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THE ECONOMIC CASE FOR HS2

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Witnesses: Paul Plummer, Rupert Walker and Professor Chris Nash

Members present

Lord Hollick (Chairman)
 Lord Carrington of Fulham
 Lord Griffiths of Fforestfach
 Lord Lawson of Blaby
 Lord May of Oxford
 Lord McFall of Alcluith
 Lord Shipley
 Lord Skidelsky

Examination of Witnesses

Paul Plummer, Group Strategy Director, Rail Delivery Group and Network Rail, **Rupert Walker**, Head of High Speed Rail Development, Network Rail, and **Professor Chris Nash**, Institute for Transport Studies, University of Leeds

The Chairman: Welcome to the Economic Affairs Committee. The session today, which is the fifth of our inquiry into the economic case for HS2, is being televised, so if you can speak up and speak clearly, that would be most helpful. Mr Plummer, Mr Walker, and Professor Nash, welcome to the Committee. I would be grateful if you could introduce yourselves and perhaps provide some opening remarks.

Paul Plummer: My name is Paul Plummer. I am group strategy director of Network Rail, but I also come here today with another hat on, as a member of Rail Delivery Group and as chairman of the Rail Delivery Group's Planning Oversight Group, which oversees the industry side of the railway industry planning processes, for which Network Rail does a lot of co-ordination. If I may, I will make three general points about how we, both Network Rail and with my other hat on, consider these issues. As we see it, HS2 is fundamental in addressing the capacity needs on the London-Birmingham-Manchester corridor as we originally conceived it a few years ago. Beyond that, it creates a massive opportunity for radically improving connectivity across the network as a whole. I think those two things are distinct but related.

We strongly believe that it is important, in order to get the full benefits from that investment, to look at it in a truly integrated way—as a network, as a whole. It is not about Network Rail or HS2 but about the whole network and planning the development of the network as a whole. Indeed, the way in which changes would be delivered because of the impact on today's services during delivery and how it is operated need to be considered from an overall network perspective.

Network Rail's role in this started some time ago with the New Lines study that we commissioned, which is an example of how we look at our responsibilities for planning the rail network to inform decisions that ultimately need to be made by Government about how they want to invest in the network, but also at the franchise process with train operators. In

that study, we concluded that it was necessary to look at the creation of a new line rather than incrementally build on existing capacity, and that that was the right thing to do. I think that was at a time when that consensus was emerging and then shortly turned into HS2.

We also co-ordinate the industry planning process, as I said, which leads to a series of route studies. We look at the demand and how that is developing, the capacity as it is and the gaps, and what interventions are necessary in order to best meet that demand or make best use of capacity on the network as a whole. Again, that is ultimately to inform the best way of developing the network and seeing that investment.

More recently, with the development of HS2 as a company, the Government have asked us to work very closely with HS2 Ltd and with DfT in developing the detailed plans to make sure it is integrated with the network as a whole, and as part of that we are for example part of a trilateral board, with the Department for Transport and HS2 Ltd, which seeks to deal with any issues relating to the interface between the networks in particular. A good example of that is Euston, which obviously has one of the biggest sets of interface issues in terms of what is needed for the existing network and for the development of HS2 itself.

On the RDG side of things, the RDG is a group of owning groups—the train operators, the main freight operators and indeed Network Rail—so I am a member of that. The thinking of that group is consistent with what I have said, but what that group considers particularly important is that the industry as a whole, not just Network Rail but the other members, have a contribution to make: in helping Government to make some of the decisions around HS2; in integrating the physical network with the existing network; in planning changes to existing train services so that we optimise the value of the new services when they are able to come on stream and do so in a joined-up way; in the specification and procurement processes for the new system and how that impacts on current service specifications—it is important not to constrain that but to consider it in an integrated way; and, likewise, in ticketing and pricing.

Again, the key choice is for Government in that, but ultimately our perspective would be that you have to look at it as a holistic whole. At a very high level, that is how we approach those issues.

The Chairman: Do you have anything to add to that, Mr Walker?

Rupert Walker: Only to introduce myself. My name is Rupert Walker. I am head of high speed rail development for Network Rail. I have led Network Rail's involvement in HS2 over the last three and a half years, working closely with HS2 Ltd and the Department for Transport. More recently, I have been appointed development director for Euston, leading the joint team's work looking at the redevelopment of Euston Station.

The Chairman: Professor Nash, do you have some brief remarks you want to make?

Professor Nash: I am a research professor in the Institute for Transport Studies at the University of Leeds. I have been involved with rail economics issues for 40 years now. Specifically on high speed rail, we were subcontractors to Atkins in the first major study, which was done for the Strategic Rail Authority in 2002. I was an adviser to Network Rail for the New Lines study, although I think I am with them today purely because of scheduling reasons rather than anything else. I have reviewed worldwide experience for the International Transport Forum, and I am a member of the advisory panel for HS2. That position does not constrain my ability to express my personal views.

Q100 The Chairman: Could I start by asking you to address the issue of capacity? We have been given slightly different pictures by different witnesses. Some say that there is unused capacity, others that in fact it is full to bursting, and quite a few in between. We have asked the Department for Transport to give some rather more detailed information than is currently in the public domain, and hopefully that will be forthcoming shortly, but in anticipation of that I wonder whether you could just explain your perspective on capacity and whether the

capacity problems relate solely to commuter trains, as opposed to long-distance trains, which is one of the points that have been put to us by a number of witnesses.

Paul Plummer: In answer to your last point, the first thing I would say to that is it is largely inseparable. At the moment, we have a mixed-use railway, and certainly the West Coast Main Line, which is where we see the biggest capacity constraints that are relevant to phase 1, is a mixed-use railway with inner-suburban services, longer outer-suburban commuting, long-distance services and freight. All those different uses are competing for scarce capacity. On that mixed route, as we have said to you, the outer-suburban commuter services in particular, services that I use every day and have used for many years, are very, very crowded in the peak and will become progressively more so over the next few years as we expect the growth that we have seen to continue. We see the congestion of trains at the moment as particularly severe on those longer-distance commuting services. It is severe also on shorter commuting, but in a shorter period standing is somewhat less of an issue, although it is still an issue.

The Chairman: What is the difference between a long-distance commuter and a short-distance commuter?

Paul Plummer: On that route, for example, there are services that stop first at Leighton Buzzard, where I get on, and then at Milton Keynes or Watford. There will be other services that stop at lots of intermediate stations along the way. The longer-distance services, provided mainly by Virgin, do not stop until Milton Keynes, in many cases, or indeed further.

The Chairman: Are the long-distance Virgin services also full to capacity?

Paul Plummer: They would use more paths if we could provide them, but it is not the case that, at all times of day and for the full length of that journey, the trains are full.

Q101 Lord Lawson of Blaby: Can I pursue a little further this question of capacity, which, as you say, is the most important determinant in the whole HS2 project? If one is looking at a

parallel—and I know it is not a precise parallel—with the airline business, particularly the low-cost airlines, it has a very sophisticated pricing model by which it ensures that its planes are nearly always pretty full, so it maximises the amount of capacity that it can take advantage of. On the rail, it is very different. There are a number of services where there is plenty of spare capacity, and there are one or two services where there is severe overcrowding. To what extent do you think that a more sophisticated, intelligent pricing policy could effectively create more useable capacity on the West Coast Main Line, say, or on the services that you are considering generally?

Paul Plummer: I am not a train operator, but train operators would passionately argue that they make very sophisticated use of yield management just as airlines do. If you look at the particular capacity constraints that we are talking about here, the peak into Euston has become increasingly broad. The evening peak, for example, really starts around half past four and goes on well past 8 o'clock, where you have very congested commuting services out of Euston, and similarly in the morning. In order to address that issue, you would be looking at shifting really quite a long way, and given the scale of growth quite a long way down. I would certainly support the principle that there is opportunity from improved use of pricing to send price signals, but the scale of shift that you would be looking to achieve, I suggest, would be beyond what is possible in order to change the business case for the interventions that we are talking about.

Lord Lawson of Blaby: Have any of you really looked thoroughly at this? As I say, the airlines manage it.

Paul Plummer: As I said, there have been a lot of studies by the industry. Pricing policy and what the franchise operators are allowed are primarily a matter for Government, but in terms of what would need to happen in order to achieve a big shift, I think those would be very large price differentials.

Lord Lawson of Blaby: You say “what is allowed to the franchise operators”. Are there, then, government restrictions on what the franchise operators can do in this area?

Paul Plummer: There are, but I am not best placed to comment on that in detail.

Lord Lawson of Blaby: Are either of the other witnesses able to comment on this?

Professor Nash: If I could make a couple of comments, there are regulatory constraints for intercity services. There is an off-peak walk-on fare, which is subject to control in the degree to which it can be raised, and there are requirements about the times of day at which that is available, which I think contribute, for instance, to the Friday evening peak. If franchisees had complete freedom, they would not make that fare available as early on a Friday evening as it currently is.

If I could add one other comment, certainly in all the work that I have been involved in in this area, we have been concerned with what is likely to be the situation 10, 20 or 30 years ahead rather than with the problems now. Our best estimate is that the sort of growth that we have had in the last 20 years will continue. Of course it is uncertain, but rail demand has doubled in the last 20 years, and that is what we expect to happen in the next 20.

Lord Lawson of Blaby: I absolutely understand that you expect there to be a growth in demand for rail transport, although I notice that the Government have recently announced that they are planning a huge extension of road-building, so there is a question of whether the extra traffic is going to go on the road or the rail. There is also the question of alternative ways of increasing rail capacity, which we will need to consider and are considering. On the question of pricing, is there any sense in these government controls that restrict what the franchisees are able to charge? Can you see a good reason for that?

Professor Nash: There is an argument for saying that there should be a walk-on fare at a reasonable level that people can afford to pay. The current franchising arrangements would otherwise encourage even heavier reliance on advance-purchase tickets, which makes it

difficult for people who have an urgent need to travel. The exact arrangements certainly need revision—I refer to the Friday evening peak—so that problem could be eased to a degree by a more sensible approach to fares regulation, but I still believe that in the long term unless we are going to have very big increases in peak rail fares to price the growth off, there will be a serious problem in the longer term.

Q102 The Chairman: In your work, what consideration have you given to the impact of superfast broadband rolled out nationally on rail travel?

Professor Nash: In all the work that we have looked at to date on the impact of improved information technology, the conclusion has tended to be that it encourages travel rather than replaces it: that people are able to develop far more connections and they do.

The Chairman: Even though people can now work from home and be pretty connected to their office?

Professor Nash: Exactly, and yet, as we have seen, demand has continued to soar. There are certainly changes. Some long-distance commuters now only commute two or three days a week, but then they still travel a lot to meetings and so on. To date, I think, there is no evidence of improved communications reducing demand for travel. It may change. There are many uncertainties.

Lord Lawson of Blaby: Can I just ask one follow-up question? You mention a move to commuters now commuting two or three days a week. I do not know how long this has been going on, but have you factored in the possibility that more commuters might be doing this and cutting down on the amount of commuting in this way?

Professor Nash: Currently, it is a very small minority.

Lord Lawson of Blaby: Right, but have you considered whether more might do this?

Professor Nash: It certainly may grow, but, as I say, that small minority tends to locate further from their workplace and to be very mobile in terms of other journeys. It may ease the

peak problems a bit, but overall again it has tended to be associated with a growth in the demand for travel.

Lord Skidelsky: I wanted to pursue this line, because you are extrapolating from the increase in volumes over the last 20 years to the next 20 years. In fact, surely it is reasonable to expect big changes in work practice—for example, work becoming more staggered, with more flexible hours, working from home and video conferencing. Are you saying that those things that are predicted and that to some extent have already taken place are too negligible to factor into your estimates of traffic demand over the next 20 years?

Professor Nash: We have done more than extrapolate; we have built models based on experience of what seems to be causing the demand for rail travel to rise.

Lord May of Oxford: Does that model incorporate the changes?

Professor Nash: No it does not, because, as I said, we have found no evidence yet that these changes are actually suppressing demand. If anything, demand is growing faster, not slower.

Paul Plummer: I would reinforce the point that we are not simply extrapolating here. Yes, we have a whole series of models that we have developed over a period of years that are based on existing relationships, but we do not stop there. We are increasingly using much more scenario-based analysis to look at what potential range of scenarios might arise. In that sense, one of the key drivers in a lot of our forecasts has been that growth has been driven hugely by central London employment for a lot of the flows that we see, but outside London we have seen a massive shift and increase in the amount of commuting by rail into other cities. We also see—and I think the improvement in communication reinforces this—people wanting business interaction and to physically be together. The importance of that for the economy we have seen increasing as a result of the communications revolution, rather than decreasing. So we are not simply extrapolating; we do seek to understand those things and the impact of those sorts of changes.

Q103 Lord Carrington of Fulham: I am trying to get my head around what we are actually trying to address with HS2. We are being told that there is a capacity problem, which there clearly is somewhere, although I was interested to see that we have been given figures that Euston's peak-time loading is only about 90%, whereas Vauxhall for Waterloo, for instance, is 130% peak-time loading. Therefore, I do wonder a bit whether Euston is critical. From what you are saying, as I understand it, the loading that is coming is coming from the short-distance commuter traffic coming in from the Greater London area, not in a political sense but where people come from in the work reach of London. In other words, it is not the long-distance routes going to Birmingham that we are talking about. Am I right in assuming, then, that the effect of HS2 is to transfer the trains that currently go on the West Coast Main Line to HS2 so that more commuter traffic can be sent into Euston to cope with the commuter growth? It is not actually to do with an increased traffic to Birmingham itself.

Paul Plummer: There are a lot of points in there. I will try to address them, but if I miss something please ask me to come back. As I said to Lord Lawson, we start from the point of view that the initial requirement is about capacity and it is referred back as the most important thing. I certainly think it is the most urgent thing. I do not think it is the only point; the issues around connectivity go beyond that.

In terms of Euston, yes of course there are a lot of other stations in London with trains coming in that are very congested, and we are looking to tackle those issues as well. In terms of Waterloo, we have plans for what we need to do to address those issues over a period of years. In terms of many of the other stations, we obviously have Crossrail, which will address the issues at Paddington, which has some of the most congested trains coming into it. In terms of the issues around Blackfriars, for example, the Thameslink programme aims to address those things.

We continue to do more of those things, but you cannot sensibly keep incrementalising your way forward with regard to the corridor from London to Birmingham to Manchester and beyond into the east as well. Therefore, we needed to build a new line. That is what we concluded.

The answer to your last point about whether it is about new capacity or transferring capacity is that it is both. This is where you get almost a double-whammy, because not only do you create additional capacity with the new line, you can put your faster services on that line, but by taking those trains off the West Coast Main Line, you get an extra benefit, because the trains are then running at more consistent speeds. You get the extra capacity on the new line and more efficient use of capacity on the existing line, so that is a double benefit. Then you can use that to do a number of things. You can use it to provide additional services, to Milton Keynes and Northampton for example, along the West Coast Main Line. You can use it to provide additional longer distance services on the new line as well. There is a great scarcity of additional paths there. The trains are not always full all the time for the whole journey, but they are very valuable train paths that we are constantly under pressure to provide more of, so there is that demand as well. It is not quite a fully segmented system, as you get in some countries, but by segmenting traffic a bit more we will get more out of the capacity of the whole system.

Q104 Lord Carrington of Fulham: One of the underlying assumptions in that, if I understand it, is that passengers are willing to move from the existing trains on the West Coast Main Line to the high speed line, which is presumably going to be a function of pricing. I know that the assumption is that high speed is going to be the same price as the current services on the West Coast Main Line, but that is probably wrong, given the experience with HS1, where the pricing is significantly higher for the high speed train coming into St Pancras.

How will you get people to move their journeys to Birmingham from the cheaper existing service to the more expensive HS2 service?

Paul Plummer: Our position on pricing is that it is not for us to determine that. The only thing we would say is that when the Government are making decisions on fares regulation and control, it is important to look at it as a system and not simply to price the high speed service in isolation without thinking about the rest, precisely for the reasons that you have given. All the work that we have done looking at it as a service proposition shows that there is a proposition there that, priced on that consistent basis, can be value for money, would be attractive to people who want to use it and would unlock that other capacity as well. If the pricing system is different from that, that must deliver further benefit. That is the way we would look at that.

Lord Carrington of Fulham: If the pricing is the same—

Paul Plummer: Consistent.

Lord Carrington of Fulham: You are saying that if the pricing is consistent, you are going to shift, but if the pricing is differential, you are not going to shift at anything like the capacity. Have you modelled that?

Paul Plummer: Not in any detail, and I am certainly not saying that it needs to be same or that “consistent” means the same. Clearly, if all the benefit of the additional service is reflected in the price, then people are going to be indifferent between the two and you are not going to achieve the effect. That is the nature of a market.

Lord Carrington of Fulham: You have not modelled this, though.

Paul Plummer: No.

Lord Carrington of Fulham: Why not?

Paul Plummer: In terms of the business case position of it, I do not think it affects that business case.

Lord Carrington of Fulham: Right. Why not?

Paul Plummer: The business case works in terms of the economic benefit of providing that capacity and the benefit to the people who are going to use it. You make an assumption about charging based on that consistent approach.

The Chairman: If it is too expensive and people do not move across to HS2, that reduces the amount of income that HS2 gets from tickets, which surely goes to the absolute viability of the business plan or otherwise.

Paul Plummer: It certainly affects the commercial position, yes.

Lord Shipley: In that whole debate about fares and who is travelling, there is a lot of discussion about business travellers, but much less about leisure travellers, who actually are a significant proportion of the total and for whom likely fare levels are very sensitive matters. In all the estimates on capacity and the transfer of people from a slower train, which is often quite fast but nevertheless slower than high speed, what allowance has been made for the fact that a lot of people will determine their mode of travel by price, not speed?

Professor Nash: There are two things. First, I have little doubt that the only sensible approach to pricing HS2 is yield management, which we referred to earlier. This is going to have massive capacity. The way to achieve the maximum revenue in a way that does not depress demand is through yield management, so high prices when capacity is scarce but low prices when there are plenty of seats available. Talk of a premium is a bit misleading in that sense. I am not responsible for it, but I believe HS2 has done some modelling of the effects of different fares levels. The increased competition from open-access operators on the existing routes would depress the fares that were charged in this yield management system; it would reduce the revenues of HS2, but according to their modelling it would not significantly affect the net benefits to the country as a whole.

I have one other comment. All the modelling work of course includes estimates of what people are willing to pay to save time. Those values are certainly much higher for business than for leisure travel, but they are substantial, and even with a reasonable difference in the average level of fare those estimates suggest that a lot of leisure travellers would switch to HS2.

Q105 Lord Griffiths of Fforestfach: I am afraid this question is still on capacity. We seem to have conflicting views in some definitive sense as to whether there is or is not capacity, for example, on the West Coast Main Line. Despite the upgrade, the Department for Transport says that it is now confident that the line has reached capacity. Then we have Professor Glaister saying that it is possible to create a lot more capacity. I must say, as I listen to the discussion, that I just wonder to what extent the initial research is really done through the mind-set of engineers who are thinking in an engineering framework, compared, for example, to questions asked by my colleagues on my left here when they talk about pricing on the airlines and so on, which would be more of an economist's approach. To what extent is that rather sensitive? Rail fares are a sensitive issue politically. If, for example, I was now a Minister in your Department, I am not sure how much I would like to see you exploring pricing in a more liberal way, because if it gets out and you have the headlines in the *Daily Mail*, you suddenly find that as a Minister one has to answer for something like that. I just wonder if you can tell us definitively whether there is really a restriction on capacity.

Paul Plummer: My view is absolutely yes there is and will increasingly be so. We will always be able to do more things to eke out additional capacity in relieving constraints somewhere on the network, so I do not deny that possibility. There are things that we are doing today to get more capacity out of the West Coast Main Line and we will continue to do so. Our assertion is that that is just putting off the inevitable and that we will need to do something much more fundamental at some stage, so I say absolutely yes.

The question of fares is of course sensitive, and I do not pretend that it is for us to make a decision about fares. What I do believe is that, in terms of informing that decision, the scale of their change would need to be very, very large in order to change what I just said, and implausibly large for it to change the fact that we need to do something fundamental about capacity on that corridor.

Lord Griffiths of Fforestfach: Can I just explore two examples? You say that future improvements are being made all the time. The evidence from the 1989 central London rail study on the London Underground was that it would be incapable of further upgrades. However, 20 years later, it turns out that the engineers have been adding 20% more capacity. That is one example. The second example is that David Prout, on behalf of the Department, told us that there was no space on the West Coast Main Line for routes that Virgin Trains wanted to add from Blackpool and Shrewsbury to London. However, we discover in the press release on 22 September of this year that they had received the green light from the Office of Rail Regulation to run direct services from Blackpool and Shrewsbury to London. When we are talking about capacity, we are told one thing and then 20 years later there is something else. We are told something here. Now we find that Virgin Trains has been given the go-ahead. Therefore, it is a confusing picture. There is a sort of mist through which we are trying to drive.

Paul Plummer: It is very fair to say that it is confusing. In relation to the example that you mentioned at the end, my understanding is that those additional paths were found effectively by extending existing services, rather than new services on the southern end of the west coast, which is where we observed it to be very heavily constrained. That was not what they ideally wanted. They ideally wanted new paths the full length of the corridor, but we found a compromise, and we will continue to find ways of making a compromise on some of that.

That, at the moment, has another effect. It means first of all that there is a big reliability issue on the west coast, because that timetable has a number of compromises in it that are not ideal, and the punctuality is not where we would want it to be. I am not saying that it is entirely because of that, but it is partly because of that sort of factor.

In terms of 20 years forward, then yes, of course, we are challenging ourselves to look at fundamentally different ways of re-signalling capacity on the network as a whole and the capacity that that could unlock, but again we believe that that does not fundamentally change the business case for the need to invest in additional capacity. It is not that we have not looked at those things; it is not that we are not challenging ourselves to modernise the way we control the network and get much better use of scarce capacity. We are doing those things as well.

Q106 Lord Skidelsky: We are back on capacity. Alternative scenarios have been suggested, for example, by the 51m alliance of local authorities. Network Rail carried out a high-level analytical review of the strategic alternatives, and the review concluded that “Selective enhancements may generate short-term capacity, but will come at a high cost and increased performance risk during construction and operation, and may not be sustainable in the long run”. There have been a number of comments of that kind. Can you explain your reasons for concluding that these alternatives were not the best long-term strategy?

Paul Plummer: I will ask Mr Walker to answer that.

Rupert Walker: We have looked at alternatives to the new high speed line a number of times. The report you have mentioned was published at the end of 2011. We looked again last year, in 2013, and again this year, and considered different ways of trying to provide the capacity and connectivity that a new line would provide. There are things that can be done. Generally, they are localised improvements, localised interventions, new infrastructure or modest changes to the operation of the railway that provide incremental benefits, either in a localised

area or more broadly across the route. They are minor benefits that, in the longer run, do not provide the level or the scale of intervention that will be needed. Our forecasts are showing that demand for travel on the West Coast Main Line will grow by 20% to 25% in the next 10 years. These interventions provide small-number-percentage increases in passenger seats or capacity.

The other point is that some of the proposals that were suggested in the 51m report have been, are being or will be implemented anyway, as Mr Plummer said, to try to provide additional capacity on the railway as it is today.

In summary, we believe that we have demonstrated that there is a capacity case for an intervention at the southern end of the country to provide the huge amount of capacity that is needed to accommodate the growth forecasts that we see, and that incremental upgrades give benefits, but not enough to provide what we need.

Lord Skidelsky: I just want to go back to the more general point about capacity that is worrying me and runs through a lot of the discussion. You cannot separate capacity from price, yet you have said nothing really about pricing, because you are saying that it is someone else's brief to comment on. Yet they obviously both play a part in adjusting supply to demand and they are connected. I do not know whether these forecasts of capacity take different pricing systems into account, because without that they are not very reliable, are they? I know I am making a more general point, but it is important to get some clarity on it.

Rupert Walker: I will hand over to Mr Plummer. The only thing I would like to add is that the work that we did five years ago—and Mr Plummer mentioned our New Lines study published in 2009—was based on forecasts. We have seen growth in demand at twice what we thought it was going to be back then, so generally our forecasts have erred on the side of caution or have been shown to be more conservative than perhaps they might have been.

Paul Plummer: I shall not repeat my point a minute ago about the scale of differential that you would need to have, and emphasise again that it is a decision for Government rather than for us, but rather than focusing on price—I am an economist as well, so I think very much in the way you described—we focus on value and what value can be created from the additional capacity that we need to provide in terms of the impact on the economy and user benefit. It is not a market price, but it is a value-based approach that we are considering it from, rather than a caricature of the engineering approaches that you mentioned.

Q107 Lord Shipley: Can I go back to the 51m proposal? As I understand it, Network Rail's 2011 report concluded that one of the key considerations in rejecting the 51m proposal was the impact of disruption during the construction phase of the work. Obviously HS2, when built, will last for many years, so could you first just explain why construction disruption is a factor in the consideration, and secondly say how you think it should be considered as a factor?

Rupert Walker: That is a good question, because people think of improvements to the railway as bringing a benefit, and they do. But to change the railway takes time and effort. Changing the infrastructure does happen overnight but only in a very short space of time. We cannot prevent people from travelling during the day very easily. Stopping the railway prevents commuters from getting to work, prevents leisure travellers' journeys, ends up being expensive and disrupts people's lives. When we change the railway, we try, wherever possible, to make those changes out of the normal hours during which people will travel.

Therefore, if one wants to deliver a large improvement to a particular route with potentially many smaller interventions along the line of the route, there is a lot of disruption because there are a lot of changes that need to be made. That disruption can be costed in a number of different ways. It can be costed in terms of what other way people will travel, how much that costs to them, what it means to people, and perhaps what it costs to the railway to provide

buses if that is how people will be moved around. We can price up the cost or the impact of closing the railway for short or longer periods, and that gives us an understanding of the impact of changing the existing railway versus constructing a new line, which would have less disruptive impact.

In fact, our report subsequent to the one published in 2011 looked at what would be needed to provide a similar level of capacity and connectivity to HS2 but improving the existing railway. It led to many, many thousands of weekends of disruption, preventing people from travelling in the country, weekend in, weekend out, over many, many years. That was what led us to take the position that improving the existing railway gives benefit but is incremental and will not deliver the amount of capacity that we need in the longer term.

Lord Shipley: Professor Overman has given us evidence, and he has said that he would have liked to see “disruption costs monetised so that we could get a feeling for quite how disruptive this was going to be, to compare that to the disruption that was going to come with HS2, which will involve a fairly substantial amount of disruption, and we could have presented this to policymakers”. Do I draw the conclusion correctly from that that we have not been given a proper evidence base on disruption costs of both options?

Rupert Walker: I am not sure what you have been provided with, and I would be happy to check with the clerk. The cost estimates that we prepared when we were analysing the differences and the benefits and costs of the alternatives included monetising the disruption. We can do that very easily.

Lord Shipley: What Professor Overman said was, “We could have presented this to policymakers”, so that, I guess, is the Government. Are you saying that this has actually been done?

Rupert Walker: Both in our October 2013 report and more recently in our report on the alternatives.

Q108 The Chairman: The Rail Freight Group has complained that too little work has been done on their interests, and it cited in particular the potential doubling of capacity coming through 'Liverpool2', which is not on HS2 but presumably will connect into HS2. Would you agree with its concern?

Paul Plummer: I can absolutely understand its concern. As the infrastructure manager, part of the reason why we have the role in respect of planning how the network should develop and how we should use capacity on the network is precisely to engage with it, to understand what is happening to freight demand and how we best accommodate that, and to look at the business case for investments to grow capacity of the network. The opportunity from HS2 is to release capacity from the existing line to be able to make greater capacity available for freight as a result of it. That is absolutely the conversation that we are having with freight operators in the planning group that I chair, in the freight-specific group that we are very much involved with, as well as with Rail Freight Group and other freight representative bodies. It is understandable that it is expressing that concern, because the outcome of these conversations is not certain, but it is important to us that freight, just as much as passenger, and the value of that to the UK economy, is reflected in these decisions.

Lord Lawson of Blaby: I would like to go back briefly to what Lord Shipley was saying. I think you promised, but I would like your confirmation, to provide us with the answers to Professor Overman's questions about precisely how you work out the cost of disruption on the 51m alternative compared with the cost of disruption to some on the HS2 project. We would like to see these figures, particularly since we have been told that the Department for Transport has said that the benefit-cost ratio of the 51m proposal is more than double the benefit-cost ratio for HS2. You will do that for us, will you?

Paul Plummer: We will do that. I think Professor Nash wanted to comment on your last point.

Professor Nash: Just to comment on benefit-cost ratios, the evidence is that the 51m proposals would have a very high benefit-cost ratio, much higher than HS2, but the standard textbook approach of comparing different, mutually exclusive alternatives is to ask, “If the cheaper one is worth doing, what are the extra benefits and the extra costs of doing the more expensive one?”. Of course, HS2 is enormously more expensive than 51m, but it does appear that the extra benefits are something like twice the extra costs, so in fact the economic case suggests that HS2 is the better alternative.

Lord Lawson of Blaby: Sorry, I do not quite understand that. If the benefit-cost ratio is much better for 51m than for HS2, how do you get to the conclusion you just enunciated?

Professor Nash: It is the difference between a very high rate of return on a relatively small investment and a good rate of return on a much bigger one. Overall, the economic case suggests that it is worth the extra investment in order to get the very much higher benefits that HS2 provides.

Lord Lawson of Blaby: What is the benefit-cost ratio for the additional benefits that you get from HS2, not the benefit-cost ratio for HS2 as a whole?

Professor Nash: It is still roughly two, in fact, because the 51m proposals are so small relative to the cost of HS2 that the incremental benefit-cost ratio for HS2 is not very much lower than compared with doing nothing.

Q109 Lord Carrington of Fulham: On a slightly different topic, we have heard quite a lot of evidence about the experience of high speed rail, in France particularly but in other countries as well. Have you made comparisons with the benefits that accrued from the high speed rail in France, and have you drawn conclusions as to why it has worked in some cities in France and been less successful in others?

Professor Nash: I have reviewed this as part of some work I did for the International Transport Forum. France has a system where by law every major investment has an ex-post

evaluation, so I have been able to look at the ex-post evaluations of certainly the first four lines, all of which have given acceptable social returns. Essentially, the success comes from having large volumes of traffic, and France has achieved that certainly partly by linking large cities but also by the policy of running its TGVs on to the ordinary network to serve a much bigger range of cities. That strategy has enabled much better use of the high speed lines than if they were just seen as self-contained lines.

There is a lesson in that for Britain. The existing proposals certainly make use of the high speed line to serve a much wider range of cities than are directly on it, but the important point coming out of that is the need for an integrated plan, looking at the conventional network and the high speed line, to get the best use of both.

Lord Carrington of Fulham: It has been suggested to us that Lille benefited quite strongly but Avignon, for instance, did not, and that one reason for that was because of the placing of the station at Avignon being well outside the city. We are planning to do the same thing, as I understand it, between Leeds and Sheffield.

Professor Nash: The French evidence does suggest that a city-centre location has big benefits. Obviously, in any particular application it is a case of trading off the costs of getting into the centre with the benefits. The proposed station at Leeds would be pretty central, in fact, but the proposed station at Sheffield would be at Meadowhall, some way from the centre but within a fairly developed area.

Lord Carrington of Fulham: Do you think that is an acceptable trade-off, rather than one that is going to mean that Sheffield will not benefit from the high speed link in the way it should?

Professor Nash: I have not been involved in any in-depth study of the two alternatives, but I can believe that Meadowhall is the best trade-off for Sheffield, given the costs of getting into

the centre and given that Meadowhall has its own attractions in terms of a pretty good level of connectivity with the area as a whole.

Rupert Walker: Whilst it is quite right that a station not in a city centre perhaps provides slightly less benefit to the city itself, it provides a broader regional benefit to people who live around the city who will, particularly on whichever side it is on, find it much easier to get to than travelling to the centre of the city, so again there is a trade-off between getting right into the centre and providing something that is a little more outside but enables more people to access it much more easily.

Lord Carrington of Fulham: Is there a difference between that and what happened at Avignon? We are being told at any rate that Avignon has not benefited greatly from the TGV, because of the location of the station. That is hugely simplistic, I am sure.

Paul Plummer: I have heard that assertion too, but I have not looked at it in detail.

Lord Carrington of Fulham: It seems to be fairly important in terms of planning locations for stations. If it is true, it does rather raise a question mark over what you have just said about Meadowhall.

Paul Plummer: The assertion is that Avignon the city has not benefited. I do not know whether the region in the south of France has benefited from having the station there.

Q110 The Chairman: Let us look at a comparison closer to home. We have been told that HS1 has substantially underperformed against its passenger targets and that the local economy around Ashford has in fact underperformed much of Kent, whereas the reverse was expected. What lessons do you draw from that?

Paul Plummer: I am simply not sighted on those facts.

Professor Nash: The lesson I would draw is that it tends to be the bigger cities that benefit anyway. Ashford has a very limited high speed service certainly in terms of international trains. Similarly, on the French side Lille is perfectly located to benefit from high speed rail,

Avignon a lot less so, in terms of connections with other cities and so forth. As I say, it tends to be the bigger cities that benefit most, and penetrating the heart of them is an important part of that.

Lord Griffiths of Fforestfach: Say you were asked to advise on the conditions you would attach to the franchise. Should there be a separate franchise for example for HS2? Should it be integrated with the west line and the east line? Should the operators have the freedom to charge premium fares? What would your advice be?

Paul Plummer: My advice would be to consider those things in an integrated way. I do not say that there needs to be an integrated franchise or that there should not be, but I do say that the two franchises, or a single integrated franchise, should be considered from the point of view of the overall network and how to get the best value from the overall network. Likewise, I do not say that pricing should be at a particular level or should be higher or lower, merely that it is considered as part of optimising the whole network, the whole system, rather than one part of it in isolation of the rest.

The Chairman: That brings the first evidence session to an end. Thank you very much for your helpful answers. You are very welcome to stay and listen to the next witness.