

## **HITRANS Response to Transport Select Committee call for Evidence**

### **RESEARCH STRATEGY AND DELIVERY**

#### **High Speed Rail**

**The Highlands & Islands Transport Partnership (HITRANS)** is a statutory body covering all forms of public transport in the Highlands and Islands of Scotland encompassing not only road, rail, sea and air travel, but also cycling and walking.

HITRANS, working with its five constituent Councils, is charged with supporting the Scottish Government in delivering the National Transport Strategy and developing and delivering a strategy and promoting improvements to the transport services and infrastructure network that serve the region. The organisation takes an integrated and inclusive approach by consulting with the local communities and companies to achieve its objective of “enhancing the region’s viability by improving the interconnectivity of the whole region to strategic services and destinations”.

HITRANS is responsible for an area that holds many of the assets critical to Scotland’s future prosperity. It covers just under half of Scotland’s land mass but with only 410,000 residents – less than 10% of Scotland’s population. It includes over 80 island communities, of which 20 or so are served by air transport. The major challenge to maximising the effectiveness of the region is to improve its accessibility both internally and externally, to the rest of the UK and increasingly to international markets.

HITRANS welcomes the opportunity to respond to this call for written evidence from The Transport Committee as part of its inquiry into the strategic case for High Speed Rail. The Partnership offers the following input into the Review.

#### **1. *What are the main arguments either for or against HSR***

- 1.1 The main arguments for HSR are; economic growth and a balanced economy, rail capacity and Journey times and the environment.
- 1.2 Economic growth and re-distribution of wealth; The positive link between economic growth and transport connectivity has been long established. Experience in other countries has shown that HSR stimulates economic growth outwith the Capital City such as for Lille in France and will therefore re-balance the national economy and reduce the current north-south divide. Improved accessibility to the north of England and Scotland will in addition provide opportunities for growth as a whole in the UK economy.
- 1.3 Rail capacity; The West Coast RUS concluded that the southern end of this line would soon run out of capacity to cater for expected growth and the only effective way to deal with this scenario would be to build an additional line. The East Coast and the Midland Main Line would also in due course experience a similar situation. The construction of HS2 would then release capacity on existing main lines, in particular the West Coast, which will cater for additional local rail services and freight.
- 1.4 Reduced end-to-end journey time; This is a more important benefit and opportunity for North of England and in particular Scotland where rail still has a relatively low share of the inter-city travel market and where only

HSR can facilitate a step change in modal share from air to rail for longer distance travel whilst at the same time enhancing UK regional connectivity as part of a more sustainable UK economic growth strategy.

- 1.5 Environment; Increased capacity and significantly reduced journey times will stimulate transfer from car and air to rail. Rail is the only mode with the realistic potential to transport large volumes of passengers over long distances between UK cities and regions in a sustainable manner, in particular with an increasing proportion of the primary energy being renewable.

## **2. How does HSR fit with the Government's transport policy objectives**

***HSR is designed to improve inter-urban connectivity. How does that objective compare in importance to other transport policy objectives and spending programmes, including those for the strategic road network?***

- 2.1 The objectives and potential benefits of HSR go well beyond improving inter-urban connectivity by improving overall network capacity and enhancing regional connectivity by reducing journey times. Other objectives that will be met through HSR would be to redistribute wealth and enhance regional prosperity by reducing real and perceived peripherality within the UK and to make transport more sustainable, in line with Government Climate Change objectives.
- 2.2 Whilst some of these objectives could be met in part by investing in other transport modes, when compared with roads, rail is in particular more environmentally sustainable (air quality, energy use, land use) and is best suited for travel between and to access regional-centres

***Focusing on rail, what would be the implications of expenditure on HSR on funding for the 'classic' network, for example in relation to investment to increase track and rolling stock capacity in and around major cities?***

- 2.3 There are already significant 'high-cost' rail projects under construction, in particular London Crossrail (approx. £15 billion over around 7 years) and Thameslink (approx. £5.5 billion over around 8 years) and it does not appear that these schemes have affected funding for the general 'classic' network.
- 2.4 These two schemes will be very close to completion by the time construction would start on the proposed HSR between London and Birmingham in around 2016. At an approx. cost of £17 billion over 10 years, the peak expenditure on the London-Birmingham HSR and subsequent phasings should be no higher than for Crossrail alone, never mind the combined peak expenditure of the two London projects
- 2.5 There is already commitment to invest in a significant number of classic rail projects, such as Great Western Main Line electrification, Intercity Express Train Replacement Programme (IEP) and significant further enhancements to the East and West Coast Main Lines (e.g. Hitchin and Stafford flyovers)
- 2.6 The development of a comprehensive and regionally inclusive HSR network, which extends to the north of England and Scotland, must be viewed as a UK Treasury priority, with commitment to development of a HSR network which delivers comparable "step change" journey time, capacity and connectivity benefits for all of the regions, including Scotland.

***What are the implications for domestic aviation?***

- 2.7 In 2009, approximately 8.8 million out of the 13.2 million domestic UK Mainland air passenger journeys were between the main cities that it is anticipated will eventually be directly served by a UK HSR Network

(London, Birmingham, Manchester, Liverpool, East Midlands, Sheffield, Leeds, Newcastle, Edinburgh and Glasgow). With significantly faster rail journeys, there should be a major shift from air to a much more sustainable rail travel mode.

- 2.8 Out of the 8.8 million air journeys, as many as 6.7 million either start or finish in Edinburgh or Glasgow demonstrating the much more significant modal change potential that exists in extending the full HSR network to Scotland. It is, therefore, imperative that the construction of a high speed rail network also includes new lines across the Border, delivering journey time improvements comparable with those proposed between Leeds/Manchester/Birmingham and London. Under the current “Y network” proposals journey time improvements between Edinburgh/Glasgow and London are roughly half those for Birmingham/Manchester/Leeds to London, potentially worsening relative peripherality for the northern parts of the UK and failing to fully capture the economic and environmental benefits that HSR offers.
- 2.9 The 2009 rail market share of the Edinburgh/Glasgow to London rail/air market was around 20% with rail journey times of typically 4hrs 30 mins. For the Newcastle to London rail/air market, rail held around 60%, with a rail journey time of around 3 hrs and for Manchester-London journeys, rail held around 76% of the rail/air market with a typical rail journey time of around 2 hrs 10 mins. For the Leeds to London air/rail market, rail held more than 95% of the market, with a typical rail journey time of 2 hrs 15 mins.
- 2.10 A 30 mins reduction in journey time (which should be achieved with high speed rail between London and West Midlands), could therefore see a shift from air to rail of nearly 1.5 million of today's long-distance passenger journeys. This should increase to more than 3 million with the extension of the network to Leeds and Manchester when it must be assumed that domestic flights between Manchester/Leeds/ Newcastle and London will end. It is acknowledged however that modal split is also affected by other factors such as frequency and fares and ease of airport access.
- 2.11 3.8 million out of the 8.8 million air journeys quoted above are to or from London Heathrow so there should be significant scope to redirect valuable take-off and landing slots to other routes. Some of these Heathrow slots should go to domestic air routes that do not directly benefit from High Speed Rail, such as Aberdeen and Inverness which will not directly gain from the HSR network due to their geographical peripherality, so that these cities and their surrounding regions do not ‘fall behind’ in respect of London and international connectivity.

### **3. Business case**

***How robust are the assumptions and methodology – for example, on passenger forecasts, modal shifts, fare levels, scheme costs, economic assumptions (eg about the value of time) and the impact of lost revenue on the ‘classic’ network?***

- 3.1 A number of fairly in-depth studies have been undertaken into a UK High Speed rail Network in addition to the HS2 study, in particular the following three major studies:-
1. Atkins study (on behalf of SRA), later updated for the Government in 2008
  2. Network Rail ‘New Lines’ study (2009)
  3. Greengauge21 ‘Fast Forward’ study (2009)
- 3.2 The studies looked at different HSR solutions and had different objectives behind their proposals. However, there were common strands such as the need for and benefits of a comprehensive UK north-south network

linking in the major cities from London to Edinburgh and Glasgow. They all showed positive cases for a HSR network with benefit/cost ratios in the region of 2 – 3.5 and costs and passenger forecasts comparable with those found in the HS2 study.

- 3.3 A recent argument is that assumptions on time spent on trains is 'un-productive' has overestimated the benefits of HSR. A recent study by Greengauge21 (where time spent on train would be regarded as 'working-time') did however show that the opposite was the case (although only marginally so). Passengers transferred from car and air would gain more productive time than in the original estimate and this would outweigh the 'over-estimate' (in the original study) of working time gained by passengers transferred from classic train services.. It could also be argued that HSR will create a better working environment than current rail services and also that there will be a limit as to how long it is reasonably practical to work on a train.
- 3.4 The study by HS2 surprisingly did not include Edinburgh – London services in its modelling and business case for the London – Birmingham/Lichfield High Speed Line although the Edinburgh – London market is around 30% greater than the Glasgow – London market. Edinburgh – London Services via the West Coast and HS2 would be around 30 mins faster than existing services (as for Glasgow services) so by including Edinburgh – London services should make the business case even stronger.

***What would be the pros and cons of resolving capacity issues in other ways, for example by upgrading the West Coast Main Line or building a new conventional line?***

- 3.5 Upgrading the West Coast Main Line could only be limited in scope in respect of capacity and the Network Rail RUS concluded that the only longer-term capacity solution would be to construct a new line between London and West Midlands.
- 3.6 The most recent upgrading of the West Coast Main Line also saw significant added costs in terms of disruption to services and reduced capacity during construction. Adding these costs to the actual upgrading cost of around £9 billion (the most recent cost estimate) for a scheme that will give less incremental capacity than a new line, it is almost certain that such an upgrade will not be better value than a new line.
- 3.7 A new conventional line (restricted to 125 mph) would largely resolve the capacity issue but would not enhance journey-times and would therefore be much more limited in benefits to North of England and Scotland where journey times become increasingly more important. Without the journey-time savings, there will not be such a significant shift to rail from the less environmentally sustainable modes of car and air. Greengauge21 has also shown that the cost of a conventional line is only marginally cheaper than a High Speed line. In summary, the potential regional and UK economic and environmental benefits would be significantly diminished compared to HSR.

***What would be the pros and cons of alternative means of managing demand for rail travel, for example by price?***

- 3.8 Managing demand by higher fares or by not providing more capacity would push passengers back onto less sustainable modes such as car or air, or journeys would not be undertaken in the first place which would be damaging in overall socio-economic terms.
- 3.9 There must also be doubts if price alone could realistically manage to reduce demand sufficiently to avoid investing in additional capacity. Regulated fares are already the highest in Europe and increasing these fares

much further in real terms could make rail travel only affordable by the more well-off in society, contrary to wider equality and social inclusion objectives.

***What lessons should the Government learn from other major transport projects to ensure that any new high speed lines are built on time and to budget?***

3.10 Construction of new rail lines (as opposed to rail upgrades) in this country has a reasonably good track record in terms of time and budget, e.g. HS1 and the recent Airdrie-Bathgate project. There will also be a large number of European High Speed projects that have a good record in this respect.

**4. *The strategic route case for more (or fewer) intermediate stations?***

***The proposed route to the West Midlands has stations at Euston, Old Oak Common, Birmingham International and Birmingham Curzon Street. Are these the best possible locations?***

4.1 The most important issue for high speed rail is that stations are well located to serve the key UK cities and major centres of population and, through excellent connections with regional rail networks, their surrounding regions. Rail is the most efficient mode in respect of land use to access city centres where this can be achieved, and without city-centre termini the advantage of high speed rail will be eroded.

4.2 Station locations outwith city centres will depend on local circumstances but should on average be located at not less than 100 mile intervals along the line. As a general principle HSR services should only stop at key city or regional hubs, with limited stopping patterns aimed at maximising achievement of the over-arching economic, environmental and regional connectivity objectives and benefits of the project.

4.3 Stations should only be provided where demand is predominantly for long distance rail travel. The temptation to add stations to cater for high volumes of shorter journeys such as commuting, must be resisted on the basis that such a strategy would erode the benefits of HSR.

***Which cities should be served by an eventual high speed network? Is the proposed Y configuration the right choice?***

4.4 Most studies have demonstrated that a UK network including London, Birmingham, Manchester, East Midlands, Sheffield, Leeds, Newcastle, Edinburgh and Glasgow derives greatest benefit and offers best value. These should be considered as the core cities for a north-south high speed network, which could be expanded by a western network. The UK Government's proposed "y-network" supports this scenario but needs to be extended to Scotland.

***Is the Government correct to build the network in stages, moving from London northwards?***

4.5 No. It is accepted that phase 1 of the HSR network should be the London-Birmingham section. It is the most capacity constrained section on the West Coast Main Line and is probably also the most complicated section to plan and construct. Furthermore, the link between Birmingham and London is accepted as being crucial to the future development of a more extensive UK HSR network. Should the London – Birmingham section be rejected, it is highly unlikely that a national network will ever materialise.

4.6 However, the proposition that future phases should be constructed moving northwards from London is challenged. The most speed restricted sections of the network are typically across the English-Scottish border. In addition, as indicated above, various studies have confirmed that extension of an HSR network to

Scotland will deliver significantly greater economic and environmental benefits. Consequently detailed consideration should be given to starting construction of northern sections at a much earlier stage rather than as “last legs”, with cross-Border sections being potentially progressed alongside, or possibly earlier than, sections between Leeds/Manchester and Birmingham.

- 4.7 In particular, the UK Government should show greater commitment to plan the future network beyond Manchester and Leeds in recognition of the benefits the completed HSR national network, including Scotland, will achieve.

***The Government proposes a link to HS1 as part of Phase 1 but a direct link to Heathrow only as part of Phase 2. Are those the right decisions?***

- 4.8 The link to HS1 must be part of phase 1 due to technical issues but will also cater for the current West Midlands-Europe market.

## **5. Economic rebalancing and equity**

***What evidence is there that HSR will promote economic regeneration and help bridge the north-south economic divide?***

- 5.1 European experience has shown that most regions directly connected to the high speed network experience higher economic growth and there is no reason why this should not be the case for the UK. A Greengauge21 report also found that areas of Kent experienced rapid growth following the construction of HS1.
- 5.2 The 2009 Greengauge21 study also found that regional economic benefits from a ‘full’ HSR network between London and Glasgow/Edinburgh would amount to around £80 billion and would be widely distributed but with Central Scotland, the North West and the South East benefitting most.

***To what extent should the shape of the network be influenced by the desirability of supporting local and regional regeneration?***

- 5.3 The most important element of a High Speed Network is to improve connectivity between the main centres of population in the UK and in particular connectivity with London. By serving City Centres, high speed rail will indirectly support regional regeneration.

***Which locations and socio-economic groups will benefit from HSR?***

- 5.4 A Greengauge21 study advised that the business case for high speed rail was robust when based on current fare levels for long-distance rail travel and would cater for both business and leisure travel. Furthermore, the release of capacity on the existing network will also benefit other travellers and commuters in particular, as well as users of rail-freight. As such, all socio-economic groups currently using rail would benefit if fares do not rise. If fares rise then this will result in negative impacts on lower social groupings..
- 5.5 The majority of the population of the UK enjoys reasonable good links with the Cities that will be directly served by a future HSR network extending to Edinburgh and Glasgow. Many cities along the HSR corridors will also experience improved connectivity by increased service levels on the classic network.
- 5.6 However, it must be recognised there will be areas that will benefit significantly less such as the Northern half of Scotland, Wales, the South West of England and Northern Ireland and transport investment in these

areas should be identified to reverse their relative decline (such as rail electrification programmes or, for the north of Scotland, improved air connectivity) and ensure a fair distribution of benefits.

***How should the Government ensure that all major beneficiaries of HSR (including local authorities and business interests) make an appropriate financial contribution and bear risks appropriately? Should the Government seek support from the EU's TEN-T programme?***

- 5.7 There may be examples from other countries with HSR that could be used as models and there may also be lessons learned from London Crossrail project
- 5.8 A UK HSR Network will 'replace' current classic rail links that form part of TEN so support should be sought from TEN-T and other relevant EU budgets.

## **6. Impact**

***What will be the overall impact of HSR on UK carbon emissions? How much modal shift from aviation and roads would be needed for HSR to reduce carbon?***

- 6.1 HSR has considerably lower carbon footprint than car and air and also matches that of classic rail when the higher capacity of HSR trains are taken into account. If it can be assumed that the primary energy source is non-fossil the carbon footprint from HSR operations (after construction completion) should be relatively very small.

***Are environmental costs and benefits (including in relation to noise) correctly accounted for in the business case?***

- 6.2 It could perhaps be argued that studies have erred on the 'safe' side so that overall environmental benefits have not been fully expressed.

***What would be the impact on freight services on the 'classic' network?***

- 6.3 The release of capacity on the classic network, in particular on the West Coast Main Line which is the busiest rail freight corridor in the UK)) should in part be utilised by rail freight services so the impact on freight by HSR should be very positive.

***How much disruption will be there to services on the 'classic' network during construction, particularly during the rebuilding of Euston?***

- 6.4 Experience from the St Pancras redevelopment indicates that this should be manageable. Disruption could also be reduced through service changes/ improvements to some of the existing local services terminating at Euston. For example, some local services on the West Coast Main Line as far out as Northampton could be incorporated into the Crossrail network through a connection in the Willesden/Old Oak Common area, extending planned Crossrail services from the East that would otherwise terminate at Old Oak Common. This could take away up to 7 train arrivals/departures per hour from Euston Station.

**Report by:** Dave Duthie  
**Designation:** Partnership Director  
**Date:** 23 May 2011

