

Lord Adonis
Minister of State for Transport
Department for Transport
Great Minster House
76 Marsham Street
London
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13th February 2009,

Dear Lord Adonis,

Objectives and remit for HS2

I have now had some time for initial reflection on the issues facing HS2 and the work we need to undertake in order to deliver a report to you by the end of the year. I thought it would be helpful to share with you my initial views on the objectives and remit, to ensure that we have a shared understanding of what we are to deliver.

Scope of work beyond West Midlands

The Memorandum of Association for HS2 states that the company's objects are the 'development of proposals for a new railway line from London to the West Midlands and potentially beyond'. We are required to produce a potential route for the new line between London to the West Midlands. Beyond that, although we are not asked to provide routes, we need to ensure that the new line would fit with HS1 and a potential future high speed network, and we will need to consider the impact of possible future requirements on the configuration of this first, core, route. This could be passive provision for future additional capacity or designing in of capability from the start.

This could have several dimensions. We will need to ensure that proposals for London – West Midlands do not preclude possible future developments to the north. Longer term considerations may influence the choice of London terminus. In considering the Heathrow interchange and connection to HS1, we will need to consider longer term potential for transfer from air to rail, and also the scope for faster east-west connections across London. And we should also consider longer term developments to the west as well as the north. (Greengauge 21 is considering a corridor to the west.)

High Speed Two (HS2) Limited, registered in England.



Our proposed approach is to undertake a strategic level consideration of the longer term options and priorities, building on Network Rail's work, the Atkins study and Booz Allen work, and Greengauge 21 proposals. We do not propose commissioning major new work on longer term options.

In addition, we will consider how to maximise the benefit of the initial route through potentially re-routing train services to destinations beyond the West Midlands either with additional High Speed (the French approach) or existing conventional trains.

Objectives for HS2, London to West Midlands

My understanding is that the objectives for the new line, subject to what I say below about the environment, are as follows, broadly in order of priority:

Passenger capacity: this is the driving consideration, including capacity released on classic lines.

Speed: the new line should be sufficiently high speed to optimise journey time benefits balanced with operational energy costs and achievement of maximum capacity. It is likely to be designed to at least the maximum speed for HS1. It should also have the ability to maintain high average speed, which will mean avoiding any permanent speed restrictions (e.g. sharp bends) which also impact on energy consumption and effective capacity, managing the approaches to cities (especially if shared with classic lines) and avoiding intermediate stops.

Land use and development objectives: We need to ensure that transport and land use planning are properly integrated in respect of the new line. We will pay particular attention to the extent to which new housing development in the West Coast corridor is supported by our proposals – probably mainly through the provision of additional regional and local services using capacity released from the WCML. We will also consider the scope for enhancing economic regeneration in the West Midlands through improved connectivity.

Freight: HS2 should be viewed principally as a fast passenger service route. However, there would be advantage in building it to be *freight capable*, for the added network resilience this would provide, and potential provision of a cost-effective route for large gauge traffic, subject to no significant cost or operational penalties being attached to this. Whether paths were subsequently allocated to freight services would be a separate decision, depending on the passenger, freight, maintenance, economic etc requirements at the time. This is the German approach. HS2 should accordingly investigate the costs of providing freight capability on the new line.

In addition, there is an objective to provide enhanced capacity for freight on classic lines, through the capacity released as a result of HS2. The scale will

depend on an assessment of benefits and costs, alongside other potential (passenger) uses of freed up capacity.

Modal shift from car: 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). There are no specific modal shift requirements for HS2: the appropriate balance of modes will be determined by the relative costs and benefits, including environmental benefits, of securing modal shift. In this respect increased car use to parkway stations might be acceptable, if there is a net environmental (and maybe economic) gain secured from the inter-urban leg.

Modal shift from air: Overall modal shift from air is not expected to be a key objective for HS2. There are no flights between Birmingham and London, and it seems unlikely that the shortened 'hybrid' journey times to, say, Manchester, will capture much more market share from air than WCML has already achieved. Nevertheless, we will examine the potential impact of a faster and easier rail-based route to Heathrow on passengers interlining at Heathrow or European airports. With a connection to HS1, there could also be transfers to rail for journeys from the West Midlands to Paris and Brussels, which HS2 will investigate.

Absolute requirements

We need to be clear where there are fixed requirements for HS2, and where alternatively we have scope to make recommendations based on the assessment of costs and benefits. My suggestions for **absolute requirements** are listed below.

General standards: The new line and connections to the classic existing railway will be specified in conformance with EU High Speed Technical Specifications for Interoperability.

Loading gauge: The work by Booz Allen for the 2007 Rail White Paper work assumed double deck ('duplex') trains, which incur marginal incremental construction cost but may provide higher capacity, better infrastructure utilisation and a better business case. This requires height clearance to UIC GB+ gauge or similar. We propose to make this a minimum requirement, as not to do so would be a permanent capacity constraint. This would give the flexibility to run duplex high speed trains to Birmingham and single deck stock beyond.

HS1 is built to UIC GB+ which is also wider than the UK norm. This gives a platform edge clearance issue, but can be managed by train design (as is the case with the current Eurostar rolling stock).

An underlying given is that services on the new line must be able to run onto the existing network, so we need to avoid foreclosing on future options for

defining and managing services running onto the existing network, or for trains configured for the existing network making use of the new line infrastructure.

Heathrow International station: This must provide an interchange between HS2, the Great Western Main Line and Crossrail with convenient access to Heathrow. The nature and location of the interchange are for HS2 to advise on, taking account, inter alia, of the scope for modal shift from air and car. Abstraction of traffic from other UK airports into Heathrow should not be an objective. The feasibility of and benefit case for direct connection onto the GWML westwards will be explored.

Connection to HS1: We need to show that a connection with HS1 is feasible, and to identify options with costs and benefits.

There should be no intermediate stations between Heathrow International and West Midlands. Intermediate stations would lead to significant erosion of average speed. Furthermore, the most realistic practical option for housing development is likely to be incremental growth to existing towns in the West Coast corridor – the transport requirements for which can be met by utilising some of the released capacity on the WCML.

The following are areas where I suggest there should be **no fixed requirements** at this stage.

City centre or parkway stations: There are pros and cons of both, and the preferred solution should be driven by analysis of the relative costs and benefits. Indeed there is likely to be a case for both – for example Birmingham International could be a ‘parkway’ option for through services, with provision also for a city centre stop for terminating passengers.

Rolling stock: We should not design for any single type of rolling stock although the experience elsewhere of standardisation of trains - for ease of use, uniformity of performance and capacity maximisation - will be taken into account. Rather, we should design the line to a gauge and a vehicle/infrastructure system specification (including wheel/rail, control systems and power interfaces) and for an assumed train length for platforms, with passive provision above first generation requirements. Bespoke rolling stock would require bespoke design, manufacturing and maintenance facilities which are expensive and subject to locational constraints.

Fares premia for high speed services: we will explore a range of fares options with a view to optimising the business case for HS2.

Future proofing: As noted above we intend to make provision for UIC GB+ gauge a firm requirement along with conformance to EU Interoperability requirements which govern many of the detailed technical specifications. Beyond that I suggest that the question of provision for future proofing should be determined in the light of the cost of providing now versus future retrofitting.

On that basis we will provide a costed option for passive provision for 4 tracks. No high speed line to date is 4-track. However in the UK the southern end of every north-south main line route into London is now effectively operating at capacity. If HS2 were to act as the 'trunk' high speed route to the West Midlands with high speed branches off to the north west and the north east and through running to numerous other cities, the 12 paths provided by 2 tracks could quickly be filled. It would be a great deal cheaper and quicker to lay 2 additional tracks on a safeguarded swathe alongside HS2 than to start from scratch on a second north-south alignment. Experience with the recent upgrading of the West Coast Main Line has shown the great cost from traffic interruption as well as physical staging of having to expand an existing railway not designed for such.

Environment

In discharging our remit, we will be paying close attention to the environmental impacts of the new line, both locally in terms of biodiversity, landscape, noise, etc and at the national/international level in terms of carbon emissions. We will factor these potential impacts into our work on the identification of route options, the specification of the new line, modal shift, etc.

Outputs required by the end of the year

In the time available we are unlikely to be able to produce very detailed designs for the whole route, with options. In some places the route may be pretty well defined – e.g. if using a disused line, and approaching existing stations. Other parts, such as some cross country sections, may be more at the corridor level, but these should not be so broad as to cause widespread blight.

The outputs of the work should be a proposed route option and possible alternatives (with possible sub options e.g. for the Heathrow interchange) with a supporting business case which is sufficiently robust for Ministers to make an in principle decision on a new line, and to proceed to public consultation on the options. The business case will need to address value for money, affordability and deliverability, including environmental considerations.

Other outputs required at the end of the year include:

- Proposed specification (e.g. gauge, line speed, capability).
- Proposed location of maintenance facility/ies and stabling
- Identification of capacity released on classic line(s) – this will be a key element in the business case, and of benefit to communities not directly served by HS2 – although allocation of that capacity would be for industry processes.
- Options for structuring the project for delivery and financing, with a recommended approach

- Assessment of options and implications for public funding
- Recommended public consultation strategy, including requirements for environmental assessment
- Recommended approach to obtaining powers
- Blight management and safeguarding strategy
- Outline plan/timetable through to opening
- Proposals for next steps for new lines beyond West Midlands.

We will need to produce a publishable report.

SIR DAVID ROWLANDS
Chairman