact.
- (e) It produces highly speculative regeneration benefits and will be far less effective in achieving the policy objective of rebalancing the economy, than would far less expensive regional investments. This is contrary to the policy priorities of the Northern Regions Development Agencies.
- (f) Although the capital costs of HS2 will fall outside this spending review, £750 million is to be spent in this parliament simply on achieving the Hybrid Bill.

CONCLUSIONS

50. For all these reasons 51m is of the view that the case for the HS2 scheme does not begin to be made. Not only are there serious doubts over the validity of the HS2 case but there is a real practical and low risk alternative, which can meet the need as it arises and relatively cheaply. This is not as exciting or high profile as HS2 but far better value for money. The Committee is asked to request the DfT to undertake a fundamental reappraisal.

51. *“The risk is that transport policy can become the pursuit of icons. Almost invariably such projects—‘grand projects’—develop real momentum, driven by strong lobbying. The momentum can make such projects difficult—and unpopular—to stop, even when the benefit:cost equation does not stack up, or the environmental and landscape impacts are unacceptable”.* Sir Rod Eddington—The Transport Study.

May 2011

The documentation to support this submission can be found in the attached chapters at: www.51m.co.uk/select-committee

Further written evidence from 51M (HSR 109A)

McNULTY REPORT

Further to our recent submission to the Committee, the publication on 19 May of “Realising the Potential of GB Rail”,⁸² Sir Roy McNulty’s report into value for money in the rail industry, raises a number of new and important issues in relation to the case for High Speed Rail which we believe the Committee should consider in forming its view.

The study was set up to investigate why the costs of the rail industry in Britain are significantly higher than for comparable European networks. The report confirms that the efficiency gap could be as high as 40%. One of the key conclusions was that an important factor is the lower level of train utilisation in this country, with on average fewer passengers using each train.⁸³ The report therefore recommends that there should be much better use of existing capacity:

“There should be a move away from ‘predict and provide’ to ‘predict, manage and provide’, with a much greater focus on making better use of existing system capacity.”⁸⁴

The study also identified a bias in the planning system towards capital expenditure.⁸⁵ This is illustrated by the Network Rail “Route Utilisation Strategy” process which captures the plans and aspirations for using key parts of the rail network from existing and potential users. However, rather than prioritising these on the basis of economic value, the process tends to look for physical solutions which enable all the aspirations to be met, in effect, “predict and provide”, an approach which was dropped for the road network some years ago, and has now also been implicitly dropped for airport capacity in the South East.

These issues are brought together in recommendation 6.3.7:

“The Study considers that industry, together with the ORR and the DfT, should review incentives and responsibilities for the efficient management of capacity. There needs to be at least as much focus on train utilisation (the number of passenger km per train km) as there is on track utilisation (the number of train km per main track km). Existing approaches appear to focus much more on track utilisation and the provision of train paths, but whilst that is important, the unit costs of carrying passengers are influenced heavily by train utilisation, which does not appear to be a primary focus for any organisation within the present system.”

We believe the approach we advocate through the development of our “Optimised Alternative” is entirely consistent with Sir Roy McNulty’s recommendations. We have identified low risk, low cost approaches which increase capacity on the existing network on an incremental basis as and when it is clear that additional capacity is needed. This is principally achieved through increasing standard class capacity on each train, directly improving train utilisation; our proposals give a potential increase in standard class capacity on the West Coast Main Line of 211% over the 2008 base used by DfT in its evaluation of HS2—over three times the base capacity. Our approach would also significantly improve the industry’s financial performance.

In contrast, the proposed HS2 project is a clear and dramatic example of the failures that he has identified. Even on DfT’s own optimistic evaluation, the project would have a net cost to the taxpayer of £17 billion over 60 years.

June 2011

Further written evidence from 51M (HSR 109B)

This supplementary evidence is submitted to update the Committee on issues related to the “Optimised Alternative”, as described in Chapter 1 of our main submission, and to respond to the supplementary evidence submitted to the Committee by DfT and HS2 Ltd this week. Given the time constraints we have provided a detailed response on the Optimised Alternative and overview responses on a number of the issues raised in the DfT and HS2 Ltd supplementary evidence. We may provide a more detailed response to the Committee on certain items of the supplementary evidence in the near future.

OPTIMISED ALTERNATIVE

Neither DfT nor HS2 Ltd has made any attempt to engage with us directly on our proposed approach or the Optimised Alternative.

DfT acknowledge that they have not carried out a full analysis of 51m’s alternative, despite its higher capacity and its lower capital costs than Atkins’ Rail Package 2. This is somewhat surprising since it has now been in the public domain for some three months.

⁸² <http://www.dft.gov.uk/pgr/rail/strategyfinance/valueformoney/realising-the-potential-of-gb-rail/pdf/realising-the-potential-of-gb-rail-summary.pdf>

⁸³ Executive Summary, paragraph 4; also section 2.3.4, figure 2.12

⁸⁴ Executive Summary, paragraph 23

⁸⁵ Section 4.4

Below we respond to the statements made by DfT and HS2 Ltd in their supplementary evidence and the “Yes to High Speed Rail” campaign paper from William Barter, which purports to analyse the Optimised Alternative.

- Both the DfT’s supplementary evidence and the William Barter paper assert that much of the 215% additional capacity set out in the Optimised Alternative doesn’t count, as any calculation of capacity increases should be based on the capacity after completion of the existing project to lengthen some of the current 52 Pendolino trains from 9 to 11 cars. This is fundamentally wrong as the HS2 Ltd business case has a 2007–08 base, from which the HS2 forecast of 102% background growth has been made, and any comparison clearly has to start from this same base, the capacity available in 2007–08.
- In addition the DfT response asserts that the Optimised Alternative only provides around 30% more capacity than the capacity available following completion of the committed Pendolino lengthening project. However, the correct figure is 57%, as set out in Table 1.1 of Chapter 1⁸⁶ of our initial submission to the Committee.
- The Barter paper claims that converting one first class car to standard ignores peak first class loadings. But first class passenger numbers have declined significantly in recent years, reflecting cut-backs in travel costs by both the private and public sectors, even though most first class passengers are now using discounted, advance purchase fares—in some cases lower than standard class on the same train. First class loadings are not high even in the business peaks, and numbers on the great majority of trains don’t fill one first class coach, let alone four.
- We are also accused of ignoring peak loadings generally. But the Network Rail WCML Route Utilisation Strategy⁸⁷ shows only two out of 287 trains daily with standing passengers on the route, at around 1900 in the evening, reflecting time restrictions for regulated off-peak (“saver”) fares. This is an artificial peak—are “Yes to High Speed Rail” really saying that we should spend £32 billion on HS2 because of overcrowding caused by time restrictions on off-peak fares?

The Optimised Alternative fully meets forecast background growth in peak periods, with a 138% increase in standard class capacity compared with the 2007–08 base.

The Optimised Alternative is described in detail in Appendix 1 of 51m’s consultation response at www.51m.co.uk—this updates and amplifies Chapter 1 of our original submission, and includes a detailed analysis of peak capacity

51m are criticised for not costing or scoping investment in additional vehicles, depot facilities, platform lengthening and any necessary track and signalling alterations to enable 12 car operations. Similarly, we are criticised for not carrying out a cost-benefit analysis of the alternative. We would strongly argue that it is DfT’s responsibility to ensure that all alternatives are properly considered before embarking on a project of the scale of HS2, and 51m do not have the technical and financial resources to undertake such work. However, it is clear from analysis of Atkins’ previous work for DfT⁸⁸ that 12 car operations (except to Liverpool) would be achievable at a fraction of the cost of HS2.

DfT challenge our view that there would be no adverse impact on performance as a result of increased services in the Optimised Alternative. But we propose investment to eliminate bottlenecks such as Ledburn Junction, and this approach is supported by Atkins’ previous work for DfT, which concluded:

“Even with higher levels of train frequency, the packages may enhance train performance at a network level....these locations may more than compensate for other areas where there will be an enhanced train frequency but no infrastructure enhancements”⁸⁹

DfT’s response contains factual inaccuracies: the correct position is that (1) the illustrative service pattern for the Optimised Alternative has fewer peak hour trains than Rail Package 2 and (2) no additional trains are proposed on the Coventry—Birmingham section of the route

We are criticised for assuming that no additional platforms are necessary at Euston. However, HS2’s supplementary evidence claims that the current level of service can be maintained during Euston reconstruction with only 14 platforms. Our proposal only envisages an extra two to three peak trains an hour over present levels with the current 18 platforms—on the basis of HS2’s own submission, this is clearly achievable.

DfT SUPPLEMENTARY EVIDENCE (30 AUGUST)

Oxera question 3—*Reliability of Conventional Services*

We would reiterate that the published service plans for HS2 have major reliability risks. In contrast, the Optimised Alternative envisages investment at key locations to remove conflicting movements (Ledburn

⁸⁶ <http://www.51m.co.uk/sites/default/files/uploads/ch1.pdf>

⁸⁷ <http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/west%20coast%20main%20line/westcoastmainlinerus.pdf> page 48

⁸⁸ Rail Interventions Report March 2010 Appendix C pages 35–39 <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/alternativestudy/pdf/railintervention.pdf>

⁸⁹ <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/alternativestudy/pdf/railintervention.pdf> Appendix B Section 1.1.1 page 16

Junction) and improve segregation between InterCity and freight trains (Colwich/Stafford). The reliability impacts are set out in Chapter 4 of our original submission.⁹⁰

Oxera question 7—*Productive Time on Trains*

DfT imply in their response that HS2 will reduce crowding. This may be true on average, but we have shown (Chapter 8),⁹¹ that HS2's planned capacity on key routes (Manchester [Phase1], Preston/Glasgow and York/Newcastle) is clearly inadequate, almost certainly resulting in a higher proportion of overcrowded trains overall, with inadequate capacity on some routes balanced by massive over-capacity to Birmingham as detailed in the 51m's consultation response—Appendix 17.

Oxera question 14—*Disruption Impacts*

The Optimised Alternative will result in significantly less overall disruption because of the impact of HS2's major reconstruction construction at Euston (Chapter 10).⁹²

HS2 SUPPLEMENTARY EVIDENCE (30 AUGUST)

HS2's evidence starts with the statement that “the Committee asked a question on the proposed 18 trains per hour service level. We are aware that this has been raised as an issue during the consultation and we have begun further work in this area”. The delivery of 18 trains per hour is clearly a vital part of the HS2 business case, and we consider that it is extraordinary that HS2 Ltd and DfT had not satisfied themselves on the deliverability of the claimed capacity of HS2 prior to commencing consultation.

Question 1—*When will WCML capacity be exhausted?*

HS2 state that actual growth on Virgin has been around 10% per year between 2008 and 2011, and imply that this high level of growth is likely to continue. We believe this is wrong; the route upgrade was completed in 2008, with major reductions in journey time and frequency increases, so high levels of growth would certainly be expected for three or four years, particularly after years of disruption during the upgrade—but this level of growth is most unlikely to continue.

HS2 seek to dismiss pricing as a means of smoothing demand on the basis of a 2006–07 AECOM study for DfT—but it appears that this was focussed on commuter, not long distance flows, which have different characteristics.

Question 4—*Implications of Evergreen 3*

HS2 Ltd confirms they have not modelled the impact of Evergreen 3. This project, completed on 4th September, provides an attractive alternative to the WCML route to the West Midlands, with only slightly longer journey times and peak fares little more than half Virgin's. Evergreen 3 has been carried out at the franchisee's risk, at no cost to the taxpayer, and will certainly free up capacity on the current Virgin service, yet this significant upgrade has effectively been dismissed as irrelevant. HS2 Ltd also state that the Chiltern route is only a viable alternative for passenger travelling from London to Birmingham but this is vitally important as the first phase of HS2 is only from London to Birmingham and is the only phase upon which HS2 have produced any information or detailed analysis

Question 7—*Disruption Impacts of HS2 Euston Works*

We note that, in contrast to their previous evidence of July 2011 which identified that they would be able to provide the off peak service during the reconstruction, this in itself being a 40% reduction from the peak service (ref), HS2 Ltd are now saying that they expect to maintain current service levels throughout the Euston reconstruction period, except for major closures at Bank Holiday periods, despite a reduction from 18 to 14 platforms and wholesale reconstruction of the approach tracks. It seems surprising that HS2 Ltd has changed its view on this within a very short period of time and we would suggest it needs further scrutiny

Question 8—*Any Capacity Problems on WCML north of Lichfield*

We note HS2 Ltd's response, but would reiterate that Atkins proposed in its alternative RP2 that major capital investment north of Lichfield should be provided for the same level of additional services which HS2 Ltd now claim can be accommodated on the existing network without these works, while at the same time improving reliability.

On a detailed point, HS2 Ltd specifically claim that an additional path per hour can be provided between Stoke-on-Trent and Cheadle Hulme while still accommodating the local service “from Macclesfield to Manchester”; this in fact operates from Stoke-on-Trent to Manchester, a much more challenging problem.

⁹⁰ <http://www.51m.co.uk/sites/default/files/uploads/ch4.pdf>

⁹¹ <http://www.51m.co.uk/sites/default/files/uploads/ch8.pdf>

⁹² <http://www.51m.co.uk/sites/default/files/uploads/ch10.pdf>

Question 9—*Ability to Run 18 trains per hour*

We consider that this response is little more than an apparently plausible smokescreen. It remains the case that no high speed railway in the world achieves anything like 18 trains an hour, and to do so would require undeliverable precision for trains travelling over busy mixed traffic two track sections of railway and starting from as far away as Glasgow and Newcastle.

Scepticism about the claimed capacity is supported by a recent paper “Rules for High Speed Line Capacity” by Piers Connor, an independent rail industry consultant, who concludes that 12 trains per hour is the practical maximum.⁹³ This conclusion is also consistent with the evidence to the Committee of Pierre Messulam of SNCF, a company recognised as a world leader in high speed operation. Separately, as set out in Chapter 4 of our initial submission, Greengauge 21 and Network Rail have previously published assessments indicating a maximum capacity of 14 trains per hour. HS2 appears completely isolated in its view that 18 trains per hour can be realistically achieved.

Question 15—*Fare Competition*

HS2 Ltd’s response does not deal with the impact of price competition on existing routes. Yet from Birmingham to London, the key route for the first phase of HS2, it is already the case that three operators (Virgin, Chiltern and London Midland) offer between them eight trains an hour, with journey times ranging from 1 hour 24 minutes (Virgin), 1 hour 30 minutes (Chiltern) to 2 hours 14 minutes (London Midland) and different fare levels with Chiltern and London Midland being approximately half WCML fares. Yet the potentially major financial impact of this competition has not been modelled: HS2 Ltd state “*more work would be needed in all these areas if the Government decides to proceed with the scheme following the public consultation*”.

FREEDOM OF INFORMATION REQUESTS

51m has recently received partial replies to a number of requests under the Environmental Information Regulations/Freedom of Information Act requests, albeit significantly later than the statutory deadline, and too late for incorporation in our consultation response.

Our questions covered a number of areas:

- Capacity and load factors to Manchester prior to the opening of Phase 2 in 2033.
- Capacity to Preston and Glasgow, together with related infrastructure enhancements.
- Capacity to York and Newcastle.

The answers in all cases were unsatisfactory; use of continued conventional services was cited as meeting capacity needs, but it is clear that this would not be adequate to meet HS2 Ltd’s growth forecasts, and no information was provided on projected load factors. Additional services were postulated on existing congested mixed traffic routes such as York to Newcastle without any proper analysis of whether this was realistic and deliverable. It is also apparent from HS2 Ltd’s response to question 15 in their Supplementary Evidence that no analysis has been carried out of the pricing policy needed to encourage use of conventional services, nor of the impact of this on HS2 revenue forecasts.

HS2 Ltd declined to respond to the following questions, on the surprising grounds that the answers would represent environmental information which was still in the course of completion:

- Services to Edinburgh (none are shown in the published documentation).
- Services diverted from Euston to Heathrow and mainland Europe.

HS2 Ltd stated “we do not hold this information” in relation to questions on:

- The cost benefit case for the “Y” network as a result of operation of Heathrow and mainland Europe services and the consequential reduction in capacity to Euston.
- Details of planned service reductions on the existing West Coast, East Coast and Midland Main Lines when HS2 is implemented. This is particularly concerning given that HS2 Ltd have included a £5.4 billion NPV saving from these reductions in the business case for HS2.

51m is extremely concerned and surprised with the inadequate responses to these important questions.

NATIONAL PASSENGER SURVEY

We would also draw the Committee’s attention to the latest National Passenger Survey⁹⁴ carried out by Passenger Focus. This shows that Virgin Trains has the second highest satisfaction score for all franchised operators (just behind Merseyrail) in relation to crowding (“sufficient room for passengers to sit/stand”), indicating that overcrowding on the West Coast route is a less serious problem than on many other parts of the rail network—yet construction of HS2, at a cost of £32 billion, is certain to constrain potential investment on other routes with much more acute capacity problems.

⁹³ <http://www.railway-technical.com/Infopaper%203%20High%20Speed%20Line%20Capacity%20v3.pdf>

⁹⁴ <http://www.passengerfocus.org.uk/research/nps/content.asp>

CONCLUSION

Neither DfT nor HS2 Ltd has demonstrated any significant flaw in the Optimised Alternative, which potentially offers a faster, more flexible means of providing additional capacity, at much less cost. However, it is clear that Government has, as yet, not been prepared to evaluate this alternative objectively.

7 September 2011

Written evidence from the AGAHST (Action Groups Against High Speed Two) Federation, comprising 79 local and national organisations opposing HS2 (HSR 115)

We would like to affirm the detailed work being submitted by HS2 Action Alliance Ltd. HS2AA is the “evidence based” arm of the Federation campaign. We invite and encourage the Committee to receive oral evidence from them and myself on behalf of the Federation. The following are key points drawing on HS2AA’s work.

What are the main arguments either for or against HSR?

We have no argument against HSR as such but we believe HS2 represents very poor use of resources. There are better, greener and less risky HSR options that provide the needed capacity and can be implemented much more quickly. Key points are as follows.

1. *Benefits overstated:* the £44 billion claimed benefits are overstated by £26 billion because of the erroneous assumption that time is unproductive on trains, the use of inflated business income figures and the comparison with unrealistic alternatives creating artificial crowding benefits.
2. *Demand forecast overstated:* the overall long distance domestic travel market is saturated and the drivers for rail growth since 1995 have largely run their course. The PVFH is not intended to provide a long term forecast and the use of v4.1 rather than 5.0 inflates the demand forecast. HS1 is running at one third of forecast demand.
3. *Environmental damage underestimated:* 87% of journeys (according to HS2 Ltd) will be new journeys or transfers from lower carbon classic rail; BAA expect to use freed up domestic slots for international use; and the line cuts through an AONB, SSSI, ancient woodlands and some of the most tranquil countryside in Britain. The Green Party and many environmental organisations oppose HS2.
4. *Disruption underestimated:* the complete rebuild of Euston will cause chaos for seven to eight years and work will impact the Chiltern Line and Great Western at Old Oak Common.
5. *Technical problems are ignored:* the expectation of 18 train paths/hour is not feasible according to the UIC; Greengauge 21 puts the figure at 15 paths/hour. This obviously reduces anticipated benefits.
6. *Better alternatives have been ignored or buried:* According to work by former SRA Director Chris Stokes, it is possible to increase standard class capacity on the WCML by 112%, MML by 100% and ECML by 87% before starting on infrastructure projects. This meets the DfT demand forecast until 2043 at a much lower cost and capacity increases can be rolled out in line with demand. The only urgent infrastructure project is grade separation at Ledburn junction, which for £243 million would relieve congestion for Milton Keynes and Northampton commuters far more quickly than HS2. The introduction of in-cab signaling will enable trains to run at 140 mph not 125 mph, a speed similar to many European lines. Significant further capacity can be achieved through work at the six other pinch points identified in RP2, the Government’s own alternative, which was buried in the HS2 papers.
7. *Many would be worse off:* Many towns will have a less frequent or slower service (eg Coventry, Shrewsbury, Wrexham, Stoke-on-Trent) and some would experience a long delay in improvement (Midland Main Line stations). Some on the HS2 route would have less capacity (Manchester) or would not see improved journey times (Newcastle). Promises of improved classic services were not forthcoming following HS1 and would depend of a willingness by the Government to increase subsidies.
8. *Very high cost:* compared with lines in Europe and compared to lower speed alternatives.
9. *No evidence of “rebalancing the economy”:* Most trips will be to London and 73% of the regeneration jobs will be in London.

May 2011

Further written evidence from the AGAHST Federation (HSR 115A)

During the oral evidence session held on Tuesday 12 July, I promised to provide an answer to a question asked about the impact on revenues of reducing the number of first class carriages on the WCML Pendolinos from four to three, although I see that HS2AA picked this up in brief at paragraph 16 of their new submission.

This is my response.

First class load factors on the West Coast Main Line are much lower than standard class (c15–20% only, compared with c50% in standard class) and first class volumes have recently dropped, reflecting reductions in corporate and public sector expenses paid first class business travel as a result of the recession and public expenditure cuts. First class yields per passenger have also declined substantially, reflecting the shift to much cheaper, train specific advance purchase tickets, in first class as well as standard. It is doubtful whether *any* InterCity trains on the West Coast Main Line currently need more than three first class vehicles. If one of the current four first class car in each unit is reconfigured as standard class, this change could almost certainly be carried out without any reduction in revenue, as the tiny minority of trains on which a reduction of one first class vehicle might cause a shortage of first class capacity could be managed through yield management techniques.

July 2011

Further written evidence from the AGAHST Federation (HSR 115B)

Now that the HS2 Consultation deadline has passed we would like to submit the following comments.

THE HS2 CONSULTATION PROCESS

The Public Consultation was conducted in a way more suited to a marketing campaign than a public, transparent and open consultation, falling short on the Consultation Code of Practice.

1. CONSULTATION QUESTIONS WERE “LEADING”

“Do you agree that there is a strong case for enhancing the capacity and performance of Britain’s inter-city rail network to support economic growth over the coming decades?”

This first question set the tone of the consultation.

- It presents a number of positives (enhancing capacity and performance) without any reference to the cost of doing this, both direct and opportunity cost.
- There is a hidden but questionable assumption that enhancements in capacity and performance would automatically support economic growth.
- The limitation to inter-city rail might be missed or misunderstood, so respondents might well have had overcrowded commuter lines in mind as they answered this question.
- There is no reference to the context statement making answering confusing and compromising.

Other questions are open to similar criticism.

2. BACKGROUND INFORMATION WAS ONE-SIDED AND IMPLIED A CERTAINTY ABOUT DISPUTED CONCLUSIONS

- The consultation documents and Roadshows were strongly one sided, with headings including “The fast track to prosperity” and “Standing room only”.
- There was nothing to say that the link with economic growth, business productivity and rebalancing the economy was strongly disputed or that there were viable alternatives for increasing capacity on existing lines.
- Information on the international experience was partial: for example information on Lille did not mention the increase in unemployment in Greater Lille relative to the rest of France since the arrival of the TGV.

3. INTERNET PROBLEMS

- Too much reliance on the Internet: information in the summary booklet was limited; it was hard for those without Internet access to get detailed information. Some files were too big for most to download, eg AoS volume 2 was over 100mb.
- It was difficult to see how to add information on the on-line form.
- When the on-line form was completed it was not obvious that the information had been sent.
- The site was unavailable at some points at the closing stages of the consultation.

4. RESIDENTS ON THE “Y” AND ELSEWHERE WERE EFFECTIVELY EXCLUDED

The “Y” route is known by HS2/DfT as detailed calculations were made to compare the “Reverse S” and “Y” options. However the route was not published. When the route is published, those on the “Y” will inevitably take an interest in the details of cost, benefits and options but will not have the option to comment on the principle of HS2. Furthermore, the Roadshows were largely limited to the HS2 Phase 1 route, limiting response from those who will have to pay for it but will not benefit.

5. LACK OF OR MISLEADING INFORMATION

- Many FOI requests were still outstanding at the end of the consultation.
- For several issues—environmental impact, business case, engineering studies—Roadshow staff said that no detailed analysis had been undertaken and would not be undertaken until after the Secretary of State had made his decision.
- There were no noise contour maps or a full environmental impact assessment.
- There was inaccurate information (eg on spoil) and contradictory responses. For example, when questioned on whether the required sensitivity tests had been done, the Roadshow response was yes and the FOI response was that they did not hold the information.

6. MINISTERS HAVE NOT BEEN IMPARTIAL

Ministers have not been impartial during the consultation period. For example, Philip Hammond exhorted to rail workers to support a positive response to the consultation with a thinly veiled threat to their jobs if they did not ensure the “yes” lobby prevailed.

7. CONCERN OVER ANALYSIS AND INTERPRETATION

Philip Hammond has said that the approximately 40,000 responses showed a low level of interest in HS2. This ignores that many responses were compiled on behalf of groups and communities and most were individual responses. There was no national anti-HS2 postcard campaign.

8. FOREGONE CONCLUSION

Comments by David Cameron and Philip Hammond suggested that the consultation would not change the government determination to proceed with HS2, which goes against the consultation code of practice. The comments implied that the Consultation was a box ticking exercise and they may have discouraged participation.

12 August 2011

Written evidence from London First (HSR 117)

1. London First is a business membership organisation with a mission to make London the best city in the world in which to do business. We do this by mobilising the experience, expertise and enthusiasm of the private sector to develop practical solutions to the challenges facing London. London First delivers its activities with the support of the capital’s major businesses in key sectors such as finance, professional services, property, ICT, creative industries, hospitality and retail. Membership also includes further education colleges and all of London’s universities.

2. We welcome the chance to give our initial views on the Government’s proposals for a national High Speed Rail (HSR) network. We will continue to gather our members’ views this year.

3. In addition, London First has established a Commission to examine—in the round—the capacity and quality of London’s transport infrastructure links with the rest of the UK and the wider world. It will make recommendations for the short, medium and longer term to Government, and others as appropriate. Further background to this Commission can be found in the Annex to this response, and at www.londonfirst.co.uk/connectivity-commission

CONDITIONS FOR SUCCESS

4. We welcome the fact that there is a considerable degree of cross-party consensus on long term transport infrastructure planning (with the exception of policy for the UK’s international air transport links). The last Government established Infrastructure UK; the present Government has continued it, and presided over the publication of the first National Infrastructure Plan. The Coalition has made a strong case for investment in economically vital long term transport infrastructure. In London, consensus has emerged over the importance of building Crossrail, Thameslink and maintaining the Tube upgrade programme. While we welcome a visionary approach in place of the all-too-familiar sweating of assets to beyond breaking point, proposals for HSR will require sustaining this political consensus.

5. The Department for Transport/HS2 study states wider benefits worth around £44 billion are generated by HSR. The Northern Way, which brought together the Regional Development Agencies (RDAs) from the north of England, estimates that the agglomeration benefits in particular could be much greater; indeed that the total GVA benefits could be up to three times the size of welfare benefits assessed in a conventional cost benefit appraisal, and up to £120 billion in present value terms.

6. While this might include optimism bias, and the calculation of such wider benefits is fraught with methodological difficulties and forecasting uncertainties, we concur with the Northern RDAs' assessment that "High speed rail is a once in a generation opportunity to transform the economic prospects of the North".⁹⁵ We believe, however, there are some conditions which must be met if this potential is to be realised to the full.

7. First, if we are to start we must finish. The real transformative benefits come from linking a network of cities to London and to each other: first Birmingham; then Leeds/Manchester; and ultimately on to Scotland. A network that goes no farther than Birmingham will not deliver the value for money of the full network; and it manifestly will not transform the economy of Northern England. Completion requires long term commitment from Government.

8. Second, HSR must be an "and", not an "or". This visionary, potentially transformative, grand project must be in addition to other vital work needed to upgrade parts of the existing transport network, to address both historic underinvestment and to meet future demand. This includes as yet unfunded Tube lines in London, road improvements in England and the vital upgrades of our current rail network needed to relieve the overcrowding experienced by commuters every day. It is worth noting, for example, the benefit cost ratio of HS2 is 2.6, while that of the still to be funded Piccadilly line upgrade is 4.2.

9. Third, the delivery of HSR cannot be a substitute for an aviation policy that underpins south east England's economic growth. Around 80% of all journeys to and from London to Manchester are already taken by rail. The demand for flights in the UK is forecast to nearly double by 2050.⁹⁶ Demand for flights in London is forecast to rise to 250 million passengers a year, up from 140 million now. Heathrow, the UK's principal hub airport, is full; Gatwick is full at peak times. They suffer, as a result, the greatest flight delays of all major European rivals. HSR may well transform the economy of northern England but it can't give London the international links it needs to maintain our world city status, to grow in the future and to share the benefits of this growth—through greater connectivity—with the rest of the country.

10. Fourth and finally, continued investment in London's transport infrastructure must be integral to any HSR strategy if London is to cope with the increased numbers of passengers expected to arrive on HSR. At Euston, demand is forecast to rise from 21,000 in AM peak in 2008 to 29,000 in 2033 without HSR and 38,000 with HSR stopping at Old Oak Common. Any policy for HSR must be tied to long term plans to upgrade London's Tube and rail infrastructure—including the second phase of the Northern line upgrade (splitting the line at Camden for extra capacity with more frequent services); and Crossrail 2, linking Finsbury Park and Victoria, via Euston. While HSR has enormous potential, it must be tightly bound to coherent transport policy if this potential is to be realised.

May 2011

Written evidence from Chilterns Conservation Board (HSR 118)

1. The Chilterns is an Area of Outstanding Natural Beauty, designated in 1965. Such a national designation confers on it the highest level of protection. Any development which would cause damage has to be shown to be in the national interest and demonstrate why it cannot be located elsewhere. The HS2 proposal will cause serious and irreversible damage to the Chilterns AONB. The Chilterns Conservation Board is not persuaded that HS2 will provide national benefits to the economy or environment.

2. The business case is poor and its dependence upon the notional valuation for time saving is not credible. The forecast for passenger numbers also lacks credibility and ignores previous experience of over-estimating demand for Eurostar and HS1 services. The result is to over state benefits to such an extent it materially affects the Benefit Cost Ratio.

3. HS2 will result in increased emissions of greenhouse gases. In combination with the damage to the natural environment the Board does not accept that any net environmental benefits will be forthcoming. The reliance on offsetting against aviation the increased emissions caused by HS2 is wholly unrealistic as it relies on vacated flight slots remaining vacant. The industry has already confirmed that these slots will be used primarily for long haul flights. The net effect of HS2 will be to significantly increase carbon emissions—the national priority must be to make significant reductions.

4. The Board is concerned that the DfT has not fully explained to the public the accepted definitions of high speed rail. Under EU Directive 96/48/EC Appendix 1 high speed railways do not require design speeds of up to 400 kph. The UK can upgrade much of its existing intercity network to high speed lines (200 kph/140 mph) with relatively modest investment compared to HS2, providing the entire country with improved services. The

⁹⁵ High speed rail: A once in a generation opportunity to transform the North's economy, The Northern Way, 31 March 2011.

⁹⁶ UK Air Passenger Demand and CO2 Forecasts, Department for Transport, 2009.

DfT design criteria for HS2 meant that route choice was seriously constrained and the scope to avoid the Chilterns AONB extinguished.

5. A national transport plan is an essential pre-requisite for investment in the rail network and specifically for high speed rail. The most recent analysis of national transport needs, The Eddington Report 2006 and Transport White Paper 2007, remain relevant—neither recommended high speed rail. Such a plan would also give due weight to options for increasing capacity on existing railways. It makes little sense to ignore the potential to increase existing capacity in the short term at much lower cost.

6. The demand forecasts are not credible. The very long period used for forecasting and reliance on historic trend data mean those forecasts are unlikely to be accurate. The active promotion of long distance travel is not a sustainable approach when the conservation of energy will be an increasing national priority. The demand forecasts have given insufficient weight to: the need to reduce travel; alternatives to long distance travel; and the growing effectiveness and availability of communications IT. The priority should be to manage demand and bring it into balance with capacity, and not to provide new capacity at high cost. The predict and provide model has been widely abandoned as unsustainable.

7. The business case fails to include the environmental costs. Whilst it includes several qualitative attributes to which it assigns large monetary values, eg time saving and crowding, the impact on the environment is not included at all. The consequences are to undervalue the environmental impacts, nearly all of which are negative. Neither does the business case include any negative impacts on the economy notably the cumulative effects on local economies.

1. *What are the main arguments either for or against HSR*

There are several accepted international definitions of HSR, which do not require speeds of up to 400 kph. The existing routes which can support speeds of up to 200 kph (125 mph) are considered to be high speed. This has not been explained to the public.

1. HSR as per the HS2 specification is not affordable—more affordable alternatives exist.
2. Experience in comparable countries is that high levels of investment in high speed rail directly leads to diversion of investment from the rest of the network.
3. There is no need for high speed rail of up to 400 kph. The UK is geographically compact, with shorter journey times now compared to comparable countries with HSR.
4. A better alternative would be to enhance capacity on the west coast main line and invest in a truly national programme of upgrading intercity routes in line with EU definition of high speed rail—up to 200kph.
5. There will be considerable environmental damage through construction of the line and the associated significant increase in carbon emissions.
6. There will be irreversible damage to the nationally protected Chilterns AONB.
- 7 Encouraging more people to travel further, more frequently is not economically or environmentally sustainable. The long term strategy has to be to reduce the need to travel and to save energy.

2. *How does HSR fit with the Government's transport policy objectives?*

1. There is a need for a national strategy to identify the role of transport in meeting anticipated future social, economic and environment needs. That strategy should go on to provide a context for investment in the rail network. Other priorities must be a road network fit for purpose, enhanced bus services, safe and attractive cycleways and well maintained footpaths of all types. This should all be in the context of reducing the need to travel and conserving energy. Particular emphasis must be given to advances in IT.

2. Such a strategy would provide the context for consideration of investment in HSR. The Transport White Paper 2007 provided some of this—notably it did not support HSR. This needs to be updated before committing the scale of funds required for HS2. Without it the country will be locked into a long term investment programme which, based on precedent and international experience, may lead to misplaced priorities and significant opportunity costs. Major cost overruns and delays can be anticipated.

3. The UK is geographically compact with short distances between major cities. Communications between them are already amongst the best in the world including a dense railway network with frequent fast services. The scope to make major savings in door to door journey times is limited. The time savings provided by HS2 are modest (eg only seven minutes on London-Newcastle)—equivalent to approx. £700 million per minute saved.

4. Greater social, environmental and economic benefits are likely to be derived from investment in the existing network. Most intercity rail lines can be upgraded to meet EU definitions of HSR—providing better value for money compared to HS2. Trains already in service are capable of travelling at sufficiently high speed (225 kph–140 mph) to qualify under EU definitions. Experience of the TGV in France is that existing services suffer as investment and other resources are diverted to creating a new network.

2.3 Impact on domestic aviation

1. The impact on domestic aviation is likely to be restricted to London to Glasgow and Edinburgh. Rail already has significant share of the Manchester—London market (80%) and passenger numbers between other cities affected by HS2 are small.

2. Saving on journey time to Scotland will not be significant (43 minutes saving on current best to Edinburgh and only 38 minutes to Glasgow). This is unlikely to prompt a major modal shift. HS2 assumes that it can convert directly numbers of travellers who switch to HS2 into numbers of withdrawn flights. This is unrealistic as airlines may accept lower load factors or use smaller aircraft. It is possible that international airlines will use this as an opportunity to use vacated domestic flight slots for long haul—the net effect would be a dramatic increase in carbon emissions.

3. HS2 forecasts assume that the domestic aviation market will increase by 178% by 2033. It also assumed new runways would be built at Stansted and Heathrow—they did not change these assumptions despite cancellation of new runways. The reality is that the domestic aviation market between London, Edinburgh, Glasgow and Manchester has been in decline for several years according to CAA statistics.

4. In practice HS2 will have to capture 50% of the current market (3.5 million flights per annum out of a total of 6 million) from Glasgow/Edinburgh to all London airports to meet modal shift forecasts (7% of passengers using HS2 will have switched from planes). Most flights are to Stansted, Gatwick and Heathrow which have been denied permission to build new runways—there is high demand for vacated slots. A switch from domestic to long haul flights will result in a quantum increase in emissions. The HS2 has not incorporated anticipated reductions in aviation emissions in the next 60 years which further reduces the scope for offsetting its own emissions

5. If airlines are to be forced to keep freed up slots vacant, possibly by legislation there will be a considerable loss of income to airlines amounting to several billion pounds over the 60 year term used for HS2 calculations. If 3.5 million of HS2's passengers previously flew the lost fare income to airlines will be approx. £175 million per annum (based on an estimate of £100 per return flight). Over a 60 year period this equates to £10.5 billion in today's prices. Other losses will be suffered by the airport, eg loss of car parking income, retail sales etc. This impact on the aviation industry and national economy has not been included in the business case for HS2.

3. Business case

1. The demand forecasts are far too optimistic with an over reliance on historic trend data. The lessons of the Eurostar and HS2 domestic services, where forecasts were not met, have not been learned despite the warning from other parliamentary committees.

2. HS2 fails to take into account the impact of IT on demand for travel, more flexible work patterns and the relatively high cost of all forms of transport. Neither does HS2 recognise that the individual propensity to travel in the UK has been static for 15 years. Most trips will be for leisure—but no explanation as to why many more people will want to travel long distance for leisure is given. Shopping and entertainment facilities are good in all city centres connected to HS2—the relative attraction of London is declining.

3.2 Capacity

1. The problem of capacity may not be as great as some have suggested. Over crowding, whilst attracting headlines, is actually a limited problem affecting a small number of intercity journeys—the problem is exacerbated by pricing practices.

2. As identified in the Eddington Report 2006 significant and affordable increases in capacity can be achieved by extending trains, converting first class carriages to standard class and improving a small number of pinch points. Upgrading of the signalling systems has to be installed in any event. These improvements would increase capacity and enable trains to operate at their design speed of 140 mph (225 kph).

3. Adjustments to pricing and the need to reserve seats on peak hour trains would help to avoid any problems of over crowding. It is likely that all HS2 trains will require seat reservation (as per TGV). Passengers cannot be allowed to stand on a high speed train which means numbers have to be controlled.

4. It is imperative that attempts are made to manage demand and keep it in balance with capacity. In line with successive Government policies, reducing the need to travel should be a priority. The ever increasing effectiveness and availability of IT will help with this challenge. It also reduces vastly the HS2 business case as all time on a train can be used productively thus reducing the value of journey time saving. The widespread practice of flexible working will help to remove traditional peaks. The use of the market to bring supply and demand into balance has not been applied fully.

4. The strategic route

1. The selection of the London-Birmingham route was significantly influenced by the DfT decision to specify that trains operate up to speeds of 400 kph. This meant there was very limited scope to alter the alignment.

Contrary to government legislation and national planning policy (notably PPS7) it made it impossible to avoid building through the nationally protected Chilterns AONB with no serious option for avoiding the area.

2. This speed was chosen partly because the claimed economic benefits rested so heavily on the value of time saved. That valuation based on the assumption that all time on a train was wasted and any time saved could be converted to productive work with a value equivalent to an annual cost of £70,000 per annum per employee lacks credibility—it fails any common sense test. Anybody who wishes to work productively on a train can do so—the percentage that can't because they have to stand is so small as to be negligible.

3. The weight given to valuing time saved and the high speed specified constrained route choice to an unacceptable degree. Acceptance of alternative international definitions of HSR would have allowed consideration of alternatives and less damaging routes. It would also have added weight to the Government option of Rail Package 2.

4. The proposed network will only directly link four major cities with partial benefits to several others. This will take at least £34 billion and 22 years (2033) to achieve. Most parts of the country will not be directly connected. It is not, therefore, a national network. If HS2 claims are accepted for economic generation the majority will be left out, even positively disadvantaged. It is also an acceptance that other efforts to promote economic regeneration outside London will not be successful unless and until several years after high speed rail is operating.

5. As Heathrow has little scope to expand, creation of a high speed link to the airport is unlikely to bring significant economic benefits—the return on this investment will be poor. The desire to create a direct link has further restricted route choice. NB HS2 has not included the cost of a link to Heathrow in its cost estimates nor business plan.

5. *Economic rebalancing and equity*

1. The Board is not satisfied that there is convincing evidence from comparable countries that HS2 will lead to regional economic regeneration. The HS2 Ltd forecast that over 70% on the employment creation will be in London is more credible. There is international evidence that the modest economic effects of high speed rail are restricted to a geographically small area close to the railway station. The city centres of Leeds, Glasgow, Edinburgh, Birmingham and Manchester have already undergone highly successful regeneration. The economic problems lie in parts of those cities and surrounding regions beyond the reach of HS2.

2. The damage to the economy of those areas affected by the HS2 route have not been taken into account in preparing the HS2 business case. There is emerging evidence that some cities and towns not served by HS2 (eg Coventry and Stoke) will suffer a decline in services with an associated impact on the local economy. It is essential that a proposal of this scale takes into account fully all impacts and doesn't overlook those which are unhelpful to the case for building the line.

6. *Impact*

1. HS2 Ltd now state that HS2 is likely to be carbon neutral. Earlier claims that high speed rail would be a central part of a low carbon economy are no longer made.

2. It has to be assumed that for the foreseeable future a significant part of electricity generation will be from fossil fuels. This means HS2 services will result directly in carbon emissions. High speed trains use more energy than slower trains—at least double. If trains travel at 400 kph it will be nearer four times. As HS2 also propose to run longer and more frequent trains emissions will increase significantly several fold again. HS2 hopes this can be offset by promoting modal shift from cars (very small) and planes. The outcome is that in total HS2 services will generate significantly increased emissions possibly more than eight times that of services operating today, and indirectly stimulate a considerable increase in carbon emissions if long haul flights replace domestic flights. According to Birmingham airport, a new Birmingham parkway station will enable it to double its passenger throughput to nine million passengers per annum.

3. HS2 make no allowance for the energy needs for operating the new and enlarged stations.

4. HS2 Ltd calculations for the emissions associated with the construction of the line are too low. The total embedded carbon for constructing the line and associated stations is estimated to be only 1.2 million MtCO_{2e}. This is not a credible figure in view of the quantities of steel and concrete needed, and the associated emissions of transport for movement of material including the quarrying and disposal of millions of cubic metres of spoil. An example of the underestimate is that HS2 state that the volume of spoil to be excavated and disposed of for the section from West Ruislip to Aylesbury is 680,000 cubic metres. The actual volume is nearer 12 million.

6.2 *Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?*

1. No. The business case does not include the value of any environmental impacts. Whilst other attributes such as crowding are given monetised values and included no such attempt was made for any environmental characteristic. As significant weight is attached to the Benefit Cost Ratio (especially by Treasury) the environmental impacts have not been correctly accounted for.

2. HS2/DfT has refused to provide a figure for the total land take but it is believed to be approx 2,500 hectares, representing a considerable loss of productive farmland and woodland. No value is attached to the value of production foregone. In the Chilterns AONB alone 24 woods will be lost or damaged (17 hectares) of which 12 hectares are ancient. The Board estimates that in the Chilterns 13,700 metres of hedgerow will be lost of which several thousand metres are ancient.

3. The Chilterns is a major aquifer providing drinking water to over one million people. The railway will be tunnelled through the aquifer but HS2 has not been able to provide any reassurance that these drinking water supplies will not be affected. It is known that abstraction sources at Chalfont St.Giles, Amersham and Little Missenden, cannot be used for the duration of the construction. Such matters have not been incorporated in the HS2 report or business plan. There will be a cost as the local water companies will have to seek alternative supplies.

4. The River Misbourne is one of England's most endangered rivers according to the Environment Agency. It has suffered from low flows for many years due to a combination of over abstraction and variable climate. The railway follows the river valley and the Misbourne is likely to be badly affected during construction with the possibility of permanent changes to its hydrology.

5. The Chilterns is one of the most popular areas for walking in Europe (55 million visits per annum—Southern Tourist Board 2007). Many visitors arrive from London by train in the Misbourne valley. The local pubs and shops benefit from these visitors, but it is a trade which will diminish significantly for many years. The blight has begun as businesses consider whether it is worth investing. The reputation of the whole of the Chilterns will suffer when the work begins, further reducing the number of visitors over a wider area than that affected directly. The loss of business has not been taken into account. In general the impact of the construction itself on the local economy and communities will be significant but no weight has been given to these effects.

6. It will have a major and permanently damaging impact on the Chilterns Area of Outstanding Natural Beauty. The reputation of the Chilterns as place for quiet recreation will be affected. The Ridgeway National Trail will be cut and regionally important routes such as The Chiltern Way and Chiltern Cycleway will also be severed or diverted. Restoration of these routes may not take place for a decade.

7. Along the line 10 SSSIs and another 100 sites important for wildlife will be damaged. It is known from HS1 that a 2 metre high security fence will be erected for the entire length of route. This would be an ugly intrusion into the landscape and a substantial barrier to the movement of mammals.

8. The quality of the Chilterns landscape (and across the UK in general), is in large measure due to farming. The high speed rail line takes no account of farm holdings, many of which will be dissected. The impact will be that many will be rendered permanently uneconomic due to severance. Others may not survive the disruption caused by the construction itself. The impact on farming is not considered at all in the HS2 business case.

9. The business case has not given any weight to the generation of noise. Published data related only to Laeq figures. This has the effect of averaging thus reducing the actual noise levels experienced. Lmax figures should also have been published. There is international evidence (ANASE Report for DfT 2007) to show that noise disturbance is also related to frequency, timing and suddenness. None of these factors have been taken into account. HS2 also acknowledges that above 200 mph aerodynamic noise becomes more of an issue, but no information has been published by HS2 to show what the effect would be if speeds of up to 250 mph were to be achieved.

May 2011

Written evidence from Leeds City Region (HSR 127)

1. What are the main arguments either for or against HSR?

There are a number of arguments for HSR. These are:

Economic

There is a strong economic case for enhancing the capacity and performance of the north-south intercity network. The benefits are particularly important in re-balancing the economy.

The Government's own analysis shows that HSR would deliver economic benefits worth £44 billion over 60 years. These benefits are conservative. Work undertaken by Northern Way⁹⁷ has demonstrated around £6 billion worth of agglomeration benefits. Work undertaken by Leeds and Sheffield city regions⁹⁸ shows over £2 billion worth of wider economic benefits to the two city regions alone.

The development of a high speed rail network in the UK with significantly quicker journey times will also help to address the challenges of global competitiveness of the UK. Other countries are developing high speed rail networks. HSR will support transformational economic change across the UK and in particular the north

⁹⁷ http://northernwaytransportcompact.com/North_South_Connectivity.html

⁹⁸ http://www.wymetro.com/NR/rdonlyres/47DE8EB2-132A-4BBF-8AA4-F0FE4B3D6E9C/0/EconomicCase_HighSpeedRail2.pdf

of England. This will help to achieve the Government's objective of rebalancing the economy. These transformational benefits have not been quantified in the DfT's appraisal which means the published benefits are conservative. Furthermore, the experience of European and other countries in the development of HSR networks suggests that there are significant transformational benefits to regional economies (see Lille in France as a good example).

There is also the issue of global competitiveness of the UK. Other countries are developing high speed rail networks as the solution to meet the lower carbon mobility needs of their modern economies. The UK risks being left behind if it decides not to go down this path.

Providing additional rail capacity

Evidence⁹⁹ shows that the classic network will run out of capacity within the next 10 years which will limit the potential for economic growth. The development of a high speed rail network not only addresses the capacity problem on existing classic rail networks, but through the reduced journey times allowed by high speed rail, enables transformational economic change and benefit to the UK and in particular the north of England.

The "freeing-up" of capacity on the classic rail network will provide capacity to provide new and better inter urban services on the East Coast, Midland and West Coast Main Lines to centres not served by HSR as well as being able to accommodate additional freight movements by rail.

Lower carbon mobility

The evidence suggests that demand for mobility will continue to rise over the next decades.¹⁰⁰ Should this demand be met by provision of additional capacity on the road network, carbon emissions and other harmful environmental impacts are likely to increase, congestion will worsen and quality of life for a large number of areas will worsen. If the UK is to meet its carbon reduction targets but at the same time enable economic prosperity and growth, then a solution to meet future demands for mobility is needed. HSR offers a solution to both of these challenges.

2. How does HSR fit with the Government's transport policy objectives?

- The government's high level transport objectives relate to economic growth, rebalancing the economy and carbon reduction—HSR fits with both of these high level objectives, albeit over the long term.
- The Local Transport White Paper envisages more sustainable local transport—the link between high level/ national projects such as HSR and local transport is not yet well-made.
- Investment will be needed in existing main railway lines to enable new and improved services between important centres not served by HSR, and to facilitate in rail freight traffic.
- HSR stations will have significant impacts on local transport networks and there needs to be an effective policy framework to make the link. Investment in city region transport systems will be crucial in order to ensure a high level of accessibility to HSR, and to distribute the benefits as widely as possible.
- The National Policy Statement on transport networks has yet to be published—this is now urgently required.

2.1 HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?

Inter-urban connectivity is extremely important to modern city region economies. Bringing labour markets and economic centres closer together has been shown to deliver significant economic benefits¹⁰¹ through agglomeration. Indeed, the Leeds City Region Transport Strategy¹⁰² emphasises the importance of improved connectivity to other city regions, including London, Birmingham, the East Midlands, Sheffield and to Manchester.

This does not however negate the importance of other transport policy objectives and spending programmes such as within city regions. Lower carbon connectivity within city regions is also extremely important from an economic, quality of life and carbon reduction perspective.

Evidence from city region studies shows that typically 70–80% of all journeys are within city regions. Therefore, more effective integrated city region transport networks and systems will support agglomeration and economic growth, and contribute towards the Government's low carbon agenda.

⁹⁹ www.networkrail.co.uk

¹⁰⁰ Tight, MR; Bristow, AL; Pridmore, AM; May, AD *What is a sustainable level of CO2 emissions from transport activity in the UK in 2050?* Transport Policy, 3, 12, 235–244, 2005

¹⁰¹ http://northernwaytransportcompact.com/Transport_the_Economy.html

¹⁰² <http://www.leedscityregion.gov.uk/content.aspx?id=230>

2.2 Focusing on rail, what would be the implications of expenditure on HSR on funding for the “classic” network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?

HSR is a national, strategic, economic intervention that is critical to a sustainable competitive economic future of the UK economy. It will help close the north-south economic divide and rebalance the economy. It should be therefore be funded with this in mind and not be at the expense of the current rail spending on services and infrastructure enhancements on the classic network such as on the East Coast mainline, Transpennine and other City Region rail networks which are desperately needed in the interim/short term.

2.3 What are the implications for domestic aviation?

The Leeds City Region has already lost direct air links to London Heathrow and also recently to London Gatwick. Whilst total numbers on these routes were relatively small in comparison to inter-city rail travel to/from Leeds City Region, the Heathrow route in particular was important as an inter-lining hub for long haul business and leisure travel. As a result, Amsterdam Schiphol is now the City Region’s inter-lining hub, effectively transferring domestic aviation to international aviation for inter-lining from Leeds City Region. A fast high speed rail link from the City Region to London Heathrow would enable “inter-lining” again via Heathrow, however this time via a lower carbon mode.

3. Business case

3.1 How robust are the assumptions and methodology—for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the “classic” network?

As previously mentioned, the economic benefits are likely to be understated as the transformational benefit that HSR would bring to the North’s city region economies has not been fully accounted for using existing appraisal methodology. Evidence from our own economic analysis has been accepted previously by HS2 Limited and used in making the case for investment in a “Y” shaped network.

3.2 What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?

The experience of the West Coast Route Modernisation programme shows that in addition to the huge disruption to passengers of upgrading existing lines and the resulting negative impact on revenue, the cost of upgrading existing lines to similar standards would be hugely expensive. In addition, it has provided a medium/long term solution and the West Coast Main Line is predicted to be at capacity again in less than 15 years.

3.3 What would be the pros and cons of alternative means of managing demand for rail travel, for example by price?

Managing demand through pricing for longer distance rail travel will have a negative impact on the economy through discouraging economic activity and business, the environment through an increase in carbon and other harmful emissions due to increased demand for motorway travel and domestic aviation, and quality of life through increased congestion, noise, and additional land take for extra road space. Whilst pricing clearly has a role for spreading demand for rail to encourage better utilisation of capacity, any choking off of inter-city rail demand by pricing would be a retrograde step for the Leeds City Region economy, and the Government’s efforts to rebalance the economy.

3.4 What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?

No comment.

4. The strategic route

4.1 The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?

No comment.

4.2 Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?

- There is a need for the development of a national HSR network that connects the major cities together.
- The Y network represents a good starting point, but further connections are required to the Tees Valley, Tyne and Wear and Scotland. There is also a need to ensure that the proposed Y shape has sufficient capacity to ensure that future demand from all parts of the country can be accommodated to facilitate not only inter-city links, but also connectivity to Heathrow and also HS1 to mainland Europe.

4.3 *Is the Government correct to build the network in stages, moving from London northwards?*

- Whilst it is inevitable that a national high speed rail network will need to be delivered in phases, it is important that the full network is delivered at the earliest possible timescale. Legislation for the Leeds and Manchester legs should be brought forward at the earliest possible opportunity. There should be a firm commitment to the whole of the network—either through provision in the Hybrid Bill or through the National Policy Statement on transport networks. A clear plan for delivery with an indicative programme will give confidence on wider investment decisions in the economy, and enable alignment with other strategic policies.
- It is particularly important that both legs of the “Y” to Manchester and Leeds are delivered in parallel to avoid any economic imbalances. The eastern part of the proposed national high speed rail network will deliver greater economic benefits than the western part. Previous work undertaken by HS2 Ltd has estimated that the eastern route between Birmingham and Leeds has a higher BCR (5.6:1) compared with the western route between Birmingham and Manchester (2.6:1). The Eastern route would deliver greater wider economic impacts than the western route, with those being £2.5 billion and £2.1 billion respectively.
- Given that the benefits of HSR are about rebalancing the economy and that there are huge wider economic benefits to be had by bringing northern cities closer to other city regions and London, there is a strong argument for beginning construction of HSR simultaneously in London and the north. Critically, the Government should include in its plans for the first phase of HS2, a connection from HS2 to the Midland Main Line (which itself should be electrified). This would allow cities along the eastern leg to benefit from the initial phase of HS2 and would begin to help further those economic linkages that are vitally important to the Leeds City Region economy.

4.4 *The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?*

Given what has already been said about the importance of inter-lining at the Heathrow hub to the Leeds City Region economy, it would be preferable to have a direct link to Heathrow from Leeds City Region via an electrified Midland Main Line and HS2 as part of the first phase,

5. *Economic rebalancing and equity*

5.1 *What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?*

This has largely been covered in previous sections through the citing of evidence based work produced by The Northern Way and Leeds and Sheffield City Regions on the economic case for HSR and the importance to northern city region economies.

The Leeds City Region has, jointly with a number of other City Regions along the proposed eastern alignment of the Y, commissioned further work to strengthen the evidence base that supports the case for high speed rail along the eastern alignment. This work will be published shortly, however it confirms the significant economic benefits to the eastern city regions due to HSR, as well as to Birmingham and London.

5.2 *To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?*

Investment in city region transport networks and systems will be vital to ensure a high level of accessibility to HSR, and to distribute the benefits as widely as possible. More effective integrated city region transport systems will support agglomeration and economic growth, and contribute towards the Government’s low carbon agenda.

The shape of the network needs to help deliver objectives around promoting economic growth, helping to reduce carbon emissions and improving quality of life, from a national strategic perspective. Governments have long sought to close the economic divide between the north and south of England, and despite some progress, have so far not succeeded. HSR provides a huge opportunity to do this and so the proposed Y shape is considered critical by the Leeds City Region.

5.3 *Which locations and socio-economic groups will benefit from HSR?*

- City centre locations and associated business and employment near to HSR stations will be the primary beneficiaries, though there are also other beneficiaries such as leisure travellers. Evidence¹⁰³ produced for the Leeds and Sheffield City Regions suggests that the sector to benefit most from HSR in the Leeds City Region is that of “Producer Services” i.e. business and financial services. This is to be expected given the importance of this sector to the Leeds City Region economy.
- The benefits of HSR can be extended by improving connectivity into city centres by investing in local transport to maximise the potential of HSR.

¹⁰³ http://www.wymetro.com/NR/rdonlyres/47DE8EB2-132A-4BBF-8AA4-F0FE4B3D6E9C/0/EconomicCase_HighSpeedRail2.pdf

5.4 *How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?*

No comment.

6. *Impact*

6.1 *What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?*

Two of the Government's main policy objectives are economic growth and carbon reduction. One way of supporting economic growth is bringing people, businesses and economic centres closer together through faster and improved transport connectivity. However, if this is done by increasing inter-city road travel or domestic aviation, then future carbon emissions will not be minimised. High speed rail offers a solution to help to achieve both of these objectives.

It should also be noted that by freeing up the existing classic rail network up to other traffic such as freight, carbon emission reduction from other economic activities is also enabled.

6.2 *Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?*

No comment.

6.3 *What would be the impact on freight services on the "classic" network?*

Additional rail capacity should be freed up on the East Coast, Midland and West Coast Main Lines for freight. This would be extremely positive for the Leeds City Region in terms of the future role of logistics in its economy. Rail freight distribution centres in the City Region are situated at Wakefield Europort and Stourton in Leeds. Network Rail's Strategic Freight Network programme will mean that the rail network to these freight centres will soon be gauge enhanced. Improved rail capacity on the national rail lines connected to these freight centres by the development of HSR will further facilitate growth in rail freight to/from the City Region freight centres which will help support and create logistics jobs in Leeds City Region, on the back of lower carbon transport activity.

6.4 *How much disruption will be there to services on the "classic" network during construction, particularly during the rebuilding of Euston?*

No comment.

May 2011

Written evidence from Eurostar (HSR 128)

Introduction

1. Eurostar is the high-speed train service linking the UK to destinations across France, Belgium, the Netherlands, Germany and Switzerland. We have been operating since 14 November 1994 and have since carried around 115 million passengers, doubling the size of the market for travel between London and Paris in the process.

2. Since September 2010 Eurostar has been a single British-registered company, Eurostar International Limited (EIL), having previously been an unincorporated joint partnership between the British, French and Belgian railways. As well as helping to streamline decision-making and reduce unit costs, this will better equip us to meet the challenge of increased competition arising from the new Open Access framework. We also believe it will help us more effectively expand our own operations, as we seek to broaden our reach across the UK, regional France, and further into continental Europe.

3. Our first step as a new company has been to announce a £700 million investment in our rolling stock, with the purchase of 10 new train-sets and the refurbishment of our existing fleet. Built to a bespoke specification, the new Eurostar e320 trains will be "interoperable", meaning that they can operate across the European high speed rail (HSR) network, and provide direct services between London and a range of city centre destinations throughout Europe.

4. We aim to become the leading travel experience in Europe, substantially increasing the number of connecting passengers to destinations beyond Brussels, Lille and Paris by 2015. At the same time, we want to maintain our leadership on the London-Paris route, which will be central to our success in the future.

5. Eurostar supports the Government's plans to expand the country's HSR network and, as the only operator currently running international HSR services in the UK, has a number of substantive points to make in response

to the Committee's inquiry. We have only responded to those questions where we have felt able to put forward a view based on our experience as a HSR operator.

The main arguments for High Speed Rail

Increasing capacity

6. High speed rail represents the most effective means to introduce additional capacity to the national transport system. It is noteworthy that the original business case for France's first high speed line from Paris to Lyon included the benefits of capacity released on conventional lines, by transferring intercity trains to the new line.

7. Additional capacity will soon become necessary in the UK. For example, the West Coast Main Line—despite being upgraded at great expense and disruption—will again encounter capacity constraints by the middle of the next decade. Investment in new infrastructure in the form of HSR will restore capacity on existing railway lines, for the benefit of local stopping services and freight movements, and deliver a step-change in reliability. This cannot be matched by upgrading the existing rail network.

8. Capacity improvements, combined with a dramatic shortening of journey times for medium- and long-distances journeys, will result in significant modal shift to HSR from carbon-intensive car and air travel. This will not only release capacity on motorways but bring with it considerable environmental benefits and will be crucial to meeting the ambition of the European Commission, as stated in its recently published White Paper, to see a “50% shift of medium distance intercity passenger and freight journeys from road to rail and waterborne transport”.

Environmental benefits

9. Through the 2008 Climate Change Act, the UK government has signed up to ambitious carbon reductions targets of 34% by 2020 and 80% by 2050. The UK Committee on Climate Change has also recently recommended an interim target for 2030 of 60% reduction with an adjustment to the 2020 target, raising it to 37%. At the time of writing, the Government has not yet decided whether to accept the recommendations of the Committee. In parallel, the European Commission's recent White Paper on Transport sets out steps to achieve a 60% reduction in transport emissions across Europe by 2050. As the transport sector is responsible for approximately 29% of European carbon emissions, it has a significant role to play in helping the UK to meet its own carbon reduction targets. Within the sector, delivering modal shift to lower carbon forms of transport such as HSR is clearly critical in meeting the proposed 60% target.

10. Travel by HSR produces only one-third of the carbon emissions of car travel and one-quarter the emissions of an equivalent trip by air, taking into account the average loadings typically achieved on each mode. For example, a typical Eurostar journey between London and Paris or Brussels generates around a tenth of the amount of the greenhouse gas carbon dioxide (CO₂) generated by the equivalent short haul flight.

11. The shift of passengers from short-haul air to high speed rail within the first year of operating on HS1 resulted in a combined passenger saving in excess of 40,000 tonnes of CO₂. Investment in HSR will therefore make possible a lowering of emissions from the transport sector at a time of increased public awareness and acceptance of the effects of damaging CO₂ emissions on climate change.

12. These benefits will further increase in the future as HSR becomes more environmentally efficient and as the UK electricity supply becomes less carbon intensive. The UK electricity supply is currently amongst the least environmentally friendly in Europe in terms of CO₂ emissions per kW hour of electricity generated. It is certainly the most carbon intensive electricity supply on Eurostar's network, with grid averages for France and Belgium having approximately a fifth and a half, respectively, of the carbon intensity of UK generation.

Journey times

13. High Speed 1 was the first new mainline railway for 100 years, with the principal practical effects having been to reduce the journey times between the centres of London and Paris/Brussels [fig.1] These faster services, as well as the convenience of city centre to city centre travel, have resulted in both significant modal shift and a stimulus to business and leisure activity.

Figure 1

	<i>November 1994</i>	<i>September 03 (opening of CTRL 1, first part of HS1)</i>	<i>November 07 (completion of HS1)</i>
London-Paris	2h 55m	2h 35m	2h 15m
London-Brussels	3h 15m	2h 20m	1h 51m
London-Lille	2h 05m	1h 40m	1h 20m

14. A further principal attraction of HSR to passengers is reliability. Because HSR lines are purpose built, they offer much higher reliability and punctuality than is possible on conventional lines. The presence of often older equipment and a mixture of different train types mean that any delays that occur on conventional lines are often compounded. In contrast, the average delay per train due to infrastructure problems of any reason (including weather) on HS1 since it opened is less than ten seconds per train.

15. The problem of regular weekend disruptions because of maintenance or renewals also barely exists for HSR lines. The greater spacing between tracks necessary for high speed operation—a wider “six foot” in railway parlance—means that relaying and maintenance works can be routinely carried out on one line with the other still fully open with reversible working.

Economic impact

16. France’s TGV network provides a number of examples of the economic impact of HSR. Lille is such an example. The city has been transformed by its location on the crossroads of the northern TGV networks, with direct links to Paris, Brussels and London. 20 years ago, it was struggling with around 40% unemployment resulting from the decline in its traditional engineering and mining industries. The TGV has given Lille residents access to new job opportunities in Paris and Brussels, with significant commuting flows to both, and encouraged new businesses to locate there because of its superb accessibility. The line has also enabled tourism to flourish in the city, further fueling the local economy and creating new jobs in the area. Unemployment is now around 11%, only a couple of percent above the national average.

17. Eurostar believes that similar benefits could flow from the construction of a London to Birmingham high speed line and the extension further north of the UK’s high speed network.

18. The establishment of high speed rail services between London and Paris has also had a major impact on the economies and geographies of those two cities. London is now France’s sixth city in terms of population with over 300,000 French nationals now living and working in London. Many companies exchange personnel weekly between their Paris and London offices, and some service both capitals from a single office—in both cases boosting productivity and extending markets. It is also well known that the volume of tourism between the two cities has expanded enormously—with the market for French visitors to London virtually created by Eurostar.

19. Moreover, according to London & Continental Railways (the builders of HS1), since the construction of the line, there has been £10 billion worth of development and investment committed around St Pancras International/Kings Cross, Stratford and Ebbsfleet stations. Although not all of this development is attributable to HS1, the line has undoubtedly played a major role in encouraging this investment.

How does HSR fit with the Government’s transport policy objectives?

HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?

20. Of all the potential options available, HSR is the only one capable of offering a step change in the reduction of journey times, and therefore improved accessibility between key cities and regions. Building a new motorway would not directly reduce inter-regional journey times, because maximum speeds would still be the same as on existing motorways. If anything, motorway speed limits may be reduced in future—as they already have been in Spain—in order to improve fuel consumption and reduce dependence on imported oil. Likewise, domestic air services are already largely at their practical limit in terms of aircraft speed, and therefore journey times. This leaves HSR as the only mode which would materially reduce passenger journey times on an inter-regional basis, and therefore achieve the desired strategic improvement in accessibility.

Focusing on rail, what would be the implications of expenditure on HSR on funding for the “classic” network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?

21. It is important that the Government maintains adequate investment in the existing rail network, including—as achieved in France with great success—allowing for the integration of existing lines with new HSR lines. The Government has already demonstrated its commitment through the allocation of hundreds of millions of pounds of investment in the classic rail network. Eurostar supports the ring-fencing of funding for HS2 away from the main DfT budget.

What are the implications for domestic aviation?

22. The construction of a HSR network should result in a decrease in domestic air journeys. The introduction of an HSR line between Brussels and Paris, for example, has virtually eliminated commercial flights between those two cities. This will, in turn, release airport capacity for long-haul flights and better enable Heathrow to preserve and build upon its status as a global aviation hub.

Business case

What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?

23. Alternatives to the construction of the national HSR network, such as upgrading the West Coast Main Line or building new conventional lines, whilst resulting in new capacity, would lead to considerable disruption during the period of construction without a concomitant improvement to journey times, punctuality or reliability. There is considerable evidence to support this, including research carried out by Atkins for the Department for Transport in 2009 and 2010 and for the Strategic Rail Authority in 2003, Network Rail's New Lines Programme and Greengauge 21's Fast Forward research programme in 2009.

What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?

24. Despite the complexity of that programme, HS1 and its associated projects serve as a good model for what future schemes can achieve. The £5.8bn project to build the UK's first high speed rail line was achieved on time and within budget. In this respect, it is one of the country's most successful major infrastructure projects in recent years, and provides an excellent example of UK engineering excellence.

The strategic route

The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?

25. HSR makes possible fast city-centre to city-centre journey times. It is self-evident that the more intermediate stations there are along a HSR line, the longer the length of the journey. As noted in a number of key studies on high speed rail,¹⁰⁴ reducing the overall speeds by stops at smaller intermediate towns can reduce the benefits for major cities without achieving sufficiently large compensating gains for the smaller centres. Examination of existing high speed networks in other countries reveals that most trains run between the capital and the major target city, with very few intermediate stops.

26. Where intermediate stations have been built on the French high speed lines—such as at Le Creusot—thus building up its role as a local centre of activity, the expected development around the station has failed to materialise and has deterred the construction of further intermediate stations.

27. Although careful planning in some areas—for example, at Aix-en-Provence—has sometimes been able to generate new development around an intermediate station, we consider that investment in the classic network, which would ensure that these areas can link to the major HSR hubs, would represent a better use of funding.

The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?

28. Eurostar welcomes the proposal to connect HS1 to a HSR network from London northwards. This will offer more and more customers the potential of connecting to continental destinations via HSR. It will also help achieve the ambition recently articulated in the EU's Transport White Paper to complete a European high-speed rail network by 2050. At the end of 2009, Europe had over 6214km of HSR lines on which trains could run at speeds in excess of 250km/h. By contrast, the UK currently only has 109km miles of HSR line.

29. The opening of the European rail network to competition under the EU Open Access framework will present passengers with greater choice in terms of both operators and destinations. The construction of a HSR line to Birmingham and northwards will enable more UK citizens to benefit from direct rail connections to Continental Europe, and for those regions to forge economic links with mainland Europe.

Economic rebalancing and equity

What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?

30. As mentioned above, Eurostar has observed at close hand the economic benefits that HSR has brought to Lille. During the 1980s, post-manufacturing dislocation resulted in high unemployment and economic depression in the city. Since the introduction of HSR in the 1990s, however, Lille has been transformed into the crossroads of Europe's HSR network, becoming France's third most powerful financial, commercial and industrial centre.

31. Cities such as Marseille, Lyon and others in France have also benefited from the steady extension of the TGV network. Economic growth has been much more evenly distributed across France, with consequent less growth pressure on Paris as a capital. By contrast, much of the UK's economic and population growth has

¹⁰⁴ Troin, J-F (1997). *Rail et aménagement du territoire—des héritages aux nouveaux défis* Edisud, Aix-en-Provence, p.84; Vickerman, R (1997) *.High speed rail in Europe: experiences and issues for further development* The Annals of Regional Science;

been concentrated in London and the South East, with strong, and still growing, pressure on housing and infrastructure as a result

32. Faster transport links between cities will boost regional business activity in the regions. They will help spread the economic halo effect around London and the south-east to areas in the Midlands, the North and the cities in Scotland. Improved business growth in regional cities will speed regeneration in run-down areas, and promote leisure travel to such destinations.

To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?

33. As indicated above, the construction of intermediate stations can reduce the benefits of HSR for major cities through the extension of journey times without achieving sufficiently large compensating gains for those smaller centres. Investing in the classic network to ensure excellent regional links into HSR hubs represents a sounder use of funding. This will enable regions to not only benefit from released capacity on the classic network but also from geographical and economic centres being brought closer together.

Which locations and socio-economic groups will benefit from HSR?

34. All rail users including low socio-economic groups will benefit from extra capacity on the classic network. For example in 2010, ticket sales at our lead-in fare of £69/€88 together with youth, disabled and senior tickets represented a significant proportion of overall ticket sales.

Impact

What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?

35. The UIC has recently published interim findings in a technical report which demonstrates that the European railway sector has reduced CO₂ emissions by a total of 38% between 1990–2009. Although this figure is representative of the entire European rail industry, it is in stark contrast to the expected rise in emissions from domestic aviation which has a negative impact on the UK contraction and convergence targets.

36. Independent research commissioned by Eurostar and conducted by Paul Watkiss Associates and AEA Technology Environment, determined that a return journey by Eurostar between London and Paris or London and Brussels generates one-tenth of the CO₂ of the same journey by air. The shift of passengers from short-haul air to high speed rail within the first year alone of operating on HS1 resulted in a combined passenger saving in excess of 40,000 tonnes of CO₂.

37. Carbon savings will also result as modal shift takes place from road and short haul air journeys to HSR. For example, on the London to Paris/Brussels route, Eurostar now has an 80% market share of the journeys made. Since the opening of HS1, Eurostar has observed a significant modal shift from air to rail, as passengers grow accustomed to the speed and ease of HSR travel.

38. A study commissioned by Eurostar in 2006 shows high speed rail's market share between a whole range of city pairs in Europe, plotting market share against journey time. The clear rule of thumb is that where the rail city centre to city centre journey time is reduced to three hours or less, rail succeeds in attracting a clear majority of the travel markets, and takes an overwhelming share where journey times are reduced below two hours. The large majority of potential British city pairs, particularly those with a significant domestic aviation service currently, fall comfortably into this range. Following the Ash cloud crisis in April 2010, Eurostar commissioned independent research which showed that 43% of respondents would be happy to travel by train for up to six hours.

39. The environmental benefits of HSR will be further accentuated as supply chains become increasingly low carbon. Our experience has shown that business travelers are already switching to a less carbon intensive form of travel. More and more corporations and many smaller companies are having to report their CO₂ emissions, and are consequently looking to reduce their environmental impacts. Our Tread Lightly carbon reduction programme was thus elaborated in response to demands from corporate customers who wanted to be able to quantify the carbon savings they were making by switching from plane to train.

40. As mentioned above, these environmental benefits will only improve in the future, as HSR travel becomes more environmentally efficient. Electric trains can be switched to even lower-carbon sources of electricity as soon as these become available under the Government's commitments to derive 20% of the UK's electricity supply from renewable sources by 2020. This is unlike aircraft and road vehicles, which are likely to remain largely wedded to fossil fuels for the foreseeable future.

Written evidence from Heathrow Airport Limited (HSR 131)

1. Heathrow Airport Limited (HAL) welcomes the opportunity to submit evidence to the Transport Committee's inquiry into the strategic case for high speed rail. We have a particular interest in the Government's plans for a new high speed rail network given the proposal to provide a direct link to Heathrow Airport.

2. We have previously submitted detailed evidence on the issue of Heathrow and high speed rail to the Mawhinney Review in 2010. Our submissions may prove useful further reading in this context and are attached as appendices to this evidence. Subsequent to the Mawhinney Review, HAL and its airlines carried out an extensive evaluation of a number of options for connecting Heathrow to the high speed network. Whilst no overall option has been established as a preferred location for a high speed station at Heathrow, it is clear that a *direct* and effective connection is a pre-requisite for achieving air/rail substitution. The proposed link from Old Oak Common will not achieve the mode shift Government is looking for. It is important to note that while we recognise the potential national strategic value of connecting Heathrow directly into the high speed rail network—ie to deliver Government objectives on mode shift and carbon savings—our commercial evaluation of the various options showed a limited investment case from a Heathrow perspective.

3. In summarising our evidence below, we consider that there is a strong case for a new high speed rail network serving the UK's principal cities and international gateways. High speed rail has the potential to create a properly integrated transport system, ensuring that the UK can compete more effectively with its European counterparts in terms of connectivity and its ability to deliver economic growth. Linking high speed rail to Heathrow Airport will be a key component of any network providing the opportunity to achieve Government objectives for increasing public transport mode share, reducing carbon emissions, improving productivity and making more efficient use of Heathrow's capacity. However, the proposal to provide a direct link to Heathrow as part of the second phase of the network means that the Government's objectives will not be fully realised for at least another 20 years.

RESPONSE TO INQUIRY QUESTIONS

Question 1: *What are the main arguments either for or against HSR?*

4. As the operator of the UK's only hub airport, we believe there are a number of key arguments in favour of a high speed rail network that is directly connected to Heathrow:

- *An integrated transport system would offer improved international connectivity across the UK.* The UK's transport system is lagging behind that of its European counterparts to the point that congestion, delay, overcrowding and costly travel are the norm on many parts of the transport network. High speed rail provides an opportunity to deliver a properly integrated transport system, with a new high speed rail network at its core, and Heathrow's global connections a key component of that system.
European experience demonstrates what can be achieved through effective integration of high speed rail with air travel and underlines the support in the recently published EU Transport White Paper to complete a European-wide high speed rail network that is connected to all core network airports. With a direct high speed rail connection, and integration into the wider transport networks serving the airport, Heathrow's extensive international route network will be complemented with a range of domestic destinations served by rail, thereby sharing the benefits of international connectivity more widely across the UK. This improved national and international connectivity will enhance the UK's international competitiveness and Heathrow's contribution to the UK economy.
- *An integrated transport system would deliver significant economic benefits.* In our second submission to the Lord Mawhinney Review,¹⁰⁵ we identified the likely value of the international connectivity benefits from a high speed rail link to Manchester and Leeds (ie assuming the full Y network). Expressed as an increase in Gross Value Added over 60 years, our analysis showed that a high speed network would offer benefits of approximately £9 billion in Present Value terms, where this provided for a direct connection at Heathrow. This illustrates the beneficial effect of improved connectivity on UK productivity, an effect that would only increase as the network is potentially extended further north and linked to HS1. Our analysis also identified, however, that a sub-optimal connection to Heathrow via Old Oak Common would result in a reduction of those benefits by some £2.4 billion.
- *An integrated transport system would promote air/rail substitution.* From an aviation perspective, there are five critical success factors to achieving air/rail substitution:
 - the passenger experience should feel like an air-to-air interchange;
 - the frequency of rail service should align with airline schedules;
 - there should be wide transport connectivity with a good range of destinations served;
 - there should be ease of interchange and efficient movement to/from airport terminals; and
 - effective baggage management solutions.

¹⁰⁵ High Speed Rail Access to Heathrow: BAA 2nd Submission to Lord Mawhinney's Review (see Appendix 2).

By combining the range of domestic destinations served by high speed rail with the range of international destinations served by Heathrow, providing the right frequency of service and making the change between the modes attractive, then it is more likely that the traveller from cities such as Manchester or Glasgow will chose to use a high speed train to reach London or connect with an international long haul flight at Heathrow, rather than a short haul flight to connect to an international long haul flight at a European airport.

- *An integrated transport system would help reduce carbon emissions.* Domestic and short-haul air travel produces more carbon per passenger kilometre than long-haul and approximately five times as much as high speed rail. By offering a more sustainable alternative to domestic and short-haul air travel, high speed rail could promote modal shift from air to rail where it is linked directly and conveniently into the UK's only hub airport at Heathrow. Integrating Heathrow directly into the high speed network could therefore bring significant carbon reductions that increase as the network is expanded northwards. It follows that the sooner Heathrow is integrated into the high speed network and it expands northwards the greater the cumulative carbon reduction benefits that can be achieved. The potential level of carbon reduction is considered further under Question 6.
- *High speed rail would help restore regional links back into Heathrow.* Heathrow's capacity constraints have resulted in the withdrawal of many domestic services to the airport. In the last 20 years there has been a 300% increase in journeys from UK regional airports to European hubs to connect to onward long-haul flights, coupled with a 25% decline in similar connections to Heathrow. In 1991, Heathrow served 23 UK airports. In 2011 that number had dropped to just six. In contrast, Amsterdam Schiphol Airport now serves 21 UK destinations and Paris Charles de Gaulle 14. Integrating Heathrow into the UK high speed rail network would help attract these passengers back to Heathrow, bringing both economic and environmental benefits through improved domestic connectivity and a reduction in domestic and short-haul flights.

Question 2: *How does HSR fit with the Government's transport policy objectives?*

(iii) *What are the implications for domestic aviation?*

5. In our second submission to the Lord Mawhinney Review (attached as an appendix), we explored in detail the addressable market share of high-speed rail if a link was built into Heathrow Airport. By connecting the proposed high speed line to Heathrow there is the potential to reduce both domestic and short-haul aviation through modal shift from air to rail. Our analysis identified three journey types that would present an opportunity for air/rail substitution:

- flights from UK regions to Heathrow for passengers flying direct to London;
- flights from UK regions wishing to transfer to one of Heathrow's long-haul services; and
- flights from the UK regions to European hub airports where passengers are wishing to transfer to long-haul services that could otherwise be taken from Heathrow.

6. For each journey type our analysis considered three scenarios:

1. a maximum case, where all air journeys were substituted;
2. a likely "integrated" case, where Heathrow has an "on" or "near" airport connection; and
3. a likely "non-integrated" case, where the connection was via Old Oak Common or similar.

7. The results are summarised below, in terms of journeys substituted in 2030 assuming the Y route to Manchester and Leeds.

REDUCTION IN AIR TRAFFIC MOVEMENTS, 2030

	<i>Maximum</i>	<i>Scenario</i>	
		<i>Likely (integrated)</i>	<i>Likely (non-integrated)</i>
	<i>Annual air traffic movements saved</i>	<i>Annual air traffic movements saved</i>	<i>Annual air traffic movements saved</i>
Heathrow passengers bound directly for London	18,000	6,000	6,000
Passengers transferring via Heathrow	11,000	3–4,000	1000
Passengers transferring via a European hub (or other London hub)	62,000	29–35,000	13,000
Total (Y network)	91,000	38–45,000	20,000

8. A direct connection at Heathrow into the high-speed rail network therefore has the potential to substitute around 38,000–45,000 flights across the UK. Significantly fewer flights are converted with an "off-airport" connection since passengers translate the additional transfer to the airport into a "penalty" that reflects their anxiety over the reliability and frequency of the transfer, lack of familiarity with the interchange, managing their luggage and the additional journey time to complete the journey. The issue of direct high speed rail

services to the airport rather than a remote interchange, such as that at Old Oak Common, is therefore a significant factor in achieving air/rail substitution.

9. Heathrow would be able to accommodate the additional passengers re-routed from the European hubs with only a minor increase in aircraft load factors. Moreover, an extension of the high speed rail network to Scotland would further increase the potential for air/rail substitution.

10. In terms of how the impact of high speed rail on domestic aviation fits with the Government's transport policy objectives, we comment as follows:

- The continued decline in connections between UK regional airports and Heathrow as a direct result of capacity constraints, coupled with the significant increase in flights from UK regional airports to European hubs, has had a damaging effect on Heathrow's position as an international hub and on the UK's international competitiveness. The Government recognises the value of Heathrow's hub status to the UK and is supportive of a continuation of that role. An integrated air/rail transport solution would improve connectivity to the airport and help to reverse the weakening of Heathrow's hub role. It will not however provide any substantial relief from the capacity shortfall facing Heathrow in the light of forecast demand.
- High speed rail, if extended as far as Scotland, would help improve regional access to London and Heathrow, particularly in light of diminishing domestic air services from the northern regions and Scotland and the subsequent adverse impacts on regional economic development. The economic and connectivity benefits of domestic air services are well understood but it is generally acknowledged that improvements in rail services can reduce demand for domestic air travel.
- In addition to improving economic competitiveness through enhanced connectivity, a high speed network could offer an attractive and more sustainable alternative to domestic air travel. With domestic air travel's inclusion within UK carbon emissions, and with those emissions set to rise over time, high speed rail could help the UK work to reverse this increase and reduce carbon emissions from domestic aviation. The Department for Transport's recently published consultation¹⁰⁶ on high speed rail confirms that the largest element of carbon reduction from the first phase of the high speed network could come from modal shift from aviation generated by improved journey times to the North and Scotland. We would emphasise, however, that a successful mode shift from aviation will generally require a journey time of less than 3.5 hours, as well as, among other things, an efficient and seamless connection. An interim connection at Old Oak Common during the first phase will not maximise the potential for modal shift.
- Mode shift from both air and road to rail would contribute to increasing the proportion of passengers travelling to airports by public transport.

11. At a broader level, implementation of high speed rail in the UK would accord with proposals in the recently published EU Transport White Paper¹⁰⁷ to complete a European high speed rail network by 2050, to connect all core network airports to high speed rail, and to encourage better modal choices for intermediate travel from greater integration of modal networks. The Commission's accompanying Staff Working Document¹⁰⁸ confirms that part of the answer to meeting the demand for air travel will be high speed rail which offers a suitable alternative to short haul and feeder flights, freeing up capacity for long haul routes, but this will require much more effective integration between the two modes to ensure the seamless transition of passengers.

Question 3: *Business Case*

(iv) *What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?*

12. The protracted Terminal 5 planning application and demise of recent major airport projects illustrates the need for the Government to ensure that large infrastructure projects, such as high speed rail, benefit from a robust, joined-up and supportive long-term policy framework. The politicisation of high speed rail must be avoided in favour of cross-party support and robust ministerial sponsorship that can be translated into a policy framework that includes the National Infrastructure Plan. This will be necessary in getting the hybrid bill successfully through Parliament, and, equally, in securing the necessary long-term sponsorship and funding certainty for a project of this scale. The constraints on public sector funding will require the Government to consider and exploit all potential funding mechanisms to ensure high speed rail becomes a reality, including EU TEN-T funding.

13. At a more detailed level, the Government must ensure that the case for high speed rail is supported by clear and thorough evidence of need and economic benefits in the context of social and environmental constraints.

¹⁰⁶ High Speed Rail: Investing in Britain's Future, Consultation February 2011, DfT.

¹⁰⁷ White Paper—Roadmap to a Single European Transport Area—Towards a competitive and resource efficient transport system, EC, 2011.

¹⁰⁸ Commission Staff Working Document—Accompanying the White Paper, EC, 2011.

Question 4: *The Strategic Route*

(ii) *Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?*

14. We support high speed rail serving those cities where it is likely to achieve air/rail substitution and subsequent carbon reduction benefits, including where this provides for a fully integrated transport network. This includes those cities already identified in the proposed Y configuration as well as a potential future extension of the network to Scotland, but could also include further connections to key cities to the south and west of Heathrow and London, such as Southampton, Cardiff and Bristol. Such a configuration could provide extensive north-south and east-west connectivity and promote substantial carbon savings.

(iii) *Is the Government correct to build the network in stages, moving from London northwards?*

15. The potential carbon and connectivity benefits from air/rail substitution and a wider integrated transport system will not be fully realised until Heathrow is properly connected into a high speed network that links directly to those key cities where there is potential for high speed rail to substitute for domestic and short-haul aviation. Our response to question iv below considers this further.

(iv) *The Government proposes a link to HSI as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?*

16. The Government has made it clear that one of its main objectives in building HS2 is to reduce domestic flights in the UK. It has also been acknowledged that the development of a high speed rail network has been a key factor in its proposed policy not to support additional runways at London's airports and that this sets a clear justification for any network to be linked to Heathrow and integrated with the European high speed network via HS1.

17. The Department for Transport's recently published consultation on high speed rail notes, in particular, that:

- The strategic case for linking a UK high speed rail network to Heathrow is compelling.
- Future patterns of economic activity are likely to depend increasingly on international connectivity.
- High speed rail is well-suited to delivering an alternative mode of travel to domestic and short-haul flying.
- A direct link to Heathrow would transform the accessibility of the airport from the Midlands and the North and would generate valuable economic opportunities for these regions making them more attractive locations for investment.
- A direct link would also contribute to Heathrow's future development as a multi-modal transport hub, further boosting demand for high speed rail access to and from the airport. This position would be enhanced with wider integration into the existing transport network.
- The largest proportion of carbon reductions associated with the London to West Midlands high speed line (Phase 1) would come from a modal shift from aviation as a result of improved journey times to the north and Scotland.

18. The Secretary of State has also commented¹⁰⁹ that switching domestic and short-haul European traffic from air to rail over the medium term will be an important part of the solution to delivering a sustainable Heathrow, ensuring that it can remain an important, national hub.

19. A spur to Heathrow, however, is currently proposed during the second phase of the network, and unlikely to be operational until 2032 at the very earliest. The Government has to accept that on these timings, its objectives for encouraging mode shift and reducing domestic flights will not be fully achieved for at least another 20 years.

Question 5: *Economic Rebalancing & Equity*

(iv) *Should the Government seek support from the EU's TEN-T programme?*

20. Yes. The Trans-European Transport Networks (TEN-T) are a planned set of interconnected road, rail, air and water transport networks designed to serve the entire continent of Europe. The aim of TEN-T is to benefit all European citizens by creating more efficient and environmentally friendly transport, while reinforcing economic and social cohesion across the continent at the same time.

21. The European Commission's TEN-T programme oversees the networks and allocates financial support towards the development of important transport infrastructure projects across Europe. The UK successfully applied for TEN-T funding as part of the HS1 project. We believe high speed rail fulfils TEN-T objectives and it would make sense for the UK to take advantage of any additional funds that may be available through the European Commission.

¹⁰⁹ HC 359 Transcript, Question 34, 26 July 2010.

Question 6: *Impact*

(i) *What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?*

22. As set out above, our second submission to the Mawhinney Review considered the addressable market share of high speed rail in the event that it is connected to Heathrow. In the same way that analysis considered the impact of various airport connections on domestic and short-haul aviation, it also considered the consequential impact on global carbon emissions. The results of that analysis are set out in the table below.

REDUCTION IN GLOBAL AVIATION EMISSIONS

	<i>Maximum</i>	<i>Scenario</i>	
		<i>Likely (integrated)</i>	<i>Likely (non-integrated)</i>
	<i>CO₂ saved per annum (Ktonnes)</i>	<i>CO₂ saved per annum (Ktonnes)</i>	<i>CO₂ saved per annum (Ktonnes)</i>
Heathrow passengers bound directly for London	90	28–30	31
Passengers transferring via Heathrow	54	13–18	3
Passengers transferring via a European hub (or other London hub)	378	185–216	84
Total (Y network)	522	226–262	118

23. Taking into account the factors that affect modal choice, and assuming an integrated “on” or “near” airport connection, the analysis indicates that the most likely carbon saving in this scenario will be around 226–262kt per annum. This is around double the carbon savings that would be achieved from an “off” airport connection, such as that at Old Oak Common.

24. The results demonstrate that fully integrating Heathrow into the high speed network brings significant carbon reductions and is critically dependent on a seamless and direct airport connection. Carbon reductions will increase as the network is expanded northwards and the UK grid decarbonizes. It follows that the sooner Heathrow is directly linked to the network and it expands northwards, the greater the cumulative carbon reduction benefits that can be achieved.

25. We hope this evidence has been helpful in setting out our overall support for high speed rail, as well as the importance of ensuring that Heathrow Airport is properly integrated into the high speed rail network to ensure that the Government’s sustainability and transport objectives can be achieved at the earliest opportunity. Should you require any clarification, please do not hesitate to contact me.

May 2011

Written evidence from the London Borough of Camden (HSR 134)

Whilst the Transport Select Committee will be examining specific issues as set out in the terms of reference there are a number of significant concerns that Camden will be making representation on in our response to the HS2 consultation undertaken by DfT. These will be forwarded to the Select Committee before 29 July 2011 and the committee is urged to give this detailed assessment full consideration.

4. *The Strategic Route*

The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?

1. Euston—The proposed main terminus of HS2 is at Euston which was selected by HS2 Ltd following their assessment of 27 locations across London including Paddington, Kings Cross, St Pancras, Old Oak Common, Stratford and Liverpool Street. The HS2 Ltd requirements for a terminus included the provision of sufficient space for 10 high speed platforms, access and dispersal areas, good public transport links and minimal impact on surrounding area. HS2 Ltd has not provided sufficient detail or justification as to why alternative locations for the terminus were discounted. As a result, there is currently insufficient evidence to take an informed view as to whether Euston is the most appropriate location for that terminus.

2. It should be noted that prior to HS2 proposals, TfL and Network Rail were working on options to redevelop Euston station to address the existing overcrowding within the station. It is likely that a project to provide additional station capacity would have increased the station footprint (but to a significantly lesser extent than HS2 propose and only to the south). The HS2 proposals at Euston would mean demolition of existing buildings (between 190 and 350 Council homes), loss of designated open space, and major construction disruptions over many years. These impacts are clearly significant and of great concern for affected communities and businesses.

3. The HS2 proposals would lead to all platforms and train lines at Euston to be lowered to below ground level and the ground level would become a large area for development (approximately 65% the size of King's Cross Central). Should the project go ahead HS2 future proposals would need to include space to re-provide homes for people displaced, provide new homes, employment opportunities, shops and new open space.

4. Whilst the principle of providing a central London terminus for HS2 may have passenger benefits, there is currently insufficient evidence to take an informed view as to whether Euston is the most appropriate location for that terminus or that the benefits would outweigh the significant negative impacts on the local community. Should HS2 go ahead, there are a number of issues that will need to be addressed, such as re-provision of housing and designated open space.

5. A further important issue would be the onward distribution of HS2 passengers potentially coming into Euston. Analysis undertaken as part of developing the Central London Transport Plan shows that whilst additional capacity is currently being provided on the transport network this will soon be absorbed by the increased demand as a result of population and employment growth and consequently there will still be significant pressure points on the network. Therefore how the onward journeys are going to be accommodated and any upgrades funded, is a key consideration as to whether Euston is the right location for the HS2 terminus. Potential solutions that could accommodate the likely future demand at Euston would be the implementation of Crossrail 2 (Chelsea-Hackney line) and the DLR extension between Bank and Euston to address the effective dispersal of passengers. These need to be included in and funded from any business case associated with High Speed rail at Euston before any decision to proceed is made.

6. Old Oak Common—The case for Old Oak Common as a terminus would remove the need for significant demolition and disruption at Euston as well as reducing the overall project costs significantly. The Council recognises that TfL have undertaken assessments that highlight concerns about Crossrail having sufficient capacity to cope with the extra passenger demand from HS2 between Old Oak Common, Paddington and Central London. Further consideration is required by TfL and HS2 Ltd to resolve if Old Oak Common would be an appropriate terminus for HS2.

7. The option for an intermediate station at Old Oak Common provides an opportunity to provide good connections to the High Speed and classic rail network without the need for some passengers to use Euston, the Underground or other rail termini. The HS2 proposals would see services on both First Great Western and Heathrow Express stopping at Old Oak Common providing direct connections to Heathrow and the west. An Old Oak Common station would help to reduce crowding at Paddington and Euston. The station is also proposed to have an interchange with Crossrail and the North London Line which has further benefits for passengers and congestion relief on the Underground.

8. There are some concerns that providing a station at Old Oak Common would detract from the case to increase the use of Stratford International for High Speed services. However, Stratford station does not provide the same connectivity or congestion relief for passengers to/from the west of London.

9. There is a good case for an intermediate and interchange station at Old Oak Common and there should be further consideration by TfL and HS2 Ltd to resolve if Old Oak Common would be an appropriate terminus for HS2.

Is the Government correct to build the network in stages, moving from London northwards?

10. The existing West Coast Main Line (WCML) serving Birmingham and Manchester is already overcrowded despite recent major enhancements. The overwhelming existing passenger demand is from and to London rather than between other regional cities. Therefore there is a clear logic to build the network in stages starting in London to relieve the pressure on the WCML.

11. It is vital that if the proposals were to go ahead that the construction phasing does not result in any significant periods of line closures as these local services provide essential transport links for people to access employment and local services. In addition the construction phases, should HS2 proceed, need to be coordinated with other upgrade/maintenance works to the transport infrastructure, such as the underground upgrades, so that a level of service to all areas is maintained throughout.

The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?

12. HS2/HS1 link—The council is concerned about the proposal by HS2 to connect HS1 via the North London Line (NLL). The current proposal would have a single track tunnel from Old Oak Common and then use track on the NLL. This could impact on capacity and services on the NLL which may need to be reduced to accommodate high speed trains.

13. The NLL has seen considerable investment in recent years to upgrade capacity and reliability on the line. The recent upgrade to rolling stock and infrastructure has contributed to significant extra demand which is forecast to increase. There are concerns about the impact on constraining future capacity enhancements to the NLL. There is concern about the impact of the proposed link on the NLL service patterns and the degree of alteration which would be needed to the existing NLL to allow the operation of High Speed trains. This

could involve bridge or tunnel widening or additional track side infrastructure. The impact of these proposals on Camden's other transports networks (eg the strategic route network, footpaths, cycle paths, bus services) and development sites (eg Hawley wharf) and open spaces adjacent to the line is not currently clear and needs to be incorporated into any proper assessment of the HS1 link.

14. Analysis undertaken by London Rail shows that with the existing infrastructure only one high speed train per hour would be able to use this link. However, the current proposal by HS2 is to allow three trains per hour to connect to HS1 at substantial cost. The issues are:

- There is no detail on the demand analysis for through running trains. The analysis needs to clearly demonstrate the benefits of such a direct link outweigh the costs and impacts on the local community.
- Lack of consideration of a link that would not impact on the NLL and allow HS2 and HS1 to link to a wider domestic high speed network in the future.
- Providing the HS2/HS1 link via a single track on the NLL provides no resilience in the network and alternative options should be considered that provides a resilient network and provides a network to future standards.
- Further technical details are needed on the link to fully understand its impacts including: its alignment, specifications and impact on bridges and structures. It is understood that HS2 Ltd are undertaking further work on how this link would be delivered. However, this it is understood that this level of detail will not be available before the closing date for the public consultation responses.

15. The council's preference is that if the proposals were to go ahead that a link between HS1 and HS2 is provided that is able to cope with future passenger demand and to enable a more comprehensive High Speed network in the future. As part of this the it is essential that businesses cases for additional network investment, both on existing networks (eg reinstate plans to extend four tracks to Camden Road) and the possible Crossrail 2 and DLR extension from Bank to Euston are considered alongside HS2, not in isolation. In the absence of this the HS proposal will have significant negative impacts.

16. In addition agencies such as Central Government, GLA, London Councils and London Boroughs will need to work together to understand the wider development of the UK's and London transport network to maximise the network benefits of HS2 not just for High Sped Rail. For example improvements to local and inter-regional services should be delivered at the same time as creating a HS2/HS1 link.

17. Heathrow link—There is a clear rationale for providing an interchange to Heathrow via Old Oak Common rather than a direct link on HS2. These issues are as follows:

- A station at Heathrow would increase journey times for all through passengers.
- The Old Oak Common interchange would enable HS2 to connect with the Heathrow Express and Crossrail which would be high frequency and provide a relatively fast journey time at a significantly reduced cost than a direct HS2 link.
- An additional station at Old Oak Common would relieve the pressure on Euston as not all passengers on HS2 would go into central London.
- Those passengers who are most likely to transfer to high speed rail from air are unlikely to be influenced by how HS2 serves Heathrow (ie Heathrow is not a destination in itself).
- It is not certain that passengers who currently fly from regional airports to Heathrow in order to transfer to long haul flights would necessarily switch to high speed rail for this part of their journey. In addition, given that HS2 is already planned to serve Birmingham International the case for connecting Heathrow Airport is far from clear.

18. In future the case for a direct link from HS2 to Heathrow as part of phase 2 may be greater, however, at this time it is understood that the HS2 Ltd's modelling results for phase 2 are not available. Therefore there remains a case to include passive provision for such a link as part of a later phase.

5. Economic Rebalancing and equity

How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?

19. If the HS2 project progresses it should be primarily funded by the Government using private finance initiative from a combination of long-term train operating contracts and maintenance contracts in a similar method to that used to finance HS1. A significant portion of the funding for the project should also be sought from Europe as HS2 would be a key element of an efficient trans-European transport network which is a key element in the relaunched Lisbon strategy for competitiveness and employment in Europe. If Europe is to fulfill its economic and social potential, it is essential to build the missing links and remove the bottlenecks in our transport infrastructure, as well as to ensure the sustainability of our transport networks into the future. Funding from fares is also a likely to be a key element of the financing package.

20. Camden has strong concerns about the Government introducing a development tariff similar to the Crossrail levy. Current experience shows that the Crossrail levy is already impacting on our ability to provide affordable homes which is a major concern for the Council for many years to come. A similar levy for HS2 would severely restrict our ability to address the affordable homes issue over the longer term which would have negative impacts on London's residents and workforce. In addition, the funding of HS2 is likely to draw funding away from other transport improvements eg investment in tube and station upgrades.

21. Other suggestions for financing HS2 should include additional passenger aviation taxes on short haul flights covered by High Speed Rail. This would have the added benefit of encouraging a greater shift to HS1 and HS2 thereby increasing their profitability.

22. It is vital that the funding for HS2 adequately takes into account the required investment in the area most impacted by the changed Euston Station, and in the wider impacts upon the London transport system—including local public realm and walking and cycling links. In transport terms this infrastructure need would include ensuring that all related public transport infrastructure projects are fully funded by any High Speed rail proposal.

6. Impact

23. Overall impact of high speed rail on carbon emissions—There is no definitive information on the environmental case for or against HS2 that assesses environmental impacts on HS2 against business as usual or alternative transport options, taking account of all whole life cost impacts and benefits. Therefore further, detailed analysis taking into account all of the factors needs to be completed. Therefore at this stage the case does not appear to be made.

24. Impact on existing services at Euston during construction—HS2 proposes to undertake the redevelopment of Euston in phases to minimise disruption to existing services and passengers and to keep the station operating. As a result, the proposal is to extend the station to the west initially to provide temporary platforms for the existing services to operate whilst the remaining platforms and new station were constructed. A similar phased approach was taken to the construction at St Pancras which broadly worked well. Camden would want to see details of the construction programme, as currently there is no indication of how the work would be phased and for how much of the seven to eight year programme services to and from Euston will be impacted. Camden would want to ensure that passengers and residents are not adversely affected during construction.

25. During the construction phase and in the longer term there are concerns about the impact of HS2 on the "classic" services between Watford and Euston. Should the project progress, there would need to be a high degree of confidence that there would be no significant negative impacts on these suburban services as they provide vital transport links. In addition there are links to the underground network as if these overground services were not provided these passengers would be displaced onto the underground network, which is already operating at capacity.

26. Whilst the terms of reference for the Transport Select Committee specifically ask a question regarding the level of disruption during the construction of HS2 there are potential longer term impacts on services operating to and from Euston as a result of HS2 proposals. A potential negative consequence of the HS2 proposal is that the overall capacity at Euston and on the approach for WCML services will be reduced. The potential for conflict between trains arriving and departing could increase resulting in delay and reduced reliability.

27. Impact on the Euston area—The construction of the proposed Euston Station will mean significant negative impacts on the lives of residents and the viability of businesses in the Euston Area. This threatens the overall functioning of Euston as a place and the potential blight arising from the proposals will stymie investment prior to and during construction. This will be to the detriment of the communities in and around the proposed station.

CONCLUSION

28. Camden opposes the HS2 and the terminus at Euston Station. There would be negative impacts on residents including the loss of people's homes, businesses and communities in the area. The proposals are not justified in transport or impact terms. There is also inadequate information to explain how an unacceptable impact on the existing public transport network would be addressed. Given this lack of evidence and the scale of the negative impacts in the Euston area the case for terminating the High Speed line here is not made. In addition long-term projects of this type carry a risk of planning blight, Euston and the surrounding area would be negatively impacted.

29. The proposal from HS2 Ltd does not provide adequate detail or a full comparison of the alternatives which include expanding and enhancing the existing rail network on an incremental basis. A proper assessment of the costs and benefits of upgrading the West Coast Mainline should be undertaken which includes:

- Optimising existing capacity by converting some first class carriages to standard class at peak times.
- Operating longer trains, without major infrastructure expenditure.

- Infrastructure modifications to selected bottlenecks to increase frequencies.
- Investment into platform lengthening, track reconfiguration and additional platforms where required.

30. Were high speed rail to progress as currently proposed then Camden would need to be convinced that the following needs are addressed at no cost to the Council.

- The replacement of and an increase in the number of affordable homes which are currently proposed to be demolished.
- An improvement in the quality of homes re-provided.
- The funding of all infrastructure upgrades required as a result of HS2.
- Re-provision of open space.
- Funding to improve impacted schools.
- Funding for resident support during process, such as West Euston Partnership model.
- A large number of apprenticeships and jobs created for local people.

May 2011

Written evidence from Passenger Focus (HSR 136)

INTRODUCTION

1. Passenger Focus,¹¹⁰ the independent national rail consumer watchdog, welcomes the opportunity to respond to the Committee’s inquiry into High Speed Rail. Our response takes a passenger centric approach to HS2 and concentrates on the impact of the scheme on passengers rather than the economic and technical analysis behind the business case.

THE CASE FOR CAPACITY

2. As part of its input into the original High Level Output Statement (HLOS) Passenger Focus commissioned research¹¹¹ into passenger priorities for improvement. Around 4,000 passengers were asked to rank 30 different aspects of rail travel. The top 10 priorities for improvement—in order of importance—were as follows:

<i>Rank</i>	<i>Rail Service Attribute (30 in total)</i>
1	Price of train tickets offer excellent value for money
2	Sufficient train services at times I use the train
3	At least 19 out of 20 trains arrive on time
4	Passengers are always able to get a seat on the train
5	Company keeps passengers informed if train delays
6	Maximum queue time no more than 2 mins to purchase tickets
7	Information on train times/platforms accurate and available
8	Trains are consistently well maintained/in excellent condition
9	Seating area on the train is very comfortable
10	Passengers experience a high level of security on the train

3. In January/February 2011, Passenger Focus carried out new research throughout the West Coast Mainline franchise operating area to identify what passengers wanted the new franchise (beginning April 2012) to deliver. Just under 4,500 passengers were asked to rank different aspects of rail travel. The table below shows the top 10 priorities for the train company as a whole. It also shows the relative importance of each attribute—the higher the score the greater priority passengers assign to that service aspect, with scores over 125 being particularly important.

<i>Virgin Trains (Whole TOC)</i>	<i>Priorities for improvement: rank order</i>	<i>Priorities for improvement: indices</i>
Value for money for price of ticket	1	246
Punctuality / reliability of the train	2	203
Being able to get a seat on the train	3	187
Length of time the journey was scheduled to take (speed)	4	139
Upkeep/repair and cleanliness of the train	5	108
Frequency of trains for this route	6	96
Provision of information during times of disruption	7	76

¹¹⁰ Passenger Focus is the operating name of the Rail Passengers Council.
¹¹¹ Rail Passengers’ Priorities for Improvements, Passenger Focus, April 2007.

<i>Virgin Trains (Whole TOC)</i>	<i>Priorities for improvement: rank order</i>	<i>Priorities for improvement: indices</i>
Personal security while on board the train	8	70
Personal security at the station	9	59
Ease of buying a ticket	10	57

4. Both our national and TOC specific research show the importance of the “core product” itself—ie an affordable, reliable, frequent service with passengers being able to get a seat. Capacity is clearly one of the top priorities for improvement among existing passengers and, we believe, one of the major challenges facing rail in the coming years.

5. Network Rail’s “New Lines” study¹¹² looked at how best to solve the problem of growing demand for rail travel on the routes between Britain’s cities. It looked at four main travel corridors:

- London to Yorkshire, the North East and Scotland (eg Leeds, Newcastle, Edinburgh).
- London to the East Midlands (eg Leicester, Sheffield).
- London to West Midlands, North West and Scotland (eg Birmingham, Manchester, Glasgow).
- London to the West (eg Bristol, Cardiff).

6. This study found that, despite all the investment to date, the route that will be become full first (by 2020) is the corridor to Birmingham and the North West. It recommended that the best solution was the building of a new railway line.

7. The Route Utilisation Strategy (RUS) for the West Coast Main Line reached similar conclusions on demand growth on the route. It concluded that the route is nearly full to capacity and is already experiencing crowding—something that would only get worse as demand grew. For example, passenger demand for travel between London and Manchester was forecast to grow by as much as 61%.¹¹³ It recommended that a “continued programme of investment is essential to deal with the expected increase in passenger numbers and to help create a climate that allows the economy to grow and flourish.”

8. DfT’s own analysis¹¹⁴ also gives priority to the main north-south inter-city routes out of London, beginning with the West Coast Main Line.

9. We believe that all these studies firmly establish the need for additional capacity and for this to focus, at least initially, on the West Coast route. There has been much debate about whether this could be delivered by upgrading existing infrastructure or whether it requires a new line and, moreover, whether any new line would need to be high-speed. From Passenger Focus’s perspective it is the provision of additional capacity that is the key priority—the other decisions being driven more in terms of identifying the most efficient and beneficial mode of delivery.

10. To this end existing studies on how to deliver this additional capacity are consistent. Network Rail’s new line study advocated a new line should be built and said that the strongest and best business case was made by making this new line capable of carrying high-speed trains. Likewise DfT’s consultation document concludes that conventional speed lines would not offer the same value for money as high speed rail and would not be significantly cheaper to construct and operate.

11. Passenger Focus agrees with the conclusions regarding the need for a new line, not least given the difficulties of modernising an existing line. Passengers know from hard earned experience that this will just mean a decade of disruption and engineering possessions while, for its part, the industry will lose valuable revenue at weekends and Bank Holidays. Virgin, for instance, has reported significant growth in demand in weekend travel since modernisation work ceased. The question of speed is, as mentioned, less of an issue for us and we must be guided by the detailed analysis provided by the experts which indicates that the best all round business case is achieved by building the new route with high speed capabilities.

CAPTURING THE PASSENGER BENEFITS

12. A new railway line also provides a once-in-a-generation chance to improve services—not just in terms of additional capacity in its own right but by rationalising services on existing routes. Passenger Focus believes that this aspect has not always come across in the debate on the merits of the proposed High Speed line—the perception being that unless it stops in “my area” it brings no benefit whereas in fact it may allow the existing conventional line to provide a better all round service (eg in terms of greater regional or local connectivity). We believe, however, that any debate on what to do with capacity released on conventional lines must be based on what passengers want from their railway. We are keen that these questions are explored further and will be working with Network Rail and the DfT on research designed to establish passengers’ priorities.

¹¹² Meeting the capacity challenge: The case for new lines. Network Rail
http://www.networkrail.co.uk/documents/About%20us/New%20Lines%20Programme/5886_NewLineStudy_synopsis.pdf

¹¹³ West Coast Route Utilisation Strategy consultation. Network Rail. 2010.

¹¹⁴ High Speed Rail : Investing in Britain’s Future. DfT. February 2011.

13. We have also consistently argued that any new line must not divert funding and attention from “today’s” railway. Getting a seat can already pose a problem for many passengers travelling during peak times on busy lines. Recent announcements on new trains and improved infrastructure are very welcome and it is important that these be introduced as quickly and efficiently as possible. Longer term it will be important to ensure that spending on the new line does not squeeze out additional investment in the rest of the network.

DEMAND MANAGEMENT

14. The Transport Committee asks about the pros and cons of managing demand for rail travel through price rather than supply. There are many within the rail industry who argue that the best way of boosting revenue from fares is to simply put them up; and that removing fare regulation and moving to airline style pricing models allows better utilisation of capacity (particularly during the “shoulder peak” period). We believe this misses two fundamental issues: rail passengers are often “captive consumers” and railways are not airlines.

15. There are a number of groups for whom the train is effectively a monopoly service. People travelling into central London often have no practical option but to take the train because some parking restrictions and congestion in London make it extremely difficult to drive. There are many people (eg elderly people) who might feel unable to drive longer distances and so the train is their only practical option. Similarly many have no access to a car, often because they cannot afford the fixed costs of owning a car.

16. The presence of many consumers unable to respond to by switching supplier (constrained consumers) means that train companies can maximise their profits by setting their fares at a higher level than if the market consisted only of consumers with other options. Where competition within an industry is insufficient to control price then it is important that the market is regulated to stop captive consumers being exploited.

17. In a truly competitive market, new companies can enter a market and compete with existing suppliers, providing a brake on existing suppliers’ ability to increase prices. In the case of rail, it is rare for new suppliers to enter the market—on most routes the train company is a monopoly provider of rail services. Sometimes it is argued that road is an adequate competitor. However on many longer distance flows, rail is substantially quicker so the train company only faces competition from an inferior product. So this is not a market where supply can expand to meet demand.

18. In addition research by Passenger Focus in 2009¹¹⁵ showed that Great Britain benefits from some of the most frequent services in Europe. The benefits of this are lost if you are tied to a specific train. Turn-up-and-go frequencies do not align themselves well to airline style book-ahead restrictions. Not everyone is able, or wants, to plan their precise train journey weeks or days in advance.

19. Another element identified by the research was the high price passengers pay for flexibility in their travel plans. Our European comparison showed that long distance travel in Britain can be cheaper than anywhere else, but in return passengers have zero flexibility—the ticket is for one train, and one train only. At the other end of the spectrum, the price of complete flexibility is very high compared with other countries. The price of flexibility is high—up to 10 times higher than the cheapest “one train only” ticket on some routes.

20. Flexibility was also an issue raised in research¹¹⁶ among business passengers. The high price of flexibility within the ticketing structure, for example to allow for a meeting that overruns by 30 minutes, was cited as a particular problem for businesses.

May 2011

Written evidence from the Campaign to Protect Rural England (HSR 140)

KEY POINTS

- Although many people and organisations make strident and sometimes simplistic claims that High Speed Rail (HSR) will or will not result in certain outcomes, whether economic, environmental or social, the evidence shows that the impacts would depend hugely on policies in other areas and external factors, not least the future price of oil.
- Just as decarbonising energy use will require using more electricity, even if total energy use could be reduced, CPRE believes decarbonising transport will require using rail for a many more trips, even assuming the overall distance travelled could be reduced.
- Other countries, such as France and South Korea, have set out long term transport plans to rebalance their transport systems in favour of rail and to secure significant modal shift of passenger and freight trips. We believe that a major shift away from road and air would be particularly appropriate for this densely populated country and lead to more efficient use of land, thereby protecting the countryside.
- CPRE believes it needs to be understood that High Speed Rail (HSR) can mean building new lines (High Speed Lines—HSLs) or it can mean upgrading and prioritising long distance passenger services on existing lines.

¹¹⁵ Fares and Ticketing Study. Passenger Focus. 2009.

¹¹⁶ Employers’ business travel needs from rail. Passenger Focus. February 2009.

- Alternatives to HS2, such as Rail Package 2A, would mean a focus on the “wrong type of capacity”, increasing seat numbers on existing services rather than overall number of train paths. By prioritising long distance passenger services, the potential to increase and increase local passenger and freight services on lines that are already congested could be severely limited.
- Problems with the Government’s current case for High Speed 2 (HS2) and particular impacts of the currently preferred route do not mean that the principle of a new HSL—as opposed to the detail of the preferred route—between London and Birmingham is wrong.
- We need to be realistic about the limits of trying to model precisely the long term impacts of profound changes to transport networks.

RECOMMENDATIONS

- CPRE believes that a new national rail plan is needed: the 2007 Strategic Rail White Paper failed to set out long term strategy and has been overtaken by events, while the post-McNulty review paper the DfT plans to publish in November will only focus on governance and structure of the rail industry.
- As well as providing for interconnectivity between HS2 and the existing rail network, such a plan should set out long-term ambitions to upgrade the regional rail network, including rural branch lines, to ensure that the benefits of investment are not focused only on the stations that would be served by HS2.
- The draft National Networks National Policy Statement due for publication by the end of 2011 should contain new policies to lock in the benefits resulting from HS2 freeing up space on roads and runways. Without such policies, HS2 is unlikely to reduce carbon emissions or improve the overall reliability of our transport networks.
- A more transparent approach to judging the benefits of transport investment is needed—rather than trying to pretend the future can be predict accurately, appraisal should judge proposals against different future scenarios. Better balancing of and communication about trade-offs between incommensurable impacts are needed, rather than trying to simplify benefits into monetary measures.
- It is concerning that the current consultation is constrained by a very tight timetable: given the scale of the investment proposed a slight delay to allow time to improve the route could be justified. A completely different approach to route development and public participation is needed for phase 2 (north of Birmingham). The French approach of a structured public debate before any route proposal has been developed in detail has much to commend it and should be trialled.
- It is unsatisfactory that the route’s precise impacts on countryside still remain unclear. The DfT should work with national and local organisations to ensure that the potential impacts of this type of infrastructure are better understood and addressed. Funding for community engagement should be considered.
- The location of stations needs to be planned better: CPRE is concerned that there has not been a two-way process between land use and transport considerations. In particular, new airport and parkway stations should be avoided.

INTRODUCTION

1. We welcome the opportunity to submit evidence to the Transport Committee on High Speed Rail. Although CPRE commented in the 1970s on the abortive Channel Tunnel and rail link proposal, it was during the planning of the Channel Tunnel in the 1980s and the Channel Tunnel Rail Link in the 1990s that CPRE established its expertise in relation to the planning of large rail infrastructure, including the involvement of local communities. The combination of our national policy work and our local reach through branches and our parish council members allows us to understand the big picture as well as local details.

2. With new High Speed Lines (HSLs) returning to the agenda, CPRE has taken a leading role again. In 2008 we drew up Five Tests for Sustainable High Speed Rail¹¹⁷ (HSR), which won the support of other NGOs and think tanks, such as the Bow Group. Recognising that the impacts of HSR can vary depending on a wide range of factors, these called to: protect the local environment; tackle climate change and minimise energy needs; shift existing trips rather than generate new ones; improve local transport, and integrate with planning and regional regeneration.

3. Last year we published *Getting Back on Track*, a referenced research report looking at HSR as well as the broader issues surrounding it. This written evidence should be read in conjunction with that report. At the start of this year we created the Right Lines Charter¹¹⁸ that sets out four principles “for doing High Speed Rail well”, relating to the need for national strategy, testing the options, public participation and minimising adverse impacts. Ten leading national NGOs and one regional NGO have now signed up to the Charter and we have met with the Secretary of State for Transport to urge him to meet its principles.

¹¹⁷ Contained in CPRE, *Getting Back on Track*, which was updated in February 2011, available at: www.cpre.org.uk/resources/transport/item/download/379

¹¹⁸ Available at: www.cpre.org.uk/what-we-do/transport/rail/update/item/1683-a-charter-for-high-speed-rail

(i) *What are the main arguments either for or against HSR*

4. When discussing HSR, it is important to differentiate building new lines from upgrading services on existing lines. The development of HSR in the post-war period prioritised long-distance passenger trains over other services and led to local stations being closed on our main lines. Adding additional tracks, whether parallel or on separate alignments (such as by reopening disused railways) can allow many local communities to reclaim these railways so they can be used for local services again and increases the potential for rail to take lorries off our roads.

5. An argument against a new line is that rail growth has been greater for local trips than long distance ones. The problem with that argument is that only by separating very high frequency, high speed services from existing tracks between Euston and Rugby will there be enough capacity for sufficient additional local services. This is particularly the case for new routes that would connect different rail lines and open up sub-regions, such as Aylesbury—Milton Keynes—Northampton.

6. A truly national High Speed Rail strategy would mean improving existing lines as well as building sections of new HSLs. CPRE is concerned that the Government's consultation focuses narrowly on a new HSR network and fails to set out a coherent vision for the rest of the rail network. Many arguments against HS2 are perhaps better conceived as arguments against this limited approach and vision.

(ii) *How does HSR fit with the Government's transport policy objectives*

7. The previous government planned a White Paper for 2012 as the culmination of its *Delivering a Sustainable Transport Strategy* (DaSTS) process. Since its election, the Government's focus on transport has been cutting the deficit and delivering HS2. The previous DaSTS policy seems to have fallen out of favour so there is no wider set of transport objectives or indeed any proposal to create any new strategy in the Departmental business plan. Indeed CPRE is concerned that there seems to be an aversion to long term planning within the Government.

8. Other countries believe that taking a long term view is essential for their competitiveness and environmental commitments. For example, at the start of 2011 France published a draft of its long term National Transport Infrastructure Plan, a key commitment of its Grenelle Environmental Law of 2008. Almost two-thirds of investment is proposed for rail, a fifth for urban public transport and a tenth for waterways.

9. Groups such as the RAC Foundation suggest that as 89% of UK trips made on roads, a similar proportion of investment should go to roads. This misses the fundamental point that there are compelling arguments to change the way we travel and shift a much greater proportion of trips to rail. In its recent White Paper,¹¹⁹ the European Commission called for the majority of medium-distance passenger to go by rail and the majority of freight to go by rail or water by 2050. Countries such as South Korea are aiming for a rapid shift to rail, an increase in passenger trips from 16% in 2008 to 27% in 2020 and freight increase from 8% to 19%.¹²⁰

10. Just as decarbonising energy use will require using more electricity, even if total energy use could be reduced, so decarbonising transport will require using electrified rail for a many more trips, even assuming the overall distance travelled could be reduced. Both energy and transport sectors in the UK have suffered from a lack of clarity and ambition from the Government in recent years and this makes it less attractive for the private sector to invest. Were the Government to be more ambitious for the share of trips made by rail and state clear objectives for future modal shares, companies bidding for rail franchises would have the confidence to propose greater investment, for example to upgrade or reopen branch lines that could feed main lines.

(iii) *Business case*

11. As business cases currently attempt to predict sixty years into the future, they are extremely sensitive to even small changes in assumptions. CPRE has undertaken analysis of the methodology for decades and has a fundamental disagreement with it. Rather than trying to predict the future and then provide accordingly, we should work out strategic objectives then plan what measures we need to achieve them. If we want business as usual—that is to say increasing congestion, increased carbon emissions from transport, land hungry patterns of development and car or lorry being the only practical option for many journeys then meeting predicted future trends could be a credible option.

12. We believe that a different course is needed for a more prosperous future. According to French experience, although existing modelling methods can cope with marginal changes, profound changes to transport networks, such as new High Speed Lines, cannot be modelled accurately, due to impacts to economic geography, such as where people live or work.

13. We do not believe that simply relying on further upgrades the West Coast Main Line is a credible option, if there is to be significant modal shift to rail. Unfortunately the assessment of alternatives to HS2 focused on seats on long distance services and not the total capacity of the railways to have more services, including new

¹¹⁹ European Commission, Roadmap to a Single European Transport Area—Towards a competitive and resource efficient transport system, 2011 available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0144:FIN:EN:PDF>

¹²⁰ Railway Gazette, *National plan to put cities 90 min apart*, April 2011

freight and local passenger services. It failed to factor in the infrastructure needs of new local passenger or rail freight services.

14. Controlling rail travel by price even more than at present would have severe economic, social and environmental outcomes. Although arguments have been made that rail travel is only for the rich, demand management by increasing peak ticket prices further would make it harder for poorer people to travel by rail.

(iv) *The strategic route*

15. The primary purpose of phase 1 of HS2—the London to Birmingham/Lichfield route—should be viewed as a bypass line to separate out high frequency non-stopping long distance services other trains on congested lines. It is this separation that means HS2 would offer much more capacity than similar expenditure on upgrading existing lines.

16. Additional stations would require significant lengths of four tracks to enable stopping trains to decelerate without holding others up. This would significantly increase land take and impact on the countryside. It would therefore be much better to plan for make better use of capacity freed up on existing lines, including reopening rural rail stations.

17. The Old Oak Common Interchange would transform local and intercity rail connectivity while a direct link to HS1 would be essential to improve connectivity between regional cities and the continent: CPRE supports both as being crucial for delivering modal shift.

18. On the other hand, the proposals for a direct link into Heathrow we believe are fundamentally wrong: the Mawhinney Review did not find a positive case for such a link, only that there could only be a case after phase 1. Demand is unlikely to justify frequent HSR services to Heathrow, while the paths needed for these would reduce the number of cities that served by HS2 trains to and from London. A Heathrow spur or loop line could have a devastating impact on West London and the green spaces within it and close to its edge. It could cause significant blight.

19. CPRE has very serious concerns about out of town parkway stations, and the proposals for a Birmingham Interchange station in the Green Belt illustrate them well.¹²¹ International evidence shows such stations do not assist regional regeneration, meaning that their environment and financial costs cannot be justified.

20. No study has been produced as to what the best options are for improving rail connectivity and capacity north of Birmingham. New HSLs are not necessarily the best option here and CPRE believes it is seriously inappropriate that detailed design of very high speed routes is being carried out by HS2 Ltd at this stage. There needs to be a wide-ranging public debate informed by evidence to decide how best to improve the north's transport and prioritise between long distance and local services. Further north, line speed improvements and passing loops on existing lines may be a better priority for investment, particularly as they could be delivered in the shorter rather than longer term.

(v) *Economic rebalancing and equity*

21. It is very easy to travel abroad and be impressed by a trip on a shiny new high speed train. It is much harder to learn about and understand the wider public consultation, transport and spatial planning as well as economic development strategies that other countries have used to try to ensure that HSLs are successful in achieving their strategic objectives.

22. It is the location of the stations that will dictate where the regeneration benefits of HS2 are felt. The evidence shows that stations need to be located in densely developed areas with excellent public transport connections, if benefits are to be spread across a region. In addition, there needs to be joined up spatial planning and development policies. This means the location of stations being influenced by land use and regeneration issues—a two-way process—rather than just expecting local authorities to plan around stations imposed in the wrong place.

23. Out of town parkway and airport stations should be avoided as these do not support regeneration. If there are to be any such stations, then their cost should be paid for by local business interests rather than the public. In terms of planning, the danger at the moment is that with the abolition of the regional tier of planning there are only Local Enterprise Partnerships to fill the gap. These are only just starting up and being made up of business interests are unrepresentative of local communities and do not include wider social or environmental concerns within their responsibilities.

(vi) *Impact*

24. The carbon impact of HS2 depends significantly on the price of oil and other transport policies: even if it does result in substantial modal shift from road or air, the capacity freed up on roads or runways could be simply reused by new trips. For aviation these could be long haul rather than short haul and so would increase the rate of climate change. A further complication is that the capacity freed up on the existing rail network

¹²¹ See CPRE West Midlands leaflet on HSR impacts on the region, 2011: www.cprewm.org.uk/hsr%20leaflet%20final%20Mar11.doc

could be used to reduce carbon emissions from transport significantly by increasing rail freight and local passenger services. Given the enormous amount of uncertainty, the claims made by some about HS2's precise carbon impact should be given little weight.

25. Many of the environmental costs of HS2 are not monetisable, for example to the impacts to landscape, tranquillity, biodiversity and heritage. Furthermore it will be impossible to quantify many of the impacts until detailed design of HS2 and associated mitigation has been carried out. It is very disappointing that the DfT has failed to give the public accurate and simple information at this stage of the consultation about the likely impacts of HS2, given how little flexibility over the route it seems prepared to consider. This needs to be urgently rectified.

26. The emphasis in the business case and DfT press releases has been on the monetised impacts as these can be expressed easily in figures of billions of pounds worth of benefits. It is of great concern to CPRE that this has meant that the wider environmental costs have been marginalised in the decision making process. Decisions on schemes of this magnitude will require detailed trade-offs between factors that are incommensurable, something the DfT seems to accept in its April 2011 guidance on business cases. How it proposes to explain this in its communications to the public remains to be seen.

May 2011

Written evidence from Heathrow Hub Ltd (HSR 150)

INTRODUCTION

1. This submission is made by Steven Costello, a Director of Heathrow Hub Ltd, the company that has developed and promoted the Heathrow Hub project to date.

2. The Select Committee asks a specific question on the proposed HS2 strategic route that is directly relevant to Heathrow—*“The Government proposes ... a direct link to Heathrow only as part of Phase 2. Is that the right decision?”*

3. The Committee may consider that this raises a wider issue—whether the current HS2 proposal adopts a strategic, intermodal approach, that includes not only Heathrow but also the existing and proposed classic rail network, or if it takes too narrow a view of transport and economic issues.

4. This is particularly important in the absence of the National Policy Statement on national networks, which HS2 Ltd. considered was required in order to allow their proposals to be assessed¹²² and the lack of any aviation industry representation on HS2 Ltd's Challenge Groups.¹²³

HS2 AND HEATHROW

5. Following their cancellation of support for a third runway at Heathrow, the Government's current consultation includes medium and long term options for an interchange between HS2 and Heathrow.

6. Meanwhile, Heathrow faces short term challenges in surface access,¹²⁴ air quality,¹²⁵ and efficient airport operations,¹²⁶ as a result of forecast passenger growth from ca. 66mppa in 2009 to 90–95mppa by 2030,¹²⁷ (within the existing constraints of a two runway airport, segregated operations and the legal cap on ATM's).

7. Historically, the UK has not adopted an integrated, intermodal approach to transport planning. HS2 Ltd. appears to have continued this approach, for example, by failing to address their remit¹²⁸ to consider wider transport issues outside of a narrow HS2 corridor between London and Birmingham.¹²⁹

8. There would appear to be clear benefits in an alternative approach, taking an integrated view of HS2, Heathrow, the classic rail network and Crossrail. Such an approach would also align with EC Transport Policy.

¹²² *“The National Policy Statement on national networks ... will set the context in which HS2 will be considered”*—para. 1.2.10, High Speed Rail, London to the West Midlands and Beyond, A Report to Government by High Speed Two Ltd. December 2009

¹²³ page 34, *ibid.*

¹²⁴ *“Even without a third runway, absolute numbers requiring surface access to Heathrow will increase dramatically over the next 20 years. In 2001–02, around 27mppa used cars and taxis to access Heathrow. By 2015–20, and assuming a 40% sustainable surface access target has been achieved, this figure will be around 40mppa”*—Heathrow Expansion, The London Assembly's response to BAA's consultation on the Interim Masterplan for Heathrow, London Assembly 2003.

¹²⁵ *“Compliance ... with EU air quality limits.... will require measures to reduce emissions from aviation and other sources, including road traffic, which is a significant contributor”*—Adding Capacity at Heathrow, Mayor of London 2008.

¹²⁶ *“Heathrow remains constrained by runway capacity. Only larger airplanes using the same finite number of slots ... represent potential increased pax until a third runway is built”*—Airports UK Pre-sale Report, BAA Funding, Fitch Ratings, Global Infrastructure and Private Finance 2008.

¹²⁷ *“Heathrow Airport could reach a passenger throughput that exceeds 90 million passengers per annum with Terminal 5 (paragraph 8.6.3 of the Terminal 5 Main Report)”*—Heathrow Airport Interim Masterplan, BAA 2005.

¹²⁸ *“The key car modal shift gain is likely to be in respect of access to Heathrow from London, the west and Thames Valley, facilitated by the Heathrow interchange (and local rail enhancements)”*—Letter from Sir David Rowlands to Lord Adonis, 13 February 2009.

¹²⁹ *“It is important to note that the model does not analyse the potential market to Heathrow from areas to the west. This means for instance that the model does not forecast the demand to Heathrow from (for example) Reading using a London Interchange Station connected to the GWML”*—p.25 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

9. For example, better surface access by rail is essential to accommodate Heathrow's growth without increasing road congestion and worsening air quality, (which already exceeds legal limits). It would also strengthen Heathrow's competitive position as an international hub against other, better connected, European airports with greater runway capacity. Securing Heathrow's future is of vital importance to the UK economy.

10. HS2 and the classic rail network would in turn benefit from additional, and high value, demand from airport passengers.

HEATHROW HUB

11. The Heathrow Hub proposal was developed prior to Government policy support for High Speed Rail, and proposes a different solution to connecting Heathrow and HS2.

12. There appears to be a growing consensus that Old Oak Common, some 12km from Heathrow, does not provide a satisfactory solution to linking Heathrow, the world's busiest international airport and UK's only hub, to the UK and Europe's High Speed Rail network.

13. Government therefore intends to consult at a later date on a spur to Heathrow as a second phase of HS2, (with the future possibility of extending the spur to form a loop). This would continue the legacy approach of diverting transport corridors into the airport, (for example the M4 spur and Heathrow Express/Connect).

14. Heathrow Hub adopts a different approach. It provides a new airport entry point located directly on the existing road and rail network, with a major intermodal interchange on the Great Western Main Line (GWML), Crossrail and the M25, (a short distance north of its junction with the M4), on a readily developable, unconstrained site less than 4km from Heathrow Terminal 5—similar to the distance between T5 and the new T2.

15. The proposed site was selected following analysis of a large number of alternatives, (including some within Heathrow's existing site boundary), as providing the optimum range of benefits at an affordable cost, allowing phased delivery and a significant private funding contribution.

16. Heathrow Hub would provide seamless connections, within a single interchange, between;

Rail, with a new railway station directly located on the GWML, served by Crossrail, regional and inter-city rail services, and the potential to extend any future Airtrack-type scheme, and the Piccadilly Line, to connect with the interchange and GWML services.

High speed rail, directly connecting Heathrow with the UK and mainland Europe.

Road, with direct access to the interchange from the M25 motorway, just north of its junction with the M4.

Air, providing an airport processor, (passenger terminal), able to accommodate forecast passenger growth, and co-located with the railway station. Fast airside transit and baggage links between the processor and satellites, located within the existing airport campus, would allow the Hub to function as an "on-airport" terminal.

17. The passenger experience would be transformed, with a high frequency "one seat" ride by GWML, Crossrail and HS2 services to the Hub, direct and seamless access to check-in facilities above the station platforms, and an airside transit journey time of only 3.5 minutes to T5A or six minutes to T2A.

18. The Government's current consultation proposal includes the Hub as one of three alternative sites, for a Heathrow interchange on a spur from HS2,¹³⁰ (the other sites being west of T5, and north of the airport close to Bath Road). Of these, only the Hub provides the potential for seamless connectivity between HS2, Heathrow and classic rail, (and the UK motorway network).

19. This connectivity would generate significant modal shift from road to rail, providing, for the first time, rail access to Heathrow from much of the UK. The resulting passenger demand would justify an airport terminal co-located with the railway station.¹³¹

20. Heathrow would be served by all trains¹³² on the GWML/Crossrail transport corridor, providing an incomparable service frequency to a wide range of destinations. This would generate greater modal shift from road to rail than, say, a Western Connection, which would continue the approach of diverting services from a limited range of destinations into the airport. This form of connection would have inherent interchange, service frequency and journey time penalties, providing significant disincentives to long distance passengers who, for example, would be required to change at, say, Reading or Maidenhead onto slow, all-station Crossrail services.

21. The Government's commitment to a direct connection between HS2 and Heathrow is to be welcomed. However, a spur or loop also has inherent service frequency penalties. Although the consultation provides no detail on service frequency and calling pattern, (indeed making no allowance at all for Heathrow services), a

¹³⁰ Connecting to Heathrow, DfT Factsheet 2011.

¹³¹ "Overall, by 2030 the presently untapped market from which the interchange could induce traffic to shift to rail contains up to 36m road journeys and 10m air journeys per year"—Improving Rail Connectivity to Heathrow—Implications for the Development of the Heathrow International Interchange, BAA/Arup October 2009.

¹³² The provision of through lines would however allow non-stopping services to pass through the station at line speed if required.

spur would inevitably have far fewer and less frequent services compared to an interchange on a direct HS2 route via Heathrow.

22. A spur also damages HS2's business case—every Heathrow service would take one¹³³ or more paths that would otherwise be used by a London train. The consultation proposes that Heathrow services would be split and joined, presumably at Birmingham Interchange. This recognises the challenge of providing high capacity services at a high enough frequency to attract passengers, whilst reliant solely on airport generated demand. Such services would also suffer a journey time penalty to allow trains to be split and joined, (and provide adequate timetabled resilience to ensure reliability and the most efficient use of HS2 train paths).

23. As the consultation has no detail of the proposed spur or service pattern, it is not clear how demand and journey time analysis, in particular HS2 Ltd's monetised values of journey time savings,¹³⁴ might impact on the business case for a spur.

24. The Government's proposal would also mean Heathrow being reliant on a sub-standard, remote interchange at Old Oak Common, (at a time when European hubs are competing on ease of access and intermodality with high speed rail), for at least 20 years—assuming that a spur is in fact eventually found to be viable, fundable and deliverable.

25. European experience is clear in demonstrating the benefit of airports and High Speed Rail being seamlessly connected by interchanges located on through lines as Heathrow Hub proposes.

26. Locating additional terminal capacity outside the existing congested, constrained airport boundary would also provide benefits to Heathrow's operational efficiency. By allowing space to be released within the airport for the larger aircraft that will generate growth in passenger numbers, it enables a better passenger experience, improved resilience and shorter taxiing distances, benefiting air quality.

27. BAA and Arup's joint submission to HS2 Ltd.¹³⁵ noted the significant potential demand for an integrated Heathrow/HS2 interchange, as well as the need for the airport to be served by high speed services running directly to the airport, (or to an interchange located as close as possible to it). It also confirmed that the interchange should be located on a site that provided maximum opportunity for the phased development of air terminal facilities co-located with both high speed and conventional rail platforms. The submission also considered that it was essential for the interchange design and location to reduce rail journey times from the West in order to attract journeys that would otherwise be made by car or taxi.

28. Having reviewed the HS2 consultation material, Heathrow Hub appears to provide a number of benefits compared to Government's current proposal:

- Heathrow would be served by the first phase of HS2, rather than relying on a sub-standard remote interchange at Old Oak Common until at least 2033, and avoiding the risk that a spur or loop is not constructed.
- Heathrow would have more space for aircraft, allowing a more efficient layout for operations, reducing the airport's environmental impacts and improving the passenger experience.
- HS2's business case is improved by connecting to Heathrow, the UK's single largest traffic generator.
- Heathrow Hub provides both GWML/Crossrail and Heathrow interchange on a single site, reducing costs compared to the separate interchanges required under Government's proposals.
- The cost of constructing Heathrow Hub, on an unconstrained Greenfield site, is likely to be lower than an Old Oak Common interchange, which requires a sub-surface station to be constructed around the operational railway and proposed Crossrail depot, assumes relocation of the existing Heathrow Express depot and is likely to need local road improvement and/or environmental measures to mitigate impacts on the local community.
- The cost of a direct route via Heathrow, using Government's own figures, is likely to be no more, and may be significantly less, than the combined cost of a spur and the first phase of HS2 when all costs associated with a spur are included.
- The environmental impacts of a through route are likely to be lower than a spur route, and its associated land-hungry, delta junction with the main HS2 route. Both the spur and junction would be located within the Green Belt and Colne Valley Regional Park. (An indication of the visual impact is provided by the images in the HS2 Engineering Study).¹³⁶ Tunnelling part of the spur would mitigate some impacts, albeit with implications for cost, although it is likely that the junction itself would be either at grade or elevated to meet the main HS2 route at that point.

¹³³ "In the case of a spur solution, one complete train path into London would be lost by every train serving and terminating at Heathrow via the spur"—p 49 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹³⁴ "Early tests suggested that reducing journey times by one minute would provide benefits of around £300–600 million on a fully utilised high speed line"—p 17, HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹³⁵ "Overall, by 2030 the presently untapped market from which the interchange could induce traffic to shift to rail contains up to 36m road journeys and 10m air journeys per year"—Improving Rail Connectivity to Heathrow—Implications for the Development of the Heathrow International Interchange, BAA/Arup October 2009.

¹³⁶ p 112–121, Delta junction visualisation, Route Engineering Study Final Report: A Report for HS2, Arup December 2009.

- Omitting Old Oak Common allows faster (non-stop) journey times between London and Birmingham.
- The consultation proposes a route that crosses the widest part of the Chilterns AONB.¹³⁷ In contrast, an alignment via Heathrow allows the option of a more southerly alignment for HS2, across the narrowest part of the Chilterns AONB, possibly following the M40 motorway corridor, (assuming some compromise on design speed over this part of the route), reducing HS2's environmental impact and the need for very costly mitigation measures.
- A connection between HS2 and Brunel's GWML high speed alignment allows possible through running, bringing early benefits to Wales, the west and south west.
- The cost to the public purse would be reduced by significant private sector funding.

HS2 LTD'S ANALYSIS OF HEATHROW

29. There appear to be a number of flaws in the way HS2 Ltd. have carried out their demand modelling and route option analysis in relation to Heathrow.

30. Referring to demand modelling, HS2 Ltd. note that Heathrow's catchment is limited to London and part of the South East. However, this appears not to recognise that this is simply a consequence of the airport currently lacking rail access from anywhere other than central London. Hence, HS2 Ltd. have mistakenly assumed that, contrary to European experience, Heathrow's market would remain unchanged with HS2¹³⁸— even if HS2 provided direct rail services, and very attractive journey times, from areas currently outside Heathrow's catchment,¹³⁹ (eg Birmingham).¹⁴⁰

31. This flawed assumption has been compounded by a significant error in HS2 Ltd's journey time calculations—the original assumption that an HS2 route via Heathrow would incur a nine minute penalty was, subsequently and apparently at a very late stage, corrected to a three minute penalty. This assumes particular significance in view of the importance of journey time savings to HS2 Ltd's business case.

32. These early assumptions appear to have been fundamental in the decision to adopt an HS2 route that bypassed Heathrow.

33. Whilst the Coalition Government's revised remit for HS2 to connect with Heathrow is welcome, it is not clear whether HS2 Ltd's original fundamental assumptions have been revisited in order to develop the current proposal for a spur or loop, or whether the current proposal has simply been retrofitted to an otherwise unchanged HS2 alignment.

34. Whilst there have been recent amendments to HS2 Ltd's modelling following cancellation of a third runway,¹⁴¹ it is not clear whether the full implications of this for HS2 demand have been modelled.¹⁴²

HS2 LTD'S ANALYSIS OF HEATHROW HUB

35. In addition to these general concerns, there appear to be a number of specific issues, concerning the way in which Heathrow Hub has been appraised in the decision making process.

HEATHROW HUB SITE CONSTRAINTS

36. In their description of Heathrow Hub,¹⁴³ HS2 Ltd. correctly state that "*the Eastern edge of the site is in the River Colne floodplain.*" (Much of the area to the north and west of Heathrow lies in the Colne Valley floodplain, including land to the west of T5).

37. HS2 Ltd. concludes that "*any station at Iver would have a major adverse environmental impact with over 50% being within the Colne floodplain with potential to disturb riparian habitat. There would be serious floodplain impacts which would be difficult to mitigate.*"¹⁴⁴

38. In fact, the proposed Heathrow Hub site is largely outside the floodplain, and extensive technical work has been carried out on an engineered solution to ensure that the proposals would have no adverse impact on the functional floodplain.

¹³⁷ para 3.5.17 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹³⁸ "Catchment areas for HS2 rail trips contain less than 10% of the air passengers accessing Heathrow"—p 8, HS2 Airport Demand Model, SKM February 2010.

¹³⁹ "This model assumes that HS2 will not increase the total number of passengers accessing Heathrow"—p 52 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁴⁰ "The market for access to Heathrow declines rapidly with distance. Journeys to and from Birmingham account for just 270,000 trips each year" para 3.3.8 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁴¹ Modelling and Appraisal Updates and their impact on the HS2 Business Case, A Report for HS2 Ltd, Atkins April 2011.

¹⁴² "A third runway at Heathrow is included in our central case. If this were not constructed, there might be additional demand for long distance rail trips as pricing and capacity constraints reduce the number of domestic air trips"—para. 4.4.12 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁴³ p 87 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁴⁴ para 3.3.30 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

39. This form of engineered solution is confirmed as being acceptable to HS2's environmental consultants with respect to HS2's own preferred route, where it is stated that "*in total the HS2 preferred route passes across 17km of the highest risk flood areas. Scheme design here would be critical to ensuring that impacts are effectively managed and avoided.*"¹⁴⁵

40. In addition, HS2's route design assumes that "*surface routes across flood plain or other land at highest risk of flooding (Flood zone 3) are on viaduct to ensure their protection and to minimise loss of flood storage and impacts on flood water flows*",¹⁴⁶ as also proposed for the relatively small area of the Heathrow Hub station platforms, adjoining, and at the same level as, the existing GWML, which runs at high level across the flood plain in this location.

HEATHROW HUB AND HEATHROW AIRPORT

41. In their description of Heathrow Hub,¹⁴⁷ HS2 Ltd. correctly state that "the proposal envisages that an airport terminal would be integrated with the Hub station, (initially illustrated with a capacity for 30 million passengers per annum). The station and air terminal would be linked to the rest of the airport with a fast and frequent, automated people mover and baggage systems. Arup estimates that the journey time from the Hub to T5 would be 3.5 minutes and six minutes to the Central Terminal Area."

42. However, HS2 Ltd. elsewhere give various, conflicting descriptions that appear to omit any consideration of the proposed "on-airport" interchange location, airside passenger transit and baggage links with the existing airport campus and the connectivity provided between the GWML, Crossrail and—potentially—the Piccadilly Line. References variously note, for example "a site close to the airport, near Iver, from which all terminals could be served by a people mover,"¹⁴⁸ and "an Iver station ... eight to nine minutes off-airport whichever terminal was being used."¹⁴⁹

43. Clearly these assumptions fundamentally differ from, and lack the benefits of, an "on-airport" interchange, with HS2 Ltd instead assuming that "a station at Iver would have connections to GWML and potentially to a parkway. However—whilst a link to the airport could be established—it is unlikely to have any connectivity equivalent to a station on the airport. Similarly this is unlikely to have connections to the Piccadilly line or Heathrow Express, and only limited Crossrail services."¹⁵⁰

44. These assumptions are critical to the modelling carried out by HS2 Ltd, since "the (Heathrow) station is designed as a modelling construct. It assumes the station is located at Heathrow CTA with cross platform connections to Crossrail and Piccadilly Lines. In practice a Heathrow station is unlikely to deliver all of these connections."¹⁵¹

45. The Government's March 2010 Command Paper on High Speed Rail adds that "a proposal has been made, which HS2 has considered, for a station outside the current airport boundary at Iver"¹⁵² and that the site is "divided from the airport by a "heavily built up area." There is, in fact, no such heavily built up area, or indeed any significant existing development, between the proposed Hub site and Heathrow's boundary.

46. In the debate that followed the Governments statement on the Command Paper, Lord Adonis responded to the Opposition's support for "a new integrated Heathrow rail hub along the lines of the plan put forward by engineering firm, Arup" by stating that "it is vital to understand that the proposal put forward by Arup is not for a station at Heathrow but at Iver, well outside the boundaries of Heathrow, some two and a half miles away on green belt and in a flood plain. If they do not even understand that their own proposal for what they call an at-airport station is not at Heathrow but two and a half miles away involving a transit journey for every passenger to get to any terminal, and on green belt in a flood plain, then they have not even begun to engage with the reality of the issues. I am not even sure that the noble Baroness understands that that is the policy of her own party."¹⁵³

47. The current consultation describes "an interchange near Iver in Buckinghamshire with a light rail link to Heathrow. Routing the line via this site shared many of the disadvantages of a direct Heathrow route without offering the benefits of an on-airport station"¹⁵⁴

48. In view of the inaccurate nature of these statements, it is of concern that the Heathrow Hub proposal, and in particular the proposal for a co-located airport terminal and railway station, which together provide an "on-airport" station and interchange, has not been properly evaluated. There must be doubt as to whether the "Iver" site that appears to form the basis for HS2's evaluation is, or has similar characteristics to, the Heathrow Hub proposal.

¹⁴⁵ p 14 Booz & Temple, Appraisal of Sustainability: A report for HS2, Non technical Summary, December 2009.

¹⁴⁶ p 8 Booz & Temple, Appraisal of Sustainability: A report for HS2, Non technical Summary, December 2009.

¹⁴⁷ p 87 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁴⁸ para 3.3.13 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁴⁹ para 3.3.37 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁵⁰ p 48, HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁵¹ p 57 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁵² para 7.6 High Speed Rail, Command Paper March 2010.

¹⁵³ Column 355 <http://www.publications.parliament.uk/pa/ld200910/ldhansrd/text/100311-0003.htm>

¹⁵⁴ p 25 High Speed Rail: Investing in Britain's Future, Consultation, DfT February 2011.

49. The Command Paper also notes that “*the dispersed nature of Heathrow’s terminal facilities means that there is no clearly optimal location for a high speed rail station*”¹⁵⁵ This assumes that the current dispersed terminal layout represents an optimal situation. In fact, the current situation is a historic legacy and there would be significant benefits, recognised by the airport operator and airlines, in an integrated approach to HS2 and Heathrow, providing the catalyst for fewer terminal facilities and enabling a more efficient airport with reduced environmental impacts.

HEATHROW HUB AND HS2 JOURNEY TIME

50. HS2 Ltd’s analysis, which led to fundamental decisions being made on the HS2 route, concluded that “an interchange station would add nine minutes at Heathrow. (The main HS2 report states the penalty for stopping trains at Heathrow is seven minutes. This difference is due to late engineering work which has suggested that our early estimates of the journey were overstated by two minutes. We have not in the time available re-run the model with this revised journey time and the results presented in this chapter are on the basis of a 9 minute journey time”¹⁵⁶

51. The current consultation reiterates that “longer journey times would reduce the benefits of an alternative route via Heathrow,”¹⁵⁷ reflecting the emphasis on journey time savings in HS2’s business case.

52. However, the journey time penalty is clarified in the same document as being marginal, “estimated to be around three to four minutes slower than the recommended Route 3, depending on the location of the interchange at Heathrow,”¹⁵⁸ and “the additional route length would entail a longer journey time between London and the West Midlands of three minutes for non-stopping services.”¹⁵⁹

HEATHROW HUB AND HS2 ROUTE

53. The consultation claims that “*this route (“Route 1.5 via Heathrow”) ... is similar in concept to the route identified by Arup for its “Heathrow Hub” proposal.*”¹⁶⁰ However, there are very significant differences between the route proposed in connection with the Hub and that assumed by HS2 Ltd, which might be expected to seriously affect its assessment.

54. For example, the consultation refers to the route “*passing close to Fulmer on a low viaduct across the river valley*”,¹⁶¹ and which “*would pass through*”—by implication, on the surface—“*the Grade II Langley Park and Black Park Country Park*”.¹⁶² The route associated with Heathrow Hub did not include such environmentally damaging proposals, but these assumptions presumably contributed to the conclusion that this route, “*although it would have less impact on the Chilterns AONB, would adversely affect other sensitive areas.*”¹⁶³

55. However, there is conflicting reference to a tunnelled alignment west of the M25, which would presumably avoid these impacts, (albeit at an increased cost). There is also stated to be a speed constraint due to a sharp curve west of the Heathrow interchange. This presumably affects journey time assumptions, but does not accurately reflect the route design associated with Heathrow Hub.¹⁶⁴

56. Route 1.5 appears not to have been assessed in the same way, or to the same level of detail, as other options.¹⁶⁵

HEATHROW HUB CONNECTIVITY

57. HS2 Ltd’s assumptions do not accurately represent the connectivity that the Hub would provide.

58. Examples include placing the “*Iver*” station on a loop or spur, rather than on the main high speed route,¹⁶⁶ assuming no platforms for international services,¹⁶⁷ and a far more limited service pattern—in

¹⁵⁵ para 7.5 High Speed Rail, Command Paper March 2010.

¹⁵⁶ p 56 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁵⁷ para 5.9 High Speed Rail: Investing in Britain’s Future, Consultation, DfT February 2011.

¹⁵⁸ para 68, p137 High Speed Rail: Investing in Britain’s Future, Consultation, DfT February 2011.

¹⁵⁹ p 66 High Speed Rail: Investing in Britain’s Future, Consultation, DfT February 2011.

¹⁶⁰ p 136 High Speed Rail: Investing in Britain’s Future” DfT February 2011.

¹⁶¹ p 136 High Speed Rail: Investing in Britain’s Future”—DfT February 2011.

¹⁶² p 137 High Speed Rail: Investing in Britain’s Future”—DfT February 2011.

¹⁶³ p 86 and 131 High Speed Rail: Investing in Britain’s Future”—DfT February 2011.

¹⁶⁴ “*West of the M25 and the station throat, the alignments would dip down to a tunnel portal. On the approach to the tunnel portal, ... the horizontal alignment would restrict speeds to 130kph*”—page 216 Route Engineering Study Final Report—A Report for HS2, Arup December 2009.

¹⁶⁵ “*This route has not been the subject of a detailed Appraisal of Sustainability as it was decided not to pursue it on the basis of additional cost and journey times. A high level assessment of this route indicated that while it would have a lesser impact on the landscape of the Chilterns, it would affect other sensitive areas*”—para 39, p 131 “High Speed Rail: Investing in Britain’s Future”—DfT February 2011.

¹⁶⁶ A through route via Iver is dismissed primarily on grounds of cost, and analysis showing that “*the majority of HS2 passengers would want to go to central London rather than to Heathrow*” para 3.3.4 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁶⁷ “*Iver—it would comprise 10 platforms (4 high speed platforms, 4 GWML platforms on the fast lines and 2 GWML platforms on the relief lines*”—para, 3.3.30 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

particular, omitting the regional and international services and some long distance domestic services, and including a more limited interchange with Crossrail services, than actually proposed.¹⁶⁸

HEATHROW HUB AND HS2 COST

59. HS2 Ltd. appears to have assumed an underground station,¹⁶⁹ specifically noted as “*not the “Arup Hub” but a below ground box with tracks at –10m (below ground level)*”¹⁷⁰

60. This has very significant cost implications, as Heathrow Hub proposes a surface station, at the same level as the existing GWML.

HEATHROW HUB AND HS2 COST BENEFIT ANALYSIS

61. HS2 Ltd’s analysis of the costs and benefits of connecting to Heathrow appears to consider the full incremental cost of connecting the preferred HS2 route with a spur or loop to the Iver Interchange (or other Heathrow locations). However, their analysis only credits the Iver Interchange with some of the benefits it would generate. It omits those passengers on the Great Western corridor who would want to access Heathrow itself. The demand analysis also omits any demand from, for example, GWML passengers who might interchange at Heathrow onto international services to Europe.¹⁷¹

62. These omissions are specifically noted. For example, “*we have not sought to model and analyse the benefits of improved connectivity to Heathrow generally through, for instance, improved western access*”¹⁷² and “*it is important to note that the model does not analyse the potential market to Heathrow from areas to the west. This means for instance that the model does not forecast the demand to Heathrow from, for example, Reading using a London Interchange station connected to the GWML*”¹⁷³

63. HS2 Ltd. acknowledges that “*a Heathrow station does improve journey times for passengers travelling to Heathrow and transferring to/from HS2 to/from locations to the west and south west of London. Our model will understate some of the benefits (of a Heathrow station) since it is designed to focus on HS2 passengers*”¹⁷⁴

64. However, HS2’s analysis of demand for an “*Iver station*” explicitly confirms its exclusion of any potential demand for access to the airport or HS1 from cities including; Bristol, Cardiff, Reading, Oxford, Slough, Southampton and others.¹⁷⁵

65. This appears contrary to Lord Adonis’s remit to HS2 Ltd, which stressed the importance of co-ordinating work to address Western access to Heathrow and proposals for high speed rail.¹⁷⁶

HEATHROW HUB AND HS2 DISPERSAL

66. HS2 Ltd’s report to Government concludes that “*few, if any, London-bound passengers would interchange onto Crossrail at Heathrow since it is too distant from London and the frequency would not be attractive*”¹⁷⁷

67. However, this appears to disregard the potential, most recently proposed in Network Rail’s draft London and South East Route Utilisation Study,¹⁷⁸ to recast GWML services, potentially incorporating Heathrow Express services into Crossrail. Such initiatives, as part of what appears to be a desirable integrated approach

¹⁶⁸ “*We assume that one train in three would stop at Heathrow. This allows around an hourly service from Heathrow to most destinations*”—para 3.3.23 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁶⁹ “*Iver—cut and cover box*”—para 3.3.30 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁷⁰ “*It would be a below ground box, with tracks at –10m probably beneath green field site. It would not be the “Arup Hub” which would offer a much wider range of connectional opportunities at a much greater cost*”—p 316, Route Engineering Study Final Report—A Report for HS2, Arup December 2009.

¹⁷¹ para 9.3.6 of HS2 Demand Model Analysis, March 2010 sets out market segments not considered for the HS1 connection. It also omits any reference to the potential for high speed rail services to compete with flights from international airports on the Great Western corridor (eg Bristol, Southampton, Exeter and Cardiff). Para 9.2.5 indicates that HS2 Ltd’s base case for modelling demand for international services includes a 40 minute interchange penalty for transferring between Euston and St. Pancras in London, assuming no direct connection between HS2 and HS1.

¹⁷² para 3.3.46 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁷³ p 25 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁷⁴ p 57 HS2 Demand Model Analysis, HS2 Ltd. February 2010.

¹⁷⁵ Page 58 of HS2 Demand Model Analysis, HS2 Ltd. February 2010 states “*this suggests that a through station at Heathrow is not attractive for the purposes of HS2. Our model does not, though, have the capability to investigate the benefits of improved connectivity between the airport and passengers in the South East and South West through, for instance, improved connections to the GWML and other rail links such as Airtrack which could be delivered without the need for HS2 to serve a Heathrow station.*”

¹⁷⁶ “*As you will be aware, the Department is working with BAA and Network Rail to consider conventional rail access to Heathrow, including schemes to improve connections from Heathrow to Reading and other stations on the Great Western Main Line. It will be important to ensure appropriate coordination between this work and the development of proposals by HS2*—Letter from Lord Adonis to Sir David Rowlands, 9 March 2009.

¹⁷⁷ para 3.3.33 High Speed Rail, London to the West Midlands and Beyond, A Report to Government by HS2 Ltd, December 2009.

¹⁷⁸ London and South East Route Utilisation Study, Draft for Consultation, Network Rail December 2010.

to HS2 and the classic network, could allow a much higher frequency of Crossrail trains serving the Hub, with limited stop services reducing journey times to central London destinations.

CONCLUSION

68. In view of the above, it is apparent that the Heathrow Hub proposal has not been fully and properly assessed in HS2 Ltd's option appraisals that determined the proposed route. It is also clear that "this option (a route directly serving Heathrow) was developed later than the other alternatives,"¹⁷⁹ and "after the submission of HS2 Ltd's report, published in March 2010, to provide a route option for serving Heathrow via a through route."¹⁸⁰

69. Heathrow Hub provides the direct four way connection between Heathrow, HS2, the GWML and Crossrail that was originally specified by Government,¹⁸¹ and provides far greater benefits, at less cost and with less environmental impact compared to the current consultation proposals.

70. Although we believe this proposal provides greater benefits than any other option of which we are aware, our primary concern is to ensure that the UK makes the right choices in these critical—and costly—strategic transport decisions.

71. The decisions made to date by HS2 Ltd. and Government appear fundamentally flawed in their narrow focus on questionable demand and appraisal methodology, rather than a wider consideration of national transport and economic issues drawing on European experience of connections between high speed rail and airports.

72. In particular, any proposal that HS2 should bypass Heathrow, one of the UK's most important economic assets, and which provides the country with a critical competitive advantage that should not be taken for granted, must be rigorously tested.

73. Similarly, whilst the current proposal for an HS1/2 link is to be welcomed, it appears short sighted to downgrade what will undoubtedly become a vital umbilical link between the UK and Europe to a single track, slow speed connection.

74. Arup's promotion, during the late 1980s and early 1990s, of an alternative alignment to British Rail's Channel Tunnel Rail Link, now HS1, always envisaged that this link would be the first stage of an eventual UK high speed network, with a London station designed to allow later extension north and west. It is unfortunate that political issues did not allow this foresight to be carried through to implementation, (although Arup were successful in at least securing a connection from St Pancras to the North London line). St. Pancras provides a splendid gateway, but if, as originally envisaged, London's HS1 station had been designed to allow HS2 to be easily connected to the rest of the UK, many of the current difficulties in linking HS1 and HS2 could be avoided.

75. Strategic foresight is as important in considering the link between HS1 and HS2 as the interchange between HS2 and Heathrow. It will be a lost opportunity if flawed strategic decisions are made at this critical stage of HS2's planning.

76. It is hoped that the Select Committee will find this contribution helpful in their important and timely Inquiry.

16 May 2011

Written evidence from HS2 Action Alliance (HSR 153)

1. What are the main arguments either for or against HSR

HS2 (and probably HSR in general) offers "poor" value for money in the UK because:

- Benefits rely upon an exaggerated value of journey time savings, as time on trains is not wasted (section 3.2), this also has implications for DfT's system of valuation (section 4).
- Demand modelling has substantially overestimated rail demand growth (section 3.4).
- Use of an unrealistic "do minimum" case causes HS2 to have artificial benefits (section 3.5).
- Failure to consider competition overestimates revenues and understates overall costs.

Improving the existing rail network is a better alternative (section 3.6):

- Alternatives can deliver all the forecast demand required.
- It is cheaper and better value for money.

¹⁷⁹ Alternative Routes Considered, Route 1.5 via Heathrow, DfT Factsheet 2011.

¹⁸⁰ p 136 High Speed Rail: Investing in Britain's Future" DfT February 2011.

¹⁸¹ "A Heathrow International Hub station on the Great Western line to provide a direct four way interchange between the airport, the new north-south line, existing Great Western rail services and Crossrail, into the heart of London"—Secretary of State for Transport, 15 January 2009.

- It can be implemented in stages and quickly when required, avoiding crowding and the risk of over-provision from relying on long term forecasts.

Technical uncertainty (section 3.3) with HS2:

- DfT do not acknowledge or explore issues of deliverability of the Y “stem” train frequencies.
- No adjustments are made to the forecast benefits to reflect the risk of undeliverability.
- Capacity on HS2 trains running on the classic network is insufficient to carry forecast traffic.

Specification and route (section 4) choices:

- Journey time savings being worth much less removes the rationale for very high speed, with the trade-off between the benefits and disadvantages of speed needing reappraisal.
- Route selection and station decisions are similarly in need of revisiting.

Environment (section 6):

- Carbon impacts are higher than DfT suggest in particular because of the re-use of runway capacity and the carbon intensity of the electricity generation HSR requires.
- High speed is destructive of the countryside as it departs from existing transport corridors.
- HS2 can have only a limited impact on domestic aviation, as it is relevant only for the London—Scottish lowlands routes.
- HS2 cannot successfully compete with short-haul European services, as the market is too small for trains to provide a service frequency that can match smaller capacity aircraft.

Priority:

- HSR should not be a UK priority as we already have fast frequent intercity rail services,¹⁸² and HSR time savings do not provide the step change typical of overseas HSR experience
- HSR is a curious target for subsidy, as it encourages additional travel and is regressive because the affluent are the main users of long distance rail (section 5)

HSR is unlikely to rebalance the economy:

- Faster connections between the regions and London are, on balance, more likely to favour the economic development of London over the regions (section 5).

It is not practicable to discuss all these topics in this submission. A fuller discussion can be found at “Review of February 2011 consultation business case for HS2”, HS2AA, May 2011.

3. Business case

3.1 Robustness of assumptions and methodology:

There are a number of serious methodological errors and omissions in DfT’s assessment of HS2. When these are corrected, the economic case for HS2 disappears, with both the London to West Midland phase and the full “Y” network becoming poor value for money (with benefits less than the subsidy required). Annex 1 provides a reworking of the benefit cost ratios (BCR).

DfT’s assessment of HS2 is a form of social cost benefit analysis. It is not a commercial business case, and accepts that HS2 requires a subsidy. The revenues generated involve substantial abstraction from the existing network revenues (as most passengers are expected to transfer), resulting in the incremental revenue unable to cover the cost of the investment.

This means that economic and welfare benefits are needed to justify the subsidy. In the case of HS2, for the full “Y” £44 billion of social benefits are claimed against a subsidy of £17 billion. However there are serious issues with:

- The value given to the journey time savings from higher speeds, and the consequence this has for the best approach to HSR.
- The technical delivery of the service pattern and the absence of any mention of this issue, or its implications in the case for HS2.
- The level of rail travel forecast and the manner in which this forecast was derived.
- The failure to develop a best alternative to HS2, and use of an unrealistic “do minimum” that implies there is no real alternative to HS2 and artificially inflates its benefits.
- Ignoring competition with the existing rail network.

¹⁸² “Evidence that UK already has a fast national railway network” HS2AA January 2011

3.2 Benefits

The largest benefits of HSR are on-board journey time savings: 40% (£18 billion) of HS2's £44 billion.

Productivity: DfT's benefits appraisal framework ignores that mobile technology is transforming the productive potential of travelling on trains. This is important as £14 billion of the £44 billion (see Annex 1) relates to the productivity benefit of reducing journey times: DfT assume that every minute taken off the journey time creates an extra minute of productive time.

The process of time on trains becoming productive (and more enjoyable) is an on-going one. Currently there are weaknesses in radio coverage (that reduce efficiency), and while market penetration has proceeded beyond early adopters, it is not complete especially for mobile internet and ultra portable systems. But when considering the benefits of a project starting more than 15 years hence, it would be expected that all travellers would have access to such advanced technology as they need to be able to spend their time effectively.

Of course not all time on trains is or will ever be fully productive. People need to find their seats, unpack, pack up again and get ready to disembark. But journey time savings do not effect such unproductive time, rather the duration of the time in the middle.

Some business travellers on long distance trains also use their time to take refreshments, a cup of coffee or a meal. Such time is not productive, but reducing the journey time does not generate productive time unless the coffee or meal is forgone.

DfT correctly observe that the value of time should not be altered in isolation,¹⁸³ and there are consequential adjustments that need to be made. What is required is an extensive re-think on the values of time saving and the costs of crowding from those settled a decade ago on even older data. It is clear that crowding can result in rendering time unproductive and materially less enjoyable, hence crowding values should be changed.

However DfT are mistaken about the specific implications of these changes for HS2:

- HS2 only appears to relieve crowding against an unrealistic comparator. It has no crowding benefits compared with the best alternative which is its proper comparator (see section 3.5).
- Adjusting the value of time for journey time reductions also has serious implications on decisions about how fast high speed railways should be designed to go, and the trade offs inherent in this and route choices. This is discussed at section 4.
- DfT suggest that modal transfer from air and car would restore the benefits, as those swapping would gain productive time. But air will shortly have facilities for full use of mobile technologies.¹⁸⁴ And for car, the 7% of HS2 passengers transferring from car could not possibly off-set the loss of benefit from the others. DfT's methodology (with some logic) attributes new rail passengers with half the value of benefits of existing rail passengers swapping from classic rail to HS2. This implies the new passengers gain no value from productivity, if HS2 has no productivity benefit over classic rail.
- DfT offer an alternative defence. They claim that decisions made by business travellers maximise their overall productivity and reveal the value business travellers actually place on time savings. They claim this indicates even higher values for time savings. But such decisions may reveal many things quite unrelated to productivity: business travellers generally do not bear the cost of their travel and so their choices may be driven by other motives than business efficiency. Their decisions may relate to matters of minor personal convenience or prestige, and reflect the extent to which business travel is managed within their organisation. It is hardly reasonable to base a £30 billion investment on speculation on what business travellers' choices may or may not reveal without any systematic analysis.

DfT's case for HS2 relies on valuing time savings in a manner that is now outdated. They have failed to appreciate that it makes a material difference to how they should assess HSR.

It is not satisfactory to justify public subsidy on a benefit that there can be no confidence will exist when HS2 commences services. DfT cannot rely on an increasingly outdated view of how people can work or on speculation that time savings may yet be highly valuable if assessed in some other as yet undeveloped manner. This is an issue for any high speed railway that needs to be justified on productivity and welfare benefits.

Unit value: DfT use a value of business time that relates to 10 year old data. The earnings relate to a very high point in the earnings distribution, equivalent to about £70,000/a in 2009. It is 40% more than the figure for car drivers and 96% higher than for car passengers.¹⁸⁵ DfT escalate the value of business time by the expected increase in real earnings throughout the appraisal period, and so assume that business travel remains the preserve of the earnings elite.

¹⁸³ "Economic Case for HS2" February 2011, section 7.3.3, page 51

¹⁸⁴ See Sunday Times article 27 March 2011 (In Gear) The breakthrough is in providing connectivity without interfering with, or dependence on, ground based transmitters

¹⁸⁵ Webtag Unit 3.5.6, Table 1, based on 1999–2001 NTS data.

Given that long distance rail travel has increased by 60% since 2000, and the forecasts for HS2 project a further quadrupling (against a population increase of only 22%), DfT expect about a six-fold increase in business demand over when the original data was collected.

The major increase in the use of rail for long distance business trips means it is not credible that all the journeys could be made by such elite earners. Nor is the rail earnings differential above car drivers credible given that this growth will mainly be by modal shift from cars. If we assume that the relative earnings of rail business travellers reduce to the average (mean) of “managers and senior official” this reduces earnings by a third, but this figure is still in the top decile of earnings.¹⁸⁶

This in itself would materially reduce expected benefits (by £7 billion out of £44 billion as it affects all time savings and reliability benefits, see Annex 1), but many of these benefits are also subject to downward adjustments for other reasons.

3.3 Technical deliverability

The service pattern assumed for the “Y” Network requires running 18 trains/hr on the Y “stem” (London West Midlands section) in the peak, but:

- No services to Heathrow or running onto HS1 have been included in the 18 train paths.
- 18 is problematic as it seems that with existing technology 15 trains/hour is the maximum.¹⁸⁷

If some of these services cannot be run, then the assumed passenger numbers, revenue and social benefits (including reliability) will be unobtainable. If new technology needs developing rather than buying standard equipment, then the costs may prove higher.

This is unsatisfactory in several respects:

- *Risk*: no consideration is given to the risk to delivery or discount applied to the potential benefits. No sensitivity tests reveal what happens if the Y is limited to 15 trains/hour.
- *Solutions*: DfT have presented no evidence that it will be technically achievable. There is a report¹⁸⁸ suggesting that HS2 Ltd do not expect that there will be a technical solution, so that the projected benefits will only be obtainable at the cost of building another HSR line.

The issue has been known for a long time eg work for Greengauge21 drew attention to it in 2009¹⁸⁹. The March 2010 documentation¹⁹⁰ and Autumn 2010 Technical seminars both acknowledged that new technology would be required. But the May/June 2010 workshops (attended by DfT, HS2 Ltd and technical experts) concluded:

“So, the better approach, as anticipated by HS2 Ltd, would be to presume that there will need to be a second north-south high-speed line in due course and plan accordingly. While this creates a fresh set of planning challenges, it has a demonstrable business case, and resolves the problems associated with the thinking in Cm 7827.”

A suggested solution was that HS2 trains would operate under computer control, but it was recognised that this is unlikely to be viable given the interfaces with the existing network (that HS2 would have).

- *Misinformed*: despite the previous documents the public consultation materials contain no reference to these technical uncertainties. Indeed DfT suggest¹⁹¹ the opposite:

“Any new high speed lines would also be based on proven European standards, technology and practices, reducing the risk of unanticipated technical problems.”

Heathrow spur: The decision in December 2010 to include a spur to Heathrow further worsens the line capacity problem, because Heathrow services would need to take the paths of some of the 18 services in the “Y” specification, and the junctions will also reduce capacity

Phase 1: The London-West Midlands phase of HS2 is not so reliant on new technology, with only 14 trains/hour in the peak, albeit within this 14 none are included for services onto HS1 and through to the Continent. However, with a benefit cost ratio of only 1.6 (or 2.0 with Wider Economic Impacts (WEI)) and the same vulnerability to benefit, demand and comparator issues, a case for Phase 1 alone is not sustainable. On DfT’s own re-working of the economic analysis of the alternatives of upgrading the WCML, “Rail Package 2” (RP2) has a better benefit cost ratio 1.9 (without WEI)—and DfT acknowledge that this underestimates its benefits.

Reliability: HS2 is assumed to deliver improved reliability, contributing almost £6 billion of the £44 billion benefits (see Annex 1), as each minute of improvement is taken to be worth three minutes of on-board journey time.¹⁹² A self contained new railway running trains of the same type is expected to achieve high levels of

¹⁸⁶ ASHE April 2009 survey.

¹⁸⁷ “High Speed Two Interfaces” Greengauge 21, July 2010, section 4a, page 6 (obtained under FOI)

¹⁸⁸ “High Speed Two Interactions” Greengauge 21, July 2010, section4a, page6

¹⁸⁹ “Fast Forward A High Speed Rail Strategy for Britain” 2009, Appendix B, Sections2.4–2.6

¹⁹⁰ “HS2 Technical Annex” HS2 Ltd, December 2009, section 2.3.2, page 6

¹⁹¹ “High Speed Rail—Investing in Britain’s Future” DfT, February 2011, section 2.46 page 51

¹⁹² “HS2 Demand Model Analysis”, February 2010, section 3.4

reliability. However, HS2 is not an isolated railway, as classic compatible trains are planned to run services from the classic network with mixed traffic, where it can be expected to experience delays. Because HS2's service pattern requires intensive usage, with no proposed means of isolating itself, it can be expected to import unreliability. This makes the claimed reliability improvements unrealistic.

Insufficient capacity on classic network: the HS2 trains that will run onto the classic network will have fewer seats than those they replace, and hence be incapable of handling the increased growth. It is understood there are difficulties in how to run more than one train per hour to Scotland. HS2 is therefore unlikely to be capable of carrying the passengers forecast for it.

3.4 Demand

DfT forecast rail growth doubling on WCML by 2043 (102% increase over 2008, an annual growth rate of 2%) to just over trebling with the HS2 uplift (219%).

But their approach to demand forecasting is unsound because:

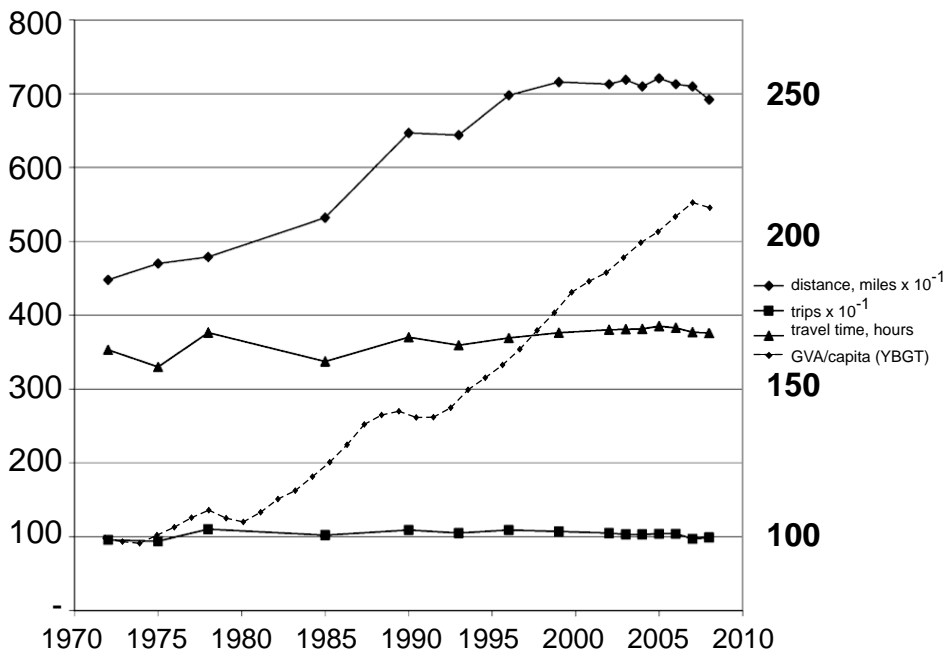
- *Link between wealth and travel decoupled:* DfT assume a relationship between economic growth and long distance domestic travel for 35 years into the future, despite evidence that the relationship has already weakened, if not expired entirely (see Figure 1).
- *Sensitivities:* DfT fail to show that the investment in HSR is robust to a lesser or less enduring linkage with economic growth—including not following their own (webtag 3.15.4) guidance on conducting sensitivities that would have shown the fragility of the case for HS2.
- *Outdated model:* DfT continue to employ a version of the forecasting model that exaggerates growth in longer distance journeys, failing to adopt their own draft guidance, the latest version of the model, or heed the results of research that they commissioned that show that their approach on this specific issue (use of a distance addition) is now wrong.
- *Long term 35 year forecast:* DfT use the forecasting model to predict rail demand over far too long a period in order to “justify” a demand increase (a “doubling”) that they determined independently. If they had retained the 25 year cut off they used in their own 2010 forecast, then their own analysis shows HS2 would be “poor” value for money (ie BCR below 1).
- *HS2 uplift:* this depends on journey time relationships from the rail model that pre-date making time on trains productive, and hence over values reducing journey times.

Link between wealth and domestic travel: DfT assume a continued link over the 35 years that they forecast demand increases. This is surprising as there is already evidence that for both domestic travel (as in Figure 1) and long distance domestic travel that this linkage has weakened and may have ended. This decoupling of economic growth and domestic travel has also been observed in other European countries.¹⁹³

¹⁹³ See Transport at the Crossroads EEA Report 3/2009, for decoupling in Europe using Eurostat data, and “The Prospects for Inter-Urban Travel Demand”, Y Crozet—*Discussion Paper 2009–14*—OECD/ITF, 2009, section 2.2

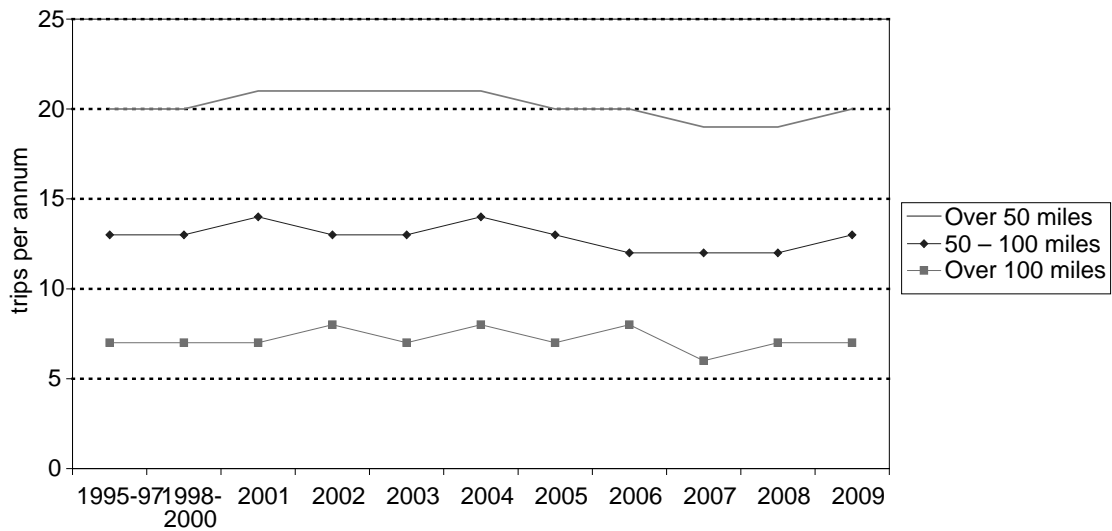
Figure 1

TRAVELLING TIME, TRIPS AND DISTANCES PER PERSON (COMPARED WITH REAL GVA/CAPITA¹⁹⁴)



The trips per person have been constant (see Figure 2), but the DfT forecast assumes the over 100 mile trips will increase from 7 to 9.5 by 2043 (by 36%).

Figure 2: Long distance travel per person (NTS0307)



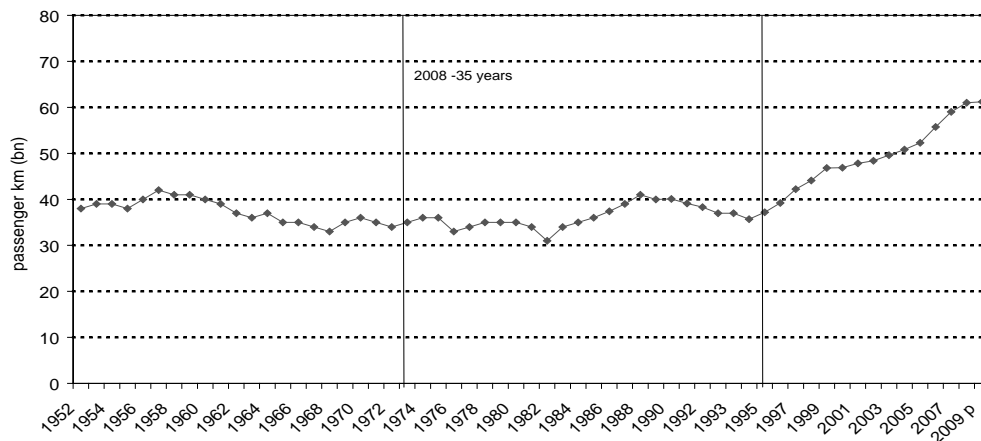
Demand has grown with population. However, population growth has been and is forecast to be relatively small (22% to 2043), explaining only a fifth of DfT's rail forecast (of 102% to 2043).

With overall long distance demand showing saturation, rail has grown strongly since privatisation in the mid 1990s. But this needs to be put in context:

- While rail demand grew strongly from 1995, there was no growth from the early 1950s to the mid-1990s at all.
- There are specific reasons that favoured rail growth (increased investment, improved services, airline style pricing and mobile technology making time on board more useful and enjoyable). But rail's modal share cannot expand indefinitely.

¹⁹⁴ Based on analysis by Dr Metz based on NTS 2008 Table 2.1 with GVA/capita trend added

Figure 3: Long term rail growth



Source: Transport Statistics of GB, 2010 release, Table TSGB0101

In this situation, at minimum DfT should be concerned that a major investment such as HSR is robust to the possibility that long distance travel demand will cease growing with the economy much earlier than 2043. In fact they fail to even consider the lesser gearing of demand on economic growth that is required by their own guidance.¹⁹⁵ What DfT do show is that should demand stop growing at 2033, the subsidy exceeds the benefits.

Out dated rail model: DfT used an old version (PDFHv4.1) in which the “income elasticity” factors forecast longer rail journeys to grow more quickly than shorter ones. National Rail Trends data in fact shows the reverse: the average long distance rail journey is now 16% shorter than in 1995. PDFHv4.1 also has larger values for journeys to London than those originating in London. For 1% more income, people in Birmingham are expected to spend 2.48% more on travel to London, whereas in Glasgow it is 2.80% more. This issue is recognised as a problem:

- DfT issued Draft Guidance (but still to be adopted) which imposes a cap (at 2.5%).
- The current model, v5.0, which was adopted in August 2009, removes the distance factor eg an elasticity of 1.9% applies to both journeys, but the HS2 forecast still used PDFHv4.1.

The recent research (for DfT and others) has now confirmed that no distance addition is appropriate for longer rail journeys,¹⁹⁶ yet it has still been used to produce the DfT forecast.

Sensitivities: It has already been noted that DfT require in their webtag guidance that different elasticities be used as a sensitivity test. These are substantially lower than not just v4.1 but also the latest PDFHv5.0 values. These tests were not conducted.¹⁹⁷

Projecting demand increases too long: The demand model used is inherently best suited to making short to medium term rail forecasts. This is because it is a fixed elasticity model that assumes people spend ever increasing proportions of income on travel. It is normal to cap the period to reflect market saturation. The use of a 35 year growth period is hard to reconcile with:

- DfT’s normal horizon for growth increases of 2026¹⁹⁸ ie 18 yrs (2008–26)
- Sir Rod Eddington’s view that a 10 year period was long enough.¹⁹⁹
- Network Rail who see a cap as essential,²⁰⁰ although express concerns about using PDFH for long term forecasts. PDFH was calibrated during a period of rapid rail growth, and has been amended five times to reflect behavioural changes
- DfT who used a 25 year period (to 2033) for their March 2010 forecast, justified on the HS2 completion date, rather than the capabilities of the model.²⁰¹ Given the cap concerns the “background growth” (not induced demand), and the project’s completion date does not effect the durability of the current elasticities,²⁰² this extension is difficult to understand

¹⁹⁵ Webtag unit 3.15.4 (section 6.1.1 page 7), states the alternative elasticities to be used for sensitivities

¹⁹⁶ The findings of research by Oxera and Arup were publicly presented at Transport Economists Group in February 2011 (by Oxera, Arup and DfT)

¹⁹⁷ The fact that Webtag 3.15.4 sensitivities were not used was confirmed by HS2 Ltd (Mark Weiner 12 May 2011), although an FOI response (received 16 May 2011) said they did not hold the information

¹⁹⁸ Webtag unit 3.13.1 Section 3.3. DfT August 2007. It says central case should cap growth at 2026

¹⁹⁹ “Inter Urban Rail Forecasts” section 3.17. Whilst the trends may be a consistent basis for forecasting forward through time, they do not account for saturation of demand in the rail market, and as such, confidence in such an uncapped forecasting procedure must reduce considerably for forecasts beyond 2016. Eddington, 2006

²⁰⁰ “Network Route Utilisation Strategy: Scenarios and Long Distance Forecasts” Network Rail, June 2009, Section 4.2 page 30; and also Section 5.2 page 34

²⁰¹ “HS2 Demand Model Analysis”, HS2 Ltd, February 2010, section 3.2.6 page 31

²⁰² HS2 Ltd state the limits purpose as “...proxy for market maturity and the long term lack of certainty in the forecasting methodology.” HS2 Demand Model Analysis’ HS2 Ltd, Feb. 2010, section 3.2.6, page 31

- If rail growth is considered over the preceding 35 years (ie from 1974, see Figure 3), only the last 15 years show any growth in rail travel at all.

In fact DfT admit that they do not use the demand model to forecast demand, but to estimate how long it would take to double.²⁰³

“.....For our earlier work we capped growth of rail demand in 2033, at a level of demand in the WCML corridor that is slightly more than double current levels. With the lower current GDP forecasts, this cap would now be hit later, in 2043.”

The “doubling” in demand has been preserved, despite it having no basis in the 2011 analysis.

DfT do consider the effect of growth finishing earlier (albeit in the context of it stopping both later and earlier than 2043), and say that growth is needed until 2034 before Phase 1 has benefits greater than the subsidy. So if DfT simply reused the same 25 year cut-off as in the 2010 forecast (ie 2033) they would have concluded that HS2 is “poor” value for money (BCR under1).

Induced travel: HSR is expected to induce additional travel and modal shift because journey times are shorter. The uplift forecast (for HS2 (Phase 1) represents a 54% increase over those transferring from classic rail. This is likely to be overestimated:

- PDFHv4.1 is used to make the forecast, and it is based on journey time relationships that pre-date the new technologies making time on trains more productive
- DfT say that there was a 36% increase in demand for an average 34 minute reduction in journey time²⁰⁴ for WCML. HS2 journey time saving will be on average smaller for the first phase of HS2. WCML could only partly reflect the reducing value of journey time savings. Even 36% is therefore a high estimate of uplift.

An “indicative revised forecast”. Tables showing the consequences of adjusting the demand forecast to be based on more realistic assumptions are included at Annex 1. For demand we assume PDFH5.0 income elasticities, demand growth capped at 25 years (2033), and the same level of uplift from HS2’s shorter journey times as that reported for WCML by DfT (36%).

This produces an “indicative demand forecast” of 81% increase over 2008 for WCML for 2033 and staying at this level (compared to DfT’s 209% for 2043). Annex 1 col 8 shows this reduces the BCR for the full “Y” to just 1.0 (including WEI), and less for phase 1.

3.5 Comparison basis

The “do minimum” comparator assumes no improvement in capacity or services beyond those already committed.²⁰⁵ It is unsuited as a basis against which HS2 can be assessed:

- There is no pretence that the “do minimum” case is realistic, the forecast demand growth could not be sustained without capacity development. Demand is forecast without regard to supply, with the result that the capacity of the “do minimum” case is insufficient.²⁰⁶
- The £5.1 billion benefits from relieving the high levels of crowding in the “do minimum” case are entirely artificial and result from its unrealistic nature (which is recognised by HS2 Ltd),²⁰⁷ with realistic alternatives having lower crowding than HS2 (as discussed at section 3.6)
- Proper assessment needs to be based on comparing HS2 with the best alternative.
- DfT failed to develop a best alternative, making no attempt to produce an optimised case.²⁰⁸

Using a “do minimum” case for reference may be reasonable for short lead time projects, where little else may happen in the timeframe. But to assume that the railway network will be effectively unchanged for a period of over 30 years is unreasonable and unrealistic. It also implies ignoring all the opportunities for improvements that extensive renewals would offer.

Comparison with the best alternative potentially increases some benefits because of how DfT value the benefits from induced demand. But this effect is diminished by the reduction in value of journey time savings and the questionable basis for anticipating reliability improvements.

²⁰³ “Economic Case for HS2” February 2011, section 3.2.9 page 14

²⁰⁴ “Demand for Long Distance Travel” April 2011, section 6.19 page 16 (the 36% relates to 2006 to 2009)

²⁰⁵ On WCML this involves extending part of fleet to 11 car, four new sets and IEP. It however excludes Evergreen 3, that reduces the Birmingham London journey time on Chiltern Railways, that will win business from WCML, delaying the requirement for any additional WCML capacity

²⁰⁶ “Baseline Forecasting Report: A Report for HS2”, Atkins, February 2010, section 2.64, page 19. “.....Do Minimum matrices for rail (and road) are estimated by uplifting constrained (ie ex-post/observed) 2007–8 demand for exogenous influences only, with no attempt to estimate levels of underlying unconstrained demand, or the effects of changes in supply/congestion occurring after 2007.”

²⁰⁷ Baseline Forecasting Report: A Report for HS2, Atkins, February 2010, section 2.64, page 19

²⁰⁸ DfT conceded that Rail Package 2 had not been optimised, but that it was irrelevant because it provided insufficient capacity, 20 September 2010 (letter Jonathon Mitchell to Bruce Weston)

3.6 Alternatives

DfT fail to properly consider the alternatives to a new railway, making no attempt to produce the best options that match demand in terms of quantum and when it occurs and at minimum cost.

The best alternative to the London-West Midlands phase that was developed (RP2) has been repeatedly misrepresented,²⁰⁹ although it produces all the capacity needed (151% on DfT's numbers over the 2008 base) and with a better benefit cost ratio.

In fact it is possible to develop a better alternative than RP2, which requires less work on the track and is considerably cheaper. Similar low cost solutions are available for the Midland Main Line and ECML, which make up the suite of alternatives to the full "Y" network.

The table is based on work by Chris Stokes²¹⁰ that develops best alternatives to HS2 for WCML, Midland Mainline and ECML. The table below gives the case for WCML (ie against the London-West Midlands phase of HS2). It shows that greatly more capacity is provided than is required on DfT's demand forecasts (with a 102% increase to 2043), through various rolling stock changes, and minimal investment in infrastructure.

BEST ALTERNATIVE FOR WCML

Interventions	Daily trains	Daily standard class seats	% increase above 2008 base		Comments
			Standard class	total	
<i>Train investment with no/little infrastructure investment</i>					
HS2 2008 Base		59,298			Base used by DfT for evaluation of HS2. Predates full WCML upgrade timetable.
Current timetable	286	81,924	38%	36%	Includes Voyager services (30 daily) Committed scheme—complete in 2011 Illustrative numbers—excluded from totals
Evergreen 3	[68]	[28,900] ²¹¹			
Committed lengthening project	286	105,924	79%	63%	Committed scheme—implemented from 2012
December 2013 additional services	306	113,769	92%	75%	Additional hourly off-peak train each way
First class reconfiguration	306	134,379	127%	84%	One car converted from first to standard
12 car sets (except Liverpool)	306	166,908	181%	121%	Major physical constraints at Liverpool
<i>Infrastructure investment</i>					
Additional services	336	184,326	211%	144%	30 additional daily trains following investment to relieve pinchpoints

Eddington²¹² referred extensively to the advantages of improving existing infrastructure noting:

"... Upgrading rolling stock and lengthening trains on congested rail links, combined with changes to timetables to increase frequency can significantly increase the effective capacity of existing rail lines. Evidence of illustrative interventions to increase variable capacity on inter-urban links into London by investing in new rolling stock, for example, suggests strong returns are possible from well-targeted interventions, with wider BCRs ranging between 1 and 13 and costs between £50 and £500 million but more typically between 1 and 3.28. The higher returns are largely driven by the ability to add variable capacity with minimal infrastructure requirements...."

The main advantages of the upgrade approach are:

- *Crowding*: because of the incremental character and short lead times, upgrades can be made that prevent serious crowding from developing. It has been repeatedly asserted that WCML will be full by 2020—only upgrading the existing services can address this problem.

HS2 has a loading factor of 58% which is higher than DfT's own RP2 alternative (52%) or the best alternative shown in the table (also 52%).

²⁰⁹ Review of February 2011 Consultation Business Case, May 2011, HS2AA section 5

²¹⁰ Chris Stokes, former SRA director and independent rail consultant

²¹¹ Illustrative Evergreen 3 figures assume Chiltern trains currently four car class 168 units (275 seats), lengthened to six car class 168 (425 seats)

²¹² Eddington Transport Study, December 2006 Volume 3, page 207, 4.164

- With a new recognition that crowding may stop time on trains being productive (or enjoyable)—rather than being a minor annoyance as DfT currently assess it—the benefits of preventing crowding are much more important.
- *Cost*: the best alternative described above is considerably cheaper than HS2, with an infrastructure cost of £2 billion instead of £18 billion for the first phase of HS2. It is likely that demand to 2043 could be entirely satisfied by rolling stock measures avoiding the need for infrastructure investment.
- *Value for money*: most of the additional capacity is achieved through more rolling stock and extra seats per train. It is likely that the changes could be made on a fully commercial basis, where the additional fares will pay for the investment. If a subsidy is required it is likely to have a very high benefit cost ratio.
- *Fast and Incremental*: upgrades remove the risk associated with needing to forecast demand for long periods as upgrades can be done in stages and relatively quickly.
- *Capacity*: Despite assertions to the contrary, upgrades of the existing network have massive potential to increase capacity (as shown in the table above). These increases are larger than that DfT's forecast for demand to 2043 (102%). This means that upgrades can meet capacity requirements for at least the next 35 years, on DfT's forecasts. With more realistic forecasts they would meet demand indefinitely.
- *Connectivity*: Unlike new HSR, the existing long distance rail network is highly integrated with local transport. This is a major advantage over HSR, as parkway stations have little or no existing connectivity with public transport, new city centre station like Birmingham Curzon Street are also remote from the existing transport hubs, while connection into the existing networks are highly disruptive, as with the approach into London and the rebuilding of Euston Station needed for HS2.

Unlike HS2, upgrading the existing network does not bypass many major cities, with a resultant worsening of their rail services. Despite statements implying the contrary, the case for HS2 involves £5.4 billion saving from reducing existing rail services. The effect of most passengers migrating to HSR creates spare capacity (because existing services will reduce), but any additional local services would be likely to require additional subsidy.

- *Disruption*: despite assertions to the contrary, the best alternative would result in very little disruption. Even RP2 which is more reliant on infrastructure improvements than the best alternative, would be far less disruptive than HS2
- *Environmental impact*: upgrades are environmentally preferable, the lower speeds give rise to lower carbon emissions, they follow existing rail corridors and so do not require the sacrifice of an AONB or tranquil countryside.

The disadvantages that are often cited:

- *Less benefits*: the journey time savings will be less than HSR, but they are also considerably over valued. It is suggested it will achieve less modal shift from air. However, HS2 is unlikely to result in much shift, as the only domestic routes susceptible to switching are the London—Scottish lowlands routes. There are no air services between London and Birmingham and Leeds. Rail already has 79% of the Manchester market, HS2's journey times for 2033 to Newcastle will not improve on the fastest train to London in the summer 2011 timetable. It is unlikely that the lowlands of Scotland will have sufficient traffic to represent as large a shift as DfT predict (equivalent to 95% of the Heathrow/Scottish lowlands market for phase 1 and double for the full Y) especially as the market is declining.
- *Worse reliability*: DfT strongly emphasise that continued increases in services on the existing rail network will result in deterioration in reliability. Lengthening trains is unlikely to have such an effect, and addressing pinch points tends to improve journey times and improve reliability. The evidence is that as the railway has become busier, reliability has actually been improving since Hatfield, with Network Rail hailing the Public Performance Measure exceeding 90% for 2009, reaching the highest level achieved.
- *Not practical*: RP2 has been said not to be practical, as it involves intensive all day operations, rather than just peak. This is an unsatisfactory argument as:
 - RP2 was developed for the 2010 White Paper by Atkins and timetabled by Robert Watson Associates, both reputable consultancies, and signed off by DfT.
 - RP2 was again included in the February 2011 consultation materials as the WCML element of the upgrade alternative to HS2 Scenario B, which indicates that DfT continue to believe it is a viable option.

3.7 Lessons learned from previous projects

WCML Route Modernisation Project was originally specified to deliver a new signalling system that allowed higher speeds, more capacity, and lower costs than conventional signalling. It eliminated lineside signalling equipment and was to use a yet to be developed radio controlled moving block signalling system. The new

system has still yet to be developed, and the route modernisation had to be successively respecified and de-scoped, eventually being completed with conventional signalling and a lower top speed than originally intended.

The delivery of the “Y” Network service specification requires 18 trains/hour in the peak. The specification has no trains available for Heathrow or HS1, which requires either more train paths or fewer London services. 18 trains/hr is apparently not achievable with current technology, as HS2 Ltd admit. It seems that HS2 Ltd believe that it will be achievable with new technology, although expert advice seems to be that HS2 should not in prudence be assumed capable of more than 15 trains/hour.²¹³ If HS2 needs to be de-scoped, even on DfT’s assessment, the “Y” Network would not be viable.

The Eddington Transport Study²¹⁴ 2006 noted:

“history has shown that for large-scale infrastructure projects that rely on emerging technological solutions, costs tend to increase by an order of magnitude against original estimates.”

4. The strategic route

DfT’s failure to adjust their evaluation framework to recognise that time on long distance trains has been becoming useful is important in the context of specification. While greater speeds bring shorter journey times, they also bring disadvantages:

- Higher capital costs.
- Higher energy consumption (and carbon emissions).
- Higher maintenance costs.
- Inability to follow existing transport corridors (greatly increase the adverse effect on landscape and local impacts).
- Greater noise pollution.

The decision on the optimal speed is therefore the result of a trade-off between the benefits from journey time savings and the adverse impacts. If the value of any given level of journey time saving is substantially reduced, the best balance is likely to favour a lower speed. To illustrate, if there are no productivity benefits from the reduced journey time, and all travellers value journey time savings at half the level leisure travellers did before their time became more useful, the time saving is worth only about 15% of its previous value.²¹⁵

While revaluing time savings does not necessarily change the preferred speed, the substantial reduction in value calls into question decisions made on the previous basis. It also invalidates the route selection process that HS2 Ltd have operated, as this too involves trading-off journey time savings against other factors. The likely effect of a revised approach is:

- To prefer a speed specification more able to conform to existing transport corridors.
- Make station stops more attractive.
- Make upgrading existing infrastructure more attractive, as the inability to deliver large journey time savings becomes a smaller consideration.

Case for HSR: Without a high value of time savings for social benefits, the case for a subsidy to build a HSR is likely to be weak. While this does not affect a commercial case, a commercial case for a HSR is unlikely to work in the UK, due to the existing fast and frequent train services that would compete. While it is conceivable that a case for a new railway could be made on the grounds of capacity, in practice there are plentiful opportunities to increase the capacity of the existing infrastructure at much lower cost, effectively for the indefinite future.

Building from London: Building HS2 in stages from London is likely to be best in that it services the greatest potential demand first. However, as the work on a possible Maglev study showed,²¹⁶ this is likely to direct the economic benefits to London and South East, compared to building from the north first.

Connections to Heathrow and HS1: There is insufficient demand to justify frequent rail services to Europe, without which HS2 could not successfully compete against air (which with small planes can have frequent flights that are near to full). This position is demonstrated by HS2 Ltd work of 2010, summarised and extended in the work for 51M work (by Chris Stokes)

5. Economic rebalancing and equity

While strong claims have been made about the benefits of HSR in stimulating regional economies, there is no good evidence that HSR will help bridge the North South divide.

²¹³ “High Speed 2 Interfaces” Greengauge21, July 2010, section 4a, page 6

²¹⁴ Eddington Transport Study, December 2006, Volume 3, page 109, 4.173

²¹⁵ Using 2009 values from “Technical Seminar QA77483” HS2 Ltd, 2010.

²¹⁶ “UK Ultraspeed Evidence to the Eddington Review” part of “UK Ultraspeed Factbook | Expanded 2nd Edition, October 2006”, page 120

HSR supporters (eg Greengauge 21) have commissioned studies that purport to demonstrate large economic benefits for the regions.²¹⁷ However the methodology has problems that cause the results to be overstated, according to a review²¹⁸ by leading academics in this area. Similar criticism of the methodology were raised in a review of the literature on the economic impacts of HSR by Professor Tomaney.²¹⁹

It seems that the balance of evidence suggests that improving north south connections tends to favour London and the South East, because of the draw of London and its greater efficiency in financial services. To quote the Tomaney work:

“Overall, the report suggests that the impacts of high speed rail investments on local and regional development are ambiguous at best and negative at worst. It is very difficult to find unambiguous evidence in support of the contentions that are being made by the government about the potential impacts of HS2 on the cities and regions of the UK.”

This was also the conclusion of the Eddington Transport Study²²⁰ after extensive review and discussion that *“.....The evidence for transformational benefits is at best unproven. ..”*

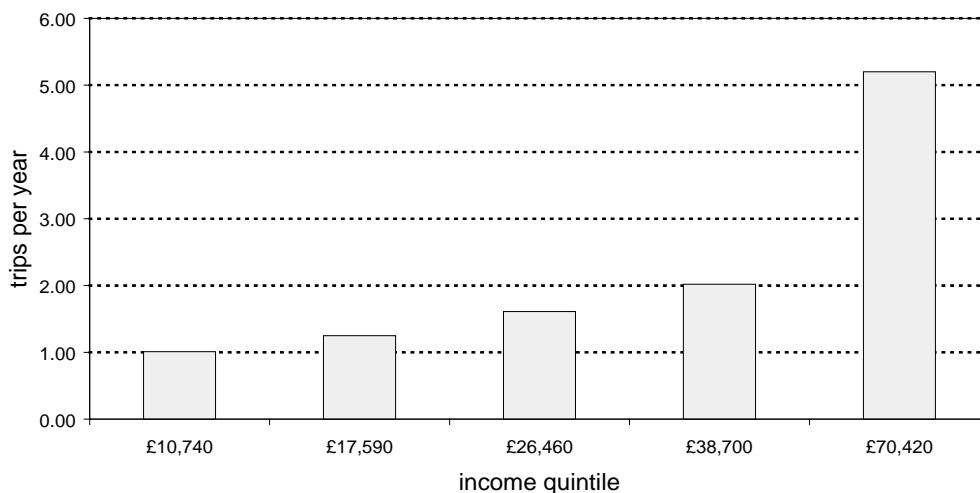
As there is only weak evidence of benefits, regeneration should be a secondary consideration in route selection. If the objective is to achieve regeneration, addressing the primary impediments to growth—eg lack of skills, will be more relevant. If the objective is to achieve regeneration through transport, local and intra-regional schemes that improve the efficiency of local economies would be more attractive.

Locations and socio-economic groups benefiting: The places most likely to benefit are London and the South East as HSR will giving improved access to Midlands and Northern markets for financial services. The evidence suggests:

- Station sites and their immediate vicinity are likely to benefit from redevelopment because they will become attractive as retail and office locations. This is demonstrated by the work done for HS2 Ltd.
- DfT figures state of the 30,000 new jobs around stations, 73% are in London. It seems generally accepted that such jobs are mainly relocations rather than net additions, with the gains balanced by losses in the station’s hinterland.
- HS2 Ltd’s demand model implies leisure trips to London will outweigh those starting in London—tourism can therefore be expected to benefit London rather than the regions.

In regard to the potential beneficiaries, the main beneficiaries will be the traveller or their employer. Assuming that HS2 users will be similar to the long distance rail users of today, the travellers will be predominantly drawn from the most affluent sections of society (see Figure 4).

Figure 4: Long distance rail trips by household income



Source: 'Modelling Long-Distance Travel in the UK', Charlene Rohr, James Fox, Andrew Daly, Bhanu Patrni, Sunil Patil, Flavia Tsang. RAND Europe, NTS 2002/5, income data 2005/6 ONS

However, the productivity benefits to business would be modest, because business travellers can be expected to be fully productive on long distance trains well before HS2 is built, so the reduced journey times would not

²¹⁷ for example, “High Speed Rail in Britain Consequences for employment and economic growth”, KPMG, 2009, and “High Speed Rail Consequences for employment and economic growth”, KPMG, March 2010

²¹⁸ “Review of methodologies to assess transport’s impacts on the size of the economy”, James Laird and Peter Mackie (ITS), September 2010.

²¹⁹ “The Local and Regional Impacts of High Speed Rail in the UK: A Review of the Evidence”, John Tomaney, Pedro Marques and Penny Marshall, April 2011.

²²⁰ Eddington Transport Study, December 2006 Volume 3, page 133, 1.33

represent a productivity benefit. But businesses whose employees travel on HS2 would benefit from the fares being below the full cost.

Beneficiaries contributing to costs: The issue of getting beneficiaries to contribute to costs, thus reducing the burden on tax payers who will not benefit directly, is appealing. The presumption that there are large benefits that will, without special measures, arise as significant windfall gains to specific groups is incorrect, if those benefiting from the line's construction and supply of the trains and equipment are excluded.

Even local authorities benefiting from the new stations may suffer counterbalancing detriment, as the new shopping centres and offices will draw jobs from nearby but less favoured locations rather than generate truly additional jobs.

An effective means of making those who benefit contribute more would be to charge higher fares. But, while premium fares might get those gaining the benefit to contribute more to the cost, it would further concentrate users into the higher income groups. Additionally, this may worsen the overall economics, with high speed trains quite empty and the competing classic services retained to carry those unwilling to pay higher prices.

6. Impact

Are the environmental costs and benefits correctly accounted? The NATA framework quantifies those costs and benefits suited to be monetised and includes them in the calculation of the benefit cost ratio—other dimensions are assessed but not reduced to a money value.

For HS2 there are several unsatisfactory features in the accounting of environmental impacts:

- Despite the assumption that runway capacity will be constrained for London, the carbon consequences of re-use of freed-up runway capacity is not assessed or included in the quantified assessment—this greatly understates the potential for increasing emissions.
- The potential reduction of aircraft emissions is unchanged from the White Paper assessment, despite fewer passengers transferring from air to HS2 and despite (by implication) some of air's demand being suppressed demand.
- The emissions from electricity generation are stated to be the annual all generation average, despite HS2's electricity requirements being day time and peak.
- The spoil calculations greatly underestimate the volumes of spoil²²¹ excavated from tunnels and cuttings in the Chilterns, causing construction traffic to be similarly underestimated.

Annex 1

ECONOMIC SUMMARY TABLES

ADJUSTED DfT RESULTS FOR LONDON—WEST MIDLANDS (PHASE 1): REVISIONS TO BENEFITS ONLY, DEMAND ONLY AND EFFECT OF REVISING BOTH

<i>All £bn NPV at 2009 prices</i> <i>Col 1</i>	<i>DfT Feb 2011 (Phase 1)</i>			<i>Revisions to benefits only (see basis in table below)</i>			<i>Revised demand only</i>	<i>Revisions combined</i>
	2	3	4	5	6	7	8	9
	<i>Business</i>	<i>Leisure/commut</i>	<i>Total</i>	<i>Business</i>	<i>Leisure/commut</i>	<i>Total</i>	<i>Total</i>	<i>Total</i>
1.1 Rail journey time saving	5.7	1.7	7.3	0.4	0.8	1.2	4.5	0.7
1.2 Improved reliability	1.8	0.5	2.3	1.2	0.5	1.7	1.4	1.0
1.3 Reduced crowding	0.7	1.9	2.6	0	0	0	1.6	0
1.4 Waiting time	1.4	1.4	2.8	0.9	1.4	2.3	1.7	1.4
1.5 Other impacts eg access	0.3	0.4	0.6	0.2	0.4	0.6	0.4	0.3
2. Road decongestion	1.2	0.6	1.8	1.2	0.6	1.8	1.1	1.1
3. HS1 link			0.4			0.4	0.2	0.2
Total transport user	11.1	6.4	17.9	3.9	3.7	8.0	10.9	4.9
Reduced tax			-1.3			-1.3	-0.8	-0.8
Net transport benefits			16.6			6.7	10.1	4.1
4.1 WEI—agglomeration			3.0			3.0	3.0	3.0
4.2 WEI—imperfect competition			1.0			0.2	0.6	0.1
Total WEI			4.0			3.2	3.6	3.1
Total net benefits incl WEI			20.6			9.9	13.7	7.2
Additional revenue			13.7			13.7	8.4	8.4
Capital and operating cost			24.0			24.0	24.0	24.0
Net subsidy			10.3			10.3	15.6	15.6

²²¹ By 18 times according to Steve Roderick, Chief Officer of the Chiltern Conservation Board

All £bn NPV at 2009 prices Col 1	DfT Feb 2011 (Phase 1)			Revisions to benefits only (see basis in table below)			Revised demand only	Revisions combined
	2	3	4	5	6	7	8	9
	Business	Leisure/ commut	Total	Business	Leisure/ commut	Total	Total	Total
Benefit cost ratio (excl WEI)			1.6			0.6	0.6	0.3
Benefit cost ratio (incl WEI)			2.0			1.0	0.9	0.5

Basis of revisions to benefits (col 5–7), to demand (col 8) and combined effect (col 9)

1.1: *Business*: productivity gain from shorter on-board journey time reduced to zero. Time savings valued at the adjusted leisure value. *Leisure*: time savings value is halved to reflect the usefulness of on-board time.

Business time unit value is reduced by one third to reflect less elite nature of rail business travellers with the major increases in business volumes. Affects items 1.1, 1.2, 1.4, 1.5 and 4.2.

1.2: *Reliability* benefits for phase 2 assumed to be halved due to issues about achievability of 18 trains/hour. No adjustment is made to phase 1 (when 14 trains/hour).

1.3: *Crowding* benefit removed: realistic comparator of uprating WCML eg RP2 is less crowded than HS2.

1.4: *Waiting time* is not reduced although a realistic comparator would have higher train frequency than “do minimum”, as RP2 does.

4.2: This item reduces automatically as valued at 10% of all business time savings and reliability benefits.

Benefit adjustments (col 5–7): DfT demand forecast unchanged (ie +209% increase); effect of applying revisions to basis of benefits is pro rata to DfT demand for all items except 1.6, 4.1 and costs.

Demand adjustments: (col 8): DfT benefits basis unchanged; uses an “indicative revised forecast” of 81% increase over 2008 base (incl. *background growth and **HS2 uplift), instead of DfT forecast of + 209%.

Revisions combined (9): the effect of revising the basis of both DfT benefits and DfT demand forecast.

*“Background growth”: 38% at 2033 and remaining at this level (compared with DfT 102% at 2043); based on PDFHv5.0 income elasticities; DfT 2011 annual growth rate capped at 2033. **With HS2 uplift: 38% is increased to 81% (with HS2 uplift) at 2033 and remaining at this level (compared with DfT 209% at 2043); based on WCML uplift of 36%.

ADJUSTED DFT RESULTS FOR FULL “Y” NETWORK: REVISIONS TO BENEFITS ONLY, DEMAND ONLY AND EFFECTS OF REVISING BOTH

All £bn NPV at 2009 prices Col 1	DfT Feb 2011 (full “Y”)			Revisions to benefits only (see basis in table below)			Revised demand only	Revisions combined
	2	3	4	5	6	7	8	9
	Business	Leisure/ commut	Total	Business	Leisure/ commut	Total	Total	Total
1.1 Rail journey time saving	14.1	4.3	18.4	0.9	2.2	3.1	11.2	1.9
1.2 Improved reliability	4.4	1.3	5.7	1.5	0.6	2.1	3.5	1.3
1.3 Reduced crowding	1.5	3.6	5.1	0	0	0	3.1	0
1.4 Waiting time	2.0	2.0	4.0	1.3	2.0	3.3	2.4	2.0
1.5 Other impacts eg access	0.5	0.6	1.2	0.4	0.6	1.0	0.7	0.6
1.6 Released capacity			1.3			1.3	1.3	1.3
benefits								
2. Road decongestion	2.7	1.3	4.0	2.7	1.3	4.0	2.4	2.4
3. HS1 link			0.4			0.4	0.2	0.2
Total transport user	25.2	13.1	39.9	8.3	7.3	15.1	24.9	9.7
Reduced tax			-2.7			-2.7	-1.6	-1.6
Net transport benefits			37.3			12.5	23.3	8.1
4.1 WEI—agglomeration			4.1			4.1	4.1	4.1
4.2 WEI—imperfect competition			2.4			0.8	1.3	0.4
Total WEI			6.5			4.9	5.4	4.5
Total net benefits incl WEI			43.8			17.3	28.7	12.6
Additional revenue			27.2			27.2	16.6	16.6
Capital and operating cost			44.3			44.3	44.3	44.3
Net subsidy			17.1			17.1	27.7	27.7

All £bn NPV at 2009 prices Col 1	DfT Feb 2011 (full "Y")			Revisions to benefits only (see basis in table below)			Revised demand only	Revisions combined
	2	3 Leisure/ Business	4 Total	5 Business	6 Leisure/ commut	7 Total	8 Total	9 Total
Benefit cost ratio (excl WEI)			2.2			0.7	0.8	0.3
Benefit cost ratio (incl WEI)			2.6			1.0	1.0	0.5

May 2011

Further written evidence from HS2 Action Alliance (HSR 153A)

1. INTRODUCTION

This document is submitted as supplementary evidence to the Transport Select Committee's inquiry on High Speed Rail by HS2 Action Alliance.

Its purpose is to clarify the basis on which the Government and some supporters of HS2 have been contending that:

- WCML will be full within a decade.
- WCML will be completely overcrowded by 2022.
- The means of increasing capacity will be exhausted.

These statements relate to contentions made by Network Rail, but this note explains that they are not consistent with the actual forecasts made by Network Rail.

2. SUMMARY

Network Rail (NR) have made recent statements about when WCML will be full which are currently being taken out of context. These statements refer to

- *Within six to 10 years*, but this statement to the Transport Select Committee was simply based on the past increases of 10%/a continuing (which no one expects, least of all NR's own forecasts, or HS2 Ltd's); using NR's own forecast suggests more like in 38 years time.
- *Effectively full by 2024*, but this statement was based on NR's Draft RUS and assumes no other improvements are made, not even those they identify eg running an extra off peak service, and seem to ignore their own evidence on actual levels of overcrowding (that indicates about 5% overcrowding weekdays by 2024).

The above does not provide robust evidence on which Philip Hammond can state the WCML will be "completely overcrowded by 2022", or statements by Theresa Villiers that it will be full within a decade, or the position being quoted by Prof Begg (on his Yes to HSR website) that it will be full within six to 10 years.

Statements are being taken out of context, and are used to suggest there is no other option than HS2.

3. EVIDENCE

3.1 Government statements

Philip Hammond, Theresa Villiers²²² and Alison Munro have all been stating that WCML will be full in around a decade. Most recently they rely on statements made by David Higgins (Network Rail's Chief Executive) to the Transport Select Committee. But his statement (that WCML would be full in 10 years, or even six to 10 years) involves a projection that no-one, including NR, would say is realistic. His words have been taken completely out of context.

Prior to that they rely on statements Higgins made when the HS2 consultation was announced.

3.2 Network Rail forecast

What NR actually forecast in the December 2010 draft RUS for WCML is reasonably in line with the current forecasts for WCML made for HS2 Ltd.

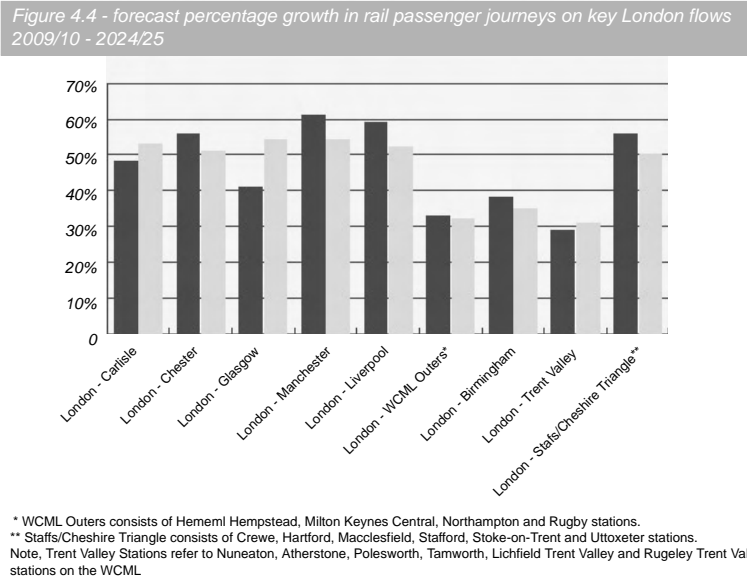
Figure 1 shows the growth they forecast. If average growth is about 45% to 2024–25, this gives 2.5% per annum—so that demand doubles in 28 years (HS2 forecast has demand doubling in 35 years).

²²² Villiers in Westminster Hall debate on HS2 (March 2011); Hammond on Central ITV debate (19 May 2011); Hammond on statement to the house (20 December 2010); Alison Munro on radio (11 April 2011); Prof Begg on Yes to HSR website 4 April 2011).

However, the Draft WCML RUS had the forecasts done prior to the fares revision of RPI+3% for three years, so forecasts that included this factor should be lower to some extent.

Figure 1

NETWORK RAIL: DRAFT WCML RUS, PAGE 69



3.3 Network Rail statements

David Higgins was reported as follows in welcoming the HS2 consultation (28 February 2011, on NR’s web site):

“David Higgins, Network Rail chief executive, said: ‘HS2 is a vital infrastructure project of national importance. It will be a hugely significant enhancement to the national rail network and will unlock tremendous capacity to tackle, what will be by 2024, critical overcrowding on the West Coast Main Line.’

‘The West Coast Main Line is Britain’s busiest and most economically vital rail artery. It will be completely full by 2024 with no more space to accommodate the continued predicted growth in both passenger and freight traffic. A new high-speed line to Birmingham and the North West is essential both to release much needed capacity on the existing line for more freight and commuter services, but also in creating the vital transport links we need to help Britain’s economy thrive.’”

This announcement is supported by reference to the Draft WCML RUS, with up to 61% growth (3.5% per annum) in passenger numbers between Manchester and London for 2024. This is the highest growth for London and other city pairs (see figure above), and the highest growth scenario. This leads to the modest levels of crowding shown in Figure 4.6 (from the Draft RUS).

NR forecast that 12%²²³ of the long distance high speed trains will have some standing in some point of their journey by 2024 (although how this aligns with Figure 4.6 is unclear). But NR see running an additional off-peak service (making use of spare capacity in the time table) as addressing this issue. This can be achieved with the then existing rolling stock, and so has little cost. Interestingly they do not see a business case for lengthening the rest of the Pendolino fleet to 11 car, or for the Voyager fleet for services to North Wales.

However, it should be noted that the business cases developed by NR are on the DfT basis that time savings are very valuable (assuming every minutes of time saving is a minute of additional productive time) and relieving crowding has little value as time is unproductive in any event. The business case for reducing crowding should be much stronger when DfT’s approach is corrected and crowding is taken to have a much higher productivity related cost.

Curiously NR in the Draft RUS entirely dismiss the option of extending trains, claiming that after the re-timetabling:

“.....thereafter the WCML, particularly at the southern end of the route is effectively full and subsequent additional capacity could only be provided by exceptionally expensive infrastructure solutions.”²²⁴

²²³ Draft RUS WCML, Network Rail, December 2010, page 7

²²⁴ Network Rail op cit, Section 6.5 page 118

This is odd, as lengthening trains is normally the cheapest means of creating more capacity, and is identified by Network Rail as the next course of action to adopt after exhausting timetable changes.²²⁵ With only the Pendolino partly lengthened to 11-car, there are options of lengthening the rest of the Pendolinos, lengthening the Voyagers and selectively lengthening some Pendolinos to 12-car.

NR also do not actually consider means of increasing capacity through infrastructure solutions either, simply claiming that:

*“Further, more expensive, incremental capacity improvements have not been considered in detail as Network Rail, High Speed Two Limited and the DfT have already examined this, concluding that a new line is the preferred strategy.”*²²⁶

The Draft RUS provides the government with some quotes clearly stating that WCML will be full by 2024, however, this is reliant on a “do nothing” view of future interventions. NR actually identify how crowding can be addressed through running an extra train off peak. They dismiss the options of train lengthening (possible for both Pendolinos and Voyagers) as lacking business cases. Their consideration of options is clearly constrained by the perceived imminence of HS2 and is not evidence that options to increase capacity on WCML do not exist.

3.4 Transport Select Committee evidence

David Higgins’ statement to the Transport Select Committee (1 March 2011) is frequently quoted by the government, and also by Professor Begg on the Yes to HSR website. The following is an extract of the oral evidence that David Higgins gave to the Transport Select Committee.²²⁷

“With West Coast, it has been a tremendous success. £10 billion upgrading West Coast means that now that franchise is having customer growth of over 10% per annum. At Christmas it was up by 20% year on year. That West Coast line, within 10 years at the absolute maximum, and probably six years, will be at capacity, and that is with additional carriages included in the area. We can look at other tactical interventions in that line to put more capacity in there, but in the end it comes down to capacity: we will, across a number of key parts of our network, run out of capacity.

Q25 Mr Leech: How many years do you predict that it would be-

David Higgins: Six to 10 years.

Q26 Chair: Is that six to 10 years from when it runs out of capacity?

David Higgins: From today. If it keeps growing at the rate it is going today, and if petrol prices keep going in the way they are going, then in 10 years’ time West Coast will be at capacity.”

The statement was not therefore based on NR’s forecast but simply the recent past (that reflects the effect of the much improved services from the Route Modernisation being completed) continuing.

The recent past of WCML reflects the upgrade that has resulted in massive reductions in generalised journey times from faster journeys, more frequent services and higher reliability. No one expects the uplift from these changes to continue to drive demand increases that are out of line with “background growth”.

The information can however be used to calculate the point at which NR believe it will be full—on the basis of six years (minimum) and 10 years (maximum) at 10%/a this represents between 77% and 159% growth.

Table 1

USING FORECASTS TO CALCULATE MAXIMUM AND MINIMUM PERIOD UNTIL WCML IS FULL

<i>NR maximum period to reaching capacity</i>		<i>increase</i>	<i>“at capacity”</i>
NR statement	10%/a for 10 years	159%	2021
NR RUS forecast	2.5%/a for 38 years	156%	2049
HS2 Ltd forecast	2.02%/a for 47 years	156%	2058
<i>NR minimum period to reaching capacity</i>			
NR statement	10%/a for 6 years	77%	2017
NR RUS forecast	2.5%/a for 23 years	76%	2034
HS2 Ltd forecast	2.02%/a for 28 years	75%	2039

Table 1 shows the results

- *Max period:* It would take 38 years for WCML to be full using the average forecast growth from NR’s Draft WCML RUS and 47 years on HS2 Ltd’s WCML forecast growth rate
- *Min period:* It would take 23 years for WCML to be full using the average forecast growth from NR’s Draft WCML RUS and 28 years on HS2 Ltd’s WCML forecast growth rate

²²⁵ Network Rail *op cit*, section 6.2 page 113

²²⁶ Network Rail *op cit*, page 89

²²⁷ Transport Select Committee 1 March 2011: David Higgins, NR Chief Executive

The answer probably lies somewhere between the two results. Based on HS2 Ltd’s forecast this would be between 28 and 47 years

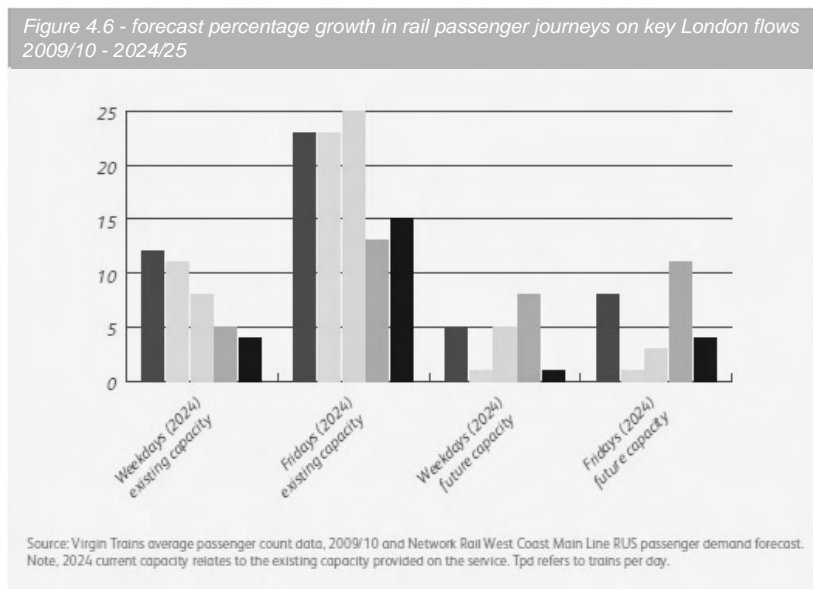
3.5 Crowding evidence

Figure 2 is from the Draft RUS and the section on crowding. The right hand side (future capacity) gives the levels of crowding expected with the new rolling stock to be introduced in 2012. The level of trains with some standing are modest (about 5%)—no doubt largely reflecting the first trains eligible for regulated saver fares in the evening (as now). It is not clear how this figure fits with the 12% of services to and from Euston having some standing at some stage.

The higher levels of crowding on the Wales services (green bars, 2nd from the right) have the highest crowding. These services are run by the Voyagers, for which no new rolling stock is being acquired, although more Voyagers could be obtained allowing more trains to be made up of two five-car units (for example).

Figure 2

NETWORK RAIL: DRAFT WCML RUS (PAGE 71)



Philip Hammond, on this evidence, has some difficulty in saying that services will be “completely overcrowded by 2022”, as he did on the recent Central ITV debate (19 May 2011).

CONCLUSION

It is convenient for Government and Professor Begg that Higgins made his statement about how long WCML might take to reach capacity, but the unqualified way it is being used or quoted is misleading—as what he said is a “what if” type of statement, rather than NR’s own proper forecast.

Similar statements in the Draft WCML RUS appear to apply to 2024 but actually using Network Rail’s forecasts, but these relate to the situation if nothing is done. NR actually identify a low cost solution.

That 5% (or 12%?) of long distance trains will have some standing in 2024 without any further increases in capacity beyond that committed for 2012 is poor evidence that WCML will be “completely overcrowded by 2022” as stated by Philip Hammond.

Further written evidence from HS2 Action Alliance (HSR 153B)

LETTER FROM HS2 ACTION ALLIANCE TO OXERA CONSULTING LIMITED

OXERA REVIEW OF THE BUSINESS CASE FOR HS2

I am writing in connection with the Independent Review that you conducted for the Transport Select Committee. We found it most helpful and were pleased that it covered several of the points that we ourselves have raised concerns about. I thought it might also be useful to identify some other points that were not covered in your review but we feel have a strong bearing on the economic case for HS2. Our purpose is simply to expose the key issues.

ALTERNATIVES

As you observe, HS2 is not compared against the strategic alternatives but a “do minimum” case. However, you do not mention that the strategic alternatives developed for DfT are sub-optimal, and other more cost effective solutions exist (some were even mentioned by Atkins but not pursued (for example in Rail Package 1 that concerned longer trains)).

An indication of the unsuitability of the options considered by DfT is that of the load factor. If we use the WCML 2007–8 base and HS2 as a point of reference, these have load factors of 57% and 58%. In contrast, WCML, MML and ECML have load factors in Scenario B of 51%, 28% and 43% respectively. Given the strategic alternatives are composed of a number of separately implementable elements, the strategic alternatives create large quantities of spare capacity. Scenario B also contains some counter-intuitive elements, for example the electrification of MML but also electrifying and upgrading the track between Retford and Sheffield (not currently an ECML service at all).

There are also some important differences in approach in DfT’s assessment of HS2 and the strategic alternative that favour HS2:

- The strategic alternatives are assumed to be implemented in their entirety for a single date, not implemented incrementally as demand requires. Had the strategic alternatives been assessed implemented as required this would greatly improve their economics—in both preventing the build up of crowding and the creation of capacity and cost before it is required. This is not even consistent with how rolling stock for HS2 is assumed to be acquired to match the build up of demand.²²⁸
- The key current crowding issue on WCML is on the Milton Keynes and Northampton commuter trains. This could be addressed by the Ledburn Junction work and new fast commuter trains in five to six years, (an element of Rail Package 2 and Scenario B) yet DfT assume that these works would not be done to 2026.
- Rail Package 2 contains a number of costs for infrastructure works equally required for HS2 but excluded from the HS2 costing, for example the platform and approach works at Manchester (needed for four trains/hour running for RP2 but assumed to occur as part of the Northern Hub works for HS2 that also runs four trains per hour).
- It might also be noted that the rolling stock and running costs for the strategic alternatives are treated as subject to the same optimism bias as HS2—despite the costs of operating the existing lines and being precisely known and additional Pendolino stock still being in the process of delivery. In contrast HS2 Ltd state that new technology on train control and braking is needed, and the exact scope of works is understood in far less detail.
- The April 2011 reworking of the economics of Rail Package 2 was even against a different base case from HS2 that caused benefits to be underestimated—despite producing this reworking on the pretext of bringing it onto the same basis as HS2!

The 51 M submission to the Select Committee details a considerably superior approach to alternatives. For example for WCML, the approach is to do the lowest cost alternatives first—ie changing the balance in provision of first and standard class accommodation (practicable without revenue loss due to the low occupancy of first class), lengthening the fleet in stages to 12-car (except for services to Liverpool). 12-car operation was explored and found practicable in the work done by Atkins for the 2010 White Paper, but not used in Rail Package 2 or Scenario B (despite the explicit recognition that it could have been). Because these elements could be implemented in phase with demand growth, they should be commercially viable and have no subsidy requirement. The commuter issue would also be addressed early.

Failing to develop the best alternatives and to compare HS2 against them has resulted in a grossly flattering economic assessment of HS2. In particular, HS2 would not have any crowding benefit (as it would not reduce crowding), so their suggestion that the loss in benefits from time on board trains being productive would not be recouped through reduced crowding.

²²⁸ “A Summary of Changes to the HS2 Economic Case” April 2011, Section 2.1.1, page 6

DEMAND FORECASTS

The demand forecasts for HS2 are much less moderate than DfT present them as being. As we discovered from an FOI, the 1.4% increase per annum is not for long distance (over 50 mile) journeys, but “strategic trips” which includes shorter journeys. The doubling in background demand for WCML to 2043, with an average growth rate of 2.0% per annum is also a misrepresentation, as the 2043 figure is reduced by transferring some of the journeys attributed to Virgin Trains in the 2007–08 base to London Midland. A more representative figure is given by looking at the traffic north of Milton Keynes that gives an increase of 127% and a growth rate of 2.4%. This is the level of long distance rail demand forecast by DfT in 2007—without the recession or the period of RPI +3% fares rises.

The “background” growth does not include the effects of improvements to services—including the improvement from the WCML December 2009 timetable—which are on top of the 2.4% growth per annum. The “do minimum” growth is for exogenous factors and fares only. The demand forecasts for HS2 and RP2 (etc) include uplifts for service improvements over the 2007–08 service specification.

You note that DfT still employ crucial PDFH4.1 values in their guidance and HS2 assessment—and not version 5.0. Readers might not be aware that DfT continue to use income elasticities on demand of 4.1 that have a distance term—unlike with version 5. We understand that the work that Oxera yourselves have recently done confirms that there should not be a distance term. The removal of this distance term has a major impact on the demand forecast.

You note that the demand forecasts are the area most thoroughly subjected to sensitivity tests. I am not sure that you are aware that the sensitivity test required by DfT’s own guidance on income elasticities was not performed. Again we had this confirmed in an FOI from HS2 Ltd and are still waiting for a reply from Phil Graham as to whether permission was given not to follow the guidance. Had it been it would have showed that the economic case is not robust.

We agree that the doubling in demand does not seem to have a proper basis. However, we feel that using PDFH to make forecasts over a 35 year period with income elasticities as high as 2.8 should attract specific questioning.

An important but unobvious omission in DfT’s case is that of the Evergreen 3 improvements to the Chiltern Line. These reduce London—Birmingham journey times to near Pendolino levels this autumn. This will be bound to win traffic from WCML, thus reducing demand and capacity requirements on WCML, and increasing competition for HS2. It is omitted from the “do minimum” case, and the assessments of HS2 and RP2.

PRICING

In your discussion of premium fares you did not note that HS2 Ltd’s view²²⁹ is that:

- demand for HS2 would be price elastic for the induced demand (some 35% of passengers) so that increases in ticket price would reduce overall revenues;
- there would be limited scope for higher prices for the leisure market (70% of passengers); and
- The availability of non-premium competition affects the ability to generate additional revenue through premium fares.

Interestingly, HS2 Ltd are more positive about using premium fares to price off excess demand, which they recognise here cannot be accommodated on some of the services running onto the classic network but fail to in their economic assessment.

It would seem that competition would increase costs (as passengers will chose cheaper classic services, so that more such services will be run) and may well reduce revenues as over-supply reduces fares, worsening the overall economic performance.

RELIABILITY

You note that the impact on reliability of the strategic alternatives is unclear. While we agree, the reliability of the strategic alternatives to the London—West Midlands phase was discussed in the 2010 documentation, that concluded:

“Even with higher levels of train frequency, the packages may enhance train performance at a network level.....These locations [where grade separation of extra track is built] may more than compensate for other area where there will be an enhanced train frequency but no infrastructure enhancement” ²³⁰

There are grounds for suggesting that the claimed reliability benefits of HS2 are questionable.

DfT claim HS2 will deliver £5.7 billion of reliability benefit for the full “Y” network. However such reliability benefits are predicated on HS2 being largely isolated from the classic network to avoid importing delays. Such isolation will not apply either to phase 1 or phase 2 of HS2. Given the very intensive time tabling planned for HS2 (18 trains/hour), this suggests the claimed benefits may be doubtful.

²²⁹ “HS2 Demand Model Analysis”, February 2010, Section A2.4.5, page 155

²³⁰ “High Speed 2 Strategic Alternatives Study: Rail Interventions Report”, March 2010, Appendix B, Section 1.1.1, page 16

UNCERTAINTY

A major uncertainty that DfT have not covered is the deliverability of the “Y” network service pattern. This requires 18 trains/hour in the peak—without allowance for trains to Heathrow and directly onto HSI. This is recognised by HS2 Ltd not to be deliverable with current technology, and HS2 Ltd have given no evidence to support it becoming deliverable in the future—despite an FOI request for the basis of their expectation.

This is clearly—if not a show stopper—at minimum a major uncertainty about the deliverability of benefits (reducing the services to 14/15 trains per hour would do serious damage to the economics)—or on the costs as building an additional line or four-tracking the stem of the “Y” would have major cost implications.

DfT have not even considered issues surrounding their proposals being capable of supporting 18 train per hour in the sensitivity analysis.

It may be that HS2 must be regarded as incapable of supporting services to Leeds, and that it needs to be appraised on the case for London West Midlands and Manchester by itself.

If you would like me to clarify any of these points, or others made in our submission, I would be pleased to in correspondence or in person.

June 2011

Further written evidence submitted by HS2 Action Alliance²³¹ (HSR 153C)

This note summarises new evidence that shows UK passengers are more satisfied with the journey speeds being achieved than for any other aspect of the railways, and that this reflects the facts on journey times in the UK, compared to other EU countries.

It also sets out the arithmetic to show how our proposed alternatives to HS2 deliver their capacity improvements to more than meet the doubling in forecast demand.

RECENT EUROPEAN EVIDENCE ON SPEED

1. A recent EU study of passengers views on their rail services has just reported. It shows that passengers in the UK are more satisfied than most other EU countries. This study of people’s views on speed coincides with an analysis of the facts on the journey times that was originally done for the 2006 Eddington Transport study, and updated by HS2AA.

2. The EU study shows UK satisfaction scored highest for speed. Not only are UK rail passengers 92% satisfied with their journey times (second in Europe) and well above Germany, France and Italy, but this perception reflects the facts. The facts show that UK has shorter journey times between its capital and top five cities than in Spain, Italy, France and Germany, all who have been investing in high speed rail so as to improve their journey times, that still do not match ours.

2011 Eurobarometer survey²³²

3. The passenger satisfaction survey of those making middle or long distance rail trips shows the UK are happier with their journey than almost all their European neighbours.

4. On 17 of the 19 aspects measured, the UK are above the EU average of 25 countries. For over half of the 19 the UK was in the top third, and on six aspects the UK was in the top three.

5. The analysis shows for key measures:

- On travelling speed (ie length of journey time) UK scored 2nd, with 92% satisfied (compared with the EU average of 78% satisfied). UK was 16% above Italy; 13% above France; 8% above Germany.
- On frequency of trains UK was 3rd, with 84% satisfied (compared with the EU average of 72% satisfied). UK was 11% above France and Italy; 10% above Germany.
- On reliability and punctuality UK came 6th, with 87% satisfied (compared with the EU average of 66% satisfied). UK was 35% above Germany; 32% above France; and 24% above Italy.
- On connections with other rail services UK was top, with 71% satisfied (compared with the EU average of 59% satisfied). UK was 14% better than France; 8% better than Germany; and 1% point above Italy.

6. Overall UK passengers were more satisfied than German passengers on all 19 criteria. The UK also scored higher than France in 15 and above Italy in 14 of the criteria measured. These are countries that have majored on high speed rail.

²³¹ This paper was prepared by Hilary Wharf, on behalf of HS2 Action Alliance, which is a not for profit organisation that is campaigning on an evidence based approach against HS2, and has 73 affiliated groups (see www.hs2actionalliance.org).

²³² The survey can be found at http://ec.europa.eu/public_opinion/archives/flash_arch_329_315_en.htm#326

7. This survey confirms that UK rail passengers do not rank faster speeds as a priority. In fact they are more satisfied with their current journey lengths than for any of the other 19 factors that were measured.

8. ATOC noted²³³ *“There is often a widespread perception that the rest of Europe is happier with their rail services than are UK passengers. But the European Commission’s opinion polling shows that the people surveyed in the UK were more satisfied with their train services than in many other countries on the continent”*.

9. The results reflect the significant investment that has been put into all aspects of the UK railways, that needs to continue in ways that benefit everyone, if such results are to be repeated.

10. People’s perceptions on speed also reflect the facts on actual journey length times, as the studies below show.

Study of connections between capital and biggest cities

11. The UK is a small and already well connected country to our capital. Unlike Europe it has had a fast national railway system (with routes capable of 200 km/h, 125 mph) for a long time.

12. The HS2AA study (at Annex A) showed that the UK has shorter journey times between the capital and top five biggest cities than in France, Germany, Italy and Spain, despite their concentration on high speed rail. Because our major cities are relatively close to each other we do not need faster trains to achieve short journey times:

- Averaging 145 minutes in UK (or 148 minutes using the same five cities as Eddington):
 - 151 minutes in Spain.
 - 184 minutes in Italy.
 - 221 minutes in France.
 - 244 minutes in Germany.

13. This is consistent with what Sir Rod Eddington found in his 2006 study. He then states “...with [rail] journeys between London and other UK major cities performing particularly well relative to journeys from other European capitals”. HS2AA updated this study

2. COUNTRIES FACING PROBLEMS WITH HIGH SPEED RAIL

14. Recent high speed rail developments have been facing difficulties in Europe and around the world. Attached (Annex 2) is a summary of recent reports. It shows a tendency to over estimate demand, and the financial difficulties of some recent high speed rail developments.

3. SUMMARY OF HOW THE ALTERNATIVES MEET THE FORECAST DEMAND

15. To avoid confusion over exactly what the different alternatives deliver in terms of capacity against forecast demand, we have summarised how the capacity builds up, with all the figures put onto the same basis (as how demand is calculated). See Annex 3

16. This demonstrates that both RP2, and more importantly the best alternative more than meets the doubling in forecast demand. It should be noted when replacing first class with standard class seats this adds capacity for no loss in revenue as all first class demand is readily accommodated within the reduced first class capacity. (First class loadings are currently around 20%).

Annex 1

“HS2AA STUDY OF JOURNEY TIME LENGTHS”

The UK actually has an extensive high speed network. With the exception of CTRL, the principle routes in the UK have a line speed of 125 mph for intercity services (ie WCML, East Coast Main Line and Great Western). 125 mph is sufficiently fast to qualify as high speed for a line uprated to be high speed under the European Directive on high speed rail.²³⁴

Bearing in mind the compactness of the UK and the closeness of centres of population such a speed is entirely appropriate, as supported by Eddington’s report and findings.²³⁵

In fact the UK has the shortest travelling times by rail between the capital and its major cities (using the most recent data and timetables).²³⁶ Our times are shorter than for Germany, France, Italy and Spain.

²³³ ATOC comments on the report are in Rail at

www.rail.co/2011/06/24/uk-rail-passengers-more-satisfied-with-their-service-than-in-many-other-eu-countries/

²³⁴ “Directive 96/48/EC—Interoperability of the Trans-European High Speed Rail: System Technical Specification for Interoperability”

²³⁵ Transport Study: Main Report (December 2006), Vol. 2 para 2.18, chart 2.4

²³⁶ Information on fastest times in Europe from timetables on Rail Europe (on a typical midweek July 2010 day)

GERMANY

<i>City</i>	<i>City pop 000s</i> ²³⁷	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Hamburg	1,773	2	1hr 36m
Munich	1,357	3	5hr 52m
Cologne	995	4	4hr 19m
Frankfurt	668	5	3hr 34m
Stuttgart	600	6	5hr 00m
Avg time to/from Berlin	3,430	1	4hr 04m (244m)

FRANCE

<i>City</i>	<i>City pop 000s</i> ²³⁸	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Marseille	839	2	3hr 03m
Lyon	472	3	1hr 57m
Toulouse	438	4	5hr 31m
Nice	347	5	5hr 38m
Strasbourg	273	6	2hr 17m
Avg time to/from Paris	2,203	1	3hr 41m (221m)

ITALY

<i>City</i>	<i>City pop 000s</i> ²³⁹	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Milan	1,307	2	2hr 59m
Naples	964	3	1hr 07m
Turin	909	4	4hr 10m
(Palermo) ²⁴⁰	(660)	(5)	(11hr 32m)
Genoa	612	6	4hr 58m
Bologna	375	7	2hr 05m
Avg time to/from Rome	2,727	1	3hr 04m (184m)

SPAIN

<i>City</i>	<i>City pop 000s</i> ²⁴¹	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Barcelona	1,622	2	2hr 43m
Valencia	815	3	3hr 43m
Seville	703	4	2hr 20m
Zaragoza	674	5	1hr 18m
Malaga	568	6	2hr 30m
Avg time to/from Madrid	3,213	1	2hr 31m (151m)

UK

<i>City</i>	<i>City pop 000s</i> ²⁴²	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Birmingham	1,017	2	1hr 22m
Leeds	771	3	2hr 04m
Glasgow	582	4	4hr 09m
Sheffield	535	5	2hr 08m
Bradford	502	6	2hr 24m
Avg time to/from London	7,556	1	2hr 25m (145m)

²³⁷ 2008 census (except Cologne and Frankfurt (2007))²³⁸ 2006 census (except Paris (2007))²³⁹ 2008 census (except Rome 2009)²⁴⁰ Palermo is on the island of Sicily, and has been excluded from the analysis of average times²⁴¹ 2009 census (except Barcelona 2008)²⁴² 2008 census (except Glasgow (2007))

SUMMARY OF AVERAGE (FASTEST) JOURNEY TIMES BETWEEN THE CAPITAL AND FIVE LARGEST CITIES

<i>Country</i>	<i>Average Journey Time</i>	<i>Notes</i>
Germany	4hrs 04m (244m)	Mixture of high speed, upgraded and some conventional lines
France	3hrs 41m (221m)	All high speed TGV except Marseille—Nice link
Italy	3hrs 04m (184m)	All high speed except last section to Genoa
Spain	2hrs 31m (151m)	All high speed except some short sections to Valencia
UK	2hrs 25m (145m)	Intercity network

The tables also show how dominant London is as the major city in the UK (seven times the next largest), compared to other major West European countries (where the capital is about twice as large).

SENSITIVITY

The above analysis uses different cities than those used in the original Eddington analysis. As a sensitivity the UK cities used were adjusted to match Eddington's selection.

<i>City</i>	<i>City pop. 000s²⁴³</i>	<i>Rank by Population size</i>	<i>Time from capital city (fastest train)</i>
Birmingham	1,017	2	1hr 22m
Leeds	771	3	2hr 04m
Glasgow	582	4	4hr 09m
Manchester	484		1hr 58m
Newcastle	275		2hr 50m
Avge time to/from London	7,556	1	2hr 28m (148m)

Sir Rod Eddington's cities (Manchester and Newcastle Dec 2010 timetable)

As can be seen there is little impact on the overall comparison.

CENTRALISATION

One of the reasons that the UK is so centralised is because journey times from major cities to London are short and have been for over 100 years. It is interesting that it is suggested that further shortening the journey times will reverse the centralisation that has resulted from it.

Annex 2

COUNTRIES FACING PROBLEMS WITH THEIR HIGH SPEED RAILWAYS

It is suggested by some that we should build more high speed rail in the UK to keep up with other countries. This note summarises some recent development in other countries.

Portugal

The Portuguese government has decided to suspend construction of its €3.3 billion Lisbon-Madrid high speed rail link. This was debated in their parliament on 30 June and 1 July, following their €78 billion bailout by the International Monetary Fund and European Union. Suspending this project is not a requirement of the bailout, but the idea is to guard against possible external and internal risks. Portugal's debt as a proportion of GDP was 93% at the end of 2010. In the UK the figure was 52% at the end of last year, and is now believed to have risen to 60%.

<http://www.guardian.co.uk/world/2011/jul/05/portugal-spain-rail-plan-morel>

http://www.ukpublicspending.co.uk/downchart_ukgs.php?year=1900_2011&chart=G0-total&units=p#copypaste

Spain

From 1 July, Spain will be axing the high speed train running between Toledo, Cuenca and Albacete. This high speed line, which cost €3.5 billion, was opened last December; however only nine passengers (on average) used this route per day. The failed route was costing €18,000 per day to operate. This is one of several austerity measures intended to drastically shrink public spending and reduce Spain's borrowing costs.

²⁴³ 2008 census (except Glasgow (2007))

France

France's plans for TGV expansion are running into financing problems because of the recession and the country's high budget deficit. We risk having longer and longer high-speed lines which are used less and less; so said the president of the SNCF, Guillaume Pépy. He thinks that France is going too fast in its further construction of high speed lines. TGV fares have increased by 100% in the last decade compared to about 30% for car travel. Pépy went on to say: The whole basis of the high-speed rail revolution—that the TGV should be the “normal” means of travel, not just something affordable by the business elite—is under threat. The SNCF president also described the state railways as: Decaying... facing a financial impasse... and heading for the wall. He should know better than most.

<http://www.independent.co.uk/news/world/europe/life-on-the-fast-track-thirty-years-of-the-tgv-2265455.html>

Netherlands

Earlier this year Reuters reported: *The Dutch high-speed train operator could face eventual bankruptcy unless steps are taken to boost its viability, after little more than a year of full services.* However passenger numbers have increased, from a low of 15% occupancy on some trains, following the decision by the operator to reduce its price premium for high speed rail tickets.

Plans for a high speed line from Amsterdam to Germany (HSL-Oost) have been suspended. The scope of the project has been reduced, and the Dutch have no plans to run high speed trains on this route in the near future.

http://en.wikipedia.org/wiki/High-speed_rail_in_the_Netherlands

Taiwan

In 2009 it became necessary for the Taiwanese government to take over the running of the Taiwan High Speed Rail Corporation as it was almost bankrupt, two years after it first started running its high speed trains. One of the contributing factors to the financial problems was that passenger numbers were approximately one third of those that had been forecast.

<http://ccsenet.org/journal/index.php/ijbm/article/view/6370/6325>

China

China has incurred a vast amount of debt during the building of its high speed rail network. The debt was estimated to have reached 2 trillion yuan (US\$304 billion) by the end of 2010. The Chinese Railways Ministry is required to pay interest of up to 120 billion yuan (US\$ 18.26 billion) each year. Apparently the railway system is currently only able to pay interest on the debt, and is unable to repay any of debt itself.

One comment reported by Reuters may strike a chord: *Professor Zhao cited the line from eastern Henan province's capital Zhengzhou to the Shaanxi city of Xi'an as the perfect example of a white elephant rail project. "It is basically empty," he said. In the first six months after its launch in February 2010, the railway reported 1.98 million passengers. It was designed for 37 million a year.*

Following some safety concerns, the speed of the trains has been reduced from 380 kph to 300 kph.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1502&MainCatID=15&id=20110301000115>

<http://www.reuters.com/article/2011/06/23/uk-chinas-railway-boom-hurtles-into-the-idUSLNE75M04520110623>

<http://www.ft.com/cms/s/0/3d859f1e-a1a1-11e0-b9f9-00144feabdc0.html#axzz1Qe9CB Rd8>

USA

In February this year, Florida's governor Rick Scott turned down a \$2 billion government incentive to develop a high speed rail link from Tampa to Orlando. He believed passenger numbers to be overestimated, and that the state would have to pick up the bill for subsidies because the line would be unable to pay for itself. His decision follows very similar decisions made in Ohio and Wisconsin.

<http://www.nytimes.com/2011/02/17/us/17rail.html>

<http://www.reuters.com/article/2010/12/09/us-usa-infrastructure-highspeedrail-idUSTRE6B860B20101209>

United Kingdom

We only have the experience of HS1 to draw on. Some may remember that 18 Javelin carriages were taken out of service four months after the line was completed in 2009 due to low passenger usage. In April 2011 a Telegraph reporter noted there were more than 200 empty seats on a peak time train leaving St Pancras at 6:10pm. Off peak usage was described as 90% empty.

<http://www.metro.co.uk/news/824624-140mph-train-service-is-reduced-after-complaints>

<http://www.telegraph.co.uk/journalists/andrew-gilligan/8423638/High-speed-rail-Britains-first-link-hasnt-worked-as-planned-say-critics.html>

CONCLUSION

What can we learn from this? There is a tendency to overestimate demand for high speed rail lines. Aalborg University found that nine out of ten rail projects overestimated passenger demand, the average overestimation being 106%. Serious financial difficulties have been experienced on some of the more recently constructed high speed lines. A government with a high level of debt finds it prudent to suspend further investment in a high speed rail project.

<http://seekerblog.com/2010/08/31/high-speed-rail-inaccuracy-in-traffic-forecasts/>

Annex 3

SUMMARY OF ALTERNATIVES TO HS2: USING EXISTING LINES TO MEET CAPACITY NEEDS

The McNulty report stressed the importance of “sweating existing assets”. There is substantial scope to do this for the West Coast, East Coast and Midland Mainlines.

Given that the benefits of faster speeds are small (see independent Oxera report to Transport Select Committee, and the 2011 Eurobarometer survey for UK passenger views), the primary benefit of HS2 is to add to capacity. However, this can be done more quickly and more affordably by developing the existing lines.

The table below gives the arithmetic for increasing West Coast Mainline intercity capacity from London for three options:

- The (unrealistic) DfT “do minimum” used as the comparator for HS2
- The DfT alternative to HS2, “Rail Package 2” (RP2), which has many benefits but is not “optimised” and there is no immediate need for much of the engineering work suggested
- An “Optimised Alternative”.

The table shows that RP2 more than meets the doubling in demand that is forecast by HS2 Ltd to happen, but also that the “Optimised Alternative” can achieve this (with 121% extra capacity overall) largely before the need for infrastructure changes.

Resolving commuter over crowding problems

It is worth noting that the grade separation at Ledburn junction (at 2.1 in the table) will, with new trains, also be able to double the fast commuter train capacity (not shown in the table) to Milton Keynes and Northampton. This is an overcrowded service that needs to be dealt with now. It cannot wait for HS2 in 2026.

Providing sufficient peak time capacity

Questions have been raised over the extent that train lengthening etc. can provide extra capacity at peak times. The “Optimised Alternative” suggests a timetable that increases the base timetable in the period 16:30 to 18:29 from 19 Intercity and 4 fast commuter trains (in the 2007–08 base) to 24 Intercity and 8 fast commuter trains. This shows the doubling of the fast commuter trains (ie Milton Keynes) capacity while at the same time (as the table shows) increasing the number of standard class intercity peak time seats from 5,736 seats (18x9 car Pendolinos and 1x10 car Voyagers) to 13,700 (18x12 car Pendolinos, 4x11 car Pendolinos and 2x10 car Voyagers), a 139% increase.

So its not just that overall capacity increases with the “Optimised Alternative”, or even that standard class capacity increases, but peak standard class capacity does too.

CONCLUSION

Capacity needs can be therefore be met incrementally (hence with less risk given the uncertain demand) and much more affordably, and given that the benefits of speed are small, there is no justification for the very high costs of HS2.

ALTERNATIVE ELEMENTS FOR INTERCITY WCML CAPACITY (IE EXCL COMMUTER SERVICES)
(ON SAME BASIS AS THE BACKGROUND GROWTH IN DEMAND IE OVER 2007–08 BASE)

	Alternatives:			“Optimised” capacity increase over 2007–08 base (cum. figures)			Comment *Evening peak 16.30 to 18.39
	“do minimum”	RP2	“Optimised”	Total	Standard class total	Peak*	
1. Train investment (with little/no infrastructure investment)							
1.1 Dec. 2008 timetable change	Y	Y	Y	+36%	+38%	+23%	Not in 2007–08 base
1.2 Evergreen 3 Chiltern speed improvements	N	N	Y				From autumn 2011, scope for extra capacity
1.3 Extra Pendolinos (by 2013)	Y	Y	Y	+63%	+79%		Being implemented; benefits peak & off-peak capacity
1.4 2013 timetable change	N	N	Y	+75%	+92%	na	Increases off-peak capacity only
1.5 Reassign 1 Pendolino car to standard class	N	N	Y	+84%	+127%		Very low cost: benefits peak & off peak capacity
1.6 Full 11-car on WCML	N	Y	Y			+106%	Benefits peak & off peak capacity
1.7 12-car WCML (not Liverpool)	N	N	Y	+121%	+181%	+130%	Benefits peak & off peak capacity
Trains total: (% incr. in capacity)	133,328 (+51%)	149,725 (+69%)	195,432 (+121%)	195,432 (+121%)	166,908 (+181%)	13,179 (+130%)	Seats in traffic Increase over 2007–08
2. Infrastructure investment							
	9 tph	12 tph	11 tph				Trains per hour
2.1 Grade-separated junction between Leighton Buzzard/Ched’ton	N	Y	Y				Needed to relieve peak crowding on commuter services
2.2 Stafford area by-pass	N	Y	Y				Benefits peak & off peak
2.3 Extra 3 Euston platforms	N	Y	N				
2.4 Extra platforms at Manchester (with Ardwick grade separation)	N	Y	N				HS2 has same train frequency to Manchester without these changes

	Alternatives:			“Optimised” capacity increase over 2007–08 base (cum. figures)		Comment *Evening peak 16.30 to 18.39
	“do minimum”	RP2	“Optimised”	Total	Standard class total Peak*	
2.5 4-tracking Attleborough/Brinklow (incl. freight works at Nuneaton)	N	Y	Y			Benefits peak & off peak
2.6 Northampton area speed improvements	N	Y	Y			Benefits peak & off peak
2.7 4-tracking Beechwood Tunnel—Stechford	N	Y	N			Benefits peak & off peak
3. Total after all investments: (% incr. in capacity)	133,328 (+51%)	222,080 (+151%)	218,538 (+147%)	218,538 (+147%)	186,648 (+215%)	13,700 (+139%) Seats in traffic Increase over 2007–08

Further written evidence from HS2 Action Alliance (HSR 153D)

OBSERVATIONS ON DfT’S FURTHER SUBMISSION (167A)

The note is prepared by HS2 Action Alliance.²⁴⁴ It raises some points on the further submission to the Transport Select Committee (TSC) by Department for Transport (DfT). It is intended to assist the TSC in their questioning of DfT in providing context for some of the assertions and explanations that they give, particularly when they have offered in our view incomplete, misleading or erroneous responses.

This document has been prepared within four days to be available in advance of DfT’s Select Committee appearance.

RESPONSES TO THE TRANSPORT SELECT COMMITTEE’S QUESTIONS

5. *We have received submissions (eg from 51M) that substantial extra capacity could be provided quickly and at relatively low cost by lengthening WCML trains to 12 car sets, and (especially relevant for commuters from Milton Keynes and Northampton) by operating additional trains enabled by a new grade separated flyover junction eg at Ledburn. Do you have any comments on this?*

DfT observe that the additional capacity from the 51M proposal is comparatively low. They fail to note that it provides sufficient capacity in total to allow services to have a lower load factor than HS2, and it is able to comfortably accommodate DfT’s projected peak demand (that is not addressed by any price changes in the HS2 Ltd modelling).

It is the cumulative or total increase in capacity that matters, and it is this that should be compared with the increase in demand. As demand is calculated from the 2007–8 base, so should capacity.

6. *What assessment have you made of the costs and benefits of running Pendolinos at up to 140mph by further upgrading the existing line?*

The reasoning for the exclusion of consideration of 140mph Pendolinos is defective.

ERTMS level 2 is planned to be implemented on WCML by 2030 as part of the UK’s commitment to ERTMS implementation.²⁴⁵ The motivation for this is:

- Meeting EU inter-operability requirements.
- Reducing costs.
- Increasing line capacity.

²⁴⁴ This paper was prepared by Bruce Weston, on behalf of HS2 Action Alliance, which is a not for profit organisation that is campaigning on an evidence based approach against HS2, and has 73 affiliated groups (see www.hs2actionalliance.org).

²⁴⁵ “ERTMS National Implementation Plan” DfT, September 2007

ERTMS provides in cab signalling which overcomes the current restriction on speed to 125mph that applies to the existing signalling system. So with ERTMS the current Pendolinos could travel at 140mph—which is their design specification.

There are uncertainties about the timing of this programme, but it is worth noting that:

- ERTMS level 2 is required for HS2—so any delivery risks apply equally to HS2.
- Implementation on WCML is scheduled towards the end of the programme (because the programme is based on when the signalling system is expected to be due for renewal and the last WCML renewal is only recently completed) so the WCML implementation is less likely to be delayed than for implementations scheduled earlier.

It is therefore unreasonable not to have considered the benefits of 140mph running (or indeed of somewhat higher top speeds that would be obtainable when rolling stock needs to be renewed). It is also likely that there would be little or no incremental cost to this faster running.

It is worth noting that while ERTMS is not considered in the WCML RUS by Network Rail, Network Rail did consider it in the ECML RUS (published 2009), with its potential benefits to linespeed, capacity (with a headway reduction from three minutes to two minutes) and performance.

In considering the existing network, Atkins did not take into account the effects of implementing ERTMS despite the UK's commitment to implement it. It is clear that it would substantially reduce the assessed benefits of HS2 if it had.

16. *What analysis have you made of business relocations between London, Birmingham and other major cities likely to arise from HS2?*

DfT observe that more than half the journeys on HS2 are expected to originate from outside London and the South East, implying that the origin is where the economic benefits would be felt. This is misleading.

- 70% of journeys will be for leisure purposes, it will be the destination that receives the benefit—ie predominantly London.
- The improved connectivity that DfT describe is primarily with London, which seems to be almost universally recognised in the academic literature as resulting in the benefit accruing to London.

It is worth commenting on the specific evidence that DfT cite for regional benefits:

- HS1—the town of Ashford has seen valuable new investment and development since the arrival of high speed services. Analysis carried out by Volterra and Colin Buchanan has estimated that the value of the regeneration benefits of HS1 could be as high as £10 billion.

This study is not based on the observed effects of HS1, but the forecast benefits according to DfT's methodology. The evidence to date is that many of the presumed benefits have not materialised.²⁴⁶

- Lyon, France—high speed rail has helped service sector firms to thrive by providing enhanced access to the Paris market. The Part-Dieu area where the Lyon station is situated has become one of the largest commercial developments in France.

The high speed rail link has enabled firms to relocate their HQs to Paris from Lyon (see evidence submitted to this Inquiry by Prof John Tomaney (section 4.6), and overall the link is assessed as having a negative impact on Lyon.

- Ciudad Real, Spain—high speed rail has enabled the town to develop into an important regional business centre and its university to expand its student population.

The balance of evidence in Spain seems to show that Madrid has been the principle beneficiary of faster connectivity (see Tomaney's submission to this Inquiry):

- The Government is considering a significant amount of evidence, submitted as part of the consultation, on the potential positive economic impacts of high speed rail in the North and the Midlands. We understand that much of this analysis has also been submitted as evidence to the Committee by relevant local and regional organisations.

The academically credible evidence does not show positive impacts on the North and Midlands. The KPMG work relied upon to show this is not robust, as shown by work by Laird and Mackie (actually for the Northern Way!) and confirmed by Tomaney. We have summarised the position in Appendix 2 of our observations on HS2 Ltd's further submission of 8 September.

²⁴⁶ See Andrew Giligan's articles in the Telegraph on unemployment and Ashford house prices in connection with HS1

DfT'S RESPONSES TO QUESTIONS RAISED IN OXERA'S REVIEW OF THE HS2 ECONOMIC CASE

Question 1. *To what extent would demand management on the conventional network delay the need for extra rail capacity?*

DfT is cautious on the benefits of pricing changes. However, given crowding on the WCML long distance services is highly concentrated on a few services (ie after the 19:00 price cliff), this is unimpressive. It hardly reflects Philip Hammond's own statements on this issue post MuNulty.

Unlike commuter railways, long distance railways predominantly carry leisure travellers, who are more responsive to pricing. It seems likely that at least the 19:00 price cliff crowding could be eliminated. As this will represent the greater part of the standing on trains forecast for 2024 by Network Rail (assuming no interventions), the need for additional capacity based on crowding levels would be considerably reduced.

Question 4. *Is it appropriate to focus on the benefits of the Y network given that its case has been assessed in less detail?*

DfT fail to mention the problems with 18 trains/hr, which arises with the Y network, and they are not discussed anywhere in the published HS2 Ltd and DfT documentation—despite the consensus of experts being that 18 trains/hr is not achievable.

On this matter a recent analysis has been published by Railway Technical Web Pages, again suggesting that HS2 Ltd's aspirations are unachievable. See <http://www.railway-technical.com/Infopaper%203%20High%20Speed%20Line%20Capacity%20v3.pdf>

Question 7. *To what extent do you consider that travel time should be considered productive? How realistic is the sensitivity test in Chapter 7 of the Economic Case?*

DfT say:

“Furthermore, the evidence provided to the Transport Select Committee by the Guild of Travel Management Companies indicates that business travellers attach a high degree of value to the speed of travel (and that they tend to favour investment in high speed rail).”

The discussion of the importance of journey time savings in the Guild's submission is developed in the context of modal shift in the London/Scotland business travel market. No quantification is given. If this is the best evidence DfT can offer that business journey time savings are highly valuable they have no case!

The Eurobarometer survey of EU countries showed that UK long distance rail travellers are overwhelmingly satisfied (92%) with rail journey times, and reducing journey times is not a priority. A result confirmed by the Passenger Focus surveys. It is the factor with which UK rail passengers are most satisfied.

No one is saying that time savings are without value, simply that DfT's assessment is faulty:

- reductions in time on board trains cannot be relied upon to improve business productivity; and
- the relative earnings of rail travellers are overestimated by using very old and inappropriate data.

It is not clear whether DfT is saying that the sensitivity is realistic or not. A powerful reason for contending that it is not is that the realistic alternatives (Rail Package 2, the 51M proposal etc) have less crowding than HS2—so there is no countervailing benefit from reducing crowding for HS2 to off set travel being useful. Indeed the alternatives are much better at reducing crowding than HS2 (being able to do so earlier and as required) and are less reliant on journey time savings for their economic case.

DfT assert:

“In the absence of better evidence on the very complex choices made by individual travellers, these adjustments indicate that the impact of incorporating a more detailed representation of passenger behaviour would not significantly affect the economic case for High Speed 2.”

In the absence of proper studies and peer reviewed estimates, the DfT is not entitled to use discredited estimates of benefits when the business case is reliant upon them. 40% of the £44 billion of benefits (ie £18 billion) for the Y relate to on board journey time savings.

Question 8. *How confident are you in the estimated values of time?*

DfT quote Lyons (et al 2011) as saying that reducing the value of time for rail travel in isolation would produce paradoxical results. We do not have a copy of this paper (only the presentation based on it), but on the basis of his previous articles we believe that this is cited misleadingly. Lyons is not suggesting that the reduction in the value is wrong—his analysis shows that it is right!—but he is emphasising it is also necessary to take account of the behavioural impact of reducing rail journey times on modal switching.

The key point that Lyons is making is that time has become more productive—and mobile technology has a clear role in this. HS2 will not be operational now, but at the earliest in 2026: DfT need a basis for being confident that time saving then (and over the 60 year appraisal period that follows) will have the value they

are assuming. DfT have no basis to support assessing reductions in on-board journey time as having any productive value at all on this timescale.

DfT say:

“At present, we are not aware of any evidence that provides alternative values that are preferable to our central assumptions regarding the value of time. Only once a credible alternative approach to measuring the value of time-savings for business travellers across all modes has gained sufficient support would we be in a position to substitute the current values.”

This is an absurd position to hold.

The numbers are discredited because time on trains has been becoming more productive and past and projected increase in business travellers implies less elite business travellers. Now that this point has been publicly exposed, DfT’s position is generally recognised as a wholly unrealistic one to take.

You cannot justify a £30 billion investment on the basis of analysis that you know to be wrong on the basis that you don’t know what the right answer is! The DfT is responsible for not having a proper basis for valuing time savings, and they simply have not made a reasonable case that the benefits would exist on anything like the scale they estimate.

The robust thing to do would be to assume that there are no productivity benefits. If the scheme still has a positive case, it doesn’t matter that the necessary analysis on the value of time hasn’t been done. If it does not then have a positive case, it is not rational to proceed with HS2.

We are not looking at a minor benefit here—it is 40% of all HS2’s benefits (as the value of leisure time on trains is also affected).

Question 20. *Is it possible to suggest a likely order of magnitude for these omitted benefits?*

It is worth examining the evidence on benefits that DfT suggest

- The Core Cities Group believes that 400,000 new jobs in the Core Cities and a total 1 million in their wider urban areas will be underpinned by HS2.

The word underpinning gives an entirely false impression of attribution.

The original study is by Oxford Economics and it suggests that one million (in total) and 400,000 (Core City) new jobs might be created. These results are from their upside forecast for 2020. But this is before HS2 would run a single train (first run in 2026) or have any effect on towns and cities at all (save inhibiting some rail improvements whose benefits would be cut short by HS2). The idea that HS2 underpins these jobs is from the Volterra Arup Study (also done for the Core Cities) and is completely without justification.

- Analysis by KPMG suggests that HSR could deliver 25,000–42,000 new jobs, contributing £17 billion–£24 billion per annum to the UK economy by 2040, generating £6 billion–£10 billion per annum in tax revenues, or £87 billion–£150 billion NPV to the Exchequer.

These are not estimated benefits from HS2 but from a much more extensive HSR network.

We believe this is the same KPMG study reported in the Greengauge 21 report “High Speed Rail in Britain: Consequences for Employment and Economic Growth” 31 January 2010. KPMG are unsurprisingly using the suspect “GVA” methodology.²⁴⁷ The lower numbers relate to the full HSR network, the higher numbers relate to what might be obtained with unspecified improvements to local services. Dr Laird & Prof Mackie²⁴⁸ and Prof Tomaney²⁴⁹ have made it clear estimates using KPMG’s GVA methodology are unsound.

- Centro found that in the West Midlands HS2, together with local transport improvements, could increase GVA by £1.5 billion, provide 22,000 additional jobs and increase average wages by £300 per worker per annum.

This is again KPMG and is for the HS2 Y network together with unspecified improvements to local rail services.

- Work undertaken by KPMG for Greengauge21 concluded that a national high speed rail network reaching to Scotland could boost the economy by between £17 billion and £29 billion by 2040, and increase national economic output by 2.1%.

This appears to be exactly the same work described in the second bullet point!

So DfT cite one completely spurious estimation of benefits, and two from pieces of KPMG work. In fairness to KPMG, KPMG do qualify their own results, but these qualifications are not reflected in DfT’s use of them. However, DfT do admit that these estimates are not additional to the transport user and other benefits estimated by DfT’s own methodology.

²⁴⁷ See Appendix 2 of our observations on HS2 Ltd’s further submission to this Inquiry.

²⁴⁸ “Review of methodologies to assess transport’s impacts on the size of the economy”, James Laird and Peter Mackie (ITS), September 2010

²⁴⁹ “The Local and Regional Impacts of High Speed Rail in the UK: A Review of the Evidence”, John Tomaney, Pedro Marques and Penny Marshall, April 2011

In effect DfT have no evidence of additional benefits.

Question 31. *Do the generally favourable ex post assessments of major rail projects (eg The Jubilee Line Extension) suggest that the bottom up BCRs are conservative estimates?*

DfT do not mention HS1, and the serious effect that failure to anticipate completion had in overestimating demand. HS2 Ltd's analysis assumes no competition between HSR and the existing network.

DfT do also not mention Stratford International (at which no international trains stop) or Ebbsfleet, both expensive white elephants.

Question 32. *Are the bottom up estimates for the High Speed Rail programme consistent with the top down estimates from other high speed rail examples?*

DfT are misleading in implying that the regeneration benefits are in addition to the monetised benefits: regeneration and employment growth are broadly how the productivity benefits are supposed to work their way through the economy—so it would be double counting to monetise both.

The fact that they are not additional is expressly recognised in the DfT discussion paper “Transport, Wider Economic Benefits, and Impacts on GDP”, Discussion Paper, July 2005. That they are different views of the same thing is not controversial.

OBSERVATIONS ON HS2 LTD'S FURTHER SUBMISSION (169A)

The note is prepared by HS2 Action Alliance.²⁵⁰ It raises some points on the further submission to the Transport Select Committee (TSC) by HS2 Ltd. It is intended to assist the TSC in their questioning of HS2 Ltd, in providing context for some of the assertions and explanations that they give, particularly when they have offered in our view incomplete, misleading or erroneous responses.

This document has been prepared within four days to be available in advance of HS2 Ltd's Select Committee appearance.

RESPONSES TO THE TRANSPORT SELECT COMMITTEE'S QUESTIONS

Question 1. *Demand growth and capacity on WCML*

HS2 Ltd observe that the 2021 forecast demand levels on WCML have already been reached, and so forecasts are likely to prove underestimates. However this ignores some important facts and is consequently misleading. Crucially the recent actual growth reflects the latest WCML service improvements, but the 2021 forecast excludes them. So it is a case of not comparing like with like:

- The 2021 demand estimate takes no account of the service improvements from the “Very High Frequency” December 2008 timetable that completed the WCML Route Modernisation. All the “do something” forecasts—including those for HS2 and the rail alternatives—incorporate an uplift in demand for service improvements which include the December 2008 timetable improvements
- Major service improvements (as with the December 2008 timetable change) normally result in rapid demand growth for a few years which then tail off
- The three years of RPI +3% pricing will depress rail demand—the HS2 Ltd model predicts a significant reduction in demand for this period (see section 2.2.13 of “Model Development and Baseline Report” April 2011).
- The period after 2021 has a high background annual growth rate (driven by the assumed economic growth) of about 2.6% per annum—so the model predicted background growth of only 18% to 2021 but 109% to 2043!

HS2 Ltd predict demand on the basis of an already out of date relationships between income and long distance rail demand, and they forecast increases over the excessively long period of 35 years. These are strong reasons for believing that their modelling will give over-estimates not under-estimates.

HS2 Ltd's observation on pricing measures to address crowding is ill considered. That there is crowding by 2043 for the “do minimum” case across the whole day is irrelevant. The “do minimum” case could and would not happen in practice, and, for any realistic alternative, measures to eliminate peak demand would be useful. This is especially true for the artificial demand peak just after 19:00 that results from the “price cliff” of saver tickets becoming valid.

Network Rail (NR) also forecasts demand without consideration of changing peak pricing or indeed any other measures to address demand, but even so they only forecast standing on about 5% of WCML long distance trains by 2024. The greater part of serious crowding must relate to the 19:00 price cliff.

NR say that by the mid 2020s WCML will be sufficiently full that ordinarily additional capacity would be provided. However, despite the suggestion to the contrary, additional measures would be available (including

²⁵⁰ This paper was prepared by Bruce Weston, on behalf of HS2 Action Alliance, which is a not for profit organisation that is campaigning on an evidence based approach against HS2, and has 73 affiliated groups (see www.hs2actionalliance.org).

using the spare off peak train path per hour that NR themselves have identified, and is even mentioned in the DfT WCML franchise competition brief). The reality is not that the analysis in WCML RUS supports a new HSR, but that it assumes that a new HSR line is the best solution and will be adopted—so that the normal range of options to enhance services on WCML are simply not considered.

HS2 Ltd do not consider alternatives beyond a new conventional speed railway. NR give no detailed consideration to the opportunities for alternatives to a new HSR. DfT fail to develop the best alternative to a new railway.

Question 2. *Sensitivity tests*

HS2 Ltd's explanation fails to recognise why the specified sensitivity tests on the distance term for the income elasticities are important:

- This distance term was recognised to be problematic in the still in force (but seriously out of date) DfT webtage guidance²⁵¹—so there was a specific requirement to use lower values.
- If the results of the appraisal are not robust to these lower values there is a serious risk of the project under-performing.
- This sensitivity is not symmetric with upper and lower alternatives to a central value, as the sensitivity analyses done by HS2 Ltd are—the whole point of this required sensitivity is that a more favourable result is not equally likely.

As it stands the current evidence is clear, ie that the distance term is incorrect (as reflected in PDFH5.0 and the latest Oxera Arup work). Compared to using the PDFH5.0 elasticities the demand predicted for 2043 by HS2 Ltd is 20% more than it should be. Were the growth also capped to 2033, as it was in the 2010 analysis, HS2 Ltd's figures would be 47% too high. Our earlier submission showed the arithmetic on this point.

Question 3. *Evergreen 3 and the “do minimum”*

HS2 Ltd are misleading about the use of Evergreen 3 in the “do minimum” cases.

Evergreen 3 was included in the assessment of Strategic Rail Alternatives Packages 3–5 in the White Paper work (March 2010 analysis), and this had the effect of reducing the benefits attributed to these alternatives. But it was excluded from the demand analysis for HS2, the “do minimum”, and the Rail Packages. The documentation states:

“Please note that although Evergreen 3 was not included in the Do-Minimum for demand modelling purposes to ensure consistency with HS2 Ltd's assumptions, it is expected to be delivered. The presence of Evergreen 3 has been taken account in the specification for Packages 3 to 5. No benefits for Evergreen 3 were included in the Economic Case.”²⁵²

It is worth noting that Evergreen 3 gives about a 25 minute journey time saving on the Birmingham-London services. If this time saving were included in the benefits of Packages 3–5 it would greatly improve their economics. Deducting this obviously reduces the ascribed benefits.

We would agree that it would be incorrect to attribute improvements that properly belong to Evergreen 3 to the rail packages—but it is equally wrong not to take account of the reduction to HS2's benefits that Evergreen 3 produces.

Evergreen 3 was agreed and therefore fully committed in January 2010. The demand modelling was extensively re-worked for the 2011 consultation materials. All that work was done after Evergreen 3 was a committed project, in contrast procuring Intercity Express Programme trains has been included in all the analyses. The Evergreen 3 London to Birmingham improvements have already been implemented.

HS2 Ltd's observations about the demand model being unstable are illuminating. In essence the projected demand and the capacity developments included in the “do minimum” are incompatible. The “do minimum” simply doesn't have enough capacity for the forecast demand—which supports our contention that the “do minimum” is simply not a realistic comparator. Rather than develop realistic comparators, ad-hoc additions to ECML capacity are made.

We have heard the explanation as to why the reworking of the rail alternatives has a different “do minimum” case before. But it still does not really make sense to us. The problem is that if the “do minimum” that is used for HS2 is stable, how can the rail alternatives not be when they have additional capacity and a reasonably low load factor?

It is important to appreciate that because of how induced demand is treated in HS2 Ltd's assessment, comparing HS2 against the “do minimum” gives a better result for HS2 than using a proper alternative.

²⁵¹ Tag Unit 3.15.4, section 6.1.1

²⁵² “High Speed 2 Strategic Alternatives Study—Strategic Outline Case”, March 2010, page 10

Question 4. *Impact of Evergreen 3 on the business case*

HS2 Ltd do not correctly explain the position with Evergreen 3.

The key reason why HS2 Ltd think that it would make little difference to include Evergreen 3 is because their demand model ignores pricing differences between different ways of making the rail journey—so it ignores Chiltern Line being much cheaper (by about one third) than Virgin Trains (or HS2). Alison Munro stated this clearly in recent correspondence²⁵³ to HS2AA as her defence of why Evergreen 3 would not affect their results. This ignores how passengers actually make their choices.

Modelled correctly, Chiltern might be forecast to win considerable numbers of passengers from both WCML and HS2. While Chiltern stations are generally less well connected than New Street for onward travel, they are better connected than the HS2 station. If premium prices applied to HS2, the loss of passengers from HS2 would be even greater.

HS2 Ltd's point about Chiltern only going to Birmingham is misleading. Passengers to Birmingham are a material part of those travelling on WCML and HS2. Three of the 10 trains per hour in the off peak specification for HS2 on day one run to Birmingham (four of the 11 trains in peak),²⁵⁴ and they are the captive sets that run with 1,100 seats per train rather than the 550 seat sets to other destinations. Consequently Birmingham trains they represent nearly half of HS2's phase 1 capacity. They continue to represent half of the 1,100 seat services with the full Y (although they are a smaller proportion of total capacity).

Question 7. *Problems at Euston*

HS2 Ltd's analysis of the number of people travelling through Euston on underground trains fails to focus on people trying to get on the trains at Euston, to which HS2 adds considerably with just phase 1—5,500 extra passengers in the am peak. The problem is that the trains will be full and so the additional passengers cannot board them

Phase 2 clearly makes the situation much worse. It is unsatisfactory to say that they haven't done the work for the Y, as the Y is the basis of their business case. It seems that this (like the 18 trains/hr) is an area that is likely to be resolvable only with considerable additional cost (Crossrail 2?).

HS2 Ltd's position on disruption is interesting. They are claiming that current services could be accommodated with four fewer platforms, despite DfT questioning whether 51M's proposal to increase peak services by just three trains per hour could be done without three additional platforms! See their supplementary submission. DfT and HS2 Ltd seem not to have consulted on this!

It is hard to square HS2 Ltd's supplementary submission with their earlier submission, and the warning given to bidders for the WCML franchise by DfT.

Question 8. *Capacity north of Litchfield*

DfT have clarified²⁵⁵ that the Manchester station and approach works that are part of Rail Package 2 (RP2) are not required to operate four Euston trains per hour, despite the wording of the documentation that says they are. These works are part of the cost of RP2 but not HS2, which also requires four trains per hour to Manchester in phase 1.

DfT now claim that the works are only required to save 1 minute on the time of Manchester services for the cost of £0.4 billion. This is surprising as the time saving is not mentioned as a reason for these works anywhere in the documentation, and it represents poor value for money as it only benefits the journeys for Manchester.

Question 9. *18 trains/hr*

The assessment of line capacity in terms of trains per hour is at odds with all expert opinion. Furthermore, HS2 Ltd have not provided sufficient details of the line design to make it possible to properly check the analysis.

HS2 Ltd has previously declined to provide even this information, despite being repeatedly requested to do so. It is the subject of a formal FOI complaint. Indeed it may be that this material has been generated only after the consultation materials were published. Andrew McNaughton has said that he was doing the calculations in July 2011, and that they would be peer reviewed. We have been promised but not had sight of any product.

Due to the lack of detail, and the inconsistency between this material and the position HS2 Ltd held as reported in the Greengauge 21 workshops last summer ("High Speed Two Interfaces", Greengauge 21, July 2010), there must be serious doubts about whether the 18 trains/hr is really deliverable.

If HS2 Ltd really believe that they can demonstrate that the claimed 18 trains/hr is feasible then they should be prepared to make their analysis available for scrutiny. Their persistent refusal implies only one conclusion.

²⁵³ Letter to Bruce Weston, 29 June 2011

²⁵⁴ 'Economic Case for HS2' Feb 2011, figure A1 page 59

²⁵⁵ Letter from Alison Munro to Bruce Weston, 28 July 2011

The design of HS2 is unfavourable to high capacity, with a diverging junction for Heathrow, and six of the 18 southbound trains per hour originating from the classic network (often after travelling long distances).

HS2 Ltd say they assume grade separation and acceleration and deceleration tracks at junctions, which implies extensive four-tracking in connection to Heathrow, although there has previously been no mention of this.

While HS2 Ltd say that they take account of the variability of arrivals from the existing network, there is no explanation of why they reach such a different conclusion from Network Rail and the summer 2010 workshops.

The idea that 18 trains per hour represents a relaxation from 20–21 trains per hour and is robust seems difficult to square with expert evidence. Before applying other constraints, Systra assessed the maximum line capacity at 16.6 tph for a maximum speed of 350km/hr.²⁵⁶

Greengauge 21's report²⁵⁷ of the workshops last summer makes it clear that the view of attendees was that 18 trains per hour was not possible. Participant included HS2 Ltd, DfT, Atkins, and Systra.

Alison Munro has offered as an explanation²⁵⁸ of HS2 Ltd's reported position in the summer 2010 workshops: planning for a second north/south HSR was in the context of demand exceeding 18 trains/hr and that it was not questioning the deliverability of 18 trains per hour. However, this explanation is plainly inconsistent with the second extract shown in Appendix 1. Appendix 1 contains several extracts from the workshop report that show clearly that 15 trains/hr was accepted as a practical limit. Please note that this is after the publication of the 2010 White Paper materials in which HS2 Ltd expressed the view that 18 trains/hr would be achievable.

The suggestion that the inability to achieve 18 trains/hr could be addressed by joining and splitting at the Birmingham Interchange is impractical. Joining and splitting is currently practiced, but it is normally avoided because of the performance risk that it introduces. For HS2 this would be very grave as there would be no spare capacity for recovery.

The latest publication in this area can be found on Railway Technical Web Pages, that argues that in reality more modest capacity should be expected. See <http://www.railway-technical.com/Infopaper%203%20High%20Speed%20Line%20Capacity%20v3.pdf>

Question 10. *Four tracking HS2*

The answers that HS2 Ltd give are at odds to other ones that they have given in the supplementary submission, and demonstrate how vulnerable the case for HS2 is to a more reasonable demand forecast.

The acceleration and deceleration lanes suggested in answer to Question 9 imply four tracking to some extent, and very extensively if speed and capacity is not to be materially affected.

The answer provided in explanation for not four tracking is illuminating, they quote their 2009 work that says that they should not rely on additional demand materialising after 2033:

“The level of demand we have assumed—with growth continuing to 2033 and then levelling off—does not appear to support such a substantial increase in capacity. That is not to say that the demand may not materialise at some point after the next 25–30 years. However it does suggest that HS2 would need initially to bear a substantial degree of additional cost and environmental impact on the basis that the demand may materialise. We do not believe this to be a credible position.”

According to HS2 Ltd's own 2011 analysis, Phase 1 of HS2 is not viable unless growth continues past 2033. Consequently HS2 Ltd provide a clear, concise and reasonable justification of why HS2 should be abandoned. The subsequent shift in position appears to have no more basis than it is necessary in order to continue to claim there is an economic case for HS2.

Question 15. *Premium fares and fares competition*

There are some simple and certain effects of premium pricing that HS2 Ltd have declined to mention. They are:

- Fewer passengers will use HS2.
- More passengers will use WCML and Chiltern Services.
- Leisure passengers are more price sensitive, and will be more likely to choose the slower non-premium services.
- The less affluent will be more price sensitive and hence not chose HS2, making HS2 even more a railway for the affluent.
- There will be less scope for reducing WCML and Chiltern intercity services because there will be more passengers, so costs will be higher and freed-up capacity less.

²⁵⁶ “Fast forward a high speed rail strategy for the Britain” Final Report Appendix B, October 2009, Greengauge 21, Figure 2

²⁵⁷ “High Speed Two Interfaces”, Greengauge 21, July 2010

²⁵⁸ Letter to Bruce Weston, 28 July 2011

- Unless classic services have lower prices than currently modelled, forecast total passenger numbers will reduce.
- If classic and HS2 services compete, surplus capacity may result in driving down prices and increasing the subsidy resulting from HS2.

There is already differential pricing, for example with Chiltern charging less than Virgin Trains. No one realistically expects that all the train services will charge the same. With time on board trains becoming more useful, and classic services having better connections to other train and public transport services, the economics of HS2 under price competition will be considerably worse.

RESPONSES TO OXERA QUESTIONS

10. *How was the level of the demand cap determined? What evidence is there to support it being set at the level selected?*

HS2 Ltd suggest that there is no evidence of when demand for long distance rail may saturate and an increase of 61% per person (that gives the doubling when population growth is taken into account) is reasonable on the basis that those with higher incomes do more travelling.

This is entirely spurious:

- Long distance domestic travel by all modes is also predominantly made by those in higher income households.
- But people have not travelled more per person as incomes have risen. Since 1995 there has been no increase per person in long distance travel (for all modes), with an unchanging average of seven trips per annum over 100 miles and 20 for over 50 miles.
- The cross-sectional relationship between income and the amount of travel undertaken is not mirrored by a correlation between income increasing through time and more travel—there is no such increase in travel.

Over this period rail has gained a larger share of long distance travel. HS2 Ltd's model (the rail part of which is generally used in the rail industry) assumes that long distance rail travel increases in a fixed relationship with changes in income. The question is how long can this be reasonably projected into the future. As the income elasticities are above one for long distance journeys, this cannot continue indefinitely as it leads to a higher and higher proportion of income being spent in such rail travel.

The reason for capping the period of increases is that fixed elasticity demand models assume that the key relationships remain permanently unchanged. But the further into the future the more unlikely it is that the assumed relationship would actually apply. This is because technical and social changes will alter the way demand develops.

There are good reasons to be cautious about relationships continuing in the longer term. In particular domestic travel (total and long distance) has shown signs of saturating in the UK, and the key relationship between economic growth and domestic travel has been breaking down. It is consequently unreasonable to assume that past relationships will remain unaltered until background growth doubles demand—however it takes.

The issue is how long one can have reasonable confidence that past relationships will hold:

- Eddington (2006) suggested about 10 years was the limit of confidence.
- DfT suggested 18 years (to 2026).
- HS2 Ltd last year suggested 25 years—and offered reasoning why further increases should not be relied upon (see Question 10 above).

HS2 Ltd have shifted from using the rail model to forecast demand, to using the model to calculate how an independently specified level of increase would take to be reached. HS2 Ltd's explanation of why they project demand increases for 35 years to achieve the background doubling in demand previously forecast to 2033 is entirely inadequate. Not only is projecting background demand until it is has doubled arbitrary, as Oxera pointed out, but it is unreasonable. There is nothing inevitable about long distance rail travel doubling. Looking back, rail demand has only increased over the last 15 to 16 years. Looking 35 years into the past (to 1975) instead of the future, for the first 20 years there was no growth in rail passenger numbers at all—not even to reflect population growth.

It is worth noting that if there were more than a background doubling in demand (and a tripling in demand with HS2) HS2 would be incapable of accommodating the demand on HS2 trains running onto the existing infrastructure. If demand is less than a background doubling, the economics of HS2 are worse. So perhaps the doubling is not so much arbitrary as optimal for HS2's assessment.

Only projecting increases for 25 years would mean that the economic case for HS2 does not work. Rather than accepting that HS2 should be abandoned, HS2 Ltd and DfT cling on to background demand doubling without any reasonable basis.

11. *Have other scenarios of higher or lower fare increases been tested?*

HS2 Ltd's approach is based on assuming that a doubling in background demand is in some way inevitable. This is inappropriate as discussed above (in Oxera question 10).

17. *How have the cost savings on the conventional network been estimated?*

DfT state that they increase the cost saving from reducing classic services by a 41% optimism bias. As a result HS2 Ltd have substantially overestimated the savings (by £1.6 billion as shown below).

*"Optimism Bias is the demonstrated systematic tendency for appraisers to be overly optimistic about key parameters."*²⁵⁹

Applying optimism bias to increase an estimated saving acts in the opposite direction from the intended manner. Optimism bias is intended to prevent underestimates of costs—not inflate estimates of savings!

To illustrate how HS2 Ltd's approach must be wrong—if services were stopped entirely the cost saving would not be 100% of the cost but 141. So as opposed to the cost being eliminated, a surplus of 41% would be generated—which is clearly nonsense!

Netting off operating costs savings on the classic network from the operating cost estimates for HS2—before applying optimism bias to the HS2 costs—is plainly wrong. If the classic network cost savings and the estimated operating costs of HS2 (before optimism bias) were identical, HS2 Ltd's approach would say there was no net cost. But the point is that the operating costs of the classic network are known and understood, while the operating costs for a new HSR are substantially unknown and therefore likely to be subject to optimism bias—ie be systematically estimated at too low a level. So the net increase in cost should be the optimism bias appropriate to the HS2 costs. Basically HS2 Ltd's approach treats all operating costs as equally subject to optimism bias—even those of operating existing systems that have been operating for years.

HS2 Ltd estimate the cost savings on the classic network with the full Y to be £5.4 billion. This suggests that the savings have been over-estimated by £1.6 billion—which represents almost a 10% increase in subsidy.

28. *Are there expected to be significant distributional effects between socio-economic groups as a result of the construction of the HS2 line?*

HS2 Ltd's answer is less than complete.

The obvious impact is that a substantial subsidy is provided, for whom the principle beneficiaries will be HS2's passengers. With existing pricing arrangements, the majority of passengers (business and leisure) will be from considerably above average income households (47% of all long distance rail passengers are from the top income 20% of households).

Clearly, if there is premium pricing, passengers will be even more concentrated amongst the affluent.

30. *What is the relative size of the economic impacts on cities expected to be served by the high speed network? What proportion of these economic impacts is abstracted from other regions not served by the high speed network?*

HS2 Ltd suggest that benefits accrue where trips originate and that the great majority originate outside London and the South East. This is incorrect on the facts.

70% of passengers will be travelling for leisure, and for them the economic benefits accrue at their destination (where they shop, visit the theatre and attractions, etc)—which is predominantly London.

For business travellers the situation is more complex, but reducing the barriers to competition through faster transport is likely to benefit London, which is economically more efficient than cities in the North and Midlands.

While cities with a HSR station may benefit, the evidence seems to be that this is at the expense of their hinterland and bypassed towns. The TSC has received extensive evidence on this topic. We summarise this at Appendix 2, which also explains why some of the evidence the Committee has received adopts a different position.

33. *How would substantial long-term oil price rises or falls have an impact on demand for rail? Would the impact be greater than those in the tested fuel duty scenarios?*

HS2 Ltd's "sensitivity" is not a proper high oil price scenario. In a high oil price scenario high efficiency and electric cars would achieve market penetration much more quickly, counteracting the effect of higher prices.

As cars have an average age of seven years, technical improvement can achieve rapid market penetration.

²⁵⁹ Wehtag Unit 3.5.9 section 3.5.1

APPENDIX 1

EXTRACTS FROM “HIGH SPEED TWO INTERFACES”, GREENGAUGE 21, JULY 2010

EXTRACT 1

Six key challenges were identified. These are:

(i) HSR route capacity

Evidence from around the world suggests that 15 tph is a realistic maximum for peak period use of a two-track high-speed railway. HS2 Ltd envisages 14tph from opening day on the London – West Midlands line, increasing to 18tph with a developed Y-shaped network. HS2 Ltd anticipates some form of automated train control system would be needed to deliver this, but there is a risk that the capacity gains will prove to be unachievable.

EXTRACT 2

a) Resolving the capacity issue of the Y-shaped network

This is an urgent issue, even though on current plans, there would be sufficient capacity for the Day 1 service level on HS2 (London – West Midlands). The reason is that it makes no policy sense to introduce HSR services to destinations, say, to the North West, using existing lines that then would need to be withdrawn as the limbs of the Y-network are added. While the Y-shaped network provides very welcome, balanced connectivity gains to the northern English regions, Greengauge 21 believes it is essential to ensure the operational robustness of HSR plans.

It would be prudent to plan on future automation of train operation over HS2, but not in the period when HSR remains an integrated part of the existing rail network with major active operational interfaces to it – and this is likely to be the case for a long time, perhaps several decades. It cannot therefore be relied upon to deliver the higher service frequency levels it is believed it would attract.

The workshops identified other options available and their strategic implications. Ministers may wish to see further evidence, before forming a definitive view. The other options are (a) to plan for four tracks over the stem (trunk) route between London and Birmingham (b) to plan for lower service frequencies or (c) to plan on a second north-south high-speed line.

The four track option may have some merits, and might work more readily if there is to be a connection to Heathrow as well as to central London, but would undoubtedly add to the planning and consent issues for the line, since it is not possible to add a second pair of tracks cost effectively at a later stage, and a four track solution would also add very significantly to HS2 capital costs (which might be near-doubled).

Restricting service frequencies below current intercity levels – for instance to two HSR trains/hour between London and each of Birmingham and Manchester – would mean that even with higher capacity trains, peak demand levels would soon reach capacity. It would also compromise the benefits that HSR would bring over existing rail services, where daytime frequencies to Birmingham and Manchester are now three trains/hour).

So, the better approach, as anticipated by HS2 Ltd, would be to presume that there will need to be a second north-south high-speed line in due course and plan accordingly. While this creates a fresh set of planning challenges, it has a demonstrable business case, and resolves the problems associated with the thinking in Cm 7827.

EXTRACT 3

Annex A: Workshop Attendees

Association of North East Councils
Atkins
ATOC
BAA
City of London Corporation
Department for Transport
East of England Development Agency
East Midlands Development Agency
Glasgow-Edinburgh Collaboration Initiative
Greater London Authority
Greengauge 21
HS1
HS2 Ltd
London Borough of Newham
London Underground
MVA
Newcastle City Council
Northern Way
Nottingham City/Shire Councils
SEStran
South East England Development Agency
SYSTRA
Transport for London
Westfield

Note: not all organisations were represented at each of the three workshops.

EXTRACT 4

Key Issue 2: Stem capacity

The second issue is the question of stem capacity. Operation of the 'Y' shaped network relies on being able to accommodate over 15 trains/hour over the stem section between Birmingham and London. SNCF experience suggests that 15 tph is possible, and is achieved on TGV-Nord, but only in peak periods, not day long. Japan does not exceed 12 tph.

HS2 Ltd assumes that in 2025/6 after building London – West Midlands, 14tph would operate at 330 km/h (top speed capability 360 km/h) over HS2, with most operating to/from the WCML. Utilisation increases to 18tph under Scenario B (with the Y 'limbs'). To achieve this either there has to be substantial segregation of HSR from other traffics on the classic lines or there would need to be a buffering arrangement. This implies either capital spend/timetable restructuring on the classic lines or some provision of journey time extension (padding time). In addition, operation over such an intensively used HSR line would probably need to be computer controlled (i.e. automated train operation).

EXTRACT 5

Key Issue: Scenarios and the Y-shaped network

At 320km/h the evidence and advice is that 15tph is a maximum throughput for a new HSR line. There are ambitions here and elsewhere to allow higher speeds and to retain the same braking capabilities and distances, but they have not yet been achieved. It is very difficult to get above 16tph, although with the use of automated train operation 17/18tph may become possible. It is also notable that the maximum speed through a diverging switch is 220 km/h and so network complexity (number of stations with loops, and the number of junctions, etc.) has a real-world bearing on what can be achieved in terms of sustainable route capacity.

If a safe maximum is taken as 14-15 tph, then Scenarios B and C which assume 17-18 tph have an additional delivery risk. It would be risky to assume that a throughput of 15 trains/hour could be routinely exceeded on a HSR network with an extensive interaction with the existing network if operating speeds are set at 330 – 360 km/h. In these circumstances, there are various variants to Scenarios B and C to consider:

- develop a second N-S line
- re-consider a 4-track scheme for the Y-shaped network scenarios
- plan for lower service frequencies than those assumed in the HS2 Ltd business case work, which is based on an assumption of 17tph on the common section of the HSR route from the outset.

It is interesting to note that on the eastern side of the country, regardless of the outcome of decisions reached on this very important strategic choice, an HSR route from Nottingham to Yorkshire and Newcastle would be a feature of a national HSR network: this section of route doesn't fundamentally depend on the choice between one or two route configurations further south (or further north).

APPENDIX 2

WILL HS2 BENEFIT THE NORTH?—A RESUME OF THE EVIDENCE

Supporters of High Speed Rail (HSR) claim HS2 will create substantial numbers of new jobs in the Midlands and North. These claims are groundless and the facts quite clear. This note explains why.

1. EMPLOYMENT

HSR on routes to London will reduce regional employment and increase jobs in London:

- DfT say more than seven out of 10 of the 30,000 jobs caused by HS2 around stations will be in London ie not the Midlands or the North, for example Old Oak Common, in London, will generate 20,000 of the jobs. But most of the jobs will not be genuinely new jobs but ones associated with shopping malls that have simply moved from other areas in the Midlands and North. So it's not a net increase in jobs. HS2 Ltd also concluded this, after taking expert advice.
- DfT assume trips *to* London grow at twice the rate of those *from* London. Given most trips are for leisure, (70%), more people and more money will go to London and so will the jobs that support this. This outcome is what might be expected when a high speed link connects to a dominant city (and happened for example with Madrid).
- HS2 impacts on the service sector, in which London is dominant. So work is more likely to move to London, not away from it, as faster journey times reduces the barrier to more efficient London businesses competing directly with less efficient regional ones.

So who says this? Just opponents to HS2? No. It is actually the leading academics who had been invited to give evidence to the Transport Select Committee (TSC) on the relationship between transport and the economy:

- Prof Mackie (ITS, Leeds) says “For various reasons HS2 is rather unlikely to make much difference to the north south divide. A spatial analysis would probably show London to be the main benefiting region”.
- Prof. Tomaney (CURDS, Newcastle) who did a full literature review, says “The impacts of high speed rail investment on local and regional developments are ambiguous at best and negative at worst”...“In countries with dominant capital cities net benefits tend to accrue to these”.
- Prof Overman (LSE, London) said to the same Committee in October 2010 Claims about the “transformational nature of transport investments for particular areas should be generally discounted in assessing these benefits because they have no convincing evidence base to support them”.
- Even the work by HS2 Ltd itself, assisted by Prof Vickermann (Kent) recognised that some regions might lose out to London as a result of faster connections.

The mainstream view is clearly expressed by the Economist (3 September 2011):

“In most developed economies high-speed railways fail to bridge regional divides and sometimes exacerbate them. Better connections strengthen the advantages of a rich city at the network’s hub: firms in wealthy regions can reach a bigger area, harming the prospects of poorer places.”

2. QUANTIFIED WIDER BENEFITS

The evidence from HS2 Ltd is that the wider economic benefits of HS2 would be small:

- The productivity benefit from shorter journey times is the key benefit, but it's already in the business case (and is greatly overstated now that DfT admit time-on-board is not wasted).
- The Wider Economic Impacts of better connectivity are relatively small, £4–£6 billion NPV (in 2009 prices), and are mainly driven by the use of freed-up capacity, but which will need a new further subsidy to realise.
- HS2 Ltd asked Imperial College (Graham and Melo) if faster connectivity had any further direct benefits—they said “very little” (max £8–£10 million/a)—but their conclusion was not only left out of the White Paper last year, but not even referred to in the consultation materials.

3. SO WHY DO NORTHERN CITIES AND BUSINESSMEN THINK THEY WILL GAIN?

There are reasons that explain why northern cities and businessmen think they will gain:

- Cities served by an HS2 station think that their local economies will gain, but while the city may indeed benefit it is only at the expense of its hinterland. And only a few cities are proposed to have a station (London, Birmingham, Leeds and Manchester). The rest will not benefit.
- Cities and businesses are not being asked to choose between having HS2 and having other transport investment. There are major benefits related to incremental non HS2 transport improvements which would be available far earlier than if the money is wasted on HS2.
- Regional development and spatial economics are complex areas. It is not surprising people take at face value what Government tell them.

4. STUDIES REPORTING MUCH BIGGER BENEFITS

There are studies that attribute much larger numbers of jobs to HS2, than DfT say. We need to get the facts agreed before we get into debate about potential benefits.

The recent Volterra Arup study (for the Core Cities) claims that HSR would support the creation of one million extra jobs. This is simply untrue on their own evidence:

- The million extra jobs are from a study by Oxford Economics in which the causes of the extra jobs are entirely unrelated to HSR. Clearly it is true that if there are one million extra jobs (in Local Enterprise Partnerships (LEPs), then extra journeys will need to be made to get them to work
- This estimate of extra jobs is for 2020—before HS2 has any effect at all—except to actually inhibit transport development because some improvements have to wait for HS2! So the 1 million extra jobs would have to happen despite HS2—not because of it!
- If HS2 is built it won't even help with journeys to work directly—it only helps through the creation of spare capacity on the existing railways. And HS2 only provides freed up capacity on the routes it serves—for 2026 this is only London to Birmingham! It does nothing for any other Core City or LEPs.

Extra capacity where it is needed on the existing network could be created well before HS2 and actually support the extra 1 million jobs that will be created (but not by HS2) in LEPs.

There are also earlier studies done for Greengauge 21, Centro and Northern Way studies (by KPMG) that attribute big employment increases to HSR. But these studies:

- Are not on a reputable basis for forecasting extra jobs—rather than using the DfT approach they are based on an unsound “GVA” methodology.
- Work commissioned by the Northern Way itself shows the problems with the GVA approach and how it overestimates the effect on jobs.

5. CONCLUSION

So far from supporting the government's claims that HS2 will redress the North/South divide, the evidence (affirmed also by Oxera the independent analysts appointed by the Transport select Committee) actually suggests that HS2 would re-enforce London's dominance.

To genuinely benefit the North/Midlands what is needed are transport investments that improve the efficiency of their labour markets—not ones that expose them to greater competition from London, as HS2 does.

8 September 2011

Written evidence from the Association of Train Operating Companies (ATOC) (HSR 160)

The Association of Train Operating Companies (ATOC) represents train operators in Great Britain. We welcome the chance to submit this evidence to the Transport Committee on the case for High Speed Rail.

1. The main arguments for High Speed Rail—ATOC's View

1.1 ATOC firmly backs the principle of the provision of a new high speed link to the Midlands and beyond to provide greater capacity to allow more people and freight to use rail.

1.2 The development of high speed rail and in particular High Speed 2 (HS2), with the Y-shaped network that the Government proposes, sets a clear, long-term plan that will help bring significant journey time gains to and from many regions of the country, including the North West, Yorkshire, the North East and Scotland. It will also release capacity on all three of the existing North—South main line corridors (the West Coast, Midland and East Coast Main Lines).

1.3 Beyond these immediate impacts, a high speed rail network of this kind would provide substantial, broader benefits in development and environmental terms. In particular, it would:

- 1.3.1 improve the economic development of the regions served, increase their competitiveness and reduce their peripherality,
- 1.3.2 contribute to the country's longer-term environmental goals by attracting passengers from air and car, whilst also taking the pressure off runway capacity in London and the South East, and
- 1.3.3 through the release of rail capacity, unlock the development of improved commuter and regional services on today's North-South main lines, particularly the West Coast, whilst permitting improvement in both the capacity and transit times of freight services. The latter would make a significant contribution to the development of the strategic freight network that the rail industry has been developing since 2007.

1.4 The lead time for development and construction of High Speed One (HS1) was 20 years and this is why it is right to plan now for new high-speed lines that will be required beyond 2020. ATOC, together with

Network Rail and the Rail Freight Operators' Association, has been actively working on a network-wide approach to investment looking at growth trends over the next Control Period (CP5) and the next 25 years and, in *Planning Ahead 2010: the Long Term Planning Framework* set out an initial viewpoint.²⁶⁰ This document sets out the industry's view on where it should be going in terms of long term improvements in customer satisfaction, capacity, carbon emissions and performance. It provides the planning background both for CP5 and for longer-term investment plans such as HS2 whilst also setting out the need to continue to fund upgrades of the capacity and capability of existing routes, in line with the strategies the industry is now developing, where there is a good business case for doing this and the costs involved are demonstrable value for money.

2. *The strategic route*

2.1 ATOC welcomes the Government's conclusion that the line should be planned as a Y-shaped network serving not only Birmingham but also Manchester, the East Midlands, Sheffield and Leeds. The earlier plans for a route to Birmingham alone would have limited the benefits that high speed rail could bring; the new plans for a Y-shaped network set much clearer goals and will deliver greater advantages, in particular by offering high speed services to and from Manchester, Liverpool, Leeds and Sheffield. On these routes, today's current journey times of 2 to 2.5 hours to London can readily be reduced to 1 to 1.5 hours. The Y-shaped network with connections to Birmingham will also improve connectivity between many of the cities in England's central belt to underpin economic regeneration here as well.

2.2 We also welcome the Government's commitment to explore further options with the Scottish Government for reducing journey times to and from Scotland, although we expect that the costs involved here are likely to mean that the tradeoff will be between new route construction and selective upgrades of the existing routes. Scotland will gain some immediate journey time benefits from the first stage project now being consulted on, with Anglo-Scottish expresses able to use the new high speed line south of the Trent Valley and further savings would be possible once the Y-shaped network reaches the North West.

2.3 ATOC also supports the Government's decision to base the London terminal of the high speed line at Euston. A comprehensive view is needed here of the additional demand this will pose for the already crowded tube network. One option that ATOC and Network Rail have looked at is the possible diversion of London Midland services at Willesden into the new Crossrail network. This would release track and platform capacity at Euston whilst bringing commuters directly into the West End rather than having to change onto tube and bus services. Such a project would potentially also permit the HS2 platforms to be accommodated within a smaller station "footprint" due to the release of suburban platforms, facilitating reduced disruption during the station's rebuilding.

2.4 ATOC is pleased to see that phase 2 of the programme is now planned to include a spur to Heathrow. The examples of France, Germany and Spain show that a high speed rail network can abstract air traffic without having stations directly at airports,²⁶¹ however a direct airport link may make sense in the longer term, providing a sound business case is proven. The spur solution will avoid the journey time penalty that diverting the HSL via Heathrow would have created and will also unlock the potential for additional extensions of the high speed network to the South and South West.

2.5 The decision to carry out preparatory works for an eventual link to HS1 is important as, providing a good business case can be established, it will allow the development of journey opportunities into the wider European high speed network, not only from the Midlands and the North, but also from Heathrow, the West and the South West. The establishment of a link to HS1 will also accord closely with the EU's 2011 Transport White Paper objectives to complete a pan-European high-speed rail network,²⁶² enabling links into existing high speed services across the EU (eg to Lyon, Bordeaux, Amsterdam, Cologne and Frankfurt) .

2.6 The proposed Crossrail Interchange station at Old Oak Common would provide links into Central London and to Heathrow, but ATOC believes the longer-term business case for all HS2 and most Great Western trains to call at this station needs to be examined carefully. This strategy would undermine the journey time benefits of HS2 and journey times on the Great Western from London to Reading, Bristol, South Wales and the South West would be increased if stops on Great Western trains were introduced. In the longer term, following a Heathrow spur, some of the advantages of Old Oak Common as an HS2 interchange station for high speed services would naturally disappear and an overall balance therefore needs to be struck between interchange benefits, journey time disbenefits and the timing of any eventual direct link to Heathrow.

2.7. The proposed station at Birmingham, Curzon Street is in a good location for the city but ATOC believes that planning for it needs to accommodate fast, local links into the city centre and to the existing rail services at New Street and Moor Street stations. This might be accommodated by light rail.

²⁶⁰ Planning for CP5; *Planning Ahead 2010: The Long Term Planning Framework*—see www.networkrail.co.uk

²⁶¹ The networks in France and Germany, for example, initially focussed on city to city centre traffic and were only extended to airports (specifically Lyon, Paris Charles de Gaulle and Frankfurt) later on.

²⁶² "Roadmap to a single European Transport Area"—EU Commission DG MOVE—http://ec.europa.eu/transport/strategies/2011_white_paper_en.htm

3. The fit with Government's Transport Policy Objectives

3.1 HS2 makes a significant contribution to improving city to city journey times and capacity, not only to and from London but also between the Midlands and the conurbations in the central belt, both east and west of the Pennines. The main motorways in these areas, the M1 and M6, are already at capacity due to the high levels of short to medium distance traffic; beyond measures to promote a smoother flow of traffic, there are few alternatives to expand the Motorways to accommodate further growth. By taking long distance traffic from the motorways, HS2 could play a role in reducing congestion on these routes and delaying the time when more substantial measures might be needed to improve capacity.

3.2 An important aspect of high speed service planning is to operate trains beyond high speed lines over the "classic" network. Around two-thirds of the train-mileage operated by TGVs in France is on the classic network, with the trains using the high speed lines to reduce journey times on the main corridors. In Germany, the equivalent proportion for the ICE network is even higher. High speed trains based on advanced rail technology have the advantage of being compatible with the conventional rail network, so that they can use existing city centre stations or run through to destinations where new construction cannot be justified.

3.3 One of the principal benefits of a new high speed network in Britain would be the creation of additional capacity to meet the growing needs of passengers and freight customers across the network, both on high speed and "classic" lines. A recent report by Greengauge 21 (of which ATOC is a member) on "Capturing the benefits of HS2 on existing lines"²⁶³ demonstrates that the building of HS2 would also allow the delivery of a wide range of improvements and increased capacity on traditional lines to the North West of London, in the West Midlands and beyond.

3.4 The impact of HS2 on freight services running on the classic network will also be positive. The release of capacity by the reduction of faster services will be exponential, since the speed of freight services will be more closely matched to that of the existing and new passenger services. This could, in effect, see the replacement of a fast service transferred from the classic network by both a new semi-fast regional service and an additional freight service.

3.5 A wide package of regional benefits could be enabled by the release of capacity on the classic network that HS2 allows. The following improvements at regional stations exemplify what could be implemented—and which would not be possible without HS2:

3.5.1 Trent Valley (Lichfield, Tamworth, Nuneaton)

30-minute services to London and the North West.

3.5.2 Coventry

An improved package of, regular local and fast services to Birmingham.

Cross-country services to/from North West, the South doubled from hourly to 30-minutes.

Maintain a high frequency (30-minute) fast service to London through use of more economic service options (eg shorter trains in off-peak).

New north—south service options possible due to the release of capacity at Coventry eg:

Nuneaton—Coventry—Kenilworth (new station)—Leamington/Stratford.

Coventry—Kenilworth (new station), Bicester, High Wycombe (& London).

3.5.3 Rugby

30-minute services to London and the North West. *Presently hourly to London, irregular to North West.*

3.5.4 Northampton

Five trains per hour to London (fastest 46 mins) in the peak. *Presently three trains per hour (fastest 59 mins).*

3.5.5 Milton Keynes

Nine peak fast London services per hour. *Presently four trains per hour.*

Regular (hourly/30 minutes) direct services to West Midlands, Manchester, Liverpool and Scotland. *Presently irregular or off-peak.*

Potentially, new journey opportunities on services to/from new East—West Rail Link (Oxford—Milton Keynes—Bedford).

3.5.6 Watford

Opportunities for regular frequency (30 minute) services to/from the West London Line and south London.

3.6 The case for HS2 is also supported by recent trends in modal shift from domestic air routes to rail. ATOC's latest findings²⁶⁴ show that the delivery of improved, faster, rail services has led to a major transfer from air to rail. Between 2008 and 2010, the market share for rail on the London—Manchester corridor rose

²⁶³ High Speed Rail—Capturing the benefits of HS2 on existing lines. Greengauge 21 February 2011.

²⁶⁴ "Shift from air to rail heralds "turning point" in how people travel between UK's main cities" ATOC, 5 April 2011.

from 69% to 79% whilst between London and Glasgow it rose from 12% to 20%. These figures indicate that the further improvements that HS2 can bring will deliver even greater modal shift and will, as French TGV services have done, wipe out demand for domestic air travel on many routes. The major shifts in travel patterns that this can promote will deliver additional environmental benefits in terms of reduced emissions.

3.7 High speed rail will deliver a form of transport that has the potential to be extremely low in terms of carbon consumption, as a consequence of the “decarbonisation” of electricity supply which is being planned by Government to meet national carbon reduction targets. Analysis by ATOC for Greengauge 21²⁶⁵ has shown that a journey by present high speed rail services generates only 33% of the CO₂ emissions of a comparable car journey and 25% of the emissions of an equivalent journey by air and this advantage will widen over time. Although energy use increases with speed, the sophisticated design of high speed trains together with their high load factors substantially offsets this.

3.8 An issue that ATOC has long been concerned about is the risk that spending on HS2 might draw funding away from the existing “classic” network. In our view, it is important not to view these as competing options: the “classic” network is complementary to HS2 both in acting as a feeder to the high speed services and in enabling the wider benefits across the rail network that HS2 can allow. We were very encouraged by the outcome of Spending Review 2010, in which the Government recognised this point and safeguarded investment in the “classic” network whilst also setting aside substantial funding to take HS2 forward. The McNulty “value for money” review will be key in setting out the way forward in terms of the affordability of future investment but the point remains that a balanced approach to rail investment will remain important.

4. Business Case

4.1 ATOC notes that HS2’s cost estimates are higher than those assumed by the Network Rail and Greengauge 21 studies but still generate a positive business case, with a benefit/cost ratio of 2:1. However, to ensure efficient delivery, ATOC believes that the opportunity should be taken to review these costs and to assess the benefits of wider private sector involvement in construction and operation. This will both help maintain firm control on costs and create a clear commercial link between the revenues earned from the line and the costs incurred to achieve them which can help offset the risk of cost increases. The UK’s train operators have wide experience of high speed operation, including Southeastern and Eurostar on High Speed One and of the demand and growth patterns in the regions to be served and we have met HS2 on a number of occasions to share this experience.

4.2 We do not support the position taken by some commentators that a further upgrade of the existing West Coast Main Line (WCML) would be a better alternative to building HS2. The recent upgrade of the WCML cost about £9 billion, caused significant disruption to existing services and the limited additional capacity it delivered is likely to be consumed at peak time well before 2020. There are also significant physical limits on what could be done next: for example construction of two new parallel tracks alongside the existing line would be impossible in some locations and the curvature of the route would still constrain line speeds to similar levels as those of today.

4.3 There are probably opportunities to improve the business case by challenging aspects of its cost and it is to be expected that, as the project progresses, the business case will evolve further, not least through the application of the findings of the Value for Money review.

May 2011

Written evidence from Campaign for Better Transport (HSR 161)

1. BACKGROUND

1.1 Campaign for Better Transport has been involved in the debates on the merits of the proposals for the HS2 route from London to Birmingham and beyond since they were initially developed by the last government. Campaign for Better Transport chief executive Stephen Joseph is a member of the HS2 challenge group and we have also worked with a range of other environmental organisations to coordinate responses to the proposals and to arrange meetings with officials and ministers.

1.2 There is a tendency for much of the debate on HS2 to be dominated by those backing the idea of high speed rail on the one hand (who can be less concerned with discussion of alternatives in the desire to see the scheme through) and those opposed at all costs to the proposals (often because they are directly affected but using wider arguments to try to oppose the plans). With other organisations, we have focussed on the details of what is being proposed and are backing the Right Lines Charter Group’s work to ensure that if high speed rail proposals do go ahead, then they are done well.

1.3 Campaign for Better Transport’s focus generally is more on people’s everyday transport and, in the context of rail, that services are accessible, affordable and convenient. There is a danger that too much focus on the new proposals for high speed rail will deflect attention away from the improvements we need on the existing “classic” railway.

²⁶⁵ Energy consumption and CO₂ impacts of High Speed Rail: ATOC analysis for Greengauge 21, ATOC, April 2009

1.4 Our initial work on high speed rail was informed by five priorities for any proposals for high speed rail. These were that the Government should:

- Prioritise investment in existing public and local transport and ensure that high speed rail does not abstract funding from these.
- Use high speed rail to shift existing trips from planes and cars, not generate new ones.
- Use pricing to encourage people to choose rail—lower train fares and increased taxes on short distance flights are needed.
- Include a moratorium on airport expansion and major road development.
- Integrate the high speed line with wider planning and regeneration.
- Avoid or if absolutely necessary mitigate impacts on environmentally sensitive sites and protect tranquil areas.

2. RIGHT LINES CHARTER GROUP PROPOSALS

2.1 Campaign for Better Transport is a member of the Right Lines Charter Group, which is a grouping of environmental NGOs seeking to ensure that if high speed rail proposals are to go ahead, they are done well. We have worked closely with the Campaign to Protect Rural England in the development of the Charter, including organising a recent meeting with Secretary of State Philip Hammond. The Charter²⁶⁶ sets out four priorities for high speed rail:

- Principle 1. *National Strategy*: High Speed Rail proposals need to be set in the context of a long-term transport strategy stating clear objectives.
- Principle 2. *Testing the Options*: Major infrastructure proposals, such as High Speed Rail, need to be “future-proofed” by comprehensive testing against different scenarios. This will help identify the best solutions for genuinely furthering sustainable development.
- Principle 3. *Public Participation*: Early public involvement in the development of major infrastructure proposals, including High Speed Rail, is essential. People need to be involved when all options are open for discussion and effective participation can take place.
- Principle 4. *Minimising Adverse Impacts*: High Speed Rail proposals need to be designed from the start to avoid significant adverse impacts on the natural environment, cultural heritage and local communities (including biodiversity, landscape, tranquillity and access) during construction and operation.

3. NATIONAL TRANSPORT STRATEGY AND THE BUSINESS CASE FOR HS2

3.1 Campaign for Better Transport has called for a clearer national transport strategy for a number of years. Decisions about transport investments, particularly when the sums involved are of the scale of tens of billions of pounds over a number of decades, must be clearly part of a coherent national strategy rather than merely justified on the basis of a benefit cost ratio (BCR).

3.2 Both proponents and critics of HS2 have focused on the published business case and its assessment of time savings, demand forecasts and carbon savings. The reality of HS2 is that the numbers are inherently unreliable. They are based on business as usual forecasts extrapolating past trends, which for a long term business case will inevitably not prove accurate.

3.3 For example, higher oil prices will drive up rail demand beyond the level assumed in the business plan, while extra rail capacity, if used for railfreight or local passenger trains, will help reduce carbon beyond the HS2 forecasts, especially if allied with supportive planning policies and less rather than more roads and runways. The time savings values are also spurious and we have criticised reliance on them in transport appraisal more generally.

3.4 The real question for HS2 is how it fits with a wider package of policies in a coherent transport strategy. It is difficult to make assumptions about HS2 without clarity on what will happen to roads, airports, planning, local public transport, lorry charging, aviation taxes and other Government policies. The business case does address this to some extent with a short discussion on scenarios based on changes in relative pricing and this should be subject to wider discussion than it has been.

4. REMAINING QUESTIONS FOR HIGH SPEED RAIL

4.1 The plans for HS2 still need to do more to demonstrate that the line will result in a real shift to rail from driving and flying and, as a result, cut carbon emissions from transport. Transport produces a fifth of our domestic emissions and is still the sector where little fundamental progress on carbon has been made. The Department for Transport’s model for the first phase of the high speed network suggests that there will be just a one per cent drop in motorway traffic as a result with most trips on the new line being from those who would otherwise have travelled on the old west coast mainline. Not surprisingly, the best that this scenario can do is to be “broadly carbon neutral”.

²⁶⁶ See <http://www.cpre.org.uk/resources/transport/item/download/531> for details of the Charter

4.2 But the scale of the climate change challenge requires us to do much more—particularly with HS2’s price tag running into the tens of billions. To do this, the government has to do three things. Firstly, it must continue to invest in the existing (or “classic”) rail network. Secondly, it needs to enable investment in local sustainable transport access to stations. And thirdly, it must introduce complimentary measures to make rail more attractive than driving or flying.

4.3 Philip Hammond has recognised in public statements that spending on HS2 needs to be additional to continued investment in the classic network. The confirmation of electrification to Cardiff is a good sign. Spending on rail has been maintained in this CP4 spending period (if at the expense of massive rises in most ticket prices). But the real challenge will be after 2015 when the main costs of HS2 will come in and when it will compete with other schemes that have been “moved to the right” in the next CP5 investment period. To cut carbon, the government must continue with further electrification of lines in this period and in growing the railways.

4.4 Continued investment in rail is also essential if the benefits of the “liberated capacity” on the West Coast Mainline are to be fully realised. Released capacity could deliver benefits for passengers,²⁶⁷ for instance through new timetabling to enable more services and investment in improved links and lines like the proposed East West rail link, and could help deliver increased freight usage. This requires continued support for rail freight, for instance by ensuring that the new National Planning Policy Framework for spatial planning supports the development of rail freight depots.

4.5 Using the planning system to foster growth and locate new development (such as warehousing and housing) to take advantage of these extra services would increase the benefits from HS2, which are not currently taken account of in DfT’s business case.

4.6 New stations on the high speed route must be accessible by public transport if they are not to add to congestion and carbon. Local transport investment has been significantly scaled back to 2015 but new stations need to be linked to existing and improved local transport networks, as well as being easily accessible for those coming on foot or by bike. Providing investment for local transport improvements will be key and will help avoid overloading already stretched local transport services. The new stations for the second phase of HS2 should be located close to existing city centres rather than in stand-alone parkway stations.

4.7 Both high speed rail and classic rail must be attractive in terms of pricing relative to flying and driving. Since 1997 the cost of motoring has fallen by seven per cent in real terms and the cost of flights within the UK fell by a third. Rail fares rose by 17% over the same period, and will now rise even faster with the Government’s decision for most fares to rise by 3% above the RPI inflation rate.

4.8 The detailed business case published with the HS2 consultation shows that if rail fares continue to rise, its benefits will be much less—so much less that they will be outweighed by the costs of the project. Campaign for Better Transport’s Fair Fares Now campaign shows the strength of feeling from those facing fare rises.

5. PUBLIC PARTICIPATION

5.1 On public participation, we are aware that the Government’s view is that there are limits to the changes that can be made now for this phase, given the need to avoid further blight and stay within the current timetable for delivery. We remain seriously concerned, however, about the limitations of the current approach to public consultation on the route. Campaign for Better Transport will continue to raise concerns about the preferred route, but we would also be keen to explore what options are available in practice to changes in design and alignment on this section to avoid the valuable and sensitive sites and places that are currently likely to be affected.

5.2 On the second phase, we believe that in looking north of Birmingham, it would be worth considering ways of planning and public engagement that are different and more inclusive than the way in which phase one has been done. There is a tension between being open and inclusive in planning the route and the need to avoid casting blight over a wide area but the Government should explore the options for early engagement, with reference to good practice in other countries and on other major infrastructure projects in this country including HS1.

6. ACCESS TO HEATHROW

6.1 Campaign for Better Transport agrees with Lord Mawhinney’s conclusion in his report²⁶⁸ for the Department for Transport that a Heathrow link is not necessary at this stage and that the existing rail network is used to link Heathrow with high-speed rail connecting London with other British cities and the rest of Europe.

6.2 We also believe that the question of HSR connections to Heathrow is linked to whether there is a full link and through trains between HS2 and HS1. This will enlarge the market where rail can substitute for air to include journeys between the UK regions and near-Europe destinations.

²⁶⁷ See *Capturing the benefits of HS2 on existing lines*, Greengauge, February 2011

²⁶⁸ High speed rail access to Heathrow: a report by Lord Mawhinney, Department for Transport, July 2010

7. CONCLUSION

7.1 HS2 could deliver the step-change in travel that we need to cut carbon and support the future needs of the economy, but it must be part of an overall strategy to shift to rail for many journeys. A decision to go-ahead with this level of spending needs wider support. Failure to demonstrate how HS2 fits into an overall strategy for transport will risk losing green groups as a key element of that wider support.

7.2 However, critics of the proposals need to address how the increase in demand for travel for the Birmingham—London route will be met. Even if there is little change in the split of modes for travel on the Birmingham—London route, demand for rail travel on this route will outstrip the capacity of the existing network. If there are policies to restrain demand for car and air travel (and even with policies to reduce the need to travel overall), there will still be a need to address the capacity issue and this would be likely to lead to an overall rise in the demand for rail travel.

May 2011

Written evidence from the Department for Transport (HSR 167)

SUMMARY

1. The Department for Transport has published a consultation document, economic case and extensive supporting documentation for its current consultation on the case for high speed rail. These documents set out robust and detailed economic, engineering and environmental analysis and are the product of collaboration between Government and industry experts. All of the consultation documents are of relevance to this inquiry.

2. In the interests of brevity, this submission to the Committee provides only some key points about the basis of the Government's support for a high speed rail network. For this reason it should be read in conjunction with the consultation documentation.

What are the main arguments either for or against high speed rail?

3. The Coalition Government's key economic objective is to achieve strong, sustainable and balanced growth that is more evenly shared across the country and across sectors. Transport is crucial to achieving this objective. Transport infrastructure drives competitiveness and supports economic growth by increasing productivity, reducing business costs and diversifying means of production. Transport provides the crucial links that allow people and businesses to prosper.

4. HS2 Ltd's analysis indicates that the Government's proposed Y-shaped network would generate monetised economic benefits with a net present value of around £44 billion and the first phase (from London to the West Midlands) alone would support the creation of more than 40,000 jobs. Significant benefits to our largest conurbations outside of the capital, as well as to London itself, would reshape our economic geography and help to bridge the north-south divide.

5. We have reached the point where we need to plan for a step-change in rail capacity, not only to meet demand for long-distance travel over the next 30 years and beyond, but to ensure that anticipated growth in demand for commuter, regional and freight services can be accommodated.

6. Demand for rail travel has been growing steadily for well over a decade, with demand for long-distance journeys more than doubling in the 15 years to 2009. For this reason, the Government has invested substantially in inter-city rail and will continue to do so, for instance through the electrification of the Great Western Main Line. However, as Network Rail recognised in its recent draft Route Utilisation Strategy, despite the recent significant modernisation of the West Coast Main Line, by 2024 it will effectively be full. Options for further feasible upgrades will have been essentially exhausted and a new line will be required. Similar patterns can be discerned on the East Coast and Midland main lines, on which further significant capacity increases will be increasingly hard to achieve, particularly following the completion of the current Thameslink upgrade.

7. Of all the options that the Government has considered, only a high speed rail network can provide the necessary step-change in capacity, whilst also enhancing intercity connectivity and reliability, minimising disruption to the existing network, and supporting the Government's objectives for reducing carbon emissions.

8. Benefits to transport users are not the only advantages offered by high speed rail. It offers a vital opportunity to support economic growth over the long-term. Both the local socio-economic benefits in the areas surrounding proposed stations and the wider national economic benefits could be substantial. Experience overseas demonstrates that well planned and integrated stations offer potential for dramatic urban regeneration and significant job creation. Wider economic benefits include better linkages between firms, increased business productivity and larger and more skilled labour markets.

9. The alternatives to high speed rail offer only an interim solution to growing demand and would not deliver the wider economic benefits of a national high speed rail network. Alternatives involving upgrades to existing lines are likely to cause far greater levels of disruption to the existing network than building high speed rail lines.

10. In terms of carbon, rail generally creates significantly fewer emissions per passenger mile than either car travel or aviation. Whilst high speed trains consume more power than conventional trains, the continued greening of electricity generation and high speed rail's greater ability to attract travellers from more carbon intensive modes, will enhance its competitive advantage. Prompted by improvements in capacity, reliability and inter-city connectivity, we expect as many as 6 million air trips and 9 million road trips a year would shift onto high speed rail.

11. A high speed rail network, as with any new transport infrastructure, would have consequences for the communities and landscape along the route. Although it is impossible to eliminate such impacts for a project of this scale, the revisions to the proposed route for HS2 demonstrate the scope to reduce them significantly through sensitive design and effective mitigation. The Government is committed to reducing environmental impacts wherever practical.

12. A national high speed rail network offers significant strategic benefits for Britain. It is a once in a generation opportunity to transform the way we travel in the 21st century, and to meet the economic, social and environmental challenges this century poses. We must make a strategic investment now—just as our European and Asian counterparts have done and continue to do—in a high speed rail system that both complements and improves our current networks.

How does high speed rail fit with the Government's transport policy objectives?

13. The Government's transport policy is set out in its latest Business Plan, in which a high speed rail network forms the first of five transport priorities. High speed rail is integral to our aims for a transport network that is an engine for economic growth but that is also greener and safer and improves quality of life in our communities.

14. The Government is investing in infrastructure across modes and networks in three major ways; maintenance and smarter use of assets; targeted development of existing networks; and investment in large-scale transformational projects (as noted in the National Infrastructure Plan). This investment is targeted to promote integrated urban, inter-urban and international corridors, which combine rail, road, air and local transport systems.

15. In terms of rail infrastructure, investment in major projects has focused over recent decades on London and the South East. The HS1 line to the Channel Tunnel has delivered international rail connectivity and the current Crossrail and Thameslink projects will radically improve London and the South East's urban networks, as did the earlier extension to the Jubilee Line. The electrification of the Great Western Main Line will extend investment further, providing significant benefits for the South West and Wales.

16. High speed rail would continue this programme of strategic investment, spreading the benefits to the broader inter-urban rail network and particularly the Midlands, North of England and Scotland. High speed rail supports the Government's aim for sustainable, geographically balanced, long-term economic growth by connecting the hearts of our largest conurbations, where a large proportion of the country's most productive businesses and jobs can be found. The Government believes, as stated in its Carbon Plan, that high speed rail is best placed to provide significant and sustainable additional capacity to meet increasing demand for travel between the UK's largest and most productive conurbations over the next 20–30 years. It would also comprise a step-change in journey times and connectivity.

17. High speed rail would therefore form an important part of a coherent and wide-ranging programme of transport investment, but would remain only *a part* of this programme. In the same way that the Government is maintaining investment in London and the UK's existing rail infrastructure during the Crossrail project, the Government does not see high speed rail as an alternative to investing in other rail improvements.

18. The Government has committed to provide £14 billion of funding to Network Rail to support maintenance and infrastructure investment during the Spending Review period (in addition to Crossrail). We will also fund light rail schemes in Birmingham, Tyneside, Nottingham and Sheffield, the Tube upgrade programme, the entire Thameslink programme, and provide additional funding to franchisees for extra rolling stock. In total, the Government will deliver more than 2,100 new rail carriages onto the network by May 2019. We are committed to the electrification of two railways, and are considering the case for further electrification schemes.

19. In addition, the Government is working with the rail industry to identify opportunities to reduce its cost base and improve efficiency, in line with the aims of Sir Roy McNulty's independent rail value for money study. This will further secure the sustainability of the industry.

20. In the longer term, high speed rail itself would be a significant investment in the existing rail network—the capacity released on the latter as a result of transferring long-distance inter-city services to the high speed rail network would allow for a significant increase in commuter, regional and freight services to meet growing demand.

21. It is also important to consider the increasing demands that may be placed on our rail networks as a result of the aviation industry's imperative to reduce its global and local environmental impacts. We do not expect to return to a world where aviation growth is unconstrained by environmental factors and since it is

unclear at what rate technological change can deliver the environmental ‘headroom’ for aviation to expand, the industry is being forced to prioritise available capacity where demand exceeds supply. Particularly at key airports in London and the South East, the aviation market is reacting to capacity constraints by altering airport operator charges to protect profitable international routes and reducing domestic flights to London from key destinations such as Glasgow and Newcastle. Rail passenger numbers on routes such as this are rising fast, as figures released recently by ATOC show—for example, the London-Glasgow route has seen the number of journeys made increase by over 80% in just four years.

22. The Coalition Government has made clear its opposition on environmental grounds to additional runways at Heathrow, Gatwick and Stansted airports. Therefore, it is likely that capacity constraints will persist on busy air routes, which will subsequently contribute to the very high levels of overcrowding forecast on inter-city rail services over the coming decades. The Government’s plans for a high speed rail network would address this capacity issue and offer a long term, environmentally sustainable and efficient alternative to domestic and some international aviation.

The Economic Case

23. DfT has a well established approach to appraisal that is recognised across the transport industry and we believe conforms to the highest standards of evidence. The approach is consistent with HM Treasury Green Book advice and is clearly set out in the Department’s WebTAG Transport Appraisal Guidance. As part of our drive to keep our approach to appraisal up-to-date we regularly research a number of its components. However, only once we have thoroughly tested new evidence is it accepted and incorporated into our guidance.

24. HS2 Ltd’s work on the economic case for HS2 was carried out on the basis of WebTAG and we believe the assumptions and methodology used are robust and appropriate to the current stage in the project’s development. The economic case for HS2 is kept under review and is periodically refreshed to take account of any new evidence or changes in circumstances (for example, new economic forecasts from the Office for Budget Responsibility.)

25. HS2 Ltd’s evidence to the Committee includes a detailed description of the approach and methodologies used in developing the economic case, which is supported by DfT.

26. The Government has considered alternatives to high speed rail, including enhancing existing lines. However, as any regular traveller on the London Tube knows, upgrades to existing networks are unavoidably disruptive and always bring with them the risk of delays and overruns. On the national network, the recent upgrade of the West Coast Main Line took a decade to complete and cost almost £9 billion. It involved a huge number of lengthy and disruptive line closures, forcing passengers repeatedly onto rail replacement bus services or off the rail network altogether.

27. Whilst the great majority of Network Rail’s enhancement works are delivered to time and to budget, they can still inconvenience passengers where sections of line are closed or service patterns altered to enable works to take place. This inevitable disruption and inconvenience, in addition to the risk of delays and cost overruns, is further exacerbated by the increasing intensity of usage on existing lines. The number of passenger journeys on the West Coast Main Line is twice as high now as in 2004. As a result, this line—like other major routes—sees high levels of usage on all seven days of the week, meaning that the impact of any works would be still greater.

28. For these reasons, even if major upgrades of this kind could clearly deliver significant benefits in terms of capacity and connectivity, caution would still be required before taking the decision to proceed. In practice, however, this is unlikely to be the case. The most valuable improvements on West Coast Main Line have already been delivered through the recent upgrade and the scope for further improvements is likely to be comparatively modest. The picture is broadly similar on the other key north-south lines.

29. This conclusion is confirmed by work carried out by Atkins for the Department for Transport on strategic alternatives to high speed rail, which shows that major enhancement packages can provide only a fraction of the potential benefits of a national high speed rail network. Furthermore, the delivery of the most significant benefits (and best value for money) from such enhancements would jeopardise service reliability by squeezing more services onto already crowded infrastructure and removing timetabling allowances.

30. Finally, it is important to remember that the Government’s objectives for high speed rail are broader than can be achieved by simply upgrading current lines. The changes to Britain’s economic geography that would be made possible through new high speed rail lines cannot be delivered through the existing network. The same is true of high speed rail’s potential to promote regeneration and enhance connectivity between inter-urban, urban and international networks, for example via new links to Crossrail and HS1. For these reasons, the Government does not consider that enhancements to the existing network are a viable or attractive alternative to high speed rail.

31. Similarly, the Government does not believe that new conventional speed lines could offer either the same strategic benefits or value for money as high speed lines; they would generate much lower benefits and revenues whilst not being significantly cheaper to construct and operate.

32. As outlined above, travel connectivity has national economic and social benefits. For many journeys within the UK, rail is the most sustainable and efficient option, and we seek to strike an appropriate balance between rail users and the taxpayer in funding investment in our rail networks, in particular through policy on regulated fares. In addition, the rail industry has developed yield management techniques to encourage efficient use of capacity, which are reflected in the modelling underpinning HS2 Ltd's analysis.

33. In investing in the national rail network, it is important that we learn the lessons of major rail infrastructure projects in the UK. This note has previously considered the challenges of upgrading live railways and we must learn particularly from the experience of the West Coast Main Line Modernisation Programme. In contrast, the UK's first high speed line, HS1, was delivered on time and on budget in 2007. Similarly, the experience of other countries in developing high speed lines shows that with careful project planning they can be delivered with similar success.

The Proposed National Network

34. The Government supports a Y-shaped national high speed rail network connecting four of the five most significant economic centres of the UK, both improving regional connectivity and links with the capital. It would also serve many of the principal destinations on each of the three main north-south routes out of London, and therefore relieve capacity on all of these important lines, for potential use by regional, commuter and freight services. HS2 Ltd analysed a range of network options, of which the Y network provided the best value for money.

35. Phasing the delivery of the project has a number of important advantages: it ensures rapid progress on developing a high speed network; it lessens the length and complexity of parliamentary processes; it manages the finances for this major new infrastructure; and, it provides a predictable pipeline of rail civil engineering projects around which the construction industry can plan. Linking London with the West Midlands as the first stage of a wider network, ensures that the UK's two largest conurbations are connected and that the rail corridor with the most urgent need for capacity in the near term is complemented by a high speed link.

36. As part of the London to West Midlands phase, there is a strong strategic case for a direct link between the proposed high speed rail network and the HS1 line to the Channel Tunnel. We need to connect any UK high speed rail network with the growing continental network, which is already a key mode of travel between major European cities, to ensure that through-services to continental Europe do not remain the preserve of London and the South East. This link would have to be constructed as part of the first phase, since the tunnel for the line would need to be dug from Old Oak Common before services became operational, in order not to halt services at a later date.

37. Equally, the Government believes there are numerous strategic and economic advantages to directly connecting Heathrow airport to the high speed rail network, including direct and greatly shortened journeys to the airport from the Midlands and the North, the development of Heathrow as a multi-modal transport hub, and released capacity and carbon savings from modal shift.

38. The demand for a direct high speed link to Heathrow airport would be stronger once any second phase of the proposed network—extending to Leeds and Manchester—was in place and demand for high speed services was beginning to mature. The link would then provide a strong alternative to aviation on routes from, for example, London to Glasgow and Edinburgh, and address the current lack of connectivity to Heathrow for major cities in Yorkshire and the East Midlands. For these reasons the link is proposed as part of the second phase of construction.

Economic Balancing and Equity

39. The benefits to transport users of high speed rail would amount to over £37 billion for the proposed Y network over a 60 year appraisal period. HS2 Ltd's analysis of the geographical spread of the benefits from just a London to West Midlands line indicates that more than 50% of the benefits would fall outside of London and the South East. In relation to a wider Y network this proportion could be higher because high speed rail journeys between regional centres (and therefore not involving the capital city) would become a possibility. This spread of benefits in favour of the cities of the North and the West Midlands would help to narrow the North-South economic gap.

40. In addition there would be more than £6 billion of monetised Wider Economic Impacts (WEIs) from the Y network, principally from agglomeration.

41. Aside from these monetised benefits, the UK stands to benefit from more strategic economic impacts across the cities and regions that would be connected by a high speed rail system, and across many towns and cities that are not on the proposed high speed line (for reasons of released capacity on the existing railways).

42. For the major conurbations of the Midlands and the North, increased rail capacity and reliability, improved connectivity and reduced journey times, would boost economic productivity in two ways. First, the connected cities would be able to benefit more directly from, and complement, the economic strength and diversity of London; they would be better placed to attract new businesses and to increase productivity by merging labour markets and customer bases. A direct connection from the Midlands and the North to Heathrow

would also enhance its attractiveness to international investors and access to international markets. In the French city of Lyon, for example, the high speed link has enabled service sector firms to access the Paris market and to gain a valuable competitive advantage from their experience working with small- and medium-sized enterprises. The reverse effect has not been seen, as Paris-based firms have continued to focus on the larger and international client base in the capital city.

43. Second, the significantly improved connectivity between the major cities of the North and the West Midlands could enable those cities to work more effectively as a coherent whole. Research commissioned by the Northern Way has suggested that the lack of connectivity between major northern and Midlands conurbations has contributed to them functioning more as isolated economies than as a single functional economic area. New high speed rail connections could play a central role in addressing this; the cities would reap benefits from increased competition, specialisation and from access to wider markets. Furthermore, they could increasingly act as a counterweight to the economic strength of London and the South East and help to bridge the North-South divide.

44. In addition, all of the proposed station locations along the proposed network would see regenerative benefits, including commercial, retail and residential development, increased land values, new jobs and wider increases in economic productivity. International experience, for example in the French cities of Lille and Lyon, the Spanish city of Ciudad Real and the German city of Cologne, has proven the potential for economic regeneration.

45. The Government intends to follow international best practice in order to maximise potential for economic activity around any new stations. We have chosen city centre and interchange locations with good local accessibility and would work closely with public and private sector partners to plan for station-area development and local transport integration. Old Oak Common, Euston Station and the Eastside area of Birmingham city centre would undergo significant regeneration and redevelopment as a result of an initial London to West Midlands high speed line.

46. Crucially, the benefits of high speed rail would not be restricted to the towns and cities on the high speed line itself. Many other places currently experiencing high levels of demand growth, such as Milton Keynes, Northampton, Peterborough and Kettering, would also stand to benefit, as inter-city services are switched to the high speed lines and routes are freed up for additional regional and commuter services.

47. It is important also to note that the socio-economic catchment for a high speed rail network would be similar to the existing railways. It would not be the exclusive preserve of the wealthy, nor would it be used exclusively by business people. HS2 Ltd's modelling assumes a fares structure in line with that of the existing railway, meaning that a new high speed line could operate effectively, generating sufficient demand and revenues, without needing to charge premium fares. As with our existing railways, off-peak fares could be highly competitive, making high speed rail travel accessible to most people. It is also possible that fares in the off-peak would fall as a result of the increase in supply.

48. Our analysis demonstrates that the majority of passengers (70%) would be travelling for reasons other than business, with leisure trips likely to be particularly important. Both social connectivity and tourism stand to benefit. The pricing structure and the appeal of the railway to leisure travellers demonstrate the potential for wide usage of high speed rail across socio-economic groups.

49. While the network would certainly require substantial Government investment, it is not appropriate to specify precise funding arrangements at this early stage in the process. Construction would be phased to manage the finances responsibly: for example, main construction of the initial London to West Midlands line could be sequenced with the completion of Crossrail to form a continuous programme of major transport infrastructure investment. We would expect to make use of trans-European network funding for high speed rail, and intend to make a bid in due course.

50. Significant numbers of individuals and organisations would stand to benefit directly from the construction of new high speed rail lines. This could include property developers, airport operators, businesses close to the high speed rail stations and local authorities. The Government expects that parties who stand to reap significant benefits from high speed rail would therefore make a contribution to its costs.

Impact

51. We have reached the stage on our busiest rail corridors and stations where maintaining the status quo is not a sustainable option. This is most immediately true of the West Coast Main Line and of Euston Station, where redevelopment of some kind, with the associated disruption to current services, is inescapable if we wish to meet demand for services. So we do not face a choice between disruption and no disruption, but a choice about the outcomes to be delivered.

52. We must also recognise the need to begin work now to address the long-term challenges facing our existing rail network, due to the time required to plan, develop and deliver any significant piece of infrastructure. Furthermore, we should avoid wasting valuable time, national resources and potential for economic growth by making the wrong decision about high speed rail, since the inadequacy of the alternatives is likely to force a revisit of the proposals in years to come.

53. In sum, the Government believes that we should choose a transformational and ambitious addition to national infrastructure, rather than a temporary fix to the challenges facing our rail network. The UK needs a rail network that is worthy of the effort and investment it involves, one that reflects an ability to prepare adequately for the future, and one that promotes our economic, environmental and social aspirations.

May 2011

Further written evidence from the Department of Transport (HSR 167A)

RESPONSES TO QUESTIONS FROM THE TRANSPORT SELECT COMMITTEE

In response to your letter of 18 July to Sir Brian Briscoe of HS2 Ltd, the Department has agreed with HS2 Ltd to provide answers to your questions 5, 6 and 16. This letter provides the Department's responses.

In addition, I attach a paper with responses to a number of the questions raised by Oxera in its recent review of the *Economic Case for HS2*. These questions relate to wider issues for which DfT has responsibility; the remainder of Oxera's questions, which deal more directly with the details of the economic case, will be answered separately by HS2 Ltd.

It should be noted that the public consultation period on HS2 only recently closed. The answers below reflect the Government's current view, and the evidence which underpinned the consultation documents, but the Committee should recognise that no final decisions will be taken by Ministers until the analysis of consultation responses (which is still at an early stage) has been completed and any new evidence considered.

5. We have received submissions (eg from 51M) that substantial extra capacity could be provided quickly and at relatively low cost by lengthening WCML trains to 12 car sets, and (especially relevant for commuters from Milton Keynes and Northampton) by operating additional trains enabled by a new grade separated flyover junction eg at Ledburn. Do you have any comments on this?

The Government has not at this stage carried out a full analysis of the 51M Group's proposals, but at the strategic level, its current view is that no package of upgrades to existing lines could offer the same level or range of benefits as a new high speed line.

The capacity increase offered by the 51M proposal, although slightly higher than that offered by Atkins' Rail Package 2, is still comparatively low—only around 30% on long-distance services, for example, than the capacity available following completion of the committed Pendolino lengthening programme. Furthermore, to accommodate the 12-car sets needed to deliver even this capacity increase, significant investment in platform lengthening, plus track and/or signalling remodelling in some locations, would be required, which the 51M Group has neither scoped nor costed.

Similarly, their proposal provides no information on the costs of procuring and operating longer Pendolino trains or of modifying depots to accommodate them. It also does not include any assessment of the costs of procuring the 125mph-capable suburban rolling stock needed to deliver the proposed increase in the Northampton service.

As a result, they have not carried out any cost-benefit analysis of the case for incurring expenditure of this kind to deliver a relatively modest increase in capacity over committed plans and few of the journey time, connectivity or wider economic benefits provided through new high speed rail lines. However, Network Rail's recently published *West Coast Main Line Route Utilisation Study*, whose development included a process of wide industry involvement as well as a public consultation, concluded that the most effective way to create additional long term capacity on this corridor would not be through train lengthening or infrastructure enhancements, but through the construction of a new line.

There are also a number of deliverability concerns in respect of 51M Group's proposed service pattern. For example, Network Rail's Route Utilisation Strategy states that the performance impacts of using even one "firebreak" path out of Euston to accommodate an additional Northampton service would need careful consideration before implementing such a change. The 51M Group's proposal adds two such Northampton services and an additional long-distance service, but assumes no impact on performance.

Their proposal also states that it retains greater spare capacity in the peak than the Rail Package 2 proposal developed by Atkins and that this would contribute to improved reliability. In fact, the peak hour service specification that they have published shows the same 16 fast line services per hour. Furthermore, it assumes that this can be delivered not only without the additional platform capacity at Euston proposed by Atkins, but also with increased train lengths, which would further reduce operational flexibility.

The additional service proposed by the 51M Group on the Coventry-Birmingham section of the route is also unlikely to be deliverable, given that it has not proved possible to meet current aspirations to route an extra Cross Country service along this corridor.

6. *What assessment have you made of the costs and benefits of running Pendolinos at up to 140mph by further upgrading the existing line?*

Atkins considered 140mph operations in a long list of potential interventions (see Appendix A of Atkins' March 2010 *Rail Interventions Report*).²⁶⁹ It was not taken forward into the short list of interventions because of the likely adverse impact on overall route capacity (due to worsening the speed differentials between intercity and other services) and the high cost and disruption of resignalling (to provide in-cab signalling). Also, the journey time savings of 140 mph max speed compared with 125 mph max speed would be very small—of the order of three seconds per mile—and there are few sections of the WCML where 140mph would be possible because of issues such as track curvature, junction constraints and aerodynamic effects in tunnels.

16. *What analysis have you made of business relocations between London, Birmingham and other major cities likely to arise from HS2?*

The Government has made no specific analysis of that kind. However we believe that high speed rail would offer significant opportunities to support long-term and sustainable economic growth that would be spread across the country. In particular, we estimate economic benefits from the Y network totaling £44 billion for the UK, of which more than 50% relates to journeys beginning outside London and the South East. The cities of the North and the Midlands would benefit from improved inter-connectivity, allowing them to act as a coherent economic whole, and from improved connections with London, allowing them to benefit more directly from, and complement, the economic strength and diversity of the capital.

European and wider international experience demonstrates that the introduction of high speed rail can help boost the performance of regional economies.

- HS1—the town of Ashford has seen valuable new investment and development since the arrival of high speed services. Analysis carried out by Volterra and Colin Buchanan has estimated that the value of the regeneration benefits of HS1 could be as high as £10 billion.
- Lyon, France—high speed rail has helped service sector firms to thrive by providing enhanced access to the Paris market. The Part-Dieu area where the Lyon station is situated has become one of the largest commercial developments in France.
- Ciudad Real, Spain—high speed rail has enabled the town to develop into an important regional business centre and its university to expand its student population.
- The Government is considering a significant amount of evidence, submitted as part of the consultation, on the potential positive economic impacts of high speed rail in the North and the Midlands. We understand that much of this analysis has also been submitted as evidence to the Committee by relevant local and regional organisations.

To maximise the economic potential that high speed rail brings to an area it is also vital that it is developed in an integrated way with other economic and transport planning initiatives. If a decision is made to go ahead with plans for a national high speed network, the Government would work with the regions concerned to secure the maximum possible benefits from HS2.

RESPONSES FROM THE DEPARTMENT FOR TRANSPORT TO QUESTIONS RAISED IN OXERA'S REVIEW OF THE HS2 ECONOMIC CASE

Question 1. *To what extent would demand management on the conventional network delay the need for extra rail capacity?*

Whilst there may be a case for employing demand management as a tactical response to managing demand on the railways, it is unlikely to significantly alter the case over the medium-to-long term for the provision of additional capacity. It is also important to recognise that fares are already substantially higher on peak services than in the off-peak, which makes a significant contribution to managing peak demand, and that the effects of more sophisticated demand management techniques are likely to be complex. The best way of illustrating this is to look at each of the potential measures in turn:

Ticket pricing: The most obvious tool to manage demand on the railway is to increase fares. The fares increase required to achieve a significant demand reduction would however be unacceptable, and would not provide a sensible or sustainable solution to managing demand. The Government does believe that there is a strong case for reducing the costs of the railways, but the associated savings should be returned equitably to both the taxpayer and the fare-payer.

“Peak spreading”: Significant price differentials are already in place between the peak and off-peak periods. There may be some additional scope to make more effective use of capacity through more sophisticated peak pricing measures, but research carried out for the Department by Aecom has indicated that, in practice, any such gains are likely to be limited. To achieve any more significant change in this area would require wider social changes: the “9–5” working day is unlikely to disappear overnight. Furthermore, given the high all day crowding levels forecast over coming decades, measures of this kind would clearly not provide a long-term solution to predicted capacity constraints.

²⁶⁹ Accessible at: <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/alternativestudy/>

Crowding in the shoulder peak: The Government recognises that the current approach to ticket pricing on the railways can lead to some artificial peaks and troughs in demand, and the Secretary of State has indicated his intention to address this issue. However, this would require changes to long-established systems for regulating ticket prices, and would need to be handled carefully given the implications for the income of train operators. It would also have at best a limited effect in reducing long-term crowding levels, given the level of demand growth forecast. Considering that over-crowding on certain services is likely to be dampening demand currently, it could in practice have the opposite effect of encouraging further demand.

Compulsory seat reservation: Existing demand management techniques already incentivise travel on reserved seats and specific services through low prices for advance purchase tickets. More widespread introduction of compulsory seat reservation, however, could have profound implications for the value that many attach to travelling by train. Constraining passengers' freedom to travel at the time that their often uncertain daily schedule dictates, could discourage rail travel or make it prohibitively expensive if associated with a premium ticket to retain existing flexibility. For these reasons, the Secretary of State has ruled out ending the "turn up and go" railway.

Question 2. *What is the latest estimate of WEIs for the conventional strategic alternatives to HS2?*

In the March 2010 report (Strategic Outline Case page 52), Atkins state that wider economic impacts are estimated as:

- agglomeration £190–299 million;
- imperfect competition £238–412 million; and
- labour markets—negligible.

They also state that the wider benefits are consistent across all four rail packages.

This work was not updated in the refresh by Atkins in February 2011.

Question 3. *Is further work progressing to estimate the impact on the reliability of conventional services for both the high speed rail options and for the strategic alternatives?*

No work is currently underway on this issue. As the Oxera report notes, however, Rail Package 2 could potentially have a negative impact on West Coast Main Line reliability. This is because the current WCML public timetable includes additional journey time for recovery from delays and incidents to underpin train service reliability, which is strongly valued by passengers. In contrast, in the modelling of Rail Package 2, this additional journey time element was removed from the timetable to improve journey times for services on the WCML.

Given concerns about the potential impact on reliability of this approach, especially when the more intensive WCML service pattern in RP2 was taken into account, a variation on RP2, called Rail Package 2a, was also modelled in which no journey time savings from this source were assumed. The Government considers this variation to be a more feasible option than the "standard" Rail Package 2, given its potential reliability impacts, but when these additional journey time savings are removed, the benefit cost ratio of upgrading existing lines drops significantly.

We do not consider that HS2 would have the same impacts on reliability on the classic network. The illustrative service pattern developed by HS2 Ltd for the use of released capacity on the WCML does not increase the number of services from the current level, and reductions in crowding should minimise any performance issues relating to dwell times at stations. See also HS2 Ltd's answer to the Transport Committee's question 8, which looks specifically at the West Coast Main Line north of Lichfield.

Question 4. *Is it appropriate to focus on the benefits of the Y network given that its case has been assessed in less detail?*

Yes. The Government's proposed strategy for high speed rail is to construct a Y-shaped high speed rail network so this focus is entirely appropriate. The appraisal of the Y that we have conducted to date has been undertaken on the basis of conservative assumptions in those areas where, at this stage, there is less certainty and available detail. We have also run sensitivity testing to provide further information about the case.

We have published the clear basis on which the appraisal of the Y has been undertaken, and are committed to producing further appraisal in due course on the basis of the more detailed technical work which is currently underway. However, given the deliberately cautious approach adopted in the current appraisal, we do not anticipate that this more detailed work will materially alter the strength of the case for the Y.

It is also important to bear in mind that the case for the Y rests not only on the strength of its economic case (the benefit:cost ratio) but also on the strength of its strategic case. Whilst the availability of detailed engineering and other appraisal is useful in developing the economic case, the wider strategic case has been appraised in considerable detail even at this stage. The strategic case relates to the fit with wider Government policies and objectives—such as shifting to a low-carbon economy, improving inter-urban and international connectivity and supporting growth in the major urban economies of the Midlands and the North.

Question 6. *Has the prospect of benefits from further extensions to the Y network been considered and analysed?*

Yes. Chapter 6 of HS2 Ltd's report, *High Speed Rail: London to the West Midlands and Beyond*,²⁷⁰ reviewed the case for a number of strategic options for a national high speed rail network including indicative costs and benefits.

Working from a recognition that the phasing of any high speed rail network is crucial to its affordability and deliverability, this work indicated that the strongest case for the initial phases of a network existed along the lines currently proposed.

If a decision were taken to proceed with high speed rail proposals, the Government would be prepared in future to consider evidence from HS2 Ltd, the Scottish Government and any other organisations, to extend the network to serve further regions across Britain. For this reason, the Y network is being specifically designed to enable extensions further north in the future.

Question 7. *To what extent do you consider that travel time should be considered productive? How realistic is the sensitivity test in Chapter 7 of the Economic Case?*

As noted in the Economic Case for HS2 (Feb 2011) we recognise that some travel time may be used productively and, as a consequence, acknowledge that the standard assumptions underpinning the values of time attributable to journeys made during the course of work are open to debate.

The degree of productive use of travel time, however, should not be over-estimated. The Oxera Review of the Government's case for a High Speed Rail programme (Jun 2011) quotes studies that suggest around 10–20% of rail travel time may be productive.²⁷¹ More recent evidence prepared by the University of the West of England found that around half (54%) of business travellers may spend some of their time working, but only a third (34%) work for a majority of their journey.²⁷² In fact, more business travellers spent most of their travel time reading for leisure, gazing out of the window or "people-watching" than spent it working. The report also found that there was negligible change between 2004 and 2010 in the proportion of business travellers who spent the majority of travel time working despite technological improvements. Therefore while rail passengers may report a similar level of productivity when working as can be achieved in the office, it may be that in most cases only a relatively small proportion of travel time is used productively.

In any case, as with all assumptions of this kind, the approach to valuing travel time savings is a necessary simplification to enable a broad assessment of benefits and not a complete representation of all the effects of altering journey times. And whilst the inclusion of some additional factors may reduce the benefits, such as accounting for time spent working productively on trains, other factors may increase it, for example considering the impact on productivity of crowding reduction or modal shift. As another example, reductions in journey time might enable some business travellers to schedule additional appointments in the course of a single trip which are of more value than other forms of work, whether carried out on a train, in the office or somewhere else.

Furthermore, the evidence provided to the Transport Select Committee by the Guild of Travel Management Companies indicates that business travellers attach a high degree of value to the speed of travel (and that they tend to favour investment in high speed rail).

The sensitivity test in Chapter 7 of the Economic Case for HS2 provides a stylised example to show that there would be a range of potential effects of including productive use of travel time in appraisal, particularly when looked at on a network-wide basis, including the impacts not only for travellers on the proposed new line but also for those benefiting from the reuse of released capacity on the conventional network.

In this test, HS2 Ltd reduced the value of time savings for business travellers in recognition of the fact that some travel time can be used productively, but also increased the value associated with reducing crowding for business travellers, as this would enable more productive use of travel time. The result of this test was a small uplift to the benefit:cost ratio.

In the absence of better evidence on the very complex choices made by individual travellers, these adjustments indicate that the impact of incorporating a more detailed representation of passenger behaviour would not significantly affect the economic case for High Speed 2.

Question 8. *How confident are you in the estimated values of time?*

As noted in the response to the previous question, we recognise that the cost-savings approach to valuing travel time in the course of business is not a perfect proxy for the value of time-savings. However, we also recognise that valuing journey time savings is difficult and needs to take into account a great deal of complexity. It is inappropriate to exploit and exaggerate specific areas of uncertainty in isolation, without considering the wider issues and implications of doing so.

²⁷⁰ <http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2Ltd/hs2report/>

²⁷¹ See, for example, Fowkes, AS (2001) Principles of valuing business time savings

²⁷² Lyons et al (2011) How do rail travellers use their time?

As Oxera note in their report, the net impact of including the productive use of travel time into the appraisal process for HS2 is ambiguous. While it would reduce the benefits attributable to reductions in travel time, benefits for existing rail passengers from reduced crowding (which has a negative correlation with productivity) would increase, as would those for passengers that switch to rail from less productive modes. As described above, the sensitivity testing carried out by HS2 Ltd, indicated that the overall result could be an uplift in the benefit:cost ratio once all relevant factors have been taken into account. The aforementioned University of the West of England study (Lyons et al 2011) also noted that simply reducing the value attached to rail journey time savings in isolation would risk “paradoxical” conclusions, by reducing the case for investment in those modes which enable greatest productivity.

At present, we are not aware of any evidence that provides alternative values that are preferable to our central assumptions regarding the value of time. Only once a credible alternative approach to measuring the value of time-savings for business travellers across all modes has gained sufficient support would we be in a position to substitute the current values.

We are able to draw additional confidence in the current value of time by comparing it with the most suitable comparator available, which is the value derived through the HS2 Ltd model calibration process and based on the willingness-to-pay evidence. As noted in the *Economic Case for HS2*, when the two are compared they are found to be very similar. As previously noted, the evidence provided to the Transport Select Committee by the Guild of Travel Management Companies also indicates that business travellers attach a high degree of value to the speed of travel (and that they tend to favour investment in high speed rail).

Question 14. Has there been an assessment of the relative degree of planned disruption between the high-speed and strategic alternative options?

The strategic alternatives are high level counterfactual constructs. As such, the estimated total costs of the works for each package include an additional 10% to account for the disruption that would occur as a result of the works. This broad figure of 10% excludes optimism bias. Further detailed engineering work would be required for the disruption impacts to be quantified more precisely.

The Economic Case for HS2 includes the costs of possession management and compensation for operational disruption in its assessment. The estimated cost is £195 million, excluding optimism bias.

It should be noted that no costs were assumed for unplanned disruption resulting from the strategic alternatives, although experience with the WCML Modernisation project and other schemes shows that this represents a significant risk. The WCML Modernisation took a decade to complete and involved a huge number of lengthy and disruptive line closures, forcing passengers repeatedly onto rail replacement bus services or off the rail network altogether.

The inevitable disruption and inconvenience of upgrades to the existing network, in addition to the risk of delays and cost overruns, is further exacerbated by the increasing intensity of usage on existing lines. The number of passenger journeys on the West Coast Main Line is twice as high now as in 2004. As a result, this line—like other major routes—sees high levels of usage on all seven days of the week, meaning that the impact of any works would be still greater.

Question 19. Are there some WEI factors that are not in standard guidance that could have been included?

Yes. The sheer scale of the HS2 proposal means that it is unlikely that every impact of the scheme is captured through strict adherence to standard DfT appraisal guidance. In their report, Oxera point out a range of factors that have not been monetised within the Economic Case for HS2. However, appraisals that are produced following WebTAG guidance do not necessarily monetise all costs and benefits of a transport intervention. Therefore, the Department also considers a wider value for money assessment, which takes into account quantitative and qualitative assessments of impacts that cannot be monetised. Even then, some impacts remain beyond the scope of current guidance although these may be considered through the strategic case.

The Department for Transport uses a narrow definition of Wider Economic Impacts (WEIs), as described in our response to the SACTRA (2000) Transport and the Economy report²⁷³. These effects have since been encapsulated in WebTAG (Transport Appraisal Guidance) advice on regeneration and wider impacts²⁷⁴. The wider impacts appraisal advice incorporates agglomeration effects, changes to output in imperfectly competitive markets and labour market impacts (access to jobs and the move to more/less productive jobs). This approach is in line with our response to the recent Transport Select Committee report into transport and the economy which stated that “we will continue to keep developments in all aspects of appraising economic impacts, conventional and wider, regeneration and additional, under review and develop our guidance accordingly.”²⁷⁵ As described above, however, this narrow definition of monetised WEIs does not imply that no other factors would be taken into account in decision making.

²⁷³ See Standing Advisory Committee on Trunk Road Assessment (2000) Transport and the Economy: Full Report and DfT (2000) The Government’s Response to SACTRA’s recommendations

²⁷⁴ See WebTAG (www.dft.gov.uk/webtag) units 3.5.8 (Regeneration) and 3.5.14 (Wider Impacts)

²⁷⁵ House of Commons Transport Committee (2011) Transport and the economy: Government response to the Committee’s Third Report of Session 2010–12

Question 20. *Is it possible to suggest a likely order of magnitude for these omitted benefits?*

In the absence of more sophisticated modelling techniques to capture the full effects of transport interventions (in a less than perfectly competitive economy), the Department for Transport's guidance does not allow any assessment of the order of magnitude for these omitted benefits.

However, other organisations who have employed alternative, and in some cases comparatively untested, appraisal methodologies to assess the WEIs of HS2, have concluded that there are potentially very large benefits not covered in the current appraisal of HS2:

- The Core Cities Group believes that 400,000 new jobs in the Core Cities and a total 1 million in their wider urban areas will be underpinned by HS2.
- Analysis by KPMG suggests that HSR could deliver 25,000–42,000 new jobs, contributing £17 billion–£24 billion per annum to the UK economy by 2040, generating £6 billion–£10 billion per annum in tax revenues, or £87 billion–£150 billion NPV to the Exchequer.
- Centro found that in the West Midlands HS2, together with local transport improvements, could increase GVA by £1.5 billion, provide 22,000 additional jobs and increase average wages by £300 per worker per annum.
- Work undertaken by KPMG for Greengauge²¹ concluded that a national high speed rail network reaching to Scotland could boost the economy by between £17 billion and £29 billion by 2040, and increase national economic output by 2.1%.

It should be noted however that these benefits have been derived from alternative approaches to those used by the Department and therefore should not be simply added to those set out in the economic case for HS2 as there may be significant overlaps between the methodologies.

In terms of the WEIs incorporated in the Department's standard guidance, the only factors included in the Economic Case for HS2 are the effects of agglomeration and imperfect competition. This does not mean that the other factors would not apply. For example, no assessment has been made by HS2 Ltd of the benefits that could be derived from people moving to more productive jobs, as there is not currently a detailed Land-Use Transport Interaction model available. A high level analysis carried out by Volterra for the Core Cities Group,²⁷⁶ however, has indicated that the value of such benefits could be as high as £5.9 billion over 60 years on the WCML corridor alone.

Question 31. *Do the generally favourable ex post assessments of major rail projects (eg The Jubilee Line Extension) suggest that the bottom-up BCRs are conservative estimates?*

The Department for Transport recognises that there are valuable lessons to be drawn from ex-post assessments of other transport investment schemes, including high-speed rail projects. For example, we have recently concluded an ex-post assessment of the forty new stations opened across Great Britain in the last ten years²⁷⁷. This assessment found a majority of cases where outturn demand had exceeded or was very close to that predicted before station opening. In most cases (including those examples where demand fell short of expectations) we found that it was not an inappropriate or misguided forecasting technique which had led to the discrepancy, but rather that key developments outside the control of the scheme promoter had affected the outturn level of demand. Unforeseen events of this kind cannot be captured within our forecasting methodology, but sensitivity testing as carried out by HS2 Ltd can help to assess the resilience of the analysis to such external influences—both positive and negative.

Due to the scale of the High Speed Two proposal it is imperative that the economic case is built on robust forecasts of future rail patronage and revenue and we are comfortable that this is the case. We are also confident that all relevant developments will be taken into account as the economic case for High Speed Two is updated on a regular basis.

Question 32. *Are the bottom-up estimates for the High Speed Rail programme consistent with the top-down estimates from other high speed rail examples?*

The case for HS2 has been developed using DfT and HMT guidance, best industry practice, and the best available demand forecasts and high speed rail comparators to create robust estimates. These estimates are iteratively reassessed to take account of wider changes to transport and the economy to ensure that our estimates remain as accurate as possible.

As outlined in the Oxera report, the case for HS2 shows a BCR of 2.0 for the London to West Midlands line, including Wider Economic Benefits (WEI). Due to the limited evaluation of existing high speed rail schemes across the world, it is impossible to perform a direct comparison of the expected HS2 BCR and the

²⁷⁶ Volterra (2011), Understanding the transport infrastructure requirements to deliver growth in England's Core Cities, Section 3.5.2 (pgs 49–51). Available at: http://www.corecities.com/sites/default/files/images/publications/Volterra-understanding-the-transport-infrastructure-requirements1_0.pdf

²⁷⁷ SDG (2010) Station Usage and Demand Forecasts for Newly Opened Railway Lines and Stations. Final Report, August 2010 is due to be published shortly

actual economic output of high speed lines. However, some recent research²⁷⁸ has sought to identify the factors which are most likely to see high speed rail projects deliver good value for money, which include focusing on routes seeing high levels of demand growth and on links between main population and business centres. On this basis, HS2 appears to deliver the key elements needed to create a high speed railway that is likely to deliver strong economic benefits.

What are not accounted for as part of the BCR are the non-monetised benefits (such as regeneration and employment growth) that HS2 would bring, which could be very significant. The evidence from areas such as Lyon, which hosts around 20,000 jobs around the TGV station, Lille, where the arrival of high speed trains drove the development of the major Euralille development, and Ashford, which is now one of Kent's fastest growing areas, demonstrates the potential scale of non-monetised benefits that could be delivered.

Question 34. *Are declining real air fares realistic given the prospect of increased environmental taxation on aviation?*

The base case of declining domestic air fares is consistent with our last set of published forecasts "UK Air Passenger Demand and CO² Forecasts" (2009). However since then we have gone through an extensive model development programme including an update of all our input assumptions. Air fares are now split between business and leisure passengers; the trend in domestic leisure fares is assumed to increase until 2050, while the trend in domestic business fares shows a continuing fall until 2030, after which this reverses and the business fares' trend begins to increase up to 2050. The reasons for the difference in domestic air fare trends between our 2009 and 2011 forecasts are threefold:

- (1) APD was treated as part of the carbon tax in our 2009 forecasts; in our 2011 forecasts we treated APD as separate to the carbon tax.
- (2) Fuel efficiency improvements were greater in our 2009 forecasts than in our 2011 forecasts.
- (3) Oil and carbon prices are higher in our 2011 forecasts.

We have recently published our 2011 forecasts.

It should be noted that impact of higher than expected air fares on the business case for HS2 would be likely to be positive, although small.

30 August 2011

Further written evidence from the Department for Transport (HSR 167B)

Letter from the Secretary of State for Transport

HIGH SPEED RAIL INQUIRY

Following the Transport Committee's session on 13 September, I am writing with further information on three matters raised in my evidence.

Decision making

I discussed my Department's approach to developing and testing the business case for HS2. As you know, business cases produced by my Department are developed in line with Treasury advice on evidence-based decision making (set out in the Green Book), using its best practice five case model approach. This approach shows whether schemes:

- are supported by a robust case for change that fits with wider public policy objectives—the "strategic case";
- demonstrate value for money—the "economic case";
- are commercially viable—the "commercial case";
- are financially affordable—the "financial case"; and
- are achievable—the "management case".

I would like to clarify that the environmental case for a project is discussed within the strategic and the economic cases for a project.

Modal shift forecasts

In my evidence to you I raised HS2 Ltd's forecasts of the modal shift from air and road to high speed rail that would be facilitated by a high speed rail link from London to the West Midlands. HS2 Ltd predicts that the percentage of passengers using HS2 in 2043 who would otherwise have travelled by air is 6%, whilst the percentage who would have otherwise travelled by car is 7%. The construction of the second phase of HS2—to Leeds and Manchester—would further reduce journey times and provide new opportunities for modal shift.

²⁷⁸ For example, de Rus and Nash (2007) In what circumstances is investment in HSR worthwhile?; available at: http://mpr.ub.uni-muenchen.de/8044/1/MPRA_paper_8044.pdf

External challenge

The Committee asked me whether my Department's work on HS2 is subject to scrutiny from external challenge groups. In addition to the external challenge panels run by HS2 Ltd, which include a range of experts from outside of Government, I gave a description of some relevant organisations and their activities. I attach a fuller description of the variety of sources of challenge and scrutiny of HS2, at Annex A.

If there is any further information that would be of use to the Committee in forming their recommendations on HS2, please do not hesitate to contact either me or my officials. I look forward to receiving the conclusions of the Committee's inquiry into high speed rail.

16 September 2011

Annex A

This annex sets out a number of processes by which the Department's work on the HS2 project has been, and continues to be, formally scrutinised, in preparation for my decisions on high speed rail at the end of the year.

The Major Projects Authority (MPA) conducted a Project Assessment Review (PAR) for HS2 in June 2011, the recommendations of which are being implemented by my Department and HS2 Ltd. The MPA will conduct a comprehensive PAR of the HS2 project at the end of October, after which its report will be referred to the Major Projects Review Group (MPRG) for consideration in mid November. My Department expects to receive an immediate assessment from the MPRG on the feasibility of the project. For information, the MPA is part of Cabinet Office and aims to significantly improve the delivery success rate of major projects across central government. Further information on their remit and powers can be found here <http://www.cabinetoffice.gov.uk/content/major-projects-authority>.

My Department's work on HS2 is subject to scrutiny from Infrastructure UK (IUK), in particular with regard to any future governance structures. For information, IUK is part of HM Treasury (HMT) and in addition to providing a stronger focus on the UK's long term infrastructure priorities, it aims to improve delivery of UK infrastructure through achieving greater value for money. Further information can be found here http://www.hm-treasury.gov.uk/ppp_infrastructureuk.htm.

The economic and financial cases of the HS2 project are the focus of robust interrogation by HMT. Depending on the outcome of my decision on high speed rail, HMT Ministers will wish to satisfy themselves as to the quality of the economic and financial cases of the project, both at the decision stage and as the project moves forward. The Ministers and officials of a number of other government departments provide input to my Department's work on policy areas relevant to them. These include the Department for Environment, Food and Rural Affairs (Defra), the Department for Communities and Local Government (CLG) and the Department for Business, Innovation and Skills (BIS).

In addition to the organisations detailed above, my Department has a comprehensive process of internal assurance, ultimately led by myself and my Permanent Secretary as the Accounting Officer. This includes the Board Investment and Commercial Sub-Committee, which reports to the Departmental Board and is a forum for making informed decisions on major investment projects within an economic, financial and commercial context at regular stages of the project.

It should not be forgotten that the public continue to serve as the most significant source of scrutiny of HS2. The recent public consultation, which lasted five months and attracted over 50,000 responses, invited interrogation of an extensive suite of documentation on the project and the opportunity to submit opinions and further evidence to the decision making process. Individuals, businesses, academics, rail industry groups and local authorities, amongst many others, have all contributed to the consultation. All relevant information was made public for this exercise and officials actively encouraged public engagement with the project through a series of road shows along the proposed route, seminars in major cities across the UK and leafleting exercises in train stations.

Additionally, my officials have engaged actively with critics of HS2 before, during and after the consultation period. Communications from individuals and action groups have provided challenge to the evidence provided by my Department, which officials have considered and responded to. All of the evidence arising from these communications and the formal consultation process will inform my decision-making process.

Written evidence from HS2 Ltd (HSR 169)

INTRODUCTION

1. This document covers HS2 Ltd's response to the Transport Select Committee's inquiry into high speed rail. It summarises the outcomes of more than two years work to date in response to our remit from Government to develop proposals for a high speed rail network in the UK. This includes detailed technical work on rail engineering and operations, demand analysis and appraisal of sustainability and therefore this submission is necessarily a high level summary. It is intended to complement and support the Department for Transport's response, and therefore does not specifically address the questions on the main arguments for or against high speed rail and its fit with the Government's transport policy objectives which are more properly covered by DfT.

BACKGROUND

2. Britain's rail network is seeing a continuing pattern of rising demand, in particular for long distance travel. Rail capacity is under increasing strain and services are growing more crowded. The scope to meet rising demand by running additional services and longer trains is becoming increasingly limited. Some of the country's key rail routes are forecast to be completely full in peak hours in the next 20 years, meaning that a substantial long-term expansion in capacity will be needed to enable the rail network to respond.

3. The Government's assessment is that a new high speed rail network would generate significantly greater benefits for travellers in terms of capacity, connectivity and reliability than any of the other options considered for adding capacity to the rail network, and that it offers valuable potential to support the Government's wider strategy to promote long-term and balanced economic growth.

4. In this context, HS2 Ltd was established as a Government company to examine the case and develop proposals for a new high speed railway line between London and the West Midlands, and potentially beyond. We submitted our initial advice to Government in December 2009 and it was published in March 2010. We have continued to develop these proposals, including refining the alignment to mitigate environmental impact and examining options for connecting directly with HS1 and Heathrow Airport. A public consultation is currently underway on the proposed route.

5. The Government sees HS2 (London to West Midlands) as the first stage of a wider high speed rail network. As part of this we have been asked to develop proposals for a wider network that would extend beyond the West Midlands to Manchester and Leeds. We will submit our findings to Government by the end of 2011.

A Specification for High Speed Rail in the UK

6. In developing our advice to Government in 2009 we also developed a set of fundamental guiding principles that would form the basis of high speed rail in the UK, with a view to the future development of a wider national network. These are:

- Exploiting maximum benefit from high speed capacity: With expected growth in demand, and the greater range of destinations that could be served with a wider network, HS2's capacity would be fully used over time. Given also the high costs of construction, it is important to ensure that the best use could be made of available paths.
- Long distance, city-to-city journeys: Benefits and revenues would be maximised by focusing high speed services on direct connections between large markets.
- High speed trains only: Permitting only trains capable of operating at high speed would ensure that overall capacity of the line would be maximised.
- Integration with the classic network: This would enable high speed lines to serve more destinations, spreading the benefits of HS2 more widely.
- Greater segregation from the classic network over time: The highest levels of reliability for passengers would be achieved on segregated networks.
- Integration with other transport networks: To fully realise the benefits of high speed rail it would be important that passengers could get easily from the station to their final destination.

7. Given the timescale over which HS2 would be operated, an element of future-proofing was included in the operational and technical specifications anticipating likely technological development in the coming decades based on advice from leading suppliers and academics. The specifications were tested with an independent panel of experts of international standing.

THE BUSINESS CASE

Methodology and assumptions

8. To consider the economic case for high speed rail we had first to consider what would happen in the absence of such investment. The number of trips on long distance rail operators has grown by 5% per year on average since 1995, and our forecasts suggest that there will be continued growth in demand for long distance trips going forward. However, given how far ahead we are looking, we have taken a cautious approach to

forecasting demand, expecting it to flatten off at a certain level in future, for example because of constraints on people's time.

9. For other rail appraisals the Department for Transport typically uses a cut-off for demand growth of 2026 as a reference point to ensure consistent comparison of smaller scale schemes, such as investments in rolling stock. We do not, however, consider this to be appropriate for HS2 as a major long term investment that would not even open before this cut-off point. We have capped rail demand in the WCML corridor (without HS2) at a level that is slightly more than double current levels, which occurs in 2043. This level of demand is consistent with households becoming wealthier as GDP per head grows and adopting lifestyles with more frequent long distance travel as demonstrated by those in higher income bands today.

10. This growth would put increasing pressure on the West Coast Main Line. Even with lengthening of Pendolino trains this means that peak services would be very crowded with all seats filled and passengers standing.

11. Against this background we have assessed the economic case for HS2, seeking to take account of the full economic costs and full economic benefits of the scheme and to quantify these in monetary terms as far as possible. We approached this on the basis of the HM Treasury Green Book and the Department for Transport's Transport Appraisal Guidance. We assessed the direct impacts that HS2 would have on transport users through, for instance, journey time savings, reliability improvements and reductions in crowding on trains. We also measured the impacts, both positive and negative, that HS2 would have on the classic rail network, and we looked at some of the wider economic impacts such as agglomeration benefits. We looked at the scope for agglomeration benefits beyond those identified by the current DfT methodology, but it did not include these in the appraisal.

12. The appraisal assumes that the Government would both regulate and maintain the high speed railway. In line with Government guidance, we assessed the economic case over the construction period and 60 years of operation, although we would expect the investment in high speed rail to have a much longer life.

13. Our assessment of the future level of demand for long distance travel and the impact of introducing HS2 has been informed by evidence and guidance from the Department for Transport based on extensive research of trends in transport demand. Our forecasts are set out in Chapter 3 of the Economic Case for HS2 published as part of the consultation. For economic growth we have applied medium term forecasts from the Office for Budget Responsibility, with long term forecasts provided by HM Treasury. Transport prices and population changes are taken from standard Department for Transport guidance and models.

14. The relationship between these drivers and transport demand is taken from existing evidence and the Department for Transport's modelling guidance. For rail travel forecasts we use the Department for Transport's recommended source—the Passenger Demand Forecasting Handbook (PDFH). For air travel forecasts we use modelling undertaken for the Department for Transport's UK air passenger demand and carbon dioxide (CO₂) forecasts 2009.

15. We established an external Analytical Challenge Panel of leading independent experts to challenge and scrutinise our approach to modelling the economic effects of HS2.

The economic case for HS2

16. A Y-shaped network that extended to Manchester and Leeds would deliver journey time savings of up to an hour between some of the UK's largest cities, with significant improvements in connectivity between the North West, the Midlands and South and West Yorkshire, as well as to and from London. It would generate estimated overall benefits (including Wider Economic Impacts) of £44 billion (present value), and estimated costs would be £32.2 billion including risk and optimism bias. Taking all factors into account, including estimated revenues, we currently estimate a central benefit cost ratio (BCR) for a Y-shaped network, including wider economic impacts, of 2.6; the BCR excluding wider economic impacts is estimated to be 2.2. This is a high level assessment at this stage, as we are still developing detailed route proposals. We have been conservative in the assumptions made for released capacity on the Midland and East Coast Main Lines, and also for wider economic impacts, although the proximity of Leeds, South Yorkshire and the East Midlands may mean that agglomeration benefits are stronger than those observed in the London to West Midlands scheme. We are continuing to refine the assessment of the business case for the Y network as part of our work on routes to Manchester and Leeds.

17. HS2 (London to West Midlands) alone would deliver significant economic benefits. Benefits to business and other transport users would represent the bulk of this (£11.1 billion and £6.4 billion respectively). Benefits of journey time savings form a large part of this, although improved reliability, reduced crowding and other benefits to rail users are also important. The benefits are not only from services on the high speed line, but also from additional services that could be provided using capacity released on the West Coast Mainline. Small further benefits (£0.4 billion) are achieved through reductions in accidents, noise and air quality from lower road traffic and benefits from the HS1 connection. Net transport benefits would be worth almost £16.5 billion.

18. From this we have subtracted the loss to the Government of indirect tax revenue as a result of fewer people travelling by car, for example, lower fuel duty receipts; this is £1.3 billion. We estimated that HS2 (London to West Midlands) would create around £4 billion worth of wider economic impacts (WEIs) over the

60-year appraisal, with the largest element being agglomeration benefits. These are mainly generated by the released capacity allowing more commuter type services on existing lines, rather than long distance journeys on HS2. The total benefits of the scheme, net of the loss of indirect taxes, are therefore estimated to be £20.6 billion.

19. Against these benefits, the costs of HS2 (London to West Midlands) over the 60 years of the appraisal would be £24.0 billion. The bulk of these are capital costs (almost £18 billion). As the first stage of a wider network these include substantial “up-front” costs, such as the reconstruction of Euston station and the London tunnels, which would also be used on a wider network. The remainder of the costs are the net impact on operating costs, covering both HS2 trains and the classic network. Revenues of £13.7 billion would partially offset the costs, giving a net cost to Government of £10.3 billion. The BCR is the net benefit divided by the net cost to Government. On this basis the BCR of HS2 (London to West Midlands), including Wider Economic Impacts would be 2.0. The BCR excluding Wider Economic Impacts would be 1.6.

Testing the reliability of the economic case for HS2 (London to West Midlands)

20. There will always be some uncertainty about future consumer behaviour and circumstances when predicting so far into the future. We therefore carried out a thorough set of sensitivity tests to explore the relationship between the assumptions we made and the economic case. The main sensitivity tests covered:

- The level and pattern of demand without HS2 (London to West Midlands).
- The valuation of benefits of HS2 (London to West Midlands), in particular looking at the valuation of time and other business benefits.
- The cost to Government of building and operating the scheme.
- Scheme opening year.

21. The sensitivity tests showed that demand for travel is a key factor affecting the economic case for HS2. If demand is higher than our central case, benefits and revenues would be higher and the BCR would rise. The opposite is true if demand were lower. For such a long term investment the future level of demand is the key consideration rather than the rate of growth, since the latter affects the timing of investment rather than whether it can be justified at all. For example, with the same demand cap but a 50% lower rate of growth in demand, the BCR excluding WEIs would be unchanged if the scheme opened in 2034 instead of 2026.

22. Therefore, factors which affect the level of demand for HS2 and rail services will impact on the economic case. Changes to assumptions on the cost of travel will change demand levels, but large changes in respect of road and air travel would be needed to have a very significant impact on the BCR. For example, 50% higher road fuel duty and 37% higher air fares would increase the BCR excluding WEIs to 2.7, while lower prices would reduce the economic case. Slower growth in road or air travel would reduce the BCR, and no growth in these modes would result in the BCR excluding WEIs falling to 1.4.

Value of time for business passengers

23. For business users, the DfT values the time spent travelling that could otherwise have been used in productive activity and assumes that all time spent travelling is unproductive. This assumption has, however, come in for challenge as, with laptop computers and wireless internet access available on modern trains, rail passengers are increasingly spending at least some of their time in productive activity. If a business passenger spends half of their time on a train working fully productively, then saving half an hour in travel time may only save 15 minutes of ‘lost’ productive time.

24. Even if this meant that values of time need adjusting, it cannot be taken in isolation. For example, if people are standing on a train it is reasonable to assume that they would be unproductive, and relieving that crowding would have a productivity effect. In our central case we value crowding for business passengers at the same level as for commuters, so that the only impact of crowding is the “discomfort” factor and no account is taken of the potential lost productivity impact. It would therefore be appropriate to increase this value if we were to assume that some time on a train is productive. If we halved the business value of time and adjusted crowding impacts to reflect the loss of value experienced by business passengers travelling in crowded conditions (instead of using commuter values for business passengers) the BCR for HS2 (London to West Midlands) would actually increase slightly.

Cost Estimation and Risk

25. Our cost estimates include an allowance of 64% for risk and optimism bias. Changes to costs will also have an impact on the economic case. Recent work by the Treasury’s Infrastructure UK has identified a number of areas for potential efficiencies. Reflecting this, the range of estimates of costs we have tested implies a range of BCRs between 1.5 and 2.0.

Benefits of HS2 (London to West Midlands) across regions

26. HS2 would generate benefits for transport users across much of the UK and the three largest economic centres in the country—London, Birmingham and Manchester—representing almost a quarter of the UK’s

employment, would benefit directly from HS2 (London–West Midlands). Benefits would not, however, be limited to areas directly served by HS2. Passengers from a wider area would be likely to access high speed services, using both road and classic rail to access the high speed stations.

27. It is difficult to analyse exactly where, geographically, the benefits of HS2 (London–West Midlands) would accrue. Our modelling tells us that trips starting in London generate the single largest share of benefits, although more than 50% of benefits in total relate to trips starting outside London and the South East, with significant benefits in particular from trips starting in the West Midlands and the North West. Over one quarter of the benefits accrue to trips starting north of Birmingham, with the North West the biggest beneficiary.

Learning lessons from other major transport projects for successful delivery

28. During 2009 we undertook initial work on the potential models for funding and delivering high speed rail, drawing on experience of other major projects in the UK and overseas. This is described in our report published in March 2010. We also commissioned a ‘benchmarking’ study by independent consultants, BSL, which investigated civil engineering costs in other countries and compared them to costs in the UK. This study showed that civil engineering costs in the UK are up to twice those in other comparable European countries. Following this, we were asked to work with Infrastructure UK (IUK). In December 2010 IUK produced a report of this study—the Infrastructure Cost Review—which identifies the scale of issues and range of possible actions that could be undertaken to reduce the cost of civil engineering construction in UK. If the project is taken forward we would work further to exploit potential efficiencies.

THE STRATEGIC ROUTE

Station locations

29. In determining the location for a London Terminus, our analysis showed the strongest demand is for a central London station. Although it would require a larger number of demolitions, we considered that, of the feasible central London locations, the redevelopment of Euston over a single level was the best option. It offered the best opportunities for longer-term redevelopment of the Euston area, and would cost no more than the other main options, and less than a double-deck station. An alternative at Kings Cross Lands would have been a major engineering challenge and would have severe effects on development currently underway. The alternative of redeveloping Euston on two levels would be very intrusive locally and would impose unacceptable disruption to existing services during construction.

30. Given that most HS2 passengers would be travelling to or from London, an interchange at Old Oak Common would provide the best location for transfer on to the Great Western Mainline and Crossrail and the Heathrow Express. It would also relieve pressure on the underground at Euston and provide better access for HS2 passengers to and from the City of London, the West End and Docklands.

31. Using Birmingham New Street as a terminus was not considered feasible as it would require removal of existing classic services to another new station in the city centre, and would be a significant, expensive engineering challenge. The station location at Curzon Street would have a lesser impact on local conservation areas than the main alternative and would require fewer demolitions. A new interchange station close to Birmingham Airport would increase the overall economic case for HS2 (London to West Midlands) and benefits could be enhanced by an Advanced People Mover connection to the airport and classic rail station.

Intermediate stations

32. On HS2 (London to West Midlands) we concluded that an intermediate station at Bicester (serving Oxford) or Milton Keynes could generate significant benefits to users of the station. The case for such a station, however, also depended on the impacts that it would have on other HS2 passengers and the capacity of the line. An intermediate station would be detrimental to the business case unless a loss of services on the line could be avoided, which we concluded could not be achieved. We are, however, considering the case for intermediate stations on Phase 2 of the network to Manchester and Leeds.

Beyond the West Midlands

33. One of the main principles that formed our basic model of high speed rail in the UK was that, in the early stages of developing a network, the benefits of high speed rail should be extended to cities further north with trains running off the high speed line and onto the existing network. This was considered to be crucial to the economic case for HS2 (London to West Midlands), and would be provided for by a link onto the West Coast Main Line near Lichfield for services to Manchester, Liverpool, Preston and Glasgow. Similarly, our work on Phase 2 of the network is considering links onto existing lines to enable services to continue beyond Manchester and Leeds.

The Appraisal of Sustainability

34. The economic case is only one of a number of factors that the Government take into account in making investment decisions. In line with guidance from Government, and the importance of understanding environmental impacts, we have presented these separately from the economic case, although we have included

provision for a further £215 million of environmental mitigation (excluding risk) on the capital cost estimates for HS2 (London to West Midlands).

35. All sustainability issues, embracing economic development and job opportunities, effects on communities, as well as environmental considerations such as landscape, noise, the natural environment and climate change have been addressed through the Appraisal of Sustainability (AoS). These have been considered alongside the economic case and are outlined below.

ECONOMIC REBALANCING AND EQUITY

Economic regeneration: local benefits of HS2 (London to West Midlands)

36. There are potential localised impacts around stations that have not been included in the economic case, and are described in the AoS. The best regeneration opportunity would be around the proposed Old Oak Common Station, where wider access to Heathrow, Central London and Docklands through the interchange with Crossrail would be a particular incentive for local development and growth, and it is forecast that it could support 20,000 new jobs. The proposed terminus at Euston would present a major opportunity for regeneration, acting as a catalyst for the area to achieve its potential of providing 1,000 new homes and 5,000 new jobs, as recognised by the Mayor of London. Current estimates suggest that HS2 (London to West Midlands) could contribute to the creation of 2,000 jobs in the area.

37. Elsewhere, around Curzon Street Birmingham City Council is revising the Masterplan for Eastside to take account of HS2, which would see significant overall benefits building on the regeneration stimulated by a new high speed service. It could contribute to 4,500 jobs in the area. Birmingham Interchange would support and create growth opportunities close to Birmingham Airport, the NEC and the existing rail station. As investment and businesses are attracted to the area, estimates suggest that HS2 could contribute to the creation of 3,800 jobs.

38. In addition to the work reported in the AoS, we considered international experience of the effect of high speed rail on local and regional patterns of economic activity. This showed that key considerations in the success of high speed stations included integrating the station development into wider local strategies such as land use plans and providing good links to the local and regional rail network.

IMPACT

Carbon impacts of HS2 (London to West Midlands)

39. HS2 could provide a relatively low carbon form of transport, offering the opportunity to deliver a major improvement in capacity and journey time between our major cities to support economic growth, without an increase in carbon emissions. The exact effect on carbon emissions of HS2 (London to West Midlands) would, however, depend on a number of factors including the carbon efficiency of electricity generation and the level of modal shift achieved, particularly from aviation. Under the best case scenario, the proposed line would result in a total reduction in carbon emissions of 28 million tonnes over 60 years.

40. Even on the most pessimistic scenario in which the carbon efficiency of electricity generation remains constant and no modal shift is achieved, the overall increase in carbon emissions over 60 years would be 24 million tonnes over the same period. This is equivalent to around 0.4 million tonnes a year—just 0.3% of total current annual domestic transport emissions.

Local Environmental impacts

41. Since recommending a route to Government in December 2009, we have identified refinements to around half of our recommended route, including more than a mile and a half of “green-tunnels” to maintain local access and minimise noise and visual impacts, lowering large sections of the proposed line and reducing the number of viaducts, while some changes to the alignment have moved it further away from settlements and important heritage sites. Nevertheless a project on this scale cannot be undertaken without any local effects.

42. Allowing for mitigation that would be provided, we currently estimate that for HS2 (London to West Midlands) around 10 dwellings would be affected by high noise levels, with around 150 additional properties likely to experience noise levels which would qualify for noise insulation under the Noise Insulation Regulations, and around 4,700 properties potentially experiencing some noticeable increase in noise levels. Further design work if the scheme is taken forward could reduce these numbers.

43. Around 340 dwellings would need to be demolished, including around 200 flats in four blocks in the Regents Park Estate to make way for the expansion of Euston. We intend to work closely with the London Borough of Camden and the GLA, and with community groups, resident’s associations and affected residents in the area generally to ensure that effective arrangements would be put in place to meet the housing needs of those affected by the demolition of these dwellings.

44. No Grade I or Grade II* listed buildings would be demolished, and no internationally protected sites of ecological interest would be adversely affected, while impacts to nationally protected sites are restricted to a few locations. The proposed route crosses the Chilterns AONB, with all but about 1.2 miles (2km) of the line

in tunnel, deep cutting or in the corridor of the existing A413 main road. Overall around half of the route is now in deep or very deep cutting, or in tunnel, reducing noise and visual impacts of the line.

Impacts of HS2 on the Classic Network

45. HS2 would be a passenger line only. However, transferring intercity services from the West Coast Main Line to HS2 would free up capacity which could be used for either additional passenger or freight services. For the purposes of calculating the economic case we made some assumptions about the use of this for additional commuter-type services into London and Birmingham, but we have not done the same for freight services. Even with the additional passenger services we assumed on the West Coast Main Line, there would still be considerable scope for additional freight services.

46. We believe that the redevelopment of Euston station could be accomplished while maintaining at least the current off peak service level, and there may be some minor alterations to the timetable. There would be some instances of disruption to services where, for example, the station would be closed for a few days over public holidays.

47. The HS1 link would have an entirely new tunnel away from railway infrastructure for the majority of its length, but further work would still need to be done to the existing North London Line viaduct through Camden. We believe that, if carefully designed and staged, most of this work could be carried out with limited impacts on existing freight and passenger services.

48. Elsewhere, there are a number of points along the proposed route where HS2 would need to cross the classic network. If the proposal were to be taken forward we would work closely with Network Rail and the relevant train operating companies in developing our construction strategy. We believe in most cases, however, that disruption could be minimised to short-term closures.

May 2011

FURTHER READING

High Speed Rail: Investing in Britain's Future (February 2011)
<http://highspeedrail.dft.gov.uk/library/documents/consultation-document>

Economic Case for HS2: The Y Network and London–West Midlands (February 2011)
<http://highspeedrail.dft.gov.uk/library/documents/economic-case>

Demand for Long Distance Travel (April 2011)
<http://www.hs2.org.uk/assets/x/77832>

Valuing the Benefits of HS2 (London to West Midlands) (April 2011)
<http://www.hs2.org.uk/assets/x/77834>

HS2 London to the West Midlands Appraisal of Sustainability (February 2011)
<http://highspeedrail.dft.gov.uk/library/documents/appraisal-sustainability>

HS2 Route Engineering Report (February 2011)
<http://highspeedrail.dft.gov.uk/library/documents/route-engineering-report>

High Speed Rail London to the West Midlands and Beyond HS2 Technical Appendix (December 2009)
<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2td/technicalappendix/pdf/report.pdf>

High Speed Rail and Spatial Patterns and Strategies in Cities and Regions published as Appendix 3 of HS2 Demand Model Analysis (March 2010)
<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2td/demandandappraisal/>

Advice on the Assessment of Wider Economic Impacts: a report for HS2 (March 2010)
<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2td/appraisalmaterial/pdf/widereconomicreport.pdf>

Further written evidence from HS2 Ltd (HSR 169A)

HS2 LTD RESPONSES TO TRANSPORT SELECT COMMITTEE QUESTIONS

Thank you for your letter of 18 July in which you enclosed a number of questions. I attach our responses to these.

The Committee asked a question on the proposed 18 trains per hour service level. We are aware that this has also been raised during the consultation and we have begun further work in this area. The answers here reflect this work.

There were a few questions which we considered would be best answered by the Department for Transport. The Department will provide responses to questions 5, 6 and 16. I hope our responses to the remaining questions are of assistance.

In addition, I also attach responses to the questions raised by Oxera in its review of the *Economic Case for HS2*. As with the questions put to us by the Committee, we agreed with the Department for Transport that they would be best placed to answer some of these. The Department will provide responses to questions 1–4, 6–8, 14, 19, 20, 31, 32 and 34 from the Oxera review.

The Committee should note that while these answers reflect the evidence base and analysis that has underpinned our advice to Government, they do not take into account any new evidence presented via the recently completed public consultation, as the analysis of the responses is still at an early stage. Clearly, no final decisions will be taken by Ministers until that process has been completed.

1. Without HS2 or a strategic alternative, when will capacity on WCML be exhausted? Please give details of projected load factors by year, section of the route and time of day; and explain what assumptions they make about pricing, including possible measures to smooth demand

The attached maps show HS2 Ltd's forecasts of demand (daily trips) and load factors (proportion of passengers to seats) on the WCML for the Intercity West Coast Train Operator only (currently Virgin Trains) in 2008, 2021 and 2043.

The demand forecasts underpinning these maps show that the total number of long distance rail trips over 100 miles will grow by 95% between 2008 and 2043, or around 2% per year on average.

On this basis, even allowing for substantial committed capacity increases, the average all day load factor on the West Coast TOC into and out of London is expected to grow from 56% in 2008 to 75% in 2043. As this is an all day average it represents a very significant level of crowding; during the peaks and on busier routes the load factors would be much higher than 75% resulting large numbers of people standing on many trains.

The reduction in the load factor shown between 2008 and 2021 on some sections of the WCML reflects the fact that the forecast growth in trip numbers over this period is less than the increase in capacity provided by the introduction of the "Very High Frequency" timetable at the end of 2008 and the committed lengthening of the Pendolino fleet. However, it is important to note that actual growth on Virgin Trains between 2008 and 2011 of around 10% per year has been noticeably higher than the average growth of 2% per annum forecast. This means that the demand level forecast for 2021 has already been reached and the load factors shown for that year are therefore likely to prove an under-estimate.

The forecasts provided assume that the Pendolino fleet retains the same number of first class carriages as today and that current policies on fares remain in place, including an annual increase of RPI+3% between 2012 and 2015 in line with decisions taken following the 2010 Spending Review.

While we have not ourselves undertaken any analysis of possible pricing measures to smooth demand, a 2006–07 study by AECOM for DfT which focused on peak flows at busy London termini concluded that very little could be done in practice to shift people out of the peak. Peak fares on long distance services are already significantly higher than during the off-peak, and we believe it unlikely that different pricing structures—that is, further increases in fare levels at peak times—would do much to smooth demand. And by 2043 crowding across the whole day is expected to be so high that such pricing measures would be largely irrelevant.

There is no simple definition of when capacity on a route is exhausted. It can be defined as the point when additional seating capacity via longer or more frequent trains can no longer be reliably provided, or the point when existing trains become unacceptably crowded. Further complexity is introduced as demand and train frequencies vary considerably across different days of the week and times of day.

This means there is no established definition of when a route is full. However, as explained in their evidence to the Committee, analysis has been conducted by Network Rail which indicates that a) by the mid-2020s some train services on the West Coast Main Line will be sufficiently full that—ordinarily—further capacity enhancement intervention would be considered essential, but b) no further viable options for enhancing capacity will be available. The recently published West Coast Main Line RUS strongly supports a new high speed line as the best solution to long term capacity issues on this route.

2. Has the DfT's guidance been followed fully with respect to the sensitivity tests performed on passenger demand forecasts and income elasticities?

As far as possible HS2 Ltd has followed the Department's guidance for forecasting, appraising and sensitivity testing transport schemes. However, given the nature and scale of HS2, HS2 Ltd considered that certain elements of the guidance relating to sensitivity testing and choice of forecast year or demand cap are not appropriate.

In terms of testing the robustness of the rail demand forecasts, the guidance recommends that forecasts are subject to sensitivity tests regarding the elasticity of rail demand to changes in income and fares. The impact

of these sensitivity tests is to change the rate of growth in rail demand which, in turn, will affect the business case for a project or policy.

Since the range of uncertainty regarding the growth in rail demand is greater than uncertainty around the income and fare elasticities, HS2 Ltd chose to undertake more wide ranging sensitivity tests than recommended by the guidance. The tests undertaken by HS2 Ltd included varying the rate of rail demand growth, the year at which growth is capped and the impact of lower (indeed, non-existent) growth in air and car travel.

The results of these tests produce a much wider range of demand outcomes than would be obtained from following the guidance. The tests undertaken by HS2 Ltd therefore exceed the guidance and remove the need to carry out the specific tests suggested. The details of all of the sensitivity tests undertaken by HS2 Ltd are set out in Chapter 7 of the Economic Case for HS2 Consultation Document.

3. What is the base case or do-minimum scenario (in terms of more rolling stock or track capacity) on which the answers to Q1 above are predicated? Can you confirm that the same base case is used in calculating the BCRs of HS2 and the strategic alternatives such as Rail Package 2?

The do minimum scenario includes all major rail schemes to which Government was committed as of summer 2009. Among the more important schemes this includes 106 additional Pendolino vehicles on the WCML, IEP trains running on the ECML and Crossrail. The Chiltern Evergreen 3 upgrade is not included, as it was not agreed at that point.

By 2043 crowding on some services is expected to become so severe that it causes instability in the demand model. To increase confidence in model performance the capacity of all long distance services on the ECML was therefore further increased by 20% above that assumed by IEP, even though this does have the consequence of potentially understating the benefits of HS2.

The base case used to assess the network-level strategic alternatives published as part of the suite of consultation documents included a similar allowance of additional capacity on the ECML. Separately, in updating the economic case for the original “rail packages”, additional modelling instability was encountered and a further adjustment was required. This was achieved by lengthening all Pendolino services to 11 cars in the base case and is acknowledged in the report on this update.

4. What assessment has been made in the business case of the implications for HS2 of Evergreen 3—the improved Chiltern line service?

HS2 Ltd has not modelled the impact of Evergreen 3, and hence the exact impact on the HS2 business case is unknown.

However, it is our view that the implications of including this scheme are likely to be small. Even with the upgrade, journey times on the Chiltern route will still be longer than the WCML and onward access options from Marylebone more limited than at Euston. More importantly, the Chiltern route is only a viable alternative for those passengers travelling between London and Birmingham whereas HS2 is serving a much wider market.

We expect to be exploring this further as part of our advice to Secretary of State following the consultation.

7. We were told by TfL that they were worried about capacity at Euston to handle and disperse the passenger flows generated by the combination of HS2 and existing routes. They told us that Crossrail 2 would need to be in operation before the opening of HS2 to handle demand. We have also received representations about the disruptive impact of the Euston HS2 works on the existing train service into Euston. Can you comment on these issues?

HS2 would increase the numbers of national rail passengers using both the mainline and Underground stations at Euston. As well as rebuilding the mainline station improvements to the Underground station would also be made, including a new direct link to Euston Square. These works would be expected to deal with crowding issues in the Underground station.

In terms of crowding on the underground trains, our analysis indicates that the extra number of Underground passengers at Euston due to HS2 would be small compared with the overall numbers already using the Underground. Whilst high quality public transport access and dispersal at all HS2 stations would undoubtedly be desirable to maximize the benefits of the new line, HS2 Ltd is not in a position to comment on the value for money of particular schemes.

Even without HS2, the number of national rail passengers arriving or departing Euston will grow by 100% by 2043 resulting in around 8,700 additional passengers using the Underground station during the morning peak. The average loading of all London Underground services travelling through Euston Underground in the three hour AM peak period is currently 138% and is expected to increase to 185% in 2043 without HS2. Both the Northern and Victoria lines which stop at Euston are likely to be particularly heavily crowded.

By 2043, HS2 Ltd estimates some 5,500 additional rail passengers would use Euston Underground Station in the morning peak as result of HS2 Phase 1—but this is equivalent to an increase in the total number of passengers travelling on London Underground services passing through Euston of just 2%. As a result of HS2

Phase 1 we estimate only a small additional increase in crowding on LUL services at Euston from 185% to 191%

Accordingly, any requirement for additional underground capacity would be predominantly triggered by general growth, not the effect of HS2. We believe that the same conclusion holds, in principle, for the wider Y network which would further increase demand at Euston but may also limit demand growth at Kings Cross St Pancras as passengers transfer to high speed services from the ECML and MML. We have not, however, analysed these numbers in equivalent detail, as we have yet to finish our work on developing the route and business case for links to Manchester and Leeds. HS2 Ltd will be working with TfL on the impacts at Euston as the Manchester and Leeds work is finalised, and is ready to provide any necessary input to TfL's wider ongoing strategy for modernising and improving Underground services should a decision be taken to proceed with HS2.

Impact on existing train services into Euston

Our Euston station proposal was developed from the outset to minimize disruption to users during its construction.

Euston station would be one of the most complicated areas of HS2 to construct. It would be undertaken over a number of years in several stages. Staging was developed on the basis of constructing new platforms on the western side to provide initially temporary platforms for existing "classic" services during subsequent construction stages and then progressively rebuilding the existing station in a number of stages. Upon completion of each stage, new platforms would be brought into service immediately.

At the current feasibility stage of the project, the proposals provide at least 14 platforms at all times. This followed an examination of the current standard off-peak and morning peak service. The latter demands the use of all 18 platforms at times and represents the "worst case".

We concluded that the off-peak service could be maintained with a minimum of 11 platforms with minor adjustments to operational practice to reduce some long turnaround times. We considered a 12th platform would be useful to maintain all-day operational flexibility for special events and the like.

The most critical period currently in the Morning peak is 08:40–09:10, with all 18 platforms being in use for part or all of this period. In order to operate the current volume of trains with a minimum of 14 platforms, we concluded turnaround times for some services would need to be reduced in line with those achieved at other similar London terminals. This would require detailed changes to arrival and departure times. However, by so doing it would be possible to maintain the current quantum of services, their frequency and general service intervals.

The London and South East Route Utilisation Strategy, July 2011 (Chapter 4, Table 4.1), notes that Euston currently operates less trains per hour in the peak than other London main line termini which have a similar mix of long distance and commuter services. This reflects extended platform occupation for some services. For example, the Highland Sleeper arrives before the critical peak but the empty stock remains occupying a platform until 0926 at present.

Therefore through the period of Euston development we concluded that the existing train service could be maintained. Passengers would experience some level of inconvenience through building works changing pedestrian, public transport and road access during the multiple stages of the works, similar to other major rebuilding projects of which the most recent and relevant was St Pancras.

We noted also in our report that on occasions it would be necessary to close the station entirely for short periods in order to stage the work. This would typically be to disconnect the track from one set of platforms and reconnect to another set, with the accompanying alterations to the signalling and overhead electrical equipment. Such closure would probably last several days, and would need to be timed to coincide with periods of lower demand such as long Bank Holidays or during the summer. The extent and timing of such closures would be developed if the project proceeds and be planned in conjunction with the availability of alternative routes.

8. Do you foresee any capacity problems on WCML north of Lichfield if HS2 opens in 2026 but the second phase to Manchester (and Leeds) does not start to open until 2032? Can the northern part of the line accommodate traffic from both HS2 and the classic line, including freight?

We do not foresee any significant capacity problems on WCML north of Lichfield, subject to the completion of Network Rail schemes as set out in the Technical Appendix to our 2009 Report.

We considered the effect of the Day One service on the capacity of each route section of the WCML north of Lichfield including both routes towards Manchester (via Crewe and via Macclesfield). Our baseline was the existing capability of the routes concerned including any relevant NR committed schemes.

We concluded that sufficient capacity would exist to operate the proposed pattern of HS2 services without detriment to other Train Operating Companies and Freight Operating Companies. However we do acknowledge

that detailed timetabling work for a potential 2026 timetable would be necessary and would expect to work with Network Rail should the project be developed.

We based our conclusion on the service pattern modelled for Day One and the change it would represent, as shown below:

<i>London to</i>	<i>Existing Trains per Hour from London Pendolino or Voyager</i>	<i>Assumed Future Trains per Hour from London</i>		<i>Total</i>	<i>Difference</i>
		<i>Pendolino or Voyager</i>	<i>HS2</i>		
Crewe	0	1	0	1	+1
Chester	1	1	0	1	0
Liverpool	1	0	2	2	+1
Manchester via Stoke	2	1	2	3	+1
Manchester via Crewe	1	0	1	1	0
Glasgow	1	1	1	2	+1
				TOTAL	+4

The above table compares the potential future off-peak services with the existing off-peak standard hour. In peak hours we have modelled a number of additional services, broadly in line with the level of service frequency enhancement in peak hours that already exists on the WCML. Further detailed work would be necessary to produce validated timetables at a later stage of the programme.

The effect on each route section would be:

Lichfield to Colwich

This section of the WCML was modernised and four-tracked as part of the West Coast Route Modernisation project, completed in December 2008. Sufficient capacity exists on this section to accommodate the four additional HS2 services without detriment to other operators or freight services.

Colwich to Cheadle Hulme via Stoke

The London—Manchester via Stoke line diverges from the WCML at Colwich Junction. At Stone the line from Stafford converges, bringing with it three trains per hour (two Cross Country and one London Midland), and further north there are also local services linking Macclesfield with Manchester.

We concluded that the addition of an additional path per hour was achievable although detailed adjustments to the timetabling of existing services might be necessary.

Stafford—Crewe Liverpool and Scotland

We concluded the proposed additional services could be accommodated.

From Stafford through to Crewe the existing railway is four-track.

Whilst Crewe station itself is complex due to the series of flat junctions, there is some grade separation of the freight lines which bypass the station. Between Crewe and Winsford the railway is four-tracked, reducing to two-tracks going north apart from a four-track section between Hartford and Acton Bridge, where freight trains can be overtaken by passenger services.

North of Warrington we proposed an increase of London services from one to two per hour. Having considered the limited capacity available we proposed that the two services (one HS2 and one classic rail) would be flighted closely together. This would maximise the connectional possibilities between the two services and minimise the demand on capacity.

9. *We have been told that no high speed railway currently operates at 18 trains per hour. To what extent is 18 tph dependent on the deployment of new signalling technology? What are the main risks to meeting that target? Does HS2 Ltd have a strategy for risk mitigation? If 18 tph is not achieved, what implications would this have for services frequencies, destinations served and the economic case?*

We calculate that an 18tph service can be offered reliably on HS2 on a “clock face” regular interval timetable. This is based on using the European Train Control System (ETCS), the most up-to-date available design for the reference train, our proposed configuration of infrastructure for stations and junctions, and our proposed service pattern. We do not consider it requires technology development to achieve this at 225mph and we believe that only limited, foreseeable, development would be necessary for the ultimate potential route maximum speed.

Capacity of current HS railways

The operational capacity of any railway depends on traffic type, speed and stopping pattern mixes, layout of junctions and stations and train technical performance as well as the innate capability of the signalling control system. For example, the Japanese centralised train control system permits trains to run safely at three minute intervals (notionally 20tph). However due to constraints of terminal station capacity from initial construction in 1964 and a complex pattern of stopping, semi-stopping and non-stopping trains, including trains timetabled to overtake each other, the practical capacity is generally limited to 13tph.

Existing high speed lines have been designed and are operated with a variety of national systems developed variously in the 1970s and 1980s, such as TVM in France and LZB in Germany. These are reported to give a capacity of up to 16tph but in practice, sharing use existing lines into terminal stations this figure is reduced to 12 or 13 tph.

New high speed lines in Europe are now being designed and fitted with ETCS (European Train Control System) which is now mandated under Interoperability legislation. Examples are Malaga—Madrid—Barcelona and Milan—Rome—Naples.

The HS2 proposal

The HS2 proposal was developed as a whole operational system to accommodate the specific intensive frequency required, having taken full account of experience elsewhere on factors limiting practical capacity.

We have determined capacity on the HS2 route based on:

- the current functionality of ETCS Level 2 train control system and the standard European train radio system, GSM-R.
- the acceleration and braking performance of the HS2 Reference Train which used the performance data from Alstom for its AGV third generation high speed train with 360kph (225mph) capability.
- all trains having the same design performance.
- the gradient profiles of the proposed route where there is an absence of sustained steep gradients, which affect train braking distances, due to the topography of the land traversed.
- avoiding capacity pinchpoints by providing grade separation at junctions and in Euston station throat, acceleration and deceleration tracks and high speed turnouts to minimise capacity loss at junctions, optimum design of track sectioning for the detection of train position and sufficient through platforms at Old Oak Common.
- no intermediate stations hence no stopping or overtaking movements on the two track core section.

On the basis of the technical performance of both the ETCS/GSM-R train control system and the Reference Train:

- the minimum headway between successive trains operating at the maximum initial speed of 360kph would be 116 seconds and 11.6km. The emergency stopping distance of the reference train from 360kph would be 5.7km.
- the worst case minimum headway between two trains was established as when a southbound train joined the line at a junction to follow a train passing through at full permitted speed. Following subsequent acceleration of the second train it would be some 130 seconds, and 13km, behind the first.

A realistic combination of through and stopping trains at Birmingham Interchange, and through and diverging / converging trains at the point on the “Y” network where the northwest and Northeast limbs join, would give a technical capacity of 29 tph with existing available technology.

To convert this to a practical, timetable planning, capacity we took into account general accepted railway practice which allows for typical day to day service variations, and European guidance published by the International Railway Union (UIC). On this basis we calculated a maximum planned capacity of between 21 and 22tph.

The proposal then took into consideration the potential variability of on-time performance of trains coming on to the HS2 route from existing railway lines. In the first stage the greater proportion of trains would be joining off the West Coast Main Line at Lichfield. In the second stage a higher proportion of train services would operate wholly on the dedicated high speed network but a significant number would still start on existing railway.

Having regard for the future desire for regular “clock-face” services, with some principal destinations served on a 20 minute cycle, we determined that we should plan HS2 service specifications on the basis of 18tph.

Risks to delivering reliable 18 tph capacity

The principal risks of adopting the European Standard ETCS with GSM-R as the radio carrier are of technical obsolescence. However we considered that the continuing development of the system in the years before it was brought into service on HS2 would more likely enhance its capability than diminish it. Similarly, the risk of

the European Union abandoning ETCS for a less capable system was considered remote. In any event we considered the additional margin we had already created by confining to 18tph compensated for this theoretical risk.

We consider other developments of train and signalling control technology would more likely enhance the ability to deliver high capacity reliably. For trains we expect to see improved guaranteed braking and deployment of automatic train operation (ATO) under driver supervision. The former already exists on some trains without recourse to novel unproven technology to the degree necessary to maintain the headways, and therefore capacity, described above at 400kph.

ATO has been widely used on metros and a version is operated on Japan's high speed lines, but there is not a specific version for ECTS Level 2 currently. It is anticipated that others will have created and proven such a product before 2020. We see the main benefits of ATO as being around improved management of key junctions to minimise potential delay and reduce energy consumption.

Implications of not achieving 18tph

Although we consider we have adopted a prudent approach in using up to 18tph to develop the illustrative service specification of HS2, we have considered the impact of a lower planned capacity. We would expect to maintain the range of destinations and key frequencies by joining trains south of the West Midlands (ie two x 200m trains joined together) where demand forecasts indicate no requirement to operate full 400m long trains.

10. Does the proposed land-take for HS2 provide sufficient width for widening to 4 tracks at some future date? Are structures being designed with future widening in mind?

No. The reasons for this were discussed in HS2 Ltd's 2009 report High Speed Rail: London to the West Midlands and Beyond. The relevant extract is reproduced below:

"6.1.60 We have considered the possibility of laying four tracks along the HS2 alignment, thereby increasing its long term capacity, to 30+ train paths per hour in each direction, rather than the maximum of 18 we assume for a two track railway. However, for the following reasons we have not pursued this option:

- The level of demand we have assumed—with growth continuing to 2033 and then levelling off—does not appear to support such a substantial increase in capacity. That is not to say that the demand may not materialise at some point after the next 25–30 years. However it does suggest that HS2 would need initially to bear a substantial degree of additional cost and environmental impact on the basis that the demand may materialise. We do not believe this to be a credible position.
- Were a second trunk into London to be justified, there are compelling reasons to believe that its optimal alignment would not follow the same as that of HS2. Firstly, a more easterly leg would enable high speed rail to address a broader market, and bring with it the possibility of further improved journey times to destinations east of the Pennines. Secondly, we believe there is no plausible site for the approximately 20-platform station that would be required to serve a four track high speed railway operating at full capacity, and nor is there a surface alignment into London that could support a four-track HS2. Were HS2 to be four-tracked to a point somewhere outside London, the second pair of tracks would need to enter London entirely in tunnel and terminate at a different station (although it is worth restating here that our analysis of the possible sites in central London suggests there is no obvious location for a second high speed terminal). A further reason for preferring a second route alignment is the added resilience it would give to a national network.

6.1.61 In short, a decision to four-track HS2 would need to be made against the backdrop of considerable uncertainty about future demand, and when other potentially superior options exist should the demand materialise. For these reasons we have recommended as part of our proposals for HS2 that it remain only a two-track railway. If demand materialises, a second leg could be built from the East Midlands to London."

11. Pierre Messulam, SNCF Director, told us that although passenger forecasts may prove broadly correct in the long run, the timing of costs and income can be problematic and make a significant difference to project viability. What sensitivity analyses have been performed on HS2 cost and income profiles?

Costs and revenues can affect project viability in a number of ways. HS2 Ltd has undertaken a number of sensitivity tests around the effect on the business case if demand growth were to be higher or lower, or capped at a different level, some of which are described in response to question 2 above.

The nature of cost and revenue risks also differs under different models for funding and operating high speed rail. In particular, revenue risk would be a key issue for a private sector concessionaire under a PPP arrangement such as has been used for recent TGV projects in France.

Ernst and Young provided some early views to us on financing issues for our 2009 Report, High Speed Rail: London the West Midlands and Beyond and, for example an illustrative profile of government funding is

shown in Figure 5.1b of the Report (p203), but the work was not detailed enough to identify specific risks around timing.

However, no decision has been taken on the preferred financing model for HS2. More work would be undertaken in this area if the decision is taken to take the project to the next stage.

12. How do the costs of a single route via Heathrow compare with the costs of the HS2 route plus a spur to Heathrow?

We have reported on the estimated base construction costs for a route via Heathrow with a station at Iver and the HS2 route plus a spur to Heathrow in our report to Government published in March 2010 and also in our Options for Connecting to the Heathrow Area Supplementary Report published later in September 2010. Our worst case assumption for a spur, assuming a Terminal 5 station on-airport in a box below-ground was that the estimated base construction costs would be c£200 million less than for a route through a Heathrow Hub 4km north of the airport. As noted below we calculated the journey time penalty to a through train of stopping on a route via Heathrow Hub as 7 minutes.

The cost of the spur option would be incurred, under the government's presently stated intention, with the second phase of HS2 to the North East and North West, when direct airport services would be scheduled.

We continue to work with BAA to investigate the possibility of creating a ground level station at Terminal 5. Should this be the case, the cost of the spur would reduce and therefore the cost differential between it and the more expensive through route would increase.

13. We have received a detailed submission saying that the Heathrow Hub / Iver Common site assessed by HS2 Ltd is not the same as the Heathrow Hub station proposed by Heathrow Hub Ltd, and that the conclusions drawn are therefore misleading. Can you please comment?

Briefly, we believe the site we assessed is at the same location as Heathrow Hub Ltd's, although the assumed nature of the station and services are very different.

During preparation of our report in 2009 we met the promoters of the Heathrow Hub on a number of occasions to discuss their proposals and they made a written submission to HS2 Ltd to outline their proposed scheme.

We believe that the location we assessed, adjacent the Great Western Main Line and the M25 on flood plain land occupied currently by the Iver Sewage Treatment Facility, is the same as that proposed for the Heathrow Hub. We also assumed that it would be linked to the airport by an extended people mover.

However, there were a number of differences in approach:

- Our remit was to provide an interchange for HS2 with Heathrow Airport and Crossrail. Accordingly, we assessed only the benefits that such an HS2 interchange would bring. In contrast, the Heathrow Hub proposal was developed as a wider interchange with conventional rail and coach services.
- The Heathrow Hub proposal included the shared use of the high-speed rail corridor into London, such as by "Javelin" services to Kent. These were not compatible with the capacity that we considered would be needed for long distance high speed services on HS2, consuming around half the potential capacity of the HS2 route.
- The Heathrow Hub proposals envisaged a new 30 million passenger airport terminal integrated with the hub.
- In addition, our station design and approach routes differed slightly—we did not consider that a surface level station was viable given the necessary tunnelled approach either side.

However, setting aside these differences, we did not progress this station location because:

- If it was served by a through route, as the Hub promoters proposed, passengers on HS2 travelling to and from London—who comprised the great majority of travellers—would incur a significant journey time penalty.
- For air passengers it was not as attractive as options closer to or on-airport.
- For HS2 passengers going to and from London it was not as attractive as a Crossrail interchange at Old Oak Common and we could not envisage these passengers transferring to Crossrail at this location, thereby increasing demand at Euston.

14. If a route were to be provided via Heathrow, what is your latest estimate of the time penalty that would be incurred by stopping trains at Heathrow? Has this figure been used in your economic analysis?

The economic analysis assumes that the journey time penalty of going via Heathrow would be an extra 7 minutes including a station stop.

15. *The business case analysis assumes fare levels similar to those on the existing WCML. If premium fares were charged on HS2 (as occurs on HS1), what would be the impacts on passenger numbers, the business case and the level of much public subsidy. How has the business case taken account of the prospect of fares competition from Chiltern Line and WCML?*

The demand model used by HS2 Ltd makes use of data on average fares between any two places across all routes and services. It is therefore unable to analyse any competitive effects of different prices across different routes or operators.

Nevertheless, for the work published in March 2010 HS2 Ltd undertook a high level study on the impact of charging a premium fare for HS2 trains. This found that the impacts of premium fares are many and complex, however it is certainly not the case that a single percentage premium is applicable or desirable across all markets and routes. Instead there would need to be careful management of revenue strategies—similar to those already seen on long distance services—to maximise use of capacity. The initial conclusions from this work were:

- The scope for premium fares is complex, with the impact varying considerably across different markets and routes.
- The availability of non-premium service alternatives would make a big difference to the scope to generate additional revenues through premium fares.

The economic case does not take account of fares competition across different routes or operators and we have not sought to undertake this analysis. Amongst other things, the impact of competition will be dependent on the regulatory framework under which HS2 would operate

More work would be needed in all these areas if the Government decides to proceed with the scheme following the public consultation.

17. *What analysis have you made of the use of HS2 by income groups and how does this compare with current rail use?*

HS2 Ltd has not specifically undertaken this kind of analysis. However, as the economic case assumes that HS2 trains are priced at the same level as classic rail services then it would be expected that the income distribution of HS2 will be broadly similar to the existing income distribution of users of long distance services classic rail.

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5. *Has further work been completed to improve the robustness of the [economic] case for the Y network?*

The current consultation is focused on the strategic case for the overall Y network, but only a detailed proposal for the initial London—West Midlands phase. Therefore, a strategic assessment of the potential economic case for such a network was appropriate.

Work is currently ongoing to develop a detailed route proposal for extending the network to Leeds and Manchester, which would form the basis for subsequent public consultation. The work involves developing a detailed line of route that will allow a much more accurate assessment of the costs, benefits and environmental impacts of the Y than was presented in the recently completed consultation process. HS2 Ltd will provide advice to Government on the refined Y route later this year.

9. *How dependent is the business case on the standard forecasting framework? Have alternative (especially non-PDFH) rail demand forecasting frameworks been tested?*

HS2 Ltd has not directly tested the impact of different demand forecasting frameworks.

Instead, the robustness of the economic case to different levels of demand has been tested by adjusting the overall rates and level of demand growth. These included varying the rate of rail growth, the year at which growth is capped and the impact of lower (indeed, non-existent) growth in air and car travel. Further explanation of these tests is provided in the response provided to question 2 of the Transport Committee's questions to HS2 Ltd.

10. *How was the level of the demand cap determined? What evidence is there to support it being set at the level selected?*

There is no evidence to suggest the observed trend of strong growth in long distance rail travel is slowing. Nevertheless HS2 Ltd considered that it would be prudent to cap demand at some point in the future and that it would be reasonable that this cap should be defined at a particular level of demand, rather than at a particular point in time.

With no evidence available to suggest whether or when demand might saturate HS2 Ltd undertook its own analysis of existing trip rates by examining how many long distance trips people currently make across different

income quintiles of the population. This showed that a demand cap that results in a growth of 61% more long distance rail trips (over 100 miles) per person per year in the absence of HS2 seems reasonable. Such a cap is equivalent to about 0.5 extra long distance rail trips per person per year and represents an average rate of trip making (1.4 rail trips per person per year) across the whole population that is lower than the rate already seen in today's population containing the top 20% of incomes (2.0 rail trips per person per year).

Taking account of population growth we forecast the total number of long distance rail trips (over 100 miles) to increase by 95% by 2043, representing an increase of 1.9% a year on average. This compares to a growth of around 5% a year over the past 15 years.

This demand cap is also consistent with the forecasts originally published in March 2010, when demand was capped in 2033. Since then amended assumptions about higher fares and lower economic growth mean that this level of demand is not now forecast to be reached until 2043.

The Department for Transport's current guidance is that demand should be capped in 2026. This assumption is not based on the belief demand growth will cease in 2026; it is just a convenient simplifying assumption that allows the Department to easily compare different conventional rail schemes on a consistent basis. However, HS2 Ltd consider that a project of HS2's size, timescale, and strategic impact necessitates thinking much further ahead than 2026 and that the Department's normal guidance is therefore not appropriate. The Department for Transport and HMT agreed with and fully supported this change in approach.

11. Have other scenarios of higher or lower fare increases been tested?

Yes. Scenarios involving both higher and lower fare increases have been tested and this is reported in the Demand and Appraisal Report published on the HS2 Ltd website.²⁷⁹

The results of these sensitivity tests are set out in the table below. It should be noted that while the overall benefit:cost ratio for the initial London-West Midlands phase of HS2 is 2.0 including Wider Economic Impacts (WEIs), the sensitivity tests carried out by HS2 Ltd were calculated as variations on the BCR for the proposed line *without* WEIs and therefore show a "central case" BCR of 1.6.

<i>Test</i>	<i>Socio-economic benefits</i>	<i>Revenue</i>	<i>BCR (excl. WEIs)</i>
Central case	16,544	13,660	1.60
High rail fares (cap 2064)	13,521	19,598	3.09
Low rail fares (cap 2035)	18,131	11,449	1.45
High rail fares (cap 2043)	11,156	11,566	0.90

As a rule, higher fares will reduce demand and lower fares will increase it. However, the effect on the benefits and revenues in the business case is more complex. In particular an assumption must be made about how fares impact the cap on demand.

It is consistent with the approach we have taken to the cap on demand, explained in Question 10, to assume that the cap occurs at the same **level** of demand as the central case reached in 2043. In this case higher fares reduce the rate of demand growth with the demand cap now reached in 2064 rather than 2043. That reduces benefits (fewer people save time before 2064) but increases revenues (after 2064, higher fares result in higher revenues). Similarly, lower rail fares increase demand and the cap level is reached earlier, in 2035. That increases benefits (more people save time before 2043) but reduces revenues (after 2043, revenues are lower). As the table shows, in these circumstances the net impacts are that higher fares result in a higher BCR and lower fares a lower BCR. Implicitly these scenarios assume that a change in fares levels will change the rate of demand growth but not the overall level of demand that is ultimately reached.

In contrast, if it is assumed that the cap on demand always occurs at 2043 (the same **time** as in the central case) irrespective of the fare or level of demand, then the result of higher fares is to reduce the level of demand in 2043 and all later years compared to the central case. This has the effect of significantly reducing both benefits (fewer people save time) and revenues (fewer people pay fares) after 2043. The net impact is to reduce the BCR. Whilst a sensitivity test has not been carried out on this basis for lower fares it is likely that they would have the opposite effect—eg increasing benefits and revenues and raising the BCR. Implicitly these scenarios assume that changes in fare levels will both change the rate of demand growth and the overall level of demand growth achieved.

²⁷⁹ <http://www.hs2.org.uk/assets/x/78304>

12. *Has further work on premium fares for high speed services been conducted since 2010? How would premium fares affect expected revenues? In particular, is there a role for demand management to “lock in” the benefits of the High Speed Rail programme?*

Please refer to the response provided to question 15 of the Transport Committee’s questions to HS2 Ltd.

13. *Has the benchmarking suggested areas where costs could be reduced through efficiency savings?*

Yes. Our benchmarking work has specifically resulted in reductions to assumed tunnelling rates, which are included in our most recent cost estimate. Our work also became a key input into the Infrastructure UK cost study looking at the costs of UK civil construction projects. The IUK’s conclusions were reported at the end of 2010 and were that there was potential to reduce the cost of building such projects by at least 15%. Were this potential to be realised, we could see a saving in HS2 scheme costs of nearly £5 billion for the “Y” and an improvement in BCR from 2.6 to 3.4.

15. *How have asset renewal rates been derived?*

We considered the individual asset types and their typical lifespans. As a result, we made assumptions regarding which assets would require either partial or full renewal over the 60 year appraisal period. Where renewal was required we applied the appropriate percentage of the estimated initial construction costs for these asset types at the required renewal frequency in our business case model. The renewals assumptions are shown below (see overleaf):

<i>Permanent Way</i>	<i>Full replacement by end of 30 and 60 years, each taking four years 25% spend each year</i>
<i>Switches and Crossings</i>	<i>Full replacement by end of 30 and 60 years, each taking four years 25% spend each year</i>
<i>OHLE</i>	<i>Renew 50% each by year 15, 30, 45 and 60, each taking two years</i>
<i>Power supply</i>	<i>Renew 50% each by year 15, 30, 45 and 60, each taking two years</i>
<i>Signalling</i>	<i>Renew 50% each by year 15, 30, 45 and 60, each taking two years</i>
<i>Communications</i>	<i>Renew 50% each by year 15, 30, 45 and 60, each taking two years</i>
<i>Stations</i>	<i>40% renewal by year 40 taking four years</i>
<i>Earthworks</i>	<i>No renewal in evaluation period</i>
<i>Retaining Walls</i>	<i>No renewal in evaluation period</i>
<i>Structures</i>	<i>No renewal in evaluation period</i>
<i>Tunnel</i>	<i>No renewal in evaluation period</i>
<i>Depot / stabling</i>	<i>50% renewal by year 30 and 60 taking three years</i>
<i>Trains</i>	<i>Renewal by year 35 spread in line with initial expenditure phasing</i>

16. *What progress has been made in improving the robustness of the cost estimates for the Y network?*

We are undertaking work to develop route proposals for the Y during 2011. This enables a better understanding of the assumed scope of work which is fundamental to further refining the Y network cost estimates. We have also engaged Davis Langdon to provide specialist independent cost support during 2011. Their work includes review of unit rates, quantitative risk analysis and improvements to the granularity of cost estimation enabling more detailed challenge than was previously possible.

17. *How have the cost savings on the conventional network been estimated?*

HS2 Ltd has calculated the net change in train kilometres for each type of rolling stock running on the classic rail network as a result of introducing HS2. This change includes both a reduction of longer distance services and an increase in shorter distance services. Information on the cost per train kilometre of different stock types has been obtained from the Department for Transport’s Network Modelling Framework, and this is then applied to the calculated change in kilometrage. This is more fully described in Annex 2 of the document “A Summary of Changes to the HS2 Economic Case” published on the HS2 Ltd website.²⁸⁰

In line with DfT guidance, an optimism bias uplift of 41% is then applied to the net change in operating cost as measured across the whole of rail network (thus including both HS2 operating costs and classic line savings).

²⁸⁰ <http://www.hs2.org.uk/assets/x/77820>

18. *Has there been analysis equivalent to that of Graham and Melo (2010) for the agglomeration benefits from additional commuter capacity? If so, does it provide indications of the robustness of the estimate of £3 billion agglomeration benefits?*

HS2 Ltd has followed the Department for Transport's standard guidance for calculating agglomeration benefits. Other than the Graham and Melo work, HS2 Ltd has not undertaken any additional work to test the robustness of this approach for the calculation of agglomeration benefits.

The Graham and Melo work was undertaken to specifically investigate whether there were any additional benefits on top of those already captured within the standard guidance due to the unusual characteristics of high speed rail.

21. *Would it be possible to reduce the estimated range of potential carbon emissions?*

The range of potential carbon emissions estimated in the report is wide because there are a large number of uncertain factors outside of the scope of the HS2 project. Whilst it would be possible in theory to reduce the range, this would rely upon the uncertainty being reduced, either through better information or by more specifically defined assumptions. For example, Government's firmer policies on future GRID energy mix will help to refine the estimates.

22. *Will the estimated carbon values in the AoS be updated to reflect this change?*

The carbon valuations in the AoS will be updated to reflect the most current guidance and reported to Government by the end of the year.

23. *Is it correct that there may be a net increase in carbon emissions because there is no reduction in the number of flights and additional HS2 services?*

The assessment of carbon impacts included in the Appraisal of Sustainability for HS2 includes a wide range of uncertainties, including around the impact on aviation. This indicates that if no reduction in flights were to occur as a result of HS2, then depending on the carbon intensity of electricity generation used to power HS2 trains, there would be an increase in carbon emissions. It is important to note, however, that even in the worst case scenario, where the carbon intensity of the grid remains as it is today and no modal shift from either aviation or road is achieved, the average increase in annual emissions would still be less than 1% of current annual transport emissions. In addition, HS2 Ltd's forecasts indicate that the full Y-shaped network could see as many as six million trips a year transfer from aviation, meaning that it is credible to imagine that some air services would be discontinued.

It has also been argued that an increase in carbon emissions could occur where domestic flights are cancelled as a result of passengers shifting from flights to HS2, and freed up slots are then refilled by new flights of a more polluting nature (eg domestic flights being replaced by international flights). However, in this scenario, caps on emissions would apply due to the introduction of aviation into the EU Emissions Trading System. As a result, there would not be a net increase in carbon emissions across the System as a whole.

24. *If changes in the cost of carbon beyond 2050 are considered, would this significantly affect the estimates?*

The effect that the cost valuation schedule introduced by DECC in 2010, which extended the end year from 2050 to 2100, would have on the AoS carbon cost valuation is not simple. For a given level of emissions, the cost of carbon would increase. This means the range estimated in February 2011 would widen.

However the cost of carbon has real impacts on the economy and on choices made by the travelling public because of the impact of the EU Emissions Trading Scheme. This means a higher carbon price is likely to increase electricity costs, air fares and other prices. This may change transport decisions which in turn could change the impact of HS2 on carbon emissions.

25. *Will these assessments be carried out when more data becomes available in order to have a better indication of the impacts, and would these assessments be likely to have a significant impact on the BCR of the scheme?*

The cost valuations will be reassessed using the most current guidance, to report back to Government this year. Going forward, if Government decides to progress scheme planning, some of the uncertainties in the carbon assessment will be reduced, for example through greater clarity in Government energy policy; level of detail in the design proposals; and, commitments to different construction or operation strategies. Carbon assessment would continue to be a theme through all future design and environmental assessment. We would expect revisions to be within the range considered and even in the worst carbon case, it is unlikely to have more than a small impact on the BCR.

26. *Have estimates been made of the landscape impacts of a new high speed line, and would these be likely to have a significant impact on the relevant BCRs? Are such assessments planned?*

The Appraisal of Sustainability has considered landscape impacts in line with DfT guidance; and this was a consideration throughout the route selection process.

In 2009–10, HS2 Ltd undertook an indicative assessment of the potential impact as the route stood at that stage. This valued the impacts at up to £4.5 billion, but was a brief assessment to consider potential scale of impacts and has not been updated to reflect the latest design and mitigation of environmental impacts. The Department is also reviewing, in the light of recent evidence, how analysis of landscape impacts can be best undertaken to provide robust measures of such effects.

27. *Has there been consideration of the types of user, in terms of socio-economic status, who will benefit from travel on HS2?*

Please refer to the response provided to question 17 of the Transport Committee's questions to HS2 Ltd.

28. *Are there expected to be significant distributional effects between socio-economic groups as a result of the construction of the HS2 line?*

The Appraisal of Sustainability provided a high level assessment of the potential impacts on the most deprived people in the community, as identified by the Government. Impacts on equality would be addressed at a greater level of detail in future stages of scheme planning, should Government decide to proceed with the scheme.

29. *What estimates have been made of the adverse economic impacts on areas not served by the new high speed line?*

In the relatively few places where HS2 might adversely affect the transport provision of an area (either through poorer train service provision or through higher road congestion), the impact is captured within the overall net benefits presented within the economic case. As explained in question 30 below, no analysis has been undertaken of how such effects are distributed.

30. *What is the relative size of the economic impacts on cities expected to be served by the high speed network? What proportion of these economic impacts is abstracted from other regions not served by the high speed network?*

HS2 Ltd has not undertaken analysis of how different regions or cities will be either positively or negatively affected by HS2. In part how different cities and regions may or may not benefit is related to a wide range of issues and local policies.

HS2 Ltd has examined how benefits are distributed on the basis of where trips originate, and on this basis well over 50% of benefits fall outside London and the South East. Around one third of benefits accrue to trips starting north of Birmingham with the North West the biggest beneficiary.

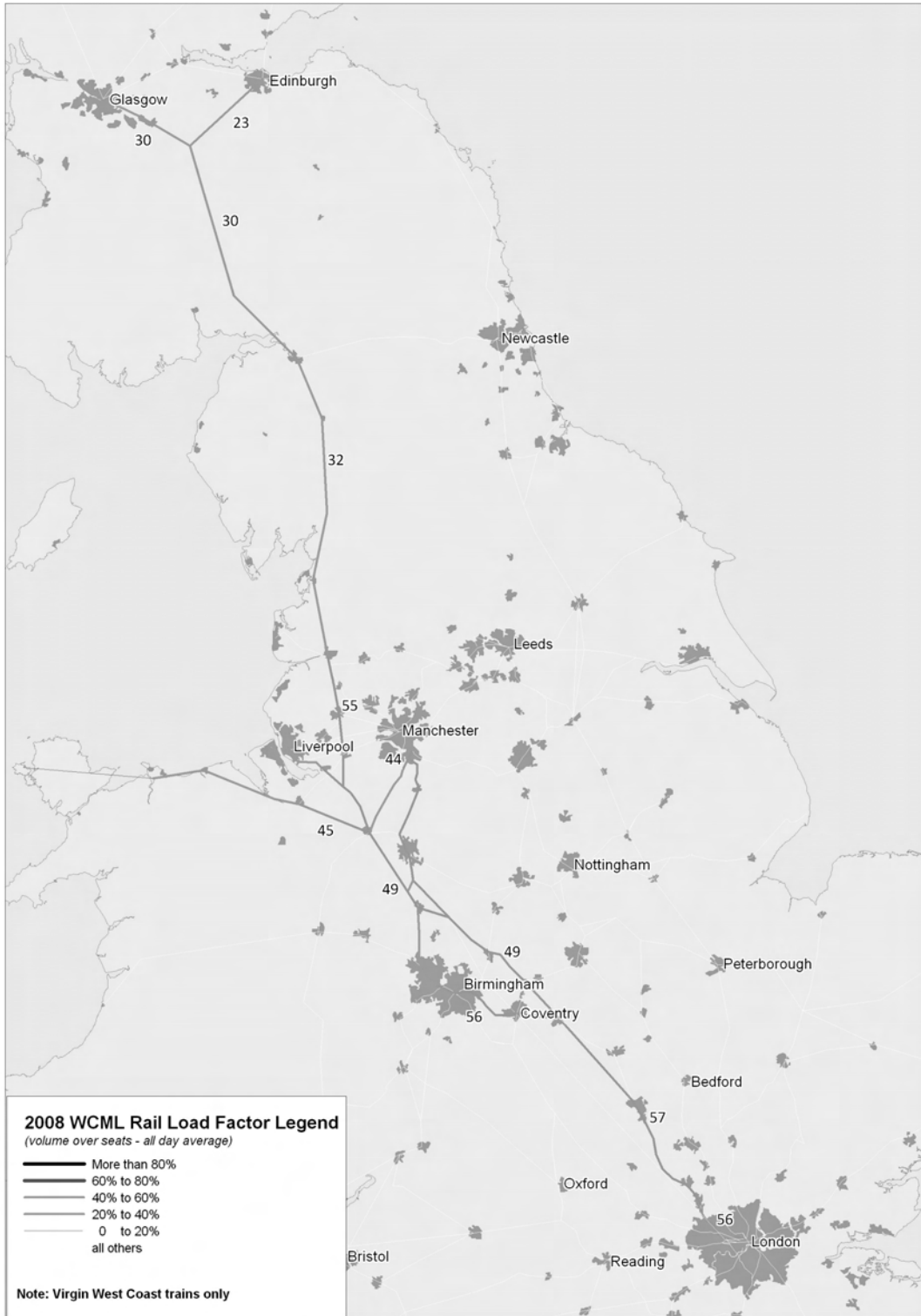
We are aware that a number of regional cities have carried out their own analyses of the potential economic impacts of new high speed rail lines and that the key outputs have been included in their evidence to the Committee.

33. *How would substantial long-term oil price rises or falls have an impact on demand for rail? Would the impact be greater than those in the tested fuel duty scenarios?*

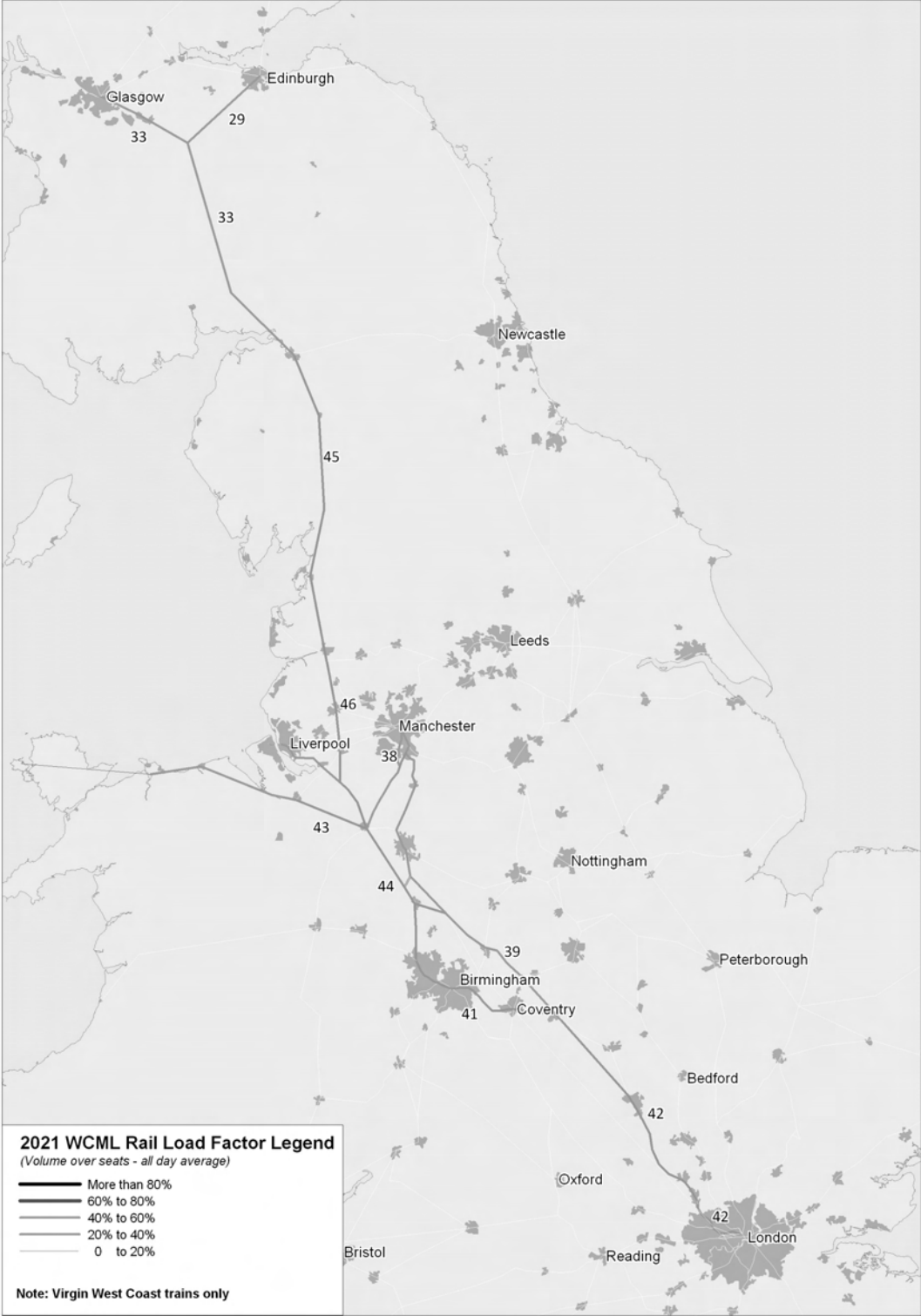
The central case for HS2 uses assumptions on car running costs (itself a combination of assumptions around fuel costs, duty and VAT, vehicle efficiency, and non fuel costs) provided by DfT's standard WebTAG guidance. This assumes that fuel costs themselves increase by 19% between 2008 and 2043.

HS2 Ltd have run a sensitivity test in which fuel duty is assumed to increase by 50%. This results in a greater demand for rail services and significantly improves the business case for HS2. (The BCR for London—West Midlands *excluding* wider economic impacts moves from 1.6 to 2.4)

30 August 2011

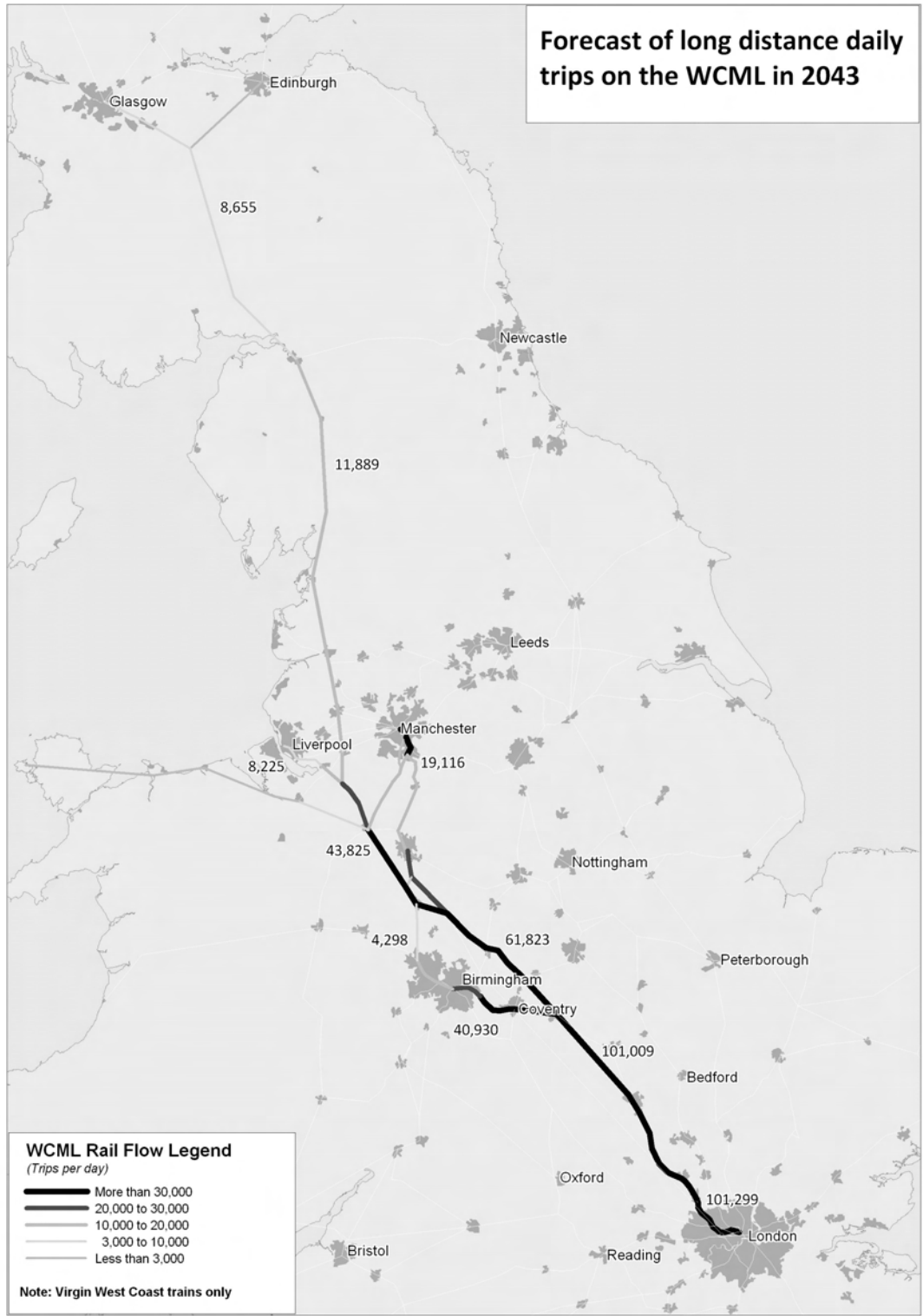












Further written evidence from HS2 Ltd (HSR 169B)

At the Select Committee Hearing on 13 September, we offered to check certain facts. You also followed up on some points of detail. This letter provides additional information on the following issues:

- spoil volume and disposal arrangements;
- land take (corridor width, area, and value);
- “18 trains per hour” external reviews;
- long distance rail demand;
- the impact of fares on the business case; and
- external challenge.

SPOIL

The Committee asked about the volume of spoil HS2 might generate during the construction of the London to West Midlands leg of the route, should the government decide to proceed with the project and for more information on the arrangements for disposal of spoil.

The volume information is contained in an erratum issued on the HS2 Ltd website, recognising an error in the figure quoted in the HS2 Ltd *Appraisal of Sustainability* (p 121, 8.18.1). The corrected version reads: “An estimated total of 2.9 million cubic metres of spoil would potentially be generated by tunnelling. This assumes that a balance is otherwise achieved on surface sections between cuttings and embankments”.

Please note that at this early stage of route design any estimates of spoil can be no more than an indication of the likely imbalance between cut and fill (ie the amount of spoil retained for landscaping and other construction) and the amount of spoil that will need to be removed from the route—called “offline spoil”. The current route proposals include assumptions at this stage that would need to be better defined and detailed to allow any precise calculation of spoil. For example, we currently assume that cutting slopes would need to be angled at 30 degrees. In practice, cuttings in chalk based soils are likely to be far steeper and reduce spoil volume.

The figures presented in the Appraisal of Sustainability (AoS) are thus indicative of potential figures for “offline spoil” created by tunnelling. They have not been material to any of our decisions, taken to date, on proposed routes or of the balance between tunnel, cutting and surface running.

If the Government decides to proceed with HS2 then we would use local assessments to provide an accurate determination of spoil balance. These would consider on-line spoil requirements for the construction of earthworks, noise bunding, accompanying road bridges and landscaping along the route and would look in detail at how online spoil surplus might be transported and to what use it might be put.

A standard approach to this type of construction is the use of a haul road along the railway trace. This is designed to minimise the need for licences to use local roads and to avoid local impacts to communities. Spoil can be moved along and away from the construction trace using a range of methods. The construction of HS1 in Kent involved the movement of spoil via rail and barge haulage. Proposals for dealing with all spoil within the rail construction would be done in close liaison with the local authorities and statutory environmental bodies and would become an important element of the Code of Construction Practice to which HS2 would be expected to adhere if the route is progressed.

In designing a route for high speed rail we would aim to limit the creation of spoil and to limit the amount of spoil that would need to be taken offline. It is, however, important to balance the negative impacts of spoil created from tunnelling and cuttings against the benefits that these structures would bring to communities, landscape and environment by reducing the visual and noise impacts of the line.

LAND TAKE—CORRIDOR WIDTH

For the corridor width, in our original 2009 work, we used the assumption as shown in HS2’s Technical Appendix December 2009 (para 4.1):

“The project shall assume an allowance of 25m of no vegetation on each side of the route, resulting in a total footprint for a two-track line of route of 75m width and 110m width for a four track railway.”

During 2010, however, after further discussion with stakeholders, we recognised that a standard route-wide assumption was not appropriate. Vegetation management would reflect the types of vegetation and the positioning relative to the railway line. As a result it would need to be considered very much on a case-by-case basis at the local level.

Accordingly, in September 2010, we formally dropped the “25m each side” assumption on vegetation, replacing it with: “The project shall undertake an assessment of vegetation along the perimeter of the proposed line of route in conjunction with third parties to assess the impact of ‘leaf fall’ on the proposed operation of the railway and to determine the extent of any additional land clearances or permanent easements that may be required.”

This updated requirement was reflected in the series of technical seminars undertaken in October 2010 with key stakeholders. The presentation is available at <http://www.hs2.org.uk/publications/HS2-Ltd-Technical-Seminars-61736> (*Infrastructure and Technical Presentation*).

The requirement is also reflected in the 2011 consultation material, which refers both to vegetation management and to the 22m standard width of a line running at surface level which Professor McNaughton referred to during the hearing. This is set out in our HS2 Railway Cross-Section factsheet at: <http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/railway-cross-section.pdf>

LAND TAKE—AREA

A figure for the total area of land take that would be required should the project go ahead has not been calculated at this stage of the project.

In order to carry out such a calculation, a wide number of assumptions would be required which could lead to an over- or under-representation of the final route figure which could be potentially misleading. For example, assumptions would include local road diversions, mitigation such as landscaped earth sidings, retained cuttings, etc. It should also be borne in mind that the final route is not yet settled.

If the Government chooses to proceed with the proposals for HS2, then a detailed assessment of land take requirements would form a necessary part of the preparation of hybrid Bill documentation that would be put before Parliament. The assessment of the environmental impacts of land take would include a further round of stakeholder consultation before the Bill is deposited.

LAND TAKE—VALUE

A figure for value of land that would need to be taken for the London to West Midlands leg of the recommended route is given in the HS2 Ltd 2009 report, *High Speed Rail, London to the West Midlands and Beyond* and in table 7 of the HS2 Ltd *Economic Case*. The figure cited is £930 million and represents the estimated land cost—including costs for dwellings and businesses. It excludes additional risk provision which is included elsewhere in our costings.

The figure was estimated for HS2 Ltd by consultants CBRE. Their methodology was based on estimates of numbers of properties and land values within an assumed distance corridor, rather than on land area.

18 TRAINS PER HOUR—EXTERNAL REVIEWS

In addition to the original review by the HS2 Technical Challenge Panel in 2009, the following reviews of the maximum potential operational capacity of the HS2 scheme as currently specified have been commissioned and are either complete or due for final completion by the end of September and thereafter available for publication:

1. Review of HS2 Ltd technical assumptions and calculations of capacity by Professor Roderick Smith FREng, President of the Institution of Mechanical Engineers and Research Professor of Future Rail Research, Imperial College, London. Status: complete.
2. Review of HS2 Ltd technical assumptions and calculations of capacity by Andrew Simmons CEng FIET FIRSE, Director, Future Train and Operational Control Systems, formerly Professional Head of Signalling, Network Rail; UK lead expert on ETCS development and implementation. Status: complete.
3. Independent calculation of HS2 capacity and signalling headway for development of junction and station design by Dr Jeremy Palmer CEng MIET FIRSE, Global Leader, Train Control, Arup Ltd. Status: draft report received.
4. Independent calculation of HS2 capacity and signalling headway by Bombardier Transportation Ltd led by Roderick Muttram FREng FIET FIRSE, Principal Technical Specialist, Rail Control Solutions. Status: draft report received.
5. Independent calculation of HS2 capacity and reliability as an element of an HS2 Ltd commission to undertake develop of the HS2 system-wide Operational Concept by Systra S.A. Status: draft report received.

Each report or draft report supports in principle the HS2 Ltd calculation that at least 18 train paths per hour can be achieved on the London to West Midlands HS2 route using the currently specified system design and technology.

Review 1 added supplementary comment and advice based on the author's expert knowledge of the Japanese high speed rail system, especially in respect of the adequacy of station size and passenger movement design.

Review 2 included advice on system design solutions for reliable operation and handling of temporary or emergency speed restrictions whilst maintaining capacity.

Report 3 discusses signalling headway in the context of system design to maintain capacity slowing for, stopping and accelerating away from stations and junctions.

Report 5 discusses signalling headway within the wider context of normal and degraded mode operation in order to highlight critical areas for design attention should the HS2 project proceed into a development phase.

LONG DISTANCE RAIL DEMAND

I can confirm that our assumption for the underlying average growth in long distance rail demand is around 2% per annum up to 2043, as quoted during the hearing [Q464]. The figure is also cited in our response to question 1 of the supplementary written questions put to us by the Committee.

I understand that the Committee may have received higher figures from other sources. The reason for the disparity in numbers may arise from the fact that HS2 Ltd's figure is for the underlying growth of long distance rail travel in GB without HS2—the business case “input”. If one were to calculate the growth in long distance travel once HS2 has been built—the business case “output”—then one would obtain a higher figure. Different figures may also arise from considering growth on specific routes or corridors rather than a GB average.

FARES

The Committee was also interested in the effects of fares on the business case for HS2.

In assessing the business case we have assumed that average fares on HS2 would be the same as those on conventional rail services; implicitly we are also assuming a similar fares structure. We have carried out sensitivity tests with different assumptions about the rate of growth of average fares, keeping fares on HS2 and conventional services the same. The results of these tests are described in the supplementary material we provided in August in response to the OXERA questions (Q11).

Previously, in our work for our March 2010 report, we had undertaken some work to investigate the possible effect of premium fares. The conclusions from this work are reported in the supplementary material we provided in August in response to the Committee's questions (Q15). However, the business case results we have presented for HS2 do not assume, or depend on having, premium fares on HS2.

EXTERNAL CHALLENGE

The Secretary of State offered to ask us to provide additional information on our external challenge groups. A relevant extract from our draft Corporate Plan is annexed to this letter.

23 September 2011

Annex

SECTION 8 OF THE HIGH SPEED TWO (HS2) LTD CORPORATE PLAN 2011–14 AND BUSINESS PLAN 2011–12

8. EXTERNAL CHALLENGE AND PEER REVIEW GROUPS

8.1 HS2 Ltd's three external challenge groups provide independent expert scrutiny on different elements of our work. We also established a Consultation Peer Review Group in 2010–11, which provided additional independent challenge

Strategic Challenge Group

8.2 Focused on offering an overall view and sense check of the programme as a whole and on providing an independent perspective on our overall approach.

8.3 Membership includes:

Prof David Begg	Publisher, Transport Times Magazine
Richard Brown CBE	Chief Executive, Eurostar UK Ltd
David Higgins	Chief Executive, Network Rail
Stephen Joseph OBE	Executive Director, Campaign for Better Transport
David Leeder	Vice Chair, Commission for Integrated Transport
Sir Roy McNulty	Chairman, Advantage West Midlands
Anthony Smith	Chief Executive, Passenger Focus
Jim Steer	Director, Greengauge 21
Tony Travers	Director, Greater London Group, LSE

Technical Challenge Group

8.4 Focused largely on peer review and challenge of the engineering and environmental specifications and assumptions, including costs and mitigation.

8.5 Membership includes:

Prof Chris Baker MA, PhD, FICE, FIHT, FRMetS, CEng	Professor of Environmental Fluid Mechanics, Director Birmingham Centre for Railway Research and Education, University of Birmingham
Keith Berryman Clive Burrows FEng Alan Dyke	Engineering Advisor, Crossrail Director of Engineering, First Group Former Chief Engineer and MD, Channel Tunnel Rail Link Project (HS1), now an Independent Consultant
Prof Robert Mair CBE FEng FRS Hugh Norrie OBE FEng Prof Roderick Smith FEng	Cambridge University Government's Agent for Channel Tunnel Rail Link Chair, Future Rail Studies at Imperial College and Vice President of the IMechE

Analytical Challenge Group

8.6 Focused on the appraisal and modelling of options, scrutinising the relevant evidence base, as well as providing technical advice on key methodologies.

8.7 Membership includes:

Prof Robert Cochrane	Transport planner and visiting Professor, Imperial College London
Prof Stephen Glaister CBE	Director, Royal Automobile Club Foundation and Professor of Transport and Infrastructure, Imperial College London
Prof Peter Mackie	Research Professor, Institute for Transport Studies, Leeds University
Prof Henry Overman Dr David Simmonds Prof Roger Vickerman	Director, Spatial Economics Research Centre, LSE Director, David Simmonds Consultancy Ltd Director, Centre for European, Regional and Transport Economics, University of Kent

Consultation Peer Review Group

8.8 Focused on the 2011 London to West Midlands route consultation, providing an independent challenge to the planned approach.

8.9 Membership included:

Ted Allett Ginny Clarke	formerly of Crossrail Ltd Director Network Service and Chief Highway Engineer, Highways Agency
Henry Cleary Julie King	Department for Communities and Local Government Head of External Relations, Olympics Delivery Authority,
Nicky Leggatt	Head of Stakeholder Engagement, Communications and Community Liaison, Jacobs
Chris Waite	formerly Kent County Council

Written evidence from the Scottish Chambers of Commerce (HSR 172)

0. INTRODUCTION

0.1 Scottish Chambers of Commerce (SCC) welcomes the opportunity to contribute to the Transport Select Committee's inquiry into the strategic case for High Speed Rail (HSR). SCC is the umbrella organisation for the 20 key Chambers of Commerce across Scotland. Our Chambers represent 10,000 member businesses of all sizes, from sole traders to large multinationals, and operate across all industry sectors. HSR has long been a priority for Chambers of Commerce and our members across Scotland and we believe that Scotland should be an integral part of the UK HSR network from an early stage.

1. *What are the main arguments either for or against HSR?*

1.1 Scottish travellers are currently highly reliant on air transport for journeys to and from London and indeed to other key UK cities. The creation of a UK wide HSR network would widen the transport options for travel between Scotland and the rest of the UK, it would reduce our reliance on air travel and would boost the Scottish economy. HSR would bring economic, environmental and social benefits to Scotland. It would bring the UK closer together in terms of travel times and would help bring our transport network up towards the standards already enjoyed by many of our major competitor nations.

2. How does HSR fit with the Government's transport policy objectives?

2.1 HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?

2.1.1 Effective and efficient connectivity between our cities is a bare minimum in terms of a national transport strategy. Britain's cities are the keys to national economic growth and their strength can be maximised by excellent communications and transport links. In turn, the connectivity of these cities with the wider economy can ensure that the benefits of wealth generation can be enjoyed by as wide a range of society as possible. Of course, HSR will largely directly improve the movement of people across the UK, and transport policy must continue to support the movement of goods and services. HSR should free up capacity on the conventional rail network for improved regional services and enhanced freight capacity. Nevertheless it will remain important to invest in our road network to maintain existing services and to enhance areas where the infrastructure requires to be brought up to an acceptable standard, for example the A1 north of Newcastle. From a Scottish perspective, HSR would improve links beyond London into continental Europe. In addition, it could help to address both the UK and Scottish Government's longer term environmental goals by reducing carbon emissions as passengers move from carbon hungry air travel towards electrically powered HSR trains, which will increasingly draw their power from renewable sources.

2.2 Focusing on rail, what would be the implications of expenditure on HSR on funding for the 'classic' network, for example in relation to investment to increase track and rolling stock capacities in and around major cities?

2.2.1 The UK HSR network should comprise new, dedicated lines, freeing up capacity on the existing conventional lines, which in many parts of the country have become severely congested. Investment in the conventional rail network must continue in order to ensure that regional transport can be improved and that new freight services can be explored, taking further freight off of our pressured road network. This is one of the reasons why the UK HSR network should incorporate Scotland from an early stage in order to reduce the congestion of HSR trains operating on conventional lines north of Birmingham and actually adding to congestion problems in the wider rail network.

2.3 What are the implications for domestic aviation?

2.3.1 Scotland is the part of the UK where the advent of HSR would have the most positive effect in terms of aviation. Currently, 6 million out of 7 million passenger journeys each year between Scotland and London are undertaken by air. Without HSR, these passengers are likely to continue to use air transport as neither the East or West Coast Main Lines are geared up towards accommodating an additional 6 million passengers per year. HSR would widen transport options when travelling to or from Scotland and would facilitate additional capacity. Experience from France and Spain has shown that where journey times can be reduced to under three hours, the train becomes a more attractive option than air travel. A direct HSR link from Glasgow and Edinburgh to London would deliver sub-three hour travel times and would herald a significant modal shift from air to rail. This would have a number of advantages for business in Scotland including a more productive travel experience in comfort with wi-fi broadband communications available for the duration of the journey. A reduction in air services could also free up slots at London airports which could be used to guarantee essential air routes to more distant Scottish airports such as Aberdeen and Inverness. We would also hope that freed-up capacity at Scottish Airports could be used to facilitate additional direct routes to international destination and improved connectivity from Highlands and Islands Airports to the central belt of Scotland.

3. Business Case

3.1 How robust are the assumptions and methodology—for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the "classic" network?

3.1.1 SCC believes that the full benefits of HSR can only be achieved by including Scotland in the new network from the outset. Modal shift will only be a major factor with the inclusion of Scotland in the network, where HSR should increase the market share of rail journeys on the Scotland-London route from around 15% to over 65%. Greengauge 21 have calculated that HSR could deliver £19.8 billion of economic benefits for Scotland at a benefit to cost ration of over 3.5:1. Network Rail studies have also shown that Scotland-London HSR revenues could cover operating costs, negating the need for ongoing subsidy.

3.2 What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?

3.2.1 The West Coast Main Line has already been upgraded at significant expense and great disruption, particularly at weekends which had an unwelcome impact on Scotland's tourist sector. The result has been only a marginal improvement in service. The solution is to create a dedicated HSR line to free up capacity on existing lines.

3.3 *What would be the pros and cons of alternative means of managing demand in rail travel, for example by price?*

3.3.1 It is difficult to see how price could be used effectively to vary demand on rail services between Scotland and London other than to drive customers away through higher prices. As stated earlier, conventional rail would find it impossible to cope with 6 million additional passengers each year across the ECML and WCML.

3.4 *What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?*

3.4.1 There are of course many variables that affect all major infrastructure projects and not all of these are within the control of contractors or Government (eg exchange rates, raw materials prices, availability etc). Whilst some of these can be hedged, there are always some issues which can conspire to make things difficult. That said, there are numerous examples both nationally and internationally of large scale projects which have been delivered on time and on budget. In Scotland, the Scottish Futures Trust has been engaged to deliver best value on large scale infrastructure projects and is currently engaged on the Forth Replacement Crossing Programme. Its wealth of expertise may be a useful potential source of advice to the UK Government as well as the Scottish Government on HSR.

4. *The strategic route*

4.1 *The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations? What criteria should be used to assess the case for more (or fewer) intermediate stations?*

4.1.1 The strategic importance of HSR should be to link up the UK quickly and efficiently. From a Scottish point of view, we want to see fast links from Scotland's key cities to London and the key cities of England. A priority for Scottish business is a rapid direct link to central London.

4.2 *Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?*

4.2.1 Ultimately, the UK's HSR network should serve all of our major cities from Inverness and Aberdeen to Cardiff, Bristol and London. Initial plans for the network should not be limited to the proposed Y shaped route to Manchester and Leeds. Scotland must be included as part of the core network from a very early stage, otherwise the UK is failing to realise the full benefits that HSR can bring. Completion of a Y shaped network, as currently proposed, would result in Scotland being proportionately further away from London in terms of travel time than it already is, prejudicing future investment.

4.3 *Is the Government correct to build the network in stages, moving from London northwards?*

4.3.1 Any network of this scale must necessarily be built in stages and we support the construction of the Birmingham-London section as an initial part of HS2. We do not accept that the route must necessarily be built northwards from London. Commencing work at both ends, ie Scotland and London, is the most sensible option if we are to ensure that this project is completed. This method was employed during the construction of the Channel Tunnel. Whilst this would require close co-operation between the UK and Scottish Governments, particularly at the planning phase, alongside agencies such as Transport Scotland, this is desirable and, in our view, is the best available option.

4.4 *The Government proposes a link to HSI as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those right decisions?*

4.4.1 Yes. Direct HSR links to London and continental Europe are a higher priority than a link to Heathrow.

5. *Economic rebalancing and equity*

5.1 *What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?*

5.1.1 HSR will only help bridge the north-south economic divide if it more effectively links the north and south of the UK. Certainly by putting Edinburgh and Glasgow within a 2.5–3 hour travel radius from London will assist in making Scotland a more attractive place to do business and this will increase employment and regeneration opportunities. The estimated economic benefits for Scotland, at £19.8 billion, are immense and undoubtedly new business opportunities will arise in the vicinity of Scotland's HSR stations.

5.2 *To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?*

5.2.1 This is an extremely important consideration. The purpose of the HSR network should be to maximise economic benefit for the UK and its nations and regions.

5.3 Which locations and socio-economic groups will benefit from HSR?

5.3.1 HSR will benefit the areas surrounding the cities and towns on the network and those areas accessible to them. Businesses will find these areas attractive and have the opportunity to expand and create new employment, assisting a wide range of socio-economic groups.

5.4 How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make the appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?

5.4.1 All revenue sources possible, including the private sector and Europe must be exploited. It would probably aid an application for funding under the TEN-T programme if the Government was presenting a truly UK wide HSR network incorporating Scotland, and possibly Wales, at the outset in order to ensure a wide and maximised coverage of the potential economic and social benefits of the project.

6. Impact

6.1 What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?

6.1.1 Modal shift towards rail will only be maximised if Scotland is part of the HSR network from an early stage. All English cities are already within a three hour rail travel radius from London and therefore it is only travel from Scotland that would fall to within this important threshold following the construction of HSR. As mentioned earlier, the experience of France and Spain has shown that three hours is the tipping point for modal shift from air to rail and that Scotland-London rail journeys could move from around 17% to over 65% market share as a result of HSR. However if the Government's Y network is not expanded, journey times from, eg central Edinburgh to central London will still be quicker by air than rail even by 2033, with rail journey times still at 3 hours and 30 minutes. Road journeys from Scotland to London represent a very small market share.

6.2 Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?

6.2.1 The environmental benefits of HSR are substantial and increase the further north the network spreads. Modal shift from air to rail will only be achieved in large measure when journey times from the central belt of Scotland to London are reduced to sub-three hours.

6.3 What would be the impact on freight services on the "classic" network?

6.3.1 A dedicated HSR line between Scotland and London would free up capacity on the conventional rail network which could be utilised by freight services.

6.4 How much disruption will there be to services on the "classic" network during construction, particularly during the rebuilding of Euston?

6.4.1 Some degree of disruption will be inevitable, particularly where new HSR track is joining with the conventional rail network during the initial phases on the project. Ultimately we envision a future network largely separate from the conventional network other than where interfaces at mainline stations occur.

May 2011

Written evidence from Network Rail (HSR 186)

NETWORK RAIL

- Network Rail owns and operates Britain's rail network. It is a private, independent, "not for dividend" company directly accountable to its Members and regulated by the Office of Rail Regulation. Profits made go straight back into improving the railway. The aim of the business is to provide a safe, reliable, efficient and sustainable railway, fit for the 21st century.
- Network Rail owns around 20,000 miles of track; 40,000 bridges and tunnels; 1,000 signal boxes; 9,000 level crossings; 2,500 stations that are leased to train operators; 18 large stations that are managed and operated directly by the company, and a further 8,200 commercial properties all of which fund the rail network infrastructure.
- In a complex and entirely interdependent system, both Network Rail and the train operating companies share the responsibility of delivering train services to the travelling public and to the nation.
- Network Rail welcomes the Committee's intention to conduct an inquiry into the issues connected to high speed rail, and the opportunity to respond.

1. What are the main arguments either for or against high speed rail

1.1 The fundamental argument in favour of high speed rail is that, by expanding the capacity and improving the performance of our rail network, it can play a vital part in supporting sustainable economic growth.

1.2 Of the 1.3 billion passenger journeys made on the railways every year, 1 billion are made by people commuting or travelling for business and our forecasts predict continued strong growth in passenger and freight demand, in line with the trend of recent years.

1.3 On the West Coast Main Line in particular, strong growth on intercity services and continued growth on commuter and regional services to towns including Milton Keynes and Northampton, will soon mean that capacity on the line will be effectively exhausted and it will be impossible to do anything to further increase capacity on the existing line. Our *New Lines Study* (published in August 2009) and West Coast Main Line Route Utilisation Strategy (RUS: published in December 2010) predict that this point will be reached around the end of this decade.

1.4 The West Coast Main Line RUS set this out clearly:

“the WCML, particularly at the south end of the route, is effectively full and any interventions will be disproportionately expensive compared with the benefits gained. The RUS supports the development of the proposed high speed line, initially between London and the West Midlands and then onwards to Manchester and beyond.”¹

1.5 In this context, “full” means that, at certain times of the day, some train services will be carrying so many passengers that—ordinarily—some form of capacity enhancing intervention would be considered essential. However, once the work that Network Rail is undertaking at Stafford (which will have capacity benefits further south on the West Coast Main Line) has been completed, there will be no possibility of increasing capacity on the line further to enable significantly more trains to run, and no possibility of lengthening the crowded services significantly.

1.6 At first, the pressure will be felt on commuter services serving communities such as Northampton or Milton Keynes, but this pressure will soon be similarly problematic on long-distance high speed services using the current infrastructure as, in the longer term, demand for all services will continue to grow strongly.

1.7 Network Rail’s passenger growth forecasts for the three biggest cities on the proposed HS2 “Y” network show that demand will continue to grow. Our published figures also lead us to expect growth into the foreseeable future. Note that these projections are for the discrete intercity markets only, and on a different timescale to the Department for Transport (DfT) and HS2 Ltd’s forecasts.

- London–Manchester will see passenger demand growth of up to 61% by 2024.
- London–Birmingham will see growth of 58% over the same period.²
- London–Leeds passenger demand was forecast to grow by 44% from 2006–2016.³

1.8 Given the already very intensive use of the network by today’s level of traffic a step change increase in capacity to accommodate increasing demand can only be delivered by a new line. Network Rail’s *New Lines Study* considered the long-term future of the main inter-city routes, including the West Coast Main Line, finding that:

“only the addition of further running lines over long sections of route would be likely to provide any meaningful increase in capacity.”⁴

1.9 Additional rail capacity, and specifically the additional capacity provided to the network by a high speed line, can play a vital role in supporting sustainable economic growth. The business case for HS2 shows benefits of £43.7 billion against net costs of around £17.1 billion.⁵ Furthermore, there are substantial risks in doing nothing: that our transport infrastructure becomes a brake on economic growth, and not an accelerant of it.

2. How does high speed rail fit with the Government’s transport policy objectives

2.1 The Government has been clear that one of its main policy objectives is to build an economy which is more balanced both sectorally and geographically, delivering sustainable economic growth at the same time as meeting climate change targets.

2.2 Investment in transport infrastructure generally, and in high speed rail in particular, is seen as central to delivering this objective. High speed rail will contribute both by providing the additional rail capacity that can accommodate anticipated demand growth but also by encouraging modal shift and helping to minimise congestion on Britain’s strategic road network.

2.3 The Eddington Study estimated that time lost to road congestion costs the economy £7–8 billion every year, a figure that is set to rise to £22 billion by 2025. Investment in high speed rail helps to address the issue of road congestion not only by providing passengers with a fast and efficient alternative to intercity road transport but also by releasing capacity on the West Coast Main Line for freight and in so doing, encouraging lorries off Britain’s roads. It is estimated that each freight train can typically take around 60 lorry journeys off the roads.

2.4 At their full extent, new high speed lines also have very significant potential for modal shift, making rail the transport mode of choice between our key cities. Effectively integrating HS2 in the existing network can help to maximise the benefits of the project. This could be with Crossrail at Old Oak Common, or in Manchester, Leeds and Sheffield where the network will, funding permitting, have been substantially improved by the Northern Hub project.⁶

2.5 Modal shift to rail can also bring significant environmental benefits over time. Network Rail's *New Lines Study* found that there are significant potential environmental benefits from a new line. Our model was for a different specification project, but it was clear that the reduction in road and air journeys resulting from a new high speed line connecting London to the Midlands, the North West and, eventually, on to Scotland would lead to carbon savings. However, any carbon savings should be seen alongside the significant increase in capacity and therefore the support for economic growth HS2 would provide.

2.6 In terms of the implications on funding for the existing network, the DfT has yet to set out its funding strategy for HS2 in detail, though it should be noted that the expenditure will, of course, be in stages over a decade or more. Over this period, however, the existing infrastructure can be expected to continue to require investment, particularly to deal with the growth in passenger demand.

2.7 Sir Roy McNulty's recently published independent Rail Value for Money Study, jointly sponsored by the Department for Transport and the Office of Rail Regulation, recommends ways in which the whole industry can work towards delivering a safe and efficient railway. The study estimated that the whole industry should be 30% more efficient by 2018–19. Network Rail is already committed to reducing the cost of the rail network by £5 billion between April 2009 and March 2014.

3. Business case

3.1 Network Rail's *New Lines Study* demonstrated there was a robust business case for a high speed rail line on the basis that it serves a sufficient number of cities. An optimised network which serves the key targets—London, Birmingham and Manchester—and adds more destinations to spread the costs over more journeys produces a strong business case.

3.2 In terms of future additions to the network beyond the Y, our findings indicated that the extension of any line to Scotland would significantly improve the benefit-to-cost ratio. London-Scotland is a substantial market currently dominated by aviation; a high speed rail line would reduce carbon emissions and time and offer substantial improvements to connectivity.

3.3 Our *New Lines Study* only looked at the key transport markets on the WCML—London, Birmingham, Manchester and Scotland. Later (though unpublished) work confirmed that the second part of the Y—to the East Midlands, South Yorkshire and Leeds, also had a strong business case.

3.4 It is worth noting that the wider economic benefits of HS2, as well as alternative rail packages, have been assessed using the New Approach to Transport Appraisal (NATA) framework. Using conservative assumptions, this analysis calculated HS2 would generate £44 billion benefits for the economy, set against net costs of £17 billion.

3.5 However, research published last year by Network Rail—*Prioritising investment to support our economy*—showed that traditional appraisal methodology do not necessarily capture all the wider benefits to the economy. The report suggests that spending decisions on transport and other related sectors (such as housing and regeneration) should focus more strongly on real economic returns of projects. Such an approach would better understand impacts such as changes in business behaviour, job creation and responses in local labour markets.

3.6 The difficulty of traditional models in capturing the full economic impacts of transport projects is unfortunate when dealing with incremental improvements, but is possibly more problematic when dealing with a potentially transformative project such as HS2. The impact of nearly halving some journey times and releasing huge amounts of capacity is hard to capture adequately with an approach based on assessing the value of incremental improvements in journey times. As a result, it is possible that the full positive impact of HS2 on the economy may have been underestimated as a result of the limitations of the methodology used in terms of capturing the full economic benefits of the project.

3.7 The proposed scheme would deliver a huge increase in capacity to the rail network as a whole and the key routes to the Midlands and the North of England in particular. In our view, smaller schemes are simply not suitable alternatives for meeting the Government's strategic objectives. It should also be noted both that upgrading the existing infrastructure would have substantial negative financial impacts as a result of the inevitable disruption that would be caused, and also that it was only in December 2008 that the West Coast Route Modernisation programme was completed.

3.8 HS2 clearly meets the strategic specification required from government, unlike any other scheme. No alternative would deliver enough additional capacity, nor would it improve journey times to anything like the same degree or have anywhere near the same transformative economic impact. Upgrading the existing network would also be disruptive for passengers and companies moving their goods by rail and this, of course, would in itself have an associated cost.

3.9 As a result, we strongly believe that a new line is the most appropriate way of addressing the need to deliver substantial additional capacity to the rail network to meet future demand. That being the case, our *New Lines Study* concluded that the additional cost involved in making any new line a high speed line, compared to the additional benefits that would accrue, were such that it should be high speed.

3.10 Managing demand through price would not, we believe, be a sustainable long-term—and politically acceptable—solution to the capacity issues. In our view, it is only through a substantial increase in capacity that these issues can be addressed.

4. *The strategic route*

4.1 In our view, the proposed route is the best option. It is highly efficient both in terms of land use and in making maximum possible use of existing transport corridors, tunnels and deep cuttings while also ensuring the route can support optimal journey times. The route has been designed to maximise performance while mitigating the impacts on local communities as far as possible.

4.2 Clearly, rail technology has changed enormously between the time the West Coast Main Line was built and today. Higher train speeds require much straighter lines. The WCML winds sinuously around the landscape, hence the need for tilting Pendolino trains to reach current linespeeds of 140 mph. This type of tilting rolling stock is not necessary on the East Coast Main Line, which was built on a far straighter alignment.

4.3 As noted in 3.1–3.3 above, our conclusion was in line with that reached by HS2 Ltd in terms of the markets that should be served by high speed rail. It should also be noted that additional intermediate stations would reduce route capacity and impose a significant journey time penalty (approximately six minutes for each station stop), thereby undermining the journey time benefits of the scheme as a whole.

4.4 Adopting a phased approach for a project of this scale is both suitable and appropriate. Beginning in the south and moving from London northwards is also logical given that it is at the southern end of the West Coast Main Line that the need for increased capacity is most acute.

4.5 In terms of strategic links to and from the line, both the spur to Heathrow and the link to HS1 show the limitations of relying solely on the benefit-to-cost ratio. Our modelling of the business cases did not make a strong case, but the fact that there may be a stronger strategic case to build these connections is understood.

4.6 In addition, it should be noted that the proposed link to HS1 would require a tunnel from Old Oak Common, and it is this that requires it to be included in the first phase of the project, rather than this being an indication of having been accorded a higher priority than the spur to Heathrow.

5. *Economic rebalancing and equity*

5.1 HS2 will support economic growth nationally, but this would particularly be the case in the cities served by new high speed services both to and from London and each other. However, the positive impact of the new network capacity delivered by HS2 on economic growth would not be restricted to the cities it serves. By moving the majority of inter-city passenger journeys onto the new line, significant spare capacity on the existing infrastructure can be released for freight, commuter and regional services.

5.2 Network Rail is currently working with Passenger Focus now to explore how best to use this released capacity, including consulting with local communities to understand their preferences and future aspirations. This would potentially also give those companies who already make extensive use of rail freight, particularly in the West Midlands, more scope to expand and more flexibility in their use of the network. In turn, this would help take lorries off the roads and ease congestion on a key part of the national road network.

5.3 Furthermore the direct benefits in terms of increased capacity and faster journeys are unlikely to be sum total of the benefits that high speed rail delivers. A new high speed line will provide vital support for regional growth through agglomeration effects. By improving the connections between the major cities of the Midlands and the North a high speed line will help businesses by improving access to wider markets, bigger pools of labour and greater numbers of suppliers.

6. *Impact*

6.1 As noted in 2.5 above, it is our view that HS2 will deliver substantial carbon benefits, but it is vital that these are seen alongside the project's contribution both to long-term sustainable economic growth and the pressing need to meet the capacity challenge effectively.

6.2 However, the proposed route for HS2 will have both positive and negative impacts on the environment. In our view, the negative sustainability impacts arising from the project such as pollution (noise, vibration and visual aesthetics), climate change, environment, heritage and community impacts have been very substantially mitigated through the extensive use of deep cuttings, routing along existing corridors and tunnelling.

6.3 The proposed route interacts with the existing rail network at various points. Some of these interfaces will present challenges in making sure that both the high speed and existing lines are optimised.

6.4 However, none of these challenges are insuperable, and we look forward to working with the department and HS2 Ltd to produce the best overall outcome and minimising disruption. The key issues which will need to be worked through include:

- Old Oak Common, where the interfaces between Great Western Main Line, HS2, Crossrail, and local services will need to be managed effectively.
- Euston station will need to remain operational throughout the construction phase, which will be a major challenge and one in which close co-operation between all partners, including Transport for London, will be essential.
- Delivery of the North London Line link has the potential to be disruptive for existing passengers; we are working with HS2 to refine the scheme and minimise the impact.
- In the Day 1 scheme, high speed trains will have to run from the high speed line onto the existing West Coast Main Line at a point north of Rugeley. This will undoubtedly present challenges to the operation of the network. Scheduling all the services is likely to be complex, though we look forward to working with DfT and HS2 to resolve these issues.

6.5 It is important that HS2 is seen in the context of the whole network and, by thinking in this way, the benefits of the scheme for the network as a whole can be maximised and any negative impacts mitigated as far as is possible.

June 2011

REFERENCES

- ¹ Network Rail (2010) *West Coast Main Line Route Utilisation Strategy Draft for Consultation*, p 8.
- ² Network Rail (2010) *West Coast Main Line Route Utilisation Strategy Draft for Consultation*, p 4.
- ³ Network Rail (2008) *East Coast Main Line Route Utilisation Strategy*, p 77.
- ⁴ Network Rail New Lines Study (2009) *Capacity Analysis*, p 30.
- ⁵ Department for Transport (2011) *High Speed Rail: investing in Britain's future* p 14.
- ⁶ Network Rail (2009) *The Northern Hub: transforming rail in the North*

Written evidence from The Campaign for High Speed Rail (HSR 187)

The Campaign for High Speed Rail fully welcomes the Government's plans for a high-speed rail network to be extended across Britain and supports the proposals put forth in the Government's consultation that was published on 28 February 2011.

The below statement is in response to the Transport Select Committee's call for evidence into the Government's consultation on HS2. We have chosen to focus on the economic benefits that high-speed rail will bring to the Midlands, North and Scotland as the members of our Campaign find this to be the most compelling reason for supporting the Government's plans for a high-speed rail network.

1. INTRODUCTION

1.1. The Campaign for High Speed Rail is a campaign, independent from the Government and HS2 Ltd, representing employers from across the country who believe Britain needs a modern, high speed rail network to meet the challenges of the 21st Century. We are supported by hundreds of business people from up and down the country, with the vast majority of supporters coming from the Midlands and the North.

1.2 Our Director, Professor David Begg, has been advocating for high-speed rail for many years. He is also the Chief Executive of Transport Times and the Director of Portobello Partnership. He sits on the boards of numerous transport-related projects and companies including FirstGroup and BAA, as well as the Greater Manchester Transport Executive and the Business Infrastructure Commission. He was formerly the Chairman of the Commission for Integrated Transport and sat on the board of the Northern Way Transport Compact. He is also a Visiting Professor in Sustainable Transport at Plymouth University, and has an international reputation as a commentator on transport issues.

2. MAIN ARGUMENTS FOR HSR

2.1 The members of our campaign support high-speed rail for many reasons, but the main reasons can be boiled down to (1) Building the economy; (2) Bringing Britain closer together; (3) Investing in the Midlands, the North and Scotland and (4) Meeting the demand for more trains.

2.2 Building the economy. I will elaborate in Section 4 on the economic benefits that HSR will bring, in particular to the Midlands and the North. Transformational changes to connectivity in the Midlands, North and Scotland will help to facilitate growth in employment, allow for existing businesses to reach new markets and stay competitive in an increasingly competitive marketplace, and allow people more time to do their business.

2.3 Bringing Britain closer together. Of our direct peers, Britain is the only country without a high-speed rail network. Employers now to look further afield for talent, and employees look across a more diverse geographic area for employment opportunities, it is only natural to build a high-speed rail network that supports our modern economic needs. Connectivity is key for business and Britain must stay competitive.

2.4 Investing in the Midlands, the North and Scotland. For too long our country's infrastructure planning has been short-sighted. The majority of money spent on transport infrastructure is spent in the South of England—Cross Rail and HS1 for example—the Midlands and North have similar infrastructure needs to the South and deserve a chance.

2.5 Meeting the demand for more trains. Demand for rail travel is not predicted to decrease and is forecast to continue to grow. The East Coast Main Line and West Coast Main Line are both already nearing capacity and will reach capacity in the coming years, so the Government will need to do something to increase our future capacity needs. Upgrading existing lines will be expensive and disruptive, without providing the economic and agglomeration benefits that come with high-speed rail. This is supported by the Government's consultation which states: "A new conventional rail line would cost 90% of HS2 but deliver 33% fewer benefits. Upgrading existing infrastructure would deliver less than 25% of the benefits of HS2."²⁸¹ Additionally, high-speed rail will then release capacity on existing networks, allowing for more frequent and more efficient commuter services, such as Coventry to London. The obvious choice for our capacity needs is to build a high-speed network.

3. ECONOMIC RE-BALANCING AND EQUITY

3.1 According to government statistics, on a per capita basis, Gross Value Added in the North is just 80% of the South. GDP per person is one third higher in the South than the North. Productivity in Yorkshire and the Humber is the second lowest in England and declining. Unemployment in the North is nearly 2.5% higher compared to the South East. We need an infrastructure system that will give the North a change for economic regeneration.²⁸²

3.2 There have been several independent reports that have begun to quantify the economic benefits that HSR could bring to the Midlands and the North, helping to re-balance the country's current south eastern centric economy.

3.3 Accountants KPMG have quantified wider economic benefits from high-speed rail for the North of England alone at £12 billion²⁸³ while economic partnership group, The Northern Way, valued the impact at £6 billion.²⁸⁴

3.4 The Northern Way report also indicates that, with the full Y network proposed by the Government, the North sets to benefits the most. To quote: "The Northern Way has identified that a north-south high speed rail network serving both sides of the Pennines has the potential to generate agglomeration benefits through linking the northern city region economies. In analysis pre-dating the Government's identification of the Y-shaped network as its preferred way forward and for a more extensive network, these agglomeration impacts are valued at £13 billion PV33, (using the Department for Transport's current methodology). Of this £13 billion, £5 billion is in the North of England. Proportionally, the North's economy receives a greater uplift than that in London and the South East."²⁸⁵

3.5 In that same Northern Way report, "Transforming Our Economy and Connectivity: High Speed Rail for the North", published in March of this year, the Northern Way also predicts that the £44 billion will be a multiple based on the success of HS1—they estimate that the GVA benefits could be up to three times the size of the welfare benefits assessed in a conventional cost-benefit appraisal.

3.6 A report by Greengauge and KPMG, found that areas of greater connectivity have higher wage levels and found strong links between employment density and rail connectivity. That same report suggests that areas like the North East could see more than a doubling in the rate of employment growth.²⁸⁶

3.7 Evidence from accountants, economists and transport consultants suggests that high-speed rail could have a dramatic effect on the economies of the Midlands and the North. For Britain to remain competitive in the world economy, a large portion of the workforce and population cannot continue to be ignored.

4. HOW DOES HSR FIT WITH THE GOVERNMENT'S TRANSPORT POLICY OBJECTIVES

4.1 To reiterate, for too long our country's transport planning has been short-sighted and short-term. HS2 offers the chance for forward thinking and much needed long-term planning.

²⁸¹ Page 43 of *Economic Case for HS2*, DfT, February 2011.

²⁸² Source: Table 1, *Public Sector Employment and Expenditure by Region*, House of Common Library, July 2010; Source: Calculations based on—Office for National Statistics, Regional Labour Market Statistics February 2011, (Table S1).

²⁸³ KPMG report.

²⁸⁴ The Northern Way *Transforming Our Economy and Our Connectivity: High Speed Rail for the North*, March 2011, page 30.

²⁸⁵ The Northern Way *Transforming Our Economy and Our Connectivity: High Speed Rail for the North*, March 2011, page 29.

²⁸⁶ Greengauge and KPMG, *High Speed Rail in Britain: Consequences for employment and economic growth*, Feb 2010, page 25.

4.2 HS2 also helps to achieve the Government’s goal of promoting more sustainable travel. High-speed rail is one of the most carbon-effective methods of mass transit. HS2 has the potential to reduce the number of internal flights, reducing aviation carbon emissions.

4.3 HS2 will link up to existing transport—airports, HS1, commuter lines, etc, bringing existing networks closer together and helping to create a unified, national transport system.

4.4 The links to airport and HS1 are critical for British business and tourism—high-speed rail will allow for better access to European and other foreign markets, in addition to sending a signal that Britain is open for business.

5. CONCLUSION

5.1. On behalf of all members of the Campaign for High Speed Rail, I hope the Select Committee strongly considers what high-speed rail will do for our entire country. Everyone is set to benefit from greater connectivity. This is a project of national significance and a once in a generation opportunity that must be seized.

June 2011

Written evidence from the Cardiff Business Partnership (HSR 188A)

SUMMARY

The new High Speed Line from London to Birmingham, Manchester and Leeds (HS2) will bring most major English and Scottish cities at least 30 minutes closer to London (for example Manchester to London in 1 hour 15 minutes). The DfT also calculates economic benefits in excess of £40 billion with the first phase alone generating over 40,000 jobs.

HS2 is not a UK investment
Ignores Wales and SW England

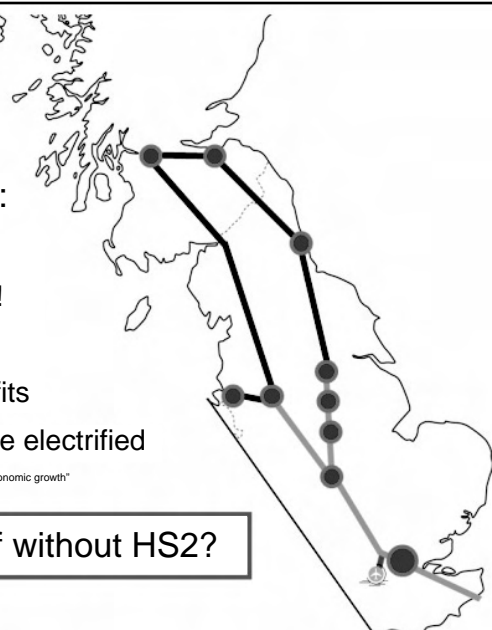
Greengauge21 / KPMG calculate:

- 21,000 less jobs in Wales to 2040 !
- 0.04% lower annual growth to 2040 !
- £600 average lower income !
- Both Bristol & Cardiff suffer dis-benefits
- Calculation assumed GWML would be electrified

Ref: Greengauge21/KPMG, March 2010 "High Speed Rail in Britain. Consequences for employment and economic growth"

Wales and SW England better off without HS2?

Not balancing the UK economy



In response, the Cardiff Business Partnership believe, that in addition to electrification, a major upgrade to the GWML is essential if Cardiff is to remain competitive in both UK and European terms. This is especially important given that Greengauge21/KPMG found that High Speed 2 (*Greengauge21/KPMG, March 2010 "High Speed Rail in Britain, Consequences for employment and economic growth"*), would have a negative impact on the Welsh economy thereby restricting Cardiff’s capacity to address Wales’ deteriorating GVA/capita Vs the UK average. That report found that HS2 would result in:

- 21,000 less jobs in Wales to 2040.
- 0.04% lower annual growth in Wales to 2040.
- £600 average lower income in 2040.
- This analysis assumed the GWML would be electrified with Cardiff-London journey times of 105 minutes (vs >125 mins today)

If the DfT believe that additional expenditure is necessary to mitigate the environmental impacts of HS2, then surely the same logic means that proportionate investment (in addition to that already committed) must be made on the GWML to mitigate the economic impact on Wales and SW England. This is especially

important given Welsh tax payers will be paying for HS2 as well as those in England. This also would be consistent with the UK Government's stated objective of encouraging a more even distribution of economic growth across the UK.

This paper sets out further details of this position.

1. IMPACT OF HS2 ON WALES

Economic Impact

Whilst the Cardiff Business Partnership broadly supports the UK Government's aspiration for a UK HSR network, it does not feel that what is proposed represents a truly UK National network. In fact, as currently configured, the plans ignore Wales and SW England. Furthermore, whilst the DfT's consultation paper presents a compelling business case for HS2 in terms of the positive economic benefits, it does not explore the economic impacts of the proposals on Wales and SW England. The only substantive work in this regard was undertaken by Greengauge21 in 2010. Their key findings, prepared in association with KPMG, were as follows:

Overall UK Impact of UK HSR

"Overall, HSR could boost annual GVA (a measure of economic output) in 2040 by between £17 billion and £29 billion, depending on how effectively this network could enable other service changes on the rail network to be implemented and capacity constraints to be addressed."

"The HSR network could contribute between 25,000 and 42,000 additional jobs in Britain, as more productive businesses offer higher wages and attract people into the labour market. KPMG has only been able to model those jobs that are expected to come from domestic residents encouraged to enter the labour market but expect that attracting foreign firms and workers to the country could give rise to a further positive impact on employment."

The following tables show the regional impact on growth and employment of HSR

Employment Impact

Table 5

REGIONAL EMPLOYMENT GROWTH RATES, 2021 TO 2040

Region	Base employment 2007	Base case with no HSR, 2040		HSR scenario, 2040	
		Employment, 2040	Annual growth rate 2007 to 2040	Employment, 2040	Annual growth rate 2007 to 2040
East	2,380,000	3,052,000	0.76%	3,012,000	0.72%
East Midlands	1,910,000	2,414,000	0.71%	2,389,000	0.67%
London	4,080,000	5,579,000	0.95%	5,520,000	0.92%
North East	1,030,000	1,071,000	0.12%	1,117,000	0.25%
North West	3,040,000	3,532,000	0.46%	3,594,000	0.51%
Scotland	2,410,000	2,726,000	0.38%	2,790,000	0.45%
South East	3,730,000	5,006,000	0.89%	4,935,000	0.85%
South West	2,240,000	2,937,000	0.83%	2,889,000	0.78%
Wales	1,170,000	1,260,000	0.225	1,239,000	0.17%
West Midlands	2,360,000	2,645,000	0.35%	2,713,000	0.42%
Yorkshire and the Humber	2,240,000	2,550,000	0.39%	2,599,000	0.45%
Total	26,580,000	32,771,000	0.636%	32,797,000	0.638%

Source: KPMG analysis of data from SYSTRA-MVA

- Wales will have 21,000 less jobs in 2040 as a result of HSR.
- Annual employment growth rate will be 0.05% lower as a result of HSR.

Wage/GVA Impact

Table 6
REGIONAL CHANGES IN WAGE INCOME USED AS A PROXY FOR
GROSS VALUE ADDED (GVA), £M, 2040

Region	Base wage income, 2007	Base case with no HSR, 2040		HSR scenario, 2040	
		Wage income, 2040	Annual growth rate 2007 to 2040	Wage income, 2040	Annual growth rate 2007 to 2040
North East	21,800	39,000	1.73%	41,800	1.93%
Scotland	56,800	111,800	2.01%	118,300	2.18%
West Midlands	53,800	104,000	1.96%	109,300	2.11%
North West	70,000	140,700	2.08%	146,100	2.19%
Yorkshire and the Humber	50,200	98,500	2.00%	102,200	2.11%
London	136,700	326,000	2.59%	325,700	2.59%
East Midlands	42,900	93,300	2.31%	92,700	2.29%
East	57,700	127,700	2.36%	126,500	2.33%
South East	96,800	224,200	2.50%	221,500	2.46%
South West	51,100	115,800	2.44%	114,400	2.40%
Wales	24,800	46,000	1.83%	45,400	1.79%
Total	662,700	1,427,000	2.28%	1,443,800	2.32%

Source: KPMG analysis of rail generalised journey time data and economic data from SYSTRA-MVA

- HSR leaves Wales worse off by 0.04% in its average annual growth rate 2007–2040
- Average wage in Wales will be £600 lower as a result of HSR by 2040

Summary of impact of Wales and SW England of UK HSR

The Greengauge/KPMG analysis as regards Wales and SW England was as follows:

“Wales sees HSR connections to Cardiff along the Great Western route, although modelled journey time savings of around 20 minutes to London are smaller than for other HSR routes as HS-WW has not been modelled as a full HSR scheme. The growth in business connectivity improves wages by some £130 per annum by 2040 and attracts around 400 new residents into the labour market. However, business and employment growth is abstracted somewhat to the most significantly affected areas in the north and Midlands of England slowing overall employment growth rates.”

“The South West benefits from an HSR connection to Bristol and areas can benefit through interchange with the HSR network at Bristol, Birmingham and London. However, limited journey time improvements have been modelled for Greater Western services which explains the relatively small impacts in these areas. The impact is again to ease employment growth rates by around 1/20th of a percentage point per annum although wages are forecast to rise slightly by around 0.2% by 2040. As with the impacts in Wales, if a full HSR line to Bristol and Cardiff were modelled, the impacts would be commensurately greater.”

Cardiff Business Partnership Position

It is clear then that the HSR programme as currently presented is at best neutral in economic development terms for Wales and SW England and most likely negative. Given the Government's stated ambition to encourage more balanced economic development across the UK, it is clear some compensatory initiatives are required. This has also to be set against the fact that over the last twenty years, multi-billion pound upgrades of the East and West Coast Main Lines have resulted in Leeds and Manchester having comparable or faster rail journey times to London than Cardiff, despite being 50 miles further away. Post HS2 these cities will be over 30 minutes closer to London than Cardiff.

It is also unclear from a funding perspective whether HS2 is a UK scheme, an England Wales scheme or an England only scheme. This has funding consequences for the devolved administrations:

- For a UK scheme or even an England/Wales scheme it is the case that Welsh tax payers will contribute some 5% of the overall £32 billion cost in the next 20 years—or approx £1.6 billion—for a scheme that is, as currently proposed, damaging to the Welsh economy.
- If it is an England only scheme then a Barnett consequential must be considered to provide an equitable amount of funds to add to the Welsh block grant—which can be spent on transport enhancements.

Given the above, it is the view of the Cardiff Business Partnership, that the current plans for a new >£32 billion high-speed rail line from London to Birmingham, Manchester and Leeds (High Speed 2) will only

exacerbate the issues facing the Welsh economy. As presented above, the current proposals for HSR in the UK indicate that the economies of Wales and South West England will suffer as a direct consequence. Furthermore, that work assumed that the Great Western Main Line would be electrified. Whilst the decision to electrify is welcome, it must be viewed as a bare minimum investment and that an ongoing programme of enhancements must be planned and delivered over the next 15 years.

Cardiff Business Partnership Recommendations

- That the DfT undertake a full economic analysis of the impact of its HSR plans on all of the UK and especially Wales and SW England.
- That the funding arrangements and implications for the devolved administrations are clarified.
- That a complimentary and incremental upgrade of the GWML for faster running (>140mph) and higher capacity is investigated and assessed in full (to the same standard and criteria as were used for HS2).

Impact re: Heathrow Access and interchange with HS1 and HS2

The CBP is disappointed that the Heathrow access question ignores the potential of an interchange with and access from, the GWML corridor from the west. As the DfT found in its 2002 review of UK airport capacity, “*Future Airport Capacity in the UK*”, Wales and SW England has a greater need for better access to Heathrow than any other region in the UK (outside the SE England). The study found the leakage of passengers to other regions, mainly South East of England Airports and especially Heathrow, was about 65% for both Wales and South West England, the highest in the UK. For each region, the total annual trips were estimated at 3.4 million and 7.2 million respectively. That was 10.6 million in total, with about 6.5 million using airports in SE England and in particular, Heathrow. Most of these Heathrow journeys are by car indicating a latent demand for better Great Western Main Line connectivity to Heathrow. The report also made some other relevant statements:

“... it does appear that Wales is suffering in attracting inward investment because it does not offer a wide range of air services to European centres.”

“It is important for Wales to maintain access to key London airports, especially Heathrow and Gatwick. Even if Cardiff was to provide a much wider range of services and frequencies than it currently offers, it is likely that a large number of Welsh air passengers would continue to use airports in the South East of England.”

“Their [South East England airports] route networks especially for long haul, will continue to be wider than the route networks offered by regional airports. Links to London are also important, particularly for the business community.”

There are also at least 10 return flights per day from Cardiff and Bristol airports to Schipol. Better access to Heathrow could deliver a significant modal shift and reduce the need for this number of short haul flights and resulting CO₂ emissions.

This position should be set against a situation in which Wales has historically been disadvantaged by competitive transport investment elsewhere in the UK and a significant deterioration in services from Cardiff Airport since 2002.

Finally, current plans for HS2 envisage a direct link to HS1—no integration between HS1 and the GWML is proposed.

Cardiff Business Partnership Recommendations

That the discussions and investigations of HSR access to Heathrow are broadened to include enhanced access from the GWML corridor from the west and in particular the potential, in the first instance, of a Heathrow Express from Reading direct to Terminal 5 using a new link between the GWML and the airport.

That the exploration of options to link HS2 to HS1 should also be extended to include the GWML and its connectivity to both HS2 and HS1.

2. A STRATEGY TO MITIGATE THE NEGATIVE ECONOMIC IMPACT OF HS2 ON WALES

Cardiff City Region

The Cardiff City Region, home to 1.4 million people within 20 miles of the city centre or half the Welsh population, has the potential to transform Welsh economic performance. Cardiff itself contains a leading UK Russell Group University, has a diversifying employment base, has achieved amongst the largest growth in the private sector in UK and now has ~80,000 inward commuters in a total work force of nearly 200,000.

From a business perspective transport connectivity is crucial—especially inter and intra regional transport. For example, a leading member of the Cardiff Business Partnership, Admiral Insurance’s (one of Wales leading company’s with over 3000 staff and a >£4 billion Mkt Cap) recent statements as regards public transport provide a stark warning:

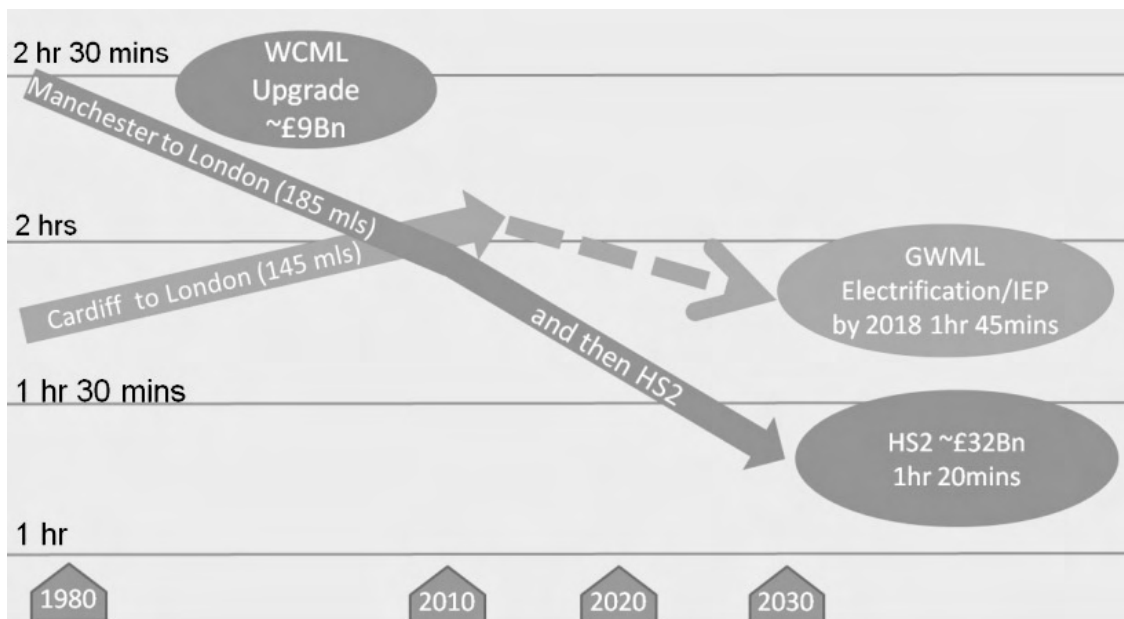
- Admiral would not locate in Cardiff today with >2hr travel time to London.

- Improved connectivity to Heathrow maybe needed to maintain a Cardiff HQ in the long term.
- The provision of an effective Cardiff City Region public transit system is essential for the long-term success of its business.

These statements underline the need to invest in transport connectivity to help address Wales' economic problems.

Current Plans for the GWML

In March 2011, the DfT announced that the GWML would be electrified (alongside introduction of ERTMS and other enhancements) as far as Cardiff; returning Cardiff-Paddington journey times to those that existed in 1980, at 1 hour 45 minutes. However, given the journey time benefits that will accrue to cities on HS2, the electrification programme will still leave Cardiff at a significant disadvantage. This will continue a trend that has seen journeys from Cardiff to London go from 30 minutes faster to 20 minutes slower when compared to the journey from Manchester to London.



However, there is an opportunity to develop a more strategic and ambitious vision for the GWML and one that could see a TOC and NR develop a far closer, longer term and more cost effective partnership as McNulty recently recommended. This, in part, is due to FGW's decision, in May 2011, not to take up the option to extend their franchise beyond 2013, bringing forward the tendering process for the route.

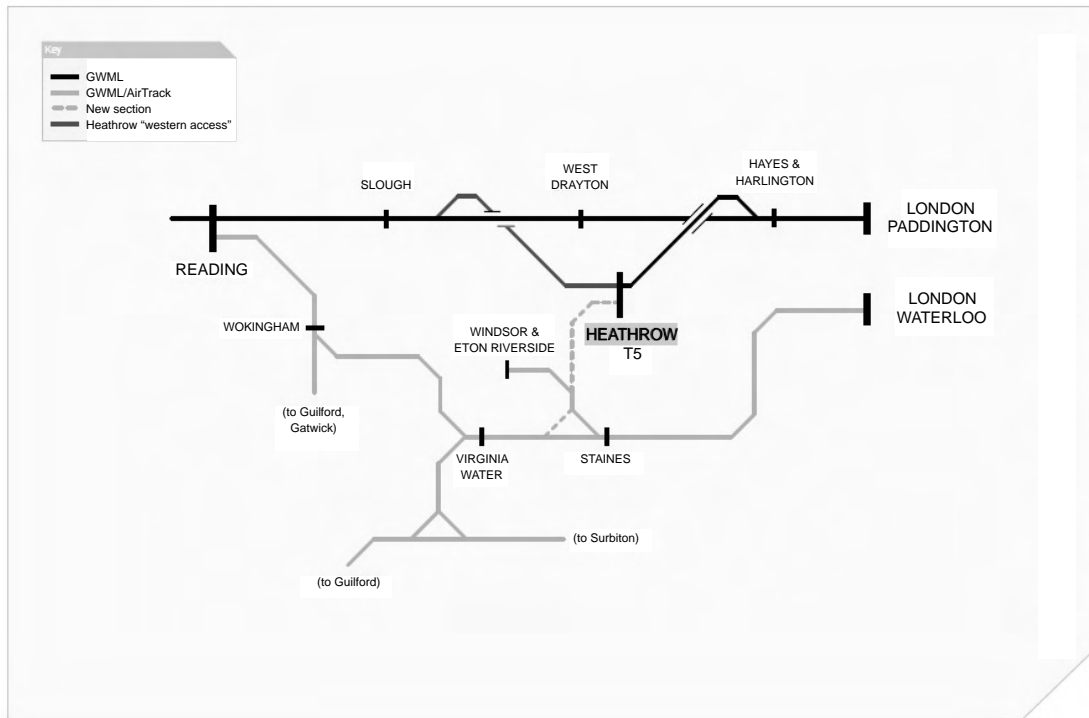
Opportunities for Economic Regeneration on the GWML

The Cardiff Business Partnership believes that the electrification programme and franchising process should be used as a catalyst to develop and implement a long term and incremental upgrade of the Great Western Corridor. This position acknowledges that whilst a dedicated new high-speed line is desirable, it would be at least 25 years before such a scheme could be delivered at a cost of over £15 billion. A pragmatic approach would see a series of ongoing upgrades to the existing rail corridor (as suggested by the Bow Group in their report, "The Right Track", in January 2010), with electrification as the foundation. This approach would deliver significant benefits in terms of capacity, journey times and Heathrow access, which collectively will help provide a stimulus to the Welsh economy and mitigate the impact of HS2. A deliverable target is:

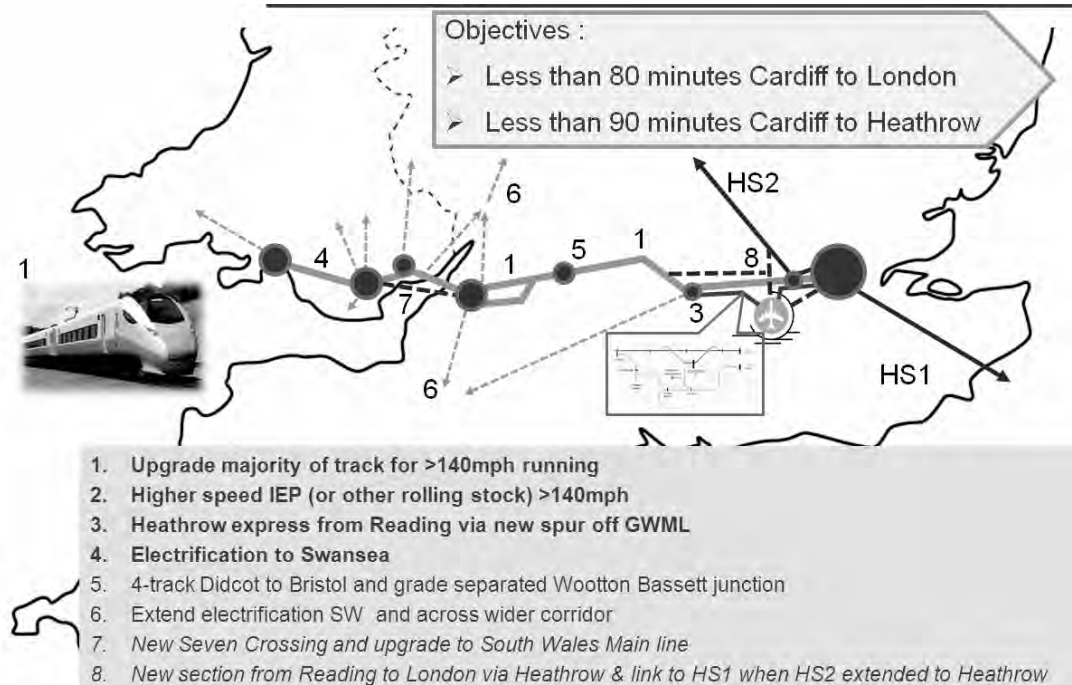
- Cardiff to London journey times of less than 80 minutes at least twice an hour.
- Cardiff to Heathrow journey times of less than 90 minutes at least twice an hour.

It is anticipated that these performance criteria can be delivered from a range of enhancements to both infrastructure and service patterns, for example:

- In the first instance, for inclusion in CP5 (Network Rail's 2015–19 planning period), a new western link should be constructed to Heathrow from the GWML. BAA recently cancelled plans for Airtrack which would have linked Heathrow Terminal 5 to the Staines-Windsor commuter line from Reading (in blue on diagram). A far better option for Swansea, Cardiff, Newport, Bristol, Swindon and The Thames Valley is a new western route into Terminal 5 to link up with the existing Heathrow express line as shown in red below (from Network Rail's Great Western Route Utilisation Strategy). This would allow a Heathrow express service to operate from Reading to serve passengers from South Wales, South West England and The Thames Valley.



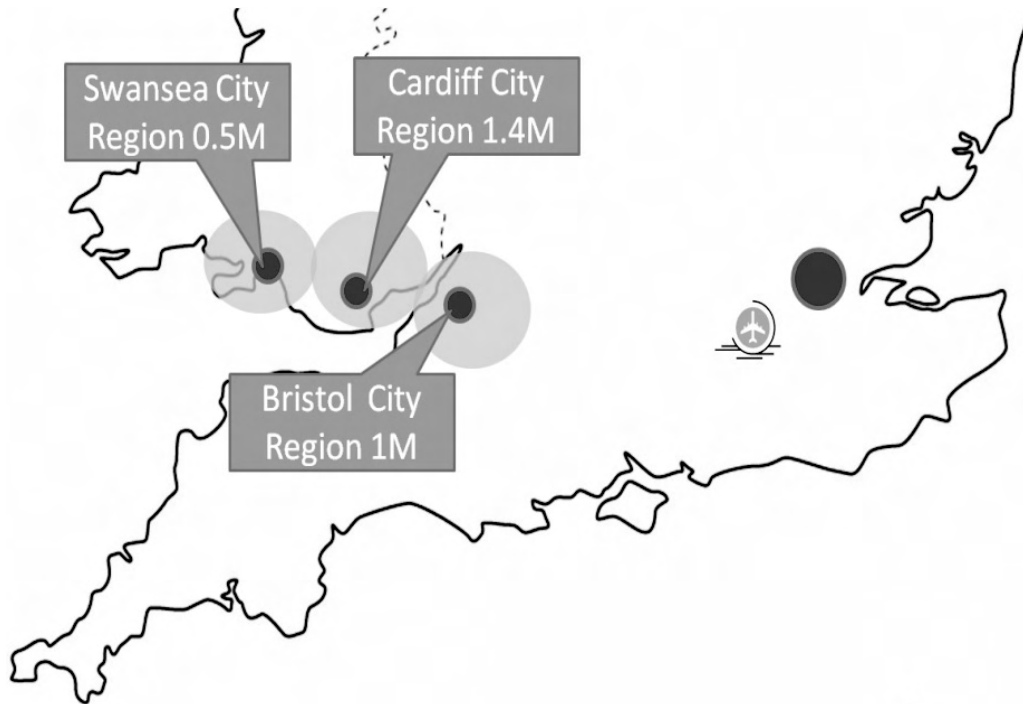
- In addition, a series of ongoing incremental upgrades to the GWML (see diagram) should be implemented over the next 15 years, that will allow non-stop services to run at speeds of >140mph. The GWML should also be intergrated with HS2 and HS1 to allow through services to Europe. In terms of “termination” stations in South Wales, aside from Cardiff Central, consideration should be given to: Pontypridd, Cardiff Airport (new station) and Swansea Parkway (new station).



Given the ~145 miles distance between Cardiff and Paddington, an 80-minute journey would require an average speed of approximately 109 mph. As a comparator, the WCML service between Manchester Piccadilly and Euston, as a result of its £9 billion upgrade, now provides a 1 hour 58 minute service for the 185 mile journey, at an average speed of ~95mph (on a line with a max running speed of 125mph). Even achieving this average speed on the GWML between Cardiff and Paddington, would deliver a journey time of approximately 90 minutes.

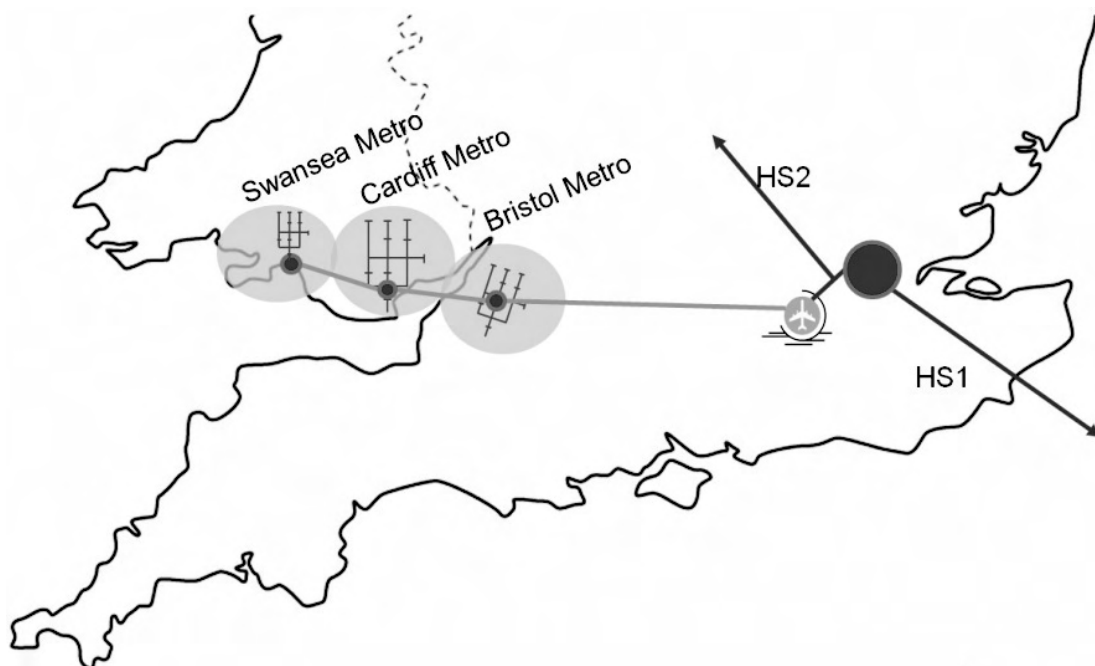
It is essential therefore that the DfT and WAG commission a strategic, Great Western Corridor study the objective of which is to develop a clear business case, with a focus on the wider economic benefits, of a

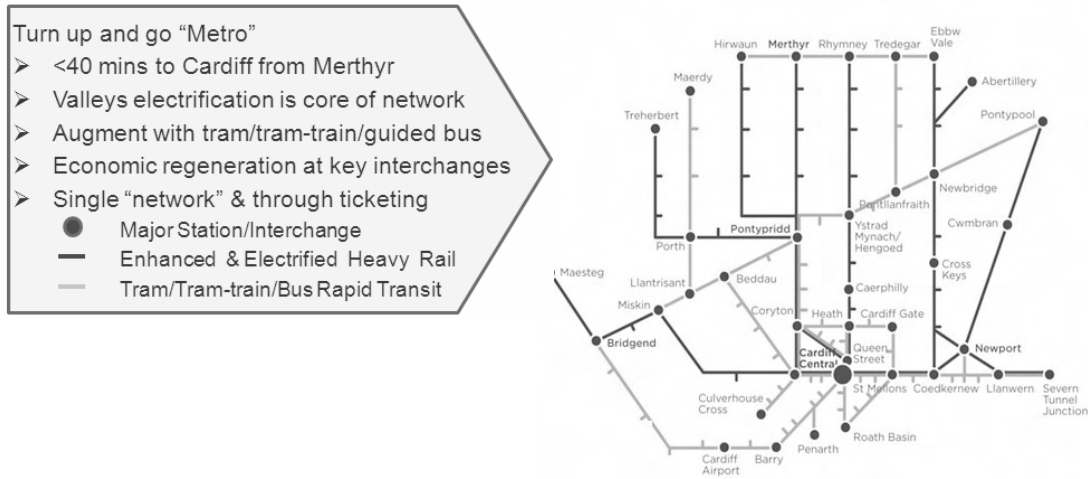
programme of incremental upgrades to the GWML. This work should be undertaken on the same basis as the work completed to date by the DfT in developing the business case for HS2. After all, the wider Severnside region has a population in excess of 5 million people and includes the Cardiff City Region (1.4 million), Swansea City Region (0.5 million) the Bristol City Region (>1 million). That's the same as Scotland.



A complementary investment in a Cardiff City Region Metro

As has been demonstrated across Europe, to maximise the returns from the investment in HSR between cities there also needs to be a complementary investment in city/city region transport infrastructure. The same applies to the Great Western Corridor. Specifically, The Cardiff Metro (illustrated below) presents just such an opportunity and one, which, using the planned electrification of the valley lines as a catalyst, can be delivered incrementally over perhaps 15 years from 2015. The Cardiff Metro concept was fully explored in, “A Metro for Wales’s Capital City Region—Connecting Cardiff Newport and the Valleys”, written by Mark Barry and published by the Cardiff Business Partnership and The Institute of Welsh Affairs in February 2011.





The benefits to the Cardiff City Region are significant:

- Stimulate economic growth throughout the region leading to increased GVA/capita Vs UK.
- Major modal shift (>20%) and reduction in CO₂ emissions.
- A coherent & sustainable city region plan for housing, transport and the economy.
- A psychological and confidence boost to the residents of the valleys.

Both the upgrade of the GWML and the Cardiff Metro could deliver a major economic stimulus to the economy of South Wales and especially the Valleys and halt a long-term decline in Wales’ economic fortunes. Given plans for HS2 it is essential that both schemes are progressed to ensure the Welsh economy does not suffer as a result of HS2.

ABOUT THE AUTHOR

Mark is the author of the paper, “A Metro for Wales’ Capital City Region—Connecting Cardiff, Newport and The Valleys” published by the Cardiff Business Partnership and the Institute of Welsh Affairs in February 2011.

June 2011

Further written evidence from the Cardiff Business Partnership (HSR 188B)

Greengauge 21 recently submitted further evidence to the Transport Committee, partly in response to the Cardiff Business Partnership submission, which referred to the Greengauge21/KPMG paper “Consequences for Employment and Economic Growth”. In this supplementary evidence, Greengauge21 pointed out that:

- The KMPG/Greengauge economic impact analysis “Consequences for employment and economic growth” related to their proposed network and not specifically HS2.
- Wales would not lose 21,000 as a result of HS2 but that their proposed network could result in 21,000 fewer job being created by 2040 (and 48,000 fewer jobs in SW England).

In response, CBP would like to make the following points:

We acknowledge that the Greengauge HSR network is physically different from HS2. However, the economic impact estimated by Greengauge21 and KPMG in their work, is based upon the reduced journey times between the major cities. The comparison of estimated journey times and savings vs today for HS2 and the Greengauge network are as follows:

Journey	Current	HS2	GG21/KPMG	Variance
London-Birmingham	1hr 24min	49min	45min	4min
London-Manchester	2hr 08min	1hr 13min	1hr 15min	2min
London-Leeds	2hr 20min	1hr 20min	1hr 25min	-5min
London-Sheffield/South Yorks	2hr 09min	1hr 15min	1hr 20min	-5min
London-Newcastle	3hr 09min	2hr 37min	1hr 45min	52min
London-Cardiff	2hr 05min	*1hr 45min	*1hr 45min	n/a
London-Bristol	1hr 45min	*1hr 25min	*1hr 45min	n/a

* based upon current plans for IEP and GWML electrification

Sources: DfT HSR Consultation, Greengauge21 Fact Sheet, Journey Times from London

The variance in journey times estimated between the Greengauge HSR network and HS2 for those cities most likely to impact economic activity in Bristol and Cardiff (ie Birmingham, Manchester, Leeds and Sheffield) is

less than five minutes. As stated, given the GG21 analysis is driven by journey times it would appear reasonable to conclude that their analysis of economic and employment consequence holds true in general terms for HS2 as well as their network. This found the jobs variance by region by 2040 resulting from the Greenauge HSR network could be:

<i>Region</i>	<i>Jobs Variance</i>
West Midlands	+68,000
North West	+62,000
Yorkshire and Humber	+49,000
Wales	-21,000
SW England	-48,000
East Midlands	-25,000

As stated in the earlier CBP evidence submitted, it is essential that the GWML is treated as a HSR corridor and that a series of incremental upgrades aligned with a more flexible franchise is implemented to deliver journey times of <1hr 20mins between London and Cardiff and <1hr between Bristol and Cardiff. At the same time, the CBP strongly urges the DfT to explore a more strategic solution for a HS2 connection to Heathrow and one that fully explores the wider benefits to Wales and South West England of a fully integrated solution so that journey times between Heathrow and South Wales/South West England are also significantly improved.

20 September 2011

Written evidence from Flybe (HSR 199)

1. INTRODUCTION

1.1 Flybe is grateful to be invited to give evidence to the Committee on 6 September and trusts that the following summary assists the Committee in laying out the company's position on HS2.

1.2 Flybe is Europe's largest regional airline. Employing nearly 3,000 staff, we currently operate 69 aircraft on 194 routes from 38 UK and 37 European airports in 13 countries and carried more than 7 million passengers in calendar year 2010.

1.3 Of particular relevance to the Committee's considerations, Flybe is also the UK's Number One Domestic Airline operating more UK flights than any other airline, carrying more domestic passengers at London Gatwick than any other airline and operating over three times more domestic routes than any other airline (*CAA statistics July 2010–June 2011*).

1.4 Flybe is the largest scheduled airline, measured by air traffic movements, at Belfast City, Birmingham, Cardiff, Edinburgh, Exeter, Inverness, the Isle of Man, Jersey, Manchester, Manston, Norwich and Southampton airports (*CAA statistics—June 2011*). As such, we can legitimately claim to understand the domestic transport needs of the UK's regions better than any other airline.

2. FLYBE'S POSITION ON HS2

2.1 Flybe supports increased expenditure on the UK's transport infrastructure, and in particular upon supporting the hard-pressed regional economies. However, Flybe does not regard HS2 as an effective use of scarce resources at a time of economic challenge. The UK has an overwhelmingly London-centric view on transport infrastructure improvements and HS2 is, to our mind, a further example of London being put before the rest of the country.

2.2 Flybe currently serves London Gatwick from four airports on the UK "mainland": Newquay, Newcastle, Aberdeen and Inverness and over water from Belfast, the Isle of Man, Jersey and Guernsey, destinations untouched by HS2. As such, Flybe can confirm that HS2 phase 1 (even if it were ready for operation tomorrow) would have absolutely no impact upon our network. There would be no route cancellations, no decreased frequency and no cuts in capacity, facts that we are happy to explain in more detail on the 6th.

3. OTHER POINTS

3.1 Aviation pays all its own infrastructure costs and doesn't take a penny (other than a small amount of Highlands and Islands Public Service Obligation) in government subsidy. With HS2 phase 1 costing tens of billions of pounds to construct, it will perhaps not surprise the Committee to learn that Flybe thinks this is a further example of a skewed playing field when it comes to expenditure on public transport.

3.2 Flybe also strongly refutes the perception that domestic aviation is somehow environmentally unsound. Having invested more than \$2 billion on aircraft, Flybe prides itself on having one of the youngest fleet of aircraft in the world, with an average age of some four years. We fly the correct aircraft on the correct route, predominantly operating the Bombardier Q400, a 78 seat state-of-the-art turboprop aircraft. On regional routes like Newcastle to Gatwick, Southampton to Glasgow and Birmingham to Belfast, we do not, as other airlines

have tried to in the past, attempt to fill a 150-seat jet for such journeys. The Q400 burns 40% less fuel than the jets we replaced them with and therefore produce significantly less CO2.

3.3 A number of studies support the environmental credentials of turboprop aircraft, including a 2007 study by the Rail Safety Standards Board which stated that “In comparison between turboprop airlines and high performance diesel trains there may be little difference between the environmental impacts in terms of CO2 emissions”.

3.4 We look forward to expanding upon the above on the 6 September.

22 August 2011

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