



**Promoting Britain's
Railway
for Passengers
and Freight**

Policy Directorate

Freepost RTEL-YAZX-HAZT
Phase Two Route Consultation
PO Box 1152
HARROW
HA1 9LH

Please Reply to:

30 The Mount
Worcester Park
Surrey
KT4 8UD

Tel: (020) 8394 0675

E-Mail: norman.bradbury@railfuture.org.uk

29th January 2014

Dear Sirs,

RAILFUTURE RESPONSE TO HS2 PHASE 2 CONSULTATION

Railfuture is a national voluntary organisation structured in England as twelve regional branches, and two national branches in Wales and Scotland. We are completely independent of all political parties, trades unions and commercial interests, funded entirely from our membership. We campaign for improved rail services for passengers and freight. Whilst pro-rail, we are not anti car or aviation.

Railfuture strongly supports high-speed rail as an effective method of increasing capacity.

We submitted extensive comments on Phase 1 of the proposals in June 2011, and HS2 Ltd. will be aware of these.

Our first concern relates to the plans for the bulk of the domestic rolling stock fleet to be built to continental TSI GC gauge (hereinafter referred to as GC gauge), and therefore incapable of being extended or diverted over classic rail lines to serve other destinations off the primary HS2 route or to be diverted onto the classic network at times of emergency, or even to serve existing city centre stations rather than having to serve entirely new stations constructed elsewhere. The costs of these larger new stations are the reason a city centre high-speed station in Sheffield, for example, has been ruled out. The new line should still be built to the planned GC gauge making it future proof for such time that classic routes into city centre stations have been cleared for this larger gauge stock. Since no such gauge trains are likely to be needed for several decades, we suggest postponing or reducing orders for these until genuinely needed.

We therefore strongly advocate the bulk of the train fleet should be built to UK1 gauge to provide the flexibility made possible by a "go anywhere" design able to serve many more destinations off the HS2 network and consisting largely of only one train type to maintain. Such a train fleet would also reduce construction costs by reducing the need to build new stations for GC gauge trains. UK1 gauge trains will in any case have to be built to serve Liverpool, Carlisle, Glasgow, York, Newcastle and Edinburgh and it would be a simple matter to increase to size of the fleet, also helping to reduce costs through economies of scale achieved through larger production runs.

Where city centre station platforms cannot be extended to accommodate the longer trains proposed, running either shorter trains throughout the journey (8 or 12 car), or splitting 16 car trains en route, would be better options in order to serve the stations concerned. Interchange with other rail services at city

www.railfuture.org.uk www.railfuturescotland.org.uk www.railfuturewales.org.uk

www.railwatch.org.uk

Twitter: [@Railfuture](https://twitter.com/Railfuture) [@RailfutureScot](https://twitter.com/RailfutureScot) [@RailfutureWales](https://twitter.com/RailfutureWales) [@Railwatch](https://twitter.com/Railwatch)

centre stations would then be far more convenient for passengers. We would like to see the rolling stock orders re-examined accordingly, and we understand that the proposals do in fact include trains of 200m, coupled where required to run as 400m trains. The DB (German Railways) uses a variety of high-speed train lengths, to run 8, 12, or 16 (2 x 8) car trains, to serve different length station platforms and to meet differing traffic demands flexibly, and this seems the most appropriate proposal for the UK also.

Secondly we still question the need for the route to be designed to accommodate 400 km/h speeds when it is extremely unlikely that trains will ever be required to operate at more than 320 km/h, the current maximum operational speed in place anywhere else in the world. At the lower speed the built curved alignment can be less constrained, often cheaper to build than catering for the higher speed, and with reduced impact on other built structures. Electrical current usage and carbon emissions are far greater at 400 km/h compared to 320 km/h as wind resistances increases with the square of the speed. The overall time saving difference between 320 and 400 km/h will always be marginal for most typical shorter journeys in the UK where major traffic objectives are generally closer together than those in France, Spain and China for example. We question the methodology used, which relies heavily on hypothetical values for timesaving, some of which are at best marginal.

Thirdly, we are disappointed at the extent to which tunnels are proposed for the entire route to reduce visibility of the trains and perceived noise levels, or to avoid the more sensitive residential areas, thereby also increasing wind resistance, rather than use cheaper structures such as cuttings or noise barriers at wheel and lower car levels only. Passengers themselves prefer to see the landscape rather than tunnel walls.

Fourthly, we believe there should be more than the proposed four (only) connections apparently to the classic network, near Lichfield, Crewe, Wigan and Ulleskelf (south of York), and none at all south of Lichfield. This would severely limit any options to increase the services, which could be offered to run over the classic network in the future, even if not foreseen at present. We already referred to the need to serve existing city centre stations with UK1 gauge trains, which of course is only possible if adequate connections off HS2 are also provided. Elsewhere there should be actual or at least passive provision for connections, with reasonably fast turnout speeds at many if not most sites where HS2 crosses over or under other major rail lines. This policy is commonplace in France even where there are no plans to run HS services over these connections. If UK1 gauge stock is predominant then such connections would also provide obvious options for diversionary routes to be used in the event of accidents, storm damage, major repair work needs, etc., and used to a very great extent in central Europe, especially in Germany, over the past two years.

Finally, we remain opposed to the provision of out-of-town parkway stations as alternatives to serving city centre stations and other principal traffic objectives. The principal advantages of direct services between city centres remains attractive and a feature of rail travel not possible by air as well as affording avoidance of road congestion in city centres. Parkway stations simply encourage car traffic in the area, often adding further congestion, and are usually not well served by public transport, which should predominate for environmental reasons. They inevitably drive comparable businesses away from adjacent city centres, a common phenomenon now across most if not the whole UK even with a government "Town Centre First" policy and unfortunately often overlooked or ignored by local authorities who seem unaware that economic benefits attributed to out of town developments will be counter balanced by probable damage to town centre economies. We comment more on this issue when considering responses needed to the specific consultation questions.

Although we recognise with potential regeneration benefits from the choice of certain proposed station locations, we note an apparent bias in favour of this in preference to serving city centre and other stations from where passenger benefits from connectivity with regional and other inter city services would be optimised. Naturally, we feel this last should take precedence.

We are therefore opposed to the proposal to locate a station on HS2 at Toton (see our answer to Question 5 (e)) which would poorly serve the cities of Nottingham (population about 450,000) and Derby (population about 250,000) and which would require a shuttle service to connect to them. We would therefore advocate a connection with HS2 at the existing nearby interchange station at East Midlands Parkway from where high speed UK1 gauge services could access city centre services in Nottingham

and Sheffield via Derby and Chesterfield, thereby closely replicating the existing inter city fast hourly services to those cities and reducing overall journey times to London by about 20 minutes we suggest.

We remain of the opinion that the prime objectives of high-speed rail should relate to capacity and connectivity and that HS2 should serve city centres, with shorter journey times being a nice to have bonus.

We hope you find these comments useful and constructive.

Yours faithfully,



Norman Bradbury
Railfuture
Deputy Director Policy

Enc.....

c.c. (cover letter only)

Rt. Hon. Patrick McLoughlin, MP - Secretary of State for Transport

Sir David Higgins - Chairman, HS2 Ltd.

Mark Carne Esq. - Chief Executive (Designate), Network Rail

RESPONSE TO QUESTIONS RELATED TO THE HS2 PHASE 2 CONSULTATION

INTRODUCTION: We note in the Appendix B where alternative route and station locations were examined and considered, that the importance of potential redevelopment opportunities around some of the proposed station sites is promoted repeatedly, yet the establishment of the best and most convenient journey and interchange opportunities for the maximum convenience of passengers should be the most important consideration. While redevelopment may be a boost to the potential success of the parkway sites particularly, and a source of outside funding for the project, there are plenty of major stations around the UK where adjacent land is available already for comparable redevelopment, and where the need to build a new station could be avoided.

We noted also the rejection of some of the alternative routes and station sites which were examined, on the grounds that they added a very few minutes to overall journey times, or because they involved additional short sections of tunnel and therefore additional construction cost. A further apparent consideration was concern expressed by some local authorities that an altered route would impinge on green belt land, yet surely most of the proposed HS2 route crosses green belt land in any case? Also extensive tunnelling has already been planned in Stage 1 to avoid line-side residents seeing or hearing the trains, to a far greater extent than Railfuture would deem necessary or desirable. Furthermore, some of the alternative sites we have proposed for serving stations, such as Leeds and Sheffield for example, use routes or station sites not studied or examined in the list of alternatives in Appendix B. We advocate the use of UK1 gauge trains in all cases where it would not be possible to provide services at reasonable cost with continental TSI GC gauge trains (hereafter referred to as GC gauge)

(i) Do you agree or disagree with the Government's proposed route between the West Midland and Manchester?

Broadly agree, except that the route should be altered to run underneath Manchester Airport and connect with the terminals directly, and the other rail services at the station there. The landscape for an amended route south west of the airport appears to be similar to the one on the plans, and possibly one-mile additional tunnel length than proposed would be needed between the airport south western boundary and Manchester Longsight.

(ii) Do you agree or disagree with the Government's proposals for:

(a) A Manchester station at Manchester Piccadilly?

Agree this is the best possible location, but it should be designed with (at least) passive provision for a connection to be built to allow through running to the north at a future date, to serve important towns north of Manchester, and a route to reach the West Coast main line at Wigan, and especially if the HS2 route is extended on to Scotland eventually.

(b) An additional station at Manchester Airport?

Yes, but only if located underneath the airport terminals and existing rail station (see above comments on the route). The proposed site shown in the plans on the west side of the M56 motorway running alongside the western boundary of the airport will have no other rail-served access at all, and passengers would only be able to reach the airport terminal or existing airport station by bus, or possibly extended Metrolink tram, but certainly requiring a modal change for any airport passengers. The report does not explain why it would "not be feasible" to tunnel under the "whole of the airport area" and in any case a route to serve the airport terminal and adjacent station could surely run parallel to just part of the runway. We also cannot see how such a route would be a threat to Mobberley since the required route deviation would leave the planned HS2 route near Thorns Green well to the north of Mobberley. Again potential redevelopment opportunities are utilised to support HS2 Ltd.'s choice of the site for the Manchester Interchange station.

(iii) Do you think that there should be any additional stations on the western leg between the West Midlands and Manchester?

Yes. There should ideally be a low level station at Crewe in the tunnel underneath the station, since the route will pass straight through the present station site. This would significantly improve connections with train services to Chester, North Wales, and Liverpool, and from Stoke, Stafford, and West Midlands and more usefully accommodate the operation of HS services on and off the classic lines at this location both to and from the north and south. However we recognise that this would be a further additional high cost for the project, and a cheaper alternative would be a further link to HS2 to the north of Crewe station, thus putting the station on a loop and enabling selected HS2 services to connect with trains from Stafford, Stoke, Birmingham, Wolverhampton, Chester, to gain access to the remaining portions of HS2 to Wigan and beyond, and also to Manchester, either by new direct train services, or by changing at Crewe. We assume, and advocate in any case, that Crewe Station be rebuilt to accommodate longer trains, which presumably can then be divided and joined up here. An extension to platforms or limited rebuilding of Liverpool Lime Street station should be examined for operation of 12-car HS services. We also believe that HS services to Stoke, Macclesfield and Stockport could be provided by access at Lichfield, if the proposed 18 trains per hour capacity from Euston is not eventually fully utilised.

We consider that putting the HS2 through tracks in tunnel under Crewe station could be more costly than the alternative of placing them on a viaduct over the station as was done at Ashford on HS1 and this option should be investigated.

(iv) Do you agree or disagree with the Government's proposed routes between West Midlands and Leeds?

Disagree. The absence of connections to the classic network from this route, combined with the proposed operation of GC gauge trains, prevents access direct to the city centres of Derby, Nottingham and Sheffield. European high-speed rail experience strongly indicates that out-of-town parkway stations (in France and Spain chiefly) are rarely successful. At Leeds where the route splits, we urge the inclusion of a short west to north high-speed link also, so HS services can run from Leeds to York, Newcastle and beyond subsequently. It would be a shame to fail to include provision for such future services at the outset.

(v) Do you agree with the Government's proposals for:

(c) A Leeds station at New Lane?

Disagree. The proposed site is inconvenient for connections to regional train services at Leeds City station, which is sufficiently far away to discourage interchange with regional and other inter city services, and the proposed site is in the middle of a traffic gyratory feeding two motorways. This site is therefore unattractive, even if a covered walkway or travelators were installed to reach Leeds City station. This site is also described as having redevelopment opportunities in the South Bank waterfront area, which may have influenced its choice.

The best alternative site for a new station is at Marsh Lane, on the edge of the city centre just over one km east of Leeds City station, on the rail line to York, and there is enough railway owned land to accommodate a new HS station and possibly a same level local station for convenient interchange where trains to and from Leeds City (reached in 3 minutes) could call additionally. The site also has some regeneration potential. We believe a connection to the classic network would be possible here, enabling through running to Leeds City station and beyond to Bradford and Skipton using UK1 gauge stock.

We would of course prefer HS trains to run through to Leeds City station but we submit this as an alternative. If this was agreed, the HS2 route would need to follow a new route from its intended junction with the York spur, east of the city but there seem to be several possible suitable alignments to reach this line in spite of doubts expressed in Appendix B. The route would approach the Marsh Lane site past the Neville Hill depot site and use the spare tracks in the Richmond Hill tunnel, in association with the tracks needed for other services.

(d) A South Yorkshire station to be located at Sheffield Meadowhall?

Only in addition to separate access to Sheffield Midland city centre station, and possibly only constructed at a later stage. Sheffield Midland station in the centre of the city (population app 850,000) should be served directly, which would also facilitate many more useful connections than the proposed station at Meadowhall.

This could best be accomplished in our view, by two possible options:

(1) By a new moderately high-speed connection from HS2, immediately after crossing the A57 near Woodhouse Mill for about a mile northwest to a new junction at Orgreave on the classic line from Worksop, to arrive in Sheffield from the east. We do not accept the assumptions made about the cost or degree of reconstruction mentioned in the report to achieve a Sheffield Midland station suitable for HS trains, if our proposed route using existing tracks is utilised by UK1 gauge trains. While this option would facilitate a faster journey time from Sheffield Midland to London Euston, it would not benefit Derby, Chesterfield or Nottingham.

(2) A connection from HS2 to the Midland main line at East Midlands Parkway, which would require a slight deviation from the proposed line of route, over similar un-built terrain to that proposed, would enable UK1 gauge trains to access the existing city centre stations at Nottingham, Derby, Chesterfield and Sheffield. Besides serving Chesterfield the Derby-Sheffield section would take about 28 minutes with electrification already planned. We estimate the overall journey time from Sheffield Midland to London Euston would be about 1 hour 40 minutes compared to 2hrs 1 minute today.

We would envisage an hourly or half hourly HS2 service formed of 2 x 8 car trains joining and splitting at East Midlands Parkway with one train bound for Sheffield calling at Derby and Chesterfield as described above and the other for Nottingham Midland station. The other Midland main line hourly inter city services calling at more intermediate towns between London, Nottingham & Sheffield would continue to operate as now.

If Meadowhall HS station is also built, we recommend re-examination of the proposed site and platform location to ensure better interchange opportunities than are apparent from the diagrams. We do recognise that this station would be very useful for journeys to the north starting in the Sheffield-Rotherham conurbation. However, we would advocate a further connection between the classic network and HS2 near Meadowhall so that HS2 services via Derby, Chesterfield & Sheffield could re-gain access to HS2 and continue to Leeds and beyond. Other HS2 services to & from Leeds or further north could serve Sheffield by calling at the new Meadowhall station as required.

(e) An East Midlands station to be located at Toton?

Disagree. The plans show that the HS2 station would be sited well to the north of the A6005 Derby-Nottingham road, and even further south of the A52, which is very congested at times already. The interchange opportunities with new shuttle services from a new adjacent local station on the classic lines do not appear very convenient on the plan diagrams. In addition there is the time penalty and inconvenience of changing trains where a minimum of ten minutes would be needed for interchange, rather than the five minutes we believe to have been quoted, consequently some of the estimated journey times in the consultation documents involving a change at Toton are unrealistic. We note that East Midlands Parkway was rejected because there would be no supported redevelopment opportunities adjacent to the expanded station site because it is in a green belt area, a secondary consideration in our view to that of maximum passenger convenience and potential success of the train services proposed.

However, we note that the nearby coal-fired power station at Ratcliffe on Soar is likely to close in the near future and this site would present opportunities for re-development instead of Toton.

No reconstruction of either Derby or Nottingham stations would be required to accommodate UK1 gauge stock running at existing (or slightly improved) current line speeds. The splitting/joining operation would probably take only two minutes. East Midlands Parkway represents better scope for interchange than Toton, and overall journey times from either Nottingham or Derby city centres in 10 minutes, (similar to the probable 10 or 11 minutes that would be needed to reach Toton via sharply curved routes); the cost

of shuttle services from both cities would not then be required either, since other existing trains to/from elsewhere in the Midlands could provide the connections at East Midlands Parkway for passengers from both Derby and Nottingham to gain access to HS trains to reach Sheffield (but see our option (2) also), Leeds and other northern destinations.

Furthermore, East Midlands Parkway is the station for East Midlands Airport, linked by bus shuttle. This role seems to have been overlooked in choosing Toton, which is a long way from the airport. The service of this airport is an additional reason for selecting East Midlands Parkway as an HS2 station.

If the local authority for Nottingham have a vision to develop a major conurbation in the Derby-Nottingham metropolitan area over the next 50 years, then we would support an HS2 station at Toton but we do not consider that a parkway station within an industrial and retail park will provide the necessary transport or economic benefits to offset the likely economic damage such development could impose on the nearby city centres. Business travel to Nottingham and Derby will be made more difficult if the parkway station at Toton is built but travelling away from those cities for those with a car would be made easier, inevitably creating a negative effect on the local economy.

(vi) Do you think there should be any additional stations on the eastern leg between the West Midlands and Leeds?

No, not if sufficient connections to the classic network are provided, whether intended for new services or not at the outset.

(vii) Please let us know your comments on the Appraisal of Sustainability of the Government's Proposed Phase Two route, including to the alternatives to the proposed route.

Please see our separate page headed Additional Comments. Most importantly, reducing line speeds from 360/400 km/h to the more realistic speeds of 300/320 km/h would produce significant environmental benefits and reduce energy costs.

(viii) Please let us know your comments on how the capacity that would be freed up on the classic rail network by the introduction of the Proposed Phase Two route could be used.

Primarily it will be important to provide high quality fast inter-city services to large cities by-passed by HS2, especially Coventry, Leicester and Stoke-on-Trent, at least two per hour from London to each of these cities at similar overall speeds. This applies especially on the Midland Main Line where the proposed electrification scheme should not be under-mined by the HS2 proposals. These improvements will be needed if HS2 is not going to serve Derby, Nottingham and Sheffield city centres with direct HS services. The remaining capacity released should, we expect, provide much additional capacity for a modal shift of freight services from the roads, increased levels of commuter and regional train services, especially where there are existing 4-track routes, or where former 4-track routes can be restored to this capacity at relatively low cost.

(ix) Comments on introduction of other utilities along proposed Phase Two line of route:

We have no objection to this proposal so long as emergency access etc. does not interfere with railway operations.