

GREATER MANCHESTER INTEGRATED TRANSPORT AUTHORITY**REPORT FOR INFORMATION****COMMITTEE: POLICY & RESOURCES****DATE: 20th NOVEMBER 2009****SUBJECT: PUBLICATION OF 'FAST FORWARD: A HIGH-SPEED RAIL STRATEGY FOR RAIL'****REPORT OF: THE CLERK OF THE AUTHORITY**

PURPOSE OF REPORT

To inform Members of the publication of the "Fast Forward" Report into high-speed rail, produced by the Greengauge 21 Public Interest Group which the Authority is a member of.

RECOMMENDATIONS

Members are recommended to

- i) note the report
- ii) welcome the contribution it makes to the development of a high speed rail strategy for the UK
- iii) request that officers remain engaged with Greengauge 21 and with other stakeholders so as to ensure that the needs of Greater Manchester are reflected in any emerging proposal for high speed rail.

BACKGROUND DOCUMENTS

1. Previous reports held on file in the ITA Policy Unit Office
2. Publication Of 'Fast Forward: A High-Speed Rail Strategy For Rail'; Greengauge 21. September 2009

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PUBLICATION OF '*FAST FORWARD: A HIGH-SPEED RAIL STRATEGY FOR RAIL*'

1. BACKGROUND

- 1.1. At its April 2008 meeting this Authority resolved to join a Public Interest Group to carry out a comprehensive study into the potential for a high speed rail network in the UK. The group was formed by Greengauge 21, a campaigning organisation set up specifically to promote the concept of high speed rail, and comprises a number of other organisations including Network Rail, Transport for Scotland, the Association of North East Councils, Northern Way and BAA.
- 1.2. The study has been underway for over a year, and is overseen by a steering group which includes the Deputy Clerk of the Authority. In addition to a number of technical reports the group published 'Fast Forward: A High-Speed Rail Strategy For Rail' in September, which sets out their proposals in full, as well as identifying the environmental benefits and funding mechanisms.
- 1.3. This study is one of a number of reports which have been, and which will be, produced this year. In August, Network Rail produced its New Lines Study, which recommended a line serving London, Birmingham, Manchester, Liverpool, Preston, Warrington and Scotland. Greengauge 21 has produced a number of reports throughout the year on particular aspects of HSR and this report is intended to bring each of those various areas of work together in a final report. Most importantly, the Government company HS2 has been tasked with proposing a HSR line between London and the West Midlands, and outline options for a route linking Greater Manchester, West Yorkshire, the North East and Scotland. That report will be submitted to the Secretary of State before the end of the year and it is expected that the Government will consult on its recommendations early in the New Year.

2. WHAT IS HIGH SPEED RAIL?

- 2.1. High speed rail (HSR) is commonly defined as a railway capable of operating at speeds of 320km/hr (200 mph) and used mainly for transporting passengers rather than freight.
- 2.2. Mainline Europe currently has 3,480 miles of high-speed railway lines with a further 2,160 miles under construction and 5,280 more miles planned for the future. Britain, meanwhile, has just 68 miles of high-speed lines in operation, between London St Pancras and the Channel Tunnel (known as HS1).

- 2.3. Other European countries have already recognised the importance of HSR. Germany, France, Belgium, Spain, Italy and the Netherlands all have well-established high-speed networks with ergonomically designed trains designed to make them as fast and energy-efficient as possible.
- 2.4. Experience from Europe has shown that HSR has the potential to encourage modal shift from other, less sustainable forms of transport, and to aid regeneration by improving linkages to growth areas.

3. 'FAST FORWARD' PROPOSALS

- 3.1. The 'Fast Forward' report recommends a comprehensive network covering all of the UK's major cities. Given the complexity and cost of such a network, a phased approach is recommended
- 3.2. The first phase involves a link up the west coast of England, from London to Liverpool and Manchester. Such a link would cut journey times between Manchester and London from 2hrs 10 min to 1hr 15 min It is also recommended that as part of this first phase, spurs are built to Heathrow airport and HS1 to give connections to Europe. Clearly, the Authority should welcome such a proposal, reducing as it does much of the capacity constraints on the West Coast Main Line and providing an opportunity to expand local commuter and freight operations.
- 3.3. Any such line would need to be integrated into the existing rail network to allow access from as wide an area as possible and so mitigate any negative economic impacts from regions which were not served by the line directly. Thus it would be possible to run high speed trains onwards to Scotland, Leeds and Newcastle.
- 3.4. The second phase would consist of a line running up the East Coast and serving Nottingham, Sheffield, Leeds and Newcastle. This would be followed by an extension of the west coast line up to Scotland to serve both Edinburgh and Glasgow
- 3.5. Both of these lines north-south would be built to operate at up to 320kmph (200mph) and could carry up to 15 trains per hour – providing capacity for 16,000 passengers per hour on each line. They would also be built to European standard to allow services to run through to the continent if necessary and also to allow for the possibility of running duplex (double deck) trains which would allow for a 40% increase in capacity at no additional infrastructure cost.
- 3.6. Following the construction of these two high speed lines it is proposed to build a line across the pennines linking Manchester and Sheffield/Leeds. However, this would not be built as fully high speed but would instead be an electrified conventional line operating at up to 200kmph (124mph). This is due to the nature of the terrain which would require extensive and

costly tunnelling for much of the route. It is calculated that such a line would provide a journey time of around 30 minutes between Manchester and Leeds, compared to 55 minutes now (though the Government has committed Network Rail to reduce this to 43 minutes).

3.7. The final phase would be to build an electrified line between London, Bristol and Cardiff, with the potential to upgrade this to a full HSL if the demand were ever to justify it.

3.8. It would then also be an option to link the east coast line to the Scottish cities already served; whilst this does not have a particularly strong benefit:cost ratio, it would increase the flexibility of the route and open up a wide variety of possible journey options. This route would most likely be a mixture of both HS and electrified line.

3.9. The full line is shown in the map below:

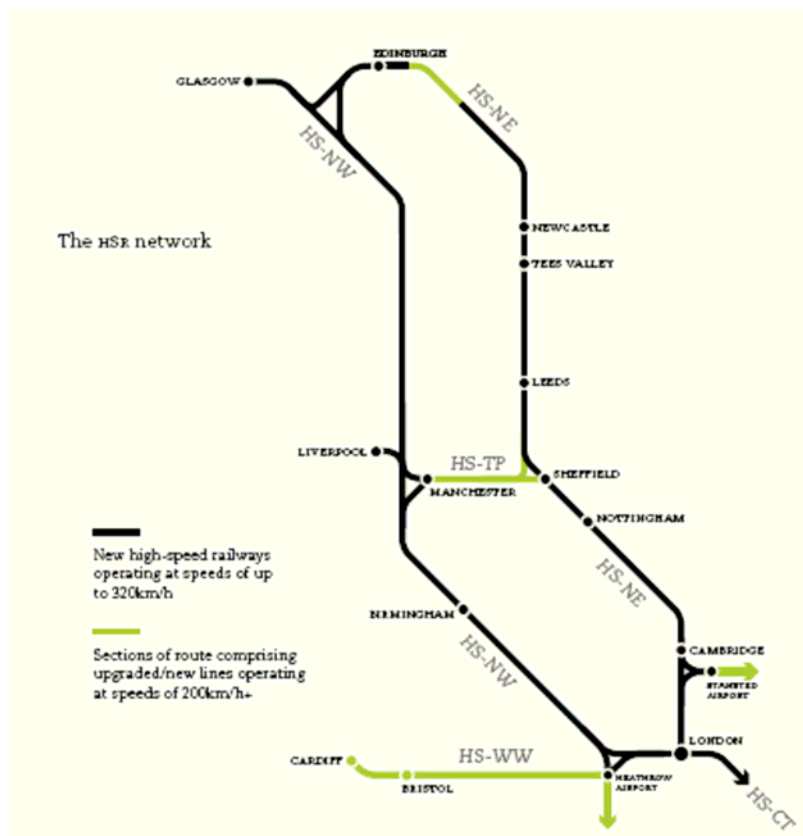


Fig 1: Proposed Green Gauge 21 network map

4. ENVIRONMENTAL ISSUES

4.1. High speed rail currently produces one-third of the carbon emissions of car travel and a quarter of an equivalent trip by air, taking average load factors into account. In the future, HSR will further improve its environmental performance as our electricity supply becomes gradually decarbonised in line with Government targets.

- 4.2. Forecasts suggest that by 2055 a full HSR network will be carrying 178 million passengers a year. Of these 101 million would be abstracted from the conventional rail network, 30 million from air, and 13 million from car journeys. In addition up to 34 million journeys on the network would be induced demand – journeys which would not otherwise be made had the network not been built.
- 4.3. This would suggest that the full HSR network could deliver carbon saving of around one million tonnes per year. This is a valuable contribution from the long distance domestic market to the carbon reductions that all sectors of industry need to deliver.

5. FINANCING AND DELIVERY

- 5.1. The cost of the full proposed HSR network is £69bn; this is roughly in keeping with the costs per mile of the construction of the Channel Tunnel Rail Link. The cost of the phase one line from London to Manchester/Liverpool would be £19bn.
- 5.2. The appraisal suggests that HSR will earn more in revenues than it will cost to operate, however, there would be insufficient surplus to fund the infrastructure costs once the reduction in revenues from the conventional rail network (which would be only partly offset by a fall in operating costs) is taken into account. The scale of the investment required for HSR is significant and would most likely be met through the development of a Public Private Partnership (PPP).
- 5.3. Whilst the costs are large, these must also be balanced against the benefits that such a network would bring. The overall benefits of a HSR network are expected to total £111bn over 60 years with a net benefit of £63bn. These sums arise for revenue, improvements in journeys times, and crowding, reductions in road congestion, environmental improvements and the economic benefits arising in the release of capacity on the conventional rail network. In total the benefit: cost ratio for the network is in excess of 3:1.
- 5.4. In addition to these conventional benefits the 'wider economic benefits' (WEBs) have also been calculated; these are improvements to business productivity which occur due to changes in infrastructure which can result in particular locations becoming more accessible. These WEBs are estimated to add a further 13% or £14bn to the conventional cost:benefit ratio.
- 5.5. It is extremely difficult to disaggregate benefits down to a regional or sub-regional level, but it is believed that around £11bn of benefits arising from HSR would be felt directly in the North West.
- 5.6. If planning were to begin in 2011, construction of the first line could begin in 2016 and begin operation in 2022. Under a Design Build Finance Transfer (DBFT) type contract a private sector construction consortium

would build the infrastructure and then transfer it to a management company to maintain it either over a long concession period or in perpetuity. This is similar to the approach in place for HS1. The financing structure assumes a service operator, and infrastructure builder /maintainer and a rolling stock manufacturer/maintainer. The operator pays access charges for the use of the new infrastructure sufficient for the for the infrastructure manager to repay its finance costs and receive an economic return on investment. The operator also pays an availability payment to the rolling stock provider for making trains available. That payment is sufficient for the rolling stock company to pay its finance costs and to receive an economic return on investment. The high speed operator is also assumed to earn an economic return on its operating franchise and pays any surplus revenues back to Government by way of a premium.

5.7. A variety of funding sources could be available to fund a high-speed line. The beneficiaries of HSR extend well beyond HSR users and include freight as well as passengers, the short haul sector air sector as well as road users and rail passengers on the existing network too. In addition to direct Government funding other sources might include:

- Farebox revenue from the HSR users
- Hypothecated charges and environmental charges
- Capital grants from strategic beneficiaries such as airports
- Regional funding – thought this is unlikely given current arrangements.
- There may also be some scope to realise major property uplifts in the vicinity of HSR stations and these could offset some of the capital costs.

6. CONCLUSION

6.1. This report is a significant contribution to the debate on high speed rail. Such a network has the potential to affect a massive shift in the economic performance of the UK's major cities as well as reducing our reliance on more carbon intensive forms of transport. From a Greater Manchester perspective such a network would also strengthen our links with London as well as the key city regions of West Yorkshire and Merseyside. It would also, importantly, release significant amounts of capacity on the local rail network which could be used to benefit commuters as well as freight operators.

7. RECOMMENDATIONS

7.1. A detailed set of recommendations appear at the front of this report

**SIR HOWARD BERNSTEIN
CLERK OF THE AUTHORITY**