

# **The Foundation for Science and Technology**

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## **The future strategy for high speed rail in the UK**

The Rt Hon the Lord Adonis, Secretary of State, Department for Transport

### UNCORRECTED TRANSCRIPT OF SPEECH

Let me just speak for a few minutes to set the scene because I know there are a number of distinguished colleagues speaking too. I am delighted, in particular to welcome my good friend Guillaume Pepy who has 'blazed a trail' that is in no small part because of the astonishing success of high speed rail in France over the last 30 years.

You probably all know the story of Margaret Thatcher's conversion to the need for high speed lines in the Channel Tunnel. If you don't, let me tell it to you anyway because it is far too good a story to miss the opportunity of telling. When the Channel Tunnel opened the French opened – at the same time – the fast link from Calais to Lille and through to Paris. At the official opening where Margaret Thatcher was with President Mitterrand, the President made, as was his way, some very elegant remarks about this for the future of France but said that he was delighted to tell colleagues and the press that trains would speed through the plains of Northern France, but then descend into the tunnel where passengers could witness one of the wonders of the world in the tunnel and then (I can't remember the phrase) I think it was 'amble' through the Kent countryside so that the passengers could better enjoy the beauties of the English countryside before the train arrived elegantly in London Waterloo!

Now Margaret Thatcher, who was, as you know, fiercely defensive of British reputation (even of implied Gallic insult) then gave permission for the plan for the Channel Tunnel rail link to be worked out. Without that of course we wouldn't have had High Speed I, we wouldn't have had the opening of the line that was finished two years ago, we wouldn't have had the extraordinary restoration of London St Pancras and I wouldn't be here today telling you about High Speed II.

One of the biggest challenges we face in terms of the public debate in Britain is being able to persuade people that in this country (where the planning system is so complex and difficult to navigate, particularly in Southern England and in and around London) that to plan and to build a high speed line, is no mean feat.

Actually the history of the planning and the building of the first high speed line – and I see many colleagues in the hall today who are party to that – was indeed a total nightmare. The story of the first plans of British Rail uniting the whole of Southern London, the near-collapse of the scheme then, the problems about the planning and financing of the scheme in its later stages was an enormous challenge to overcome. It took a great deal of time and it is only now that it has been successfully completed that we can say that it is possible to carry through big projects of this kind, and for me to be able to say – as I say time and again when addressing audiences – that if we can build a high speed line through Kent, the 'Garden of England' and through London, including a terminus in the beautifully restored St Pancras, then there is no reason (except lack of ambition and lack of a plan) why we cannot build a high speed line going north from London, connecting the great cities of the country, ultimately through to Scotland.

Indeed the point I also make is that if we were starting from scratch and phasing these projects in the right order, we probably should have started with the connection of our major cities before building the lines of the Channel Tunnel. It was because of the need to provide an effective link to the Channel Tunnel and one which mirrored the speed and prestige of the one on the other side of the Tunnel, that the high speed link to France came first.

So we have demonstrated that it can be done. The Command Paper, published last Thursday, I hope demonstrates why it should be done and how it should be done. Let me deal with the 'why' first – indeed the 'why' in both senses, not just the 'why it should be done' – but in fact the line is going to be the shape of a 'Y' as you can see in front of you. I'm sorry that's the problem with these things that are lifted from the document, the writing is probably too small and you can't make it out, but take my word for it, those are the major metropolitan centres of Britain – London, Birmingham, Liverpool, Manchester, Glasgow, Leeds, Newcastle, Edinburgh.

Let me just explain why it is that the Government has been persuaded that we should put before the British people at the Election a plan for high speed rail. There will be very significant journey time savings. Birmingham Interchange, which is the station which will be next to Birmingham International, through to Crossrail Interchange at Old Oak Common (linking straight into Crossrail) will be a 31 minute link which will transform relationships between Britain's first and second cities. From central Birmingham – in a station which is going to be in Curzon Street (with the historians amongst you will know was the first terminus on the line from London to Birmingham in the 1830s) – from Curzon Street to London Euston will be 49 minutes. All the other journey times will also be reduced substantially. Manchester, Leeds, Sheffield will all be 75-80 minutes from London. Just under 75 minutes to Crossrail Interchange, 80 minutes to London Euston – that compares with a standard journey time of 2 hours 10 minutes to 2 hours 15 minutes for all three of those cities at the moment. The relative journey time savings with East Midlands at the moment will be greater still because the Midland Mainline is slow.

The plan, as was published last week is for operating much as in France where the high speed trains all run on the high speed line and the classic lines: the plan is for High Speed 2 to go onto the West Coast Mainline at Preston and the East Coast Mainline just south of York. By doing that it will be possible to run services through to Newcastle, saving about half an hour on the current journey time and through to Glasgow and Edinburgh in an estimated three and a half hours. Now three and a half hours is crucially important because it is at three and a half hours that you get very significant modal shift from the plane. Once a line goes all the way through to Scotland (but that is also a very significant planning and spending project) it will be possible to get that journey time down to under two and a half hours to 2 hours 40 minutes. But three and a half hours should be sufficiently fast to bring about significant modal change from the plane to the train. So the journey time savings will be significant and they offer the prospect of very substantial economic benefits for cities, particularly those cities which are poorly connected at the moment.

However, the journey time savings are only one of the reasons why it is in the public interest to take forward a high speed rail project – two other factors are equally significant. The first is the need for additional capacity. Our estimates are that very significant additional inter-city capacity will be required in the 2020s, 2030s and beyond. There were only a certain number of ways it could be provided. It could be provided by building entirely new motorways: our judgement is that that is not going to be a sustainable step forward in the next generation, even if it did deliver the connectivity benefits. Motorways don't accelerate journey times and don't, by their definition, go into cities and city centres. If it is not going to be by motorway and if we also don't think it appropriate to plan for a very significant increase in domestic aviation (which

is the other alternative, particularly in respect of Glasgow and Edinburgh to London) then that leaves rail, which is clearly (in terms of carbon emissions) sustainable. The estimates in the Command Paper published last week show no net increase in carbon emissions as a result of the High Speed Rail project, despite the huge addition in capacity that is brought about by the high speed line. There is in fact the potential for a significant reduction in carbon emissions if there is a significant modal shift from the plane to the train for journeys between Scotland and London.

So in terms of capacity, the high speed line offers significant advantages over the other modes. There are also advantages over other rail options because, this being Britain, I'm bound to look at incremental changes rather than transformational changes as that is how we tend to do things in this country. We did look at incremental improvements to the rail network, we examined a number of different options very carefully to see their cost/benefit ratio, how they stood up against high speed rail. In particular we looked at an option that would have increased capacity on the existing rail lines by four-tracking the Chiltern Line, four-tracking everything that has not been four-tracked on the West Coast Mainline, increasing capacity at all the stations that would be required to take this additional capacity (London Euston, London Marylebone, London Paddington, Birmingham New Street and Birmingham International and other stations going north) and other changes that would be required to increase capacity by up to 100 per cent which was the biggest increase that it was possible to get.

A thorough piece of work was done by Atkins the consultants – their estimates (which were published in the Command Paper last week) – their estimates were that for a 100 per cent increase in capacity by upgrading existing conventional lines you would need to invest more in cash terms than in building the high speed line (from London to the West Midlands). We assume the same will be true going north but that further work will be done as part of the next stage. You have to invest more in cash terms but you do not get any of the connectivity gains (or very few of the connectivity gains of the high speed lines) and you get a much lower capacity increase as well. You spend more for a capacity increase of about 100 per cent, as opposed to 250 per cent for the high speed line. You gain marginal connectivity benefits for upgrading existing lines whereas you get transformational connectivity benefits with the high speed line. Therefore the cost/benefit ratio is far more favourable for a high speed line than it is to the upgrading of conventional lines.

Now that is a very important piece of analysis because there are many colleagues here from the rail industry who say to me – some of you here in the hall have said to me – that your worry is that the high speed line will take investment away from the classic railway. The experience of other countries (including France) is that once you have put a high speed rail project on the map, because of the central importance that is required within the national infrastructure, it tends to attract more funding to the railways than less.

Even if that were not true (and I believe it will be true), the counter-factual is another set of upgrades to existing lines, very similar to what we have just finished with the West Coast Mainline (remember £9 billion spent on upgrading the West Coast Mainline over the last 10 years with, depending on how you calculate it, something like a 60-80 per cent increase in capacity). All of our estimates are that this would cost more, it would yield fewer benefits and I should add of course it would cause more disruption because you would have to do all of that work to a live railway. That disruption is not properly priced – the full measure of the disruption caused by the upgrading of the West Coast Mainline was not properly priced over the last 10 years and that is a very significant additional factor.

So it is not just increased speed, it is transformational capacity benefits and it is also a set of connectivity benefits which come from not only running trains faster, but from fundamentally

changing the Victorian railway map of Britain. The Victorians built their railways with private companies and individual lines, all seeking to connect their own individual terminus in London, with very poor connectivity between them. Take, for example, Birmingham to Manchester (the second and the third largest cities in this country). It is 82 miles from Birmingham to Manchester – a standard journey time today (after a lot of improvements over recent years) is one and a half hours. Leeds to Birmingham (the fourth largest and most important economic centre in the country, connected to the second), very poor connectivity there – 116 track miles between those cities, standard journey time of two hours. Both of those journey times will be cut in half by the high speed line because it is routed as a single integrated line going from London to the West Midlands and then forking either side of the Pennines. So even in respect of Leeds – we all have the Victorian railway map imprinted on our minds because it is the only way you get between cities in this country – Leeds to London via the West Midlands is precisely 20 miles further than Leeds to London via the existing East Coast Mainline, branching off at Doncaster. But of course, because the trains are running at 200 miles per hour rather than an average speed of barely 100, you get huge reductions of journey time as well as a transformation of connectivity with Leeds now having high speed connections, not just with London, but also with the second largest city - Birmingham, as well as with Sheffield and the East Midlands. If the Trans-Pennine link is upgraded as is proposed in the Northern Hub Proposal then of course across to Manchester as well.

That is also true of Manchester to Birmingham and those connectivity benefits which will fundamentally change and improve the relationship between our cities and economic centres are further intensified by the connection of Old Oak Common with Crossrail at a station we are calling Crossrail Interchange. This has two very important connectivity benefits. It is a 10 minute journey from Heathrow by Heathrow Express. So instead of the current position of passengers coming from the North by rail, coming into St Pancras, Euston or King's Cross and then having to (in a very inconvenient underground journey) slog across to Paddington and then get the Heathrow Express, they will instead come straight into Crossrail Interchange, over the bridge, onto the Heathrow Express, and on to Heathrow in 10 minutes. We are looking to see whether that connection can be further improved – as you know there is a debate taking place as to whether there should be a station located directly at Heathrow. I am not close-minded about that, but there are a lot of issues that need to be addressed, not least of which is 'where is Heathrow?' – it is an airport with three widely-dispersed terminal centres and all of that needs to be resolved.

But much more important than that connection, in terms of the passenger flows, is the connection onto Crossrail. From that Crossrail Interchange station which, as I say, is 31 minutes from the West Midlands, you will cross the bridge, go straight into the highest capacity, fastest underground line that there is in London which from the Crossrail Interchange is 10 minutes from the West End, 15 minutes to the City and 20 minutes to Canary Wharf. That further transforms the connectivity benefits you get from this line. It means, for example, that for most of these cities, going to the City or Canary Wharf, you save an additional 10 or 15 minutes as a result of the Crossrail Interchange against travelling on the Underground, over and above the gains that you get from the High Speed 2 line.

So the benefits of high speed rail are emphatically not just those that come from running faster trains – although the trains will be a lot faster – there are also two other equally significant benefits. I believe in transport, economic and social terms these will be transformational – there is the big capacity benefit that will meet intercity transport requirements into the mid and later decades of this century and there is also the connectivity benefits to come from the once-in-a-century opportunity to reinvent the railway map of Britain. So we do not have to adopt the routes that the Victorians, for reasons that were peculiar to them, had to adopt, but we can integrate, essentially, the East Coast and West Coast mainlines into the single spine of the

southern route from the West Midlands through to London, and therefore fundamentally change and improve the connections between our major cities and population centres. I believe this will be of benefit not just to London but will be of huge benefit to the cities in the Midlands and the North where what the economists call 'agglomeration effects' will be intensified by bringing the cities fundamentally closer together.

So this is a hugely important project. It is not just about running trains faster, it is also about fundamentally changing and improving relationships between our cities and if the critical elements are set fair and we have a consensus on the principle of high speed rail – indeed we do have a fairly high degree of consensus on this 'Y', the 335 track miles necessary to construct this 'Y' – if that consensus holds into the next Parliament, if it is possible for us to get through our fairly difficult planning system (which quite rightly takes into account local objections and I am only too well aware how significant those local objections will be) – I have been added to the mailing list of *Chiltern News* and it is going to be quite difficult for me to visit the Chilterns without disguise for quite a long period of time!

So these issues are going to be very difficult for us to address, but if it is possible to go through our planning system successfully, if the political consensus holds and if we have the drive and the determination over the coming years that High Speed 2 has shown in taking this project forward over the last year, then I believe it is just possible that in 2026 we will all be at London Euston when the ribbon is cut and the first high speed train leaves, heading North.

Thank you.