18 January 2016

National Infrastructure Commission consultation
HM Treasury
1 Horse Guards Road
London
SW1A 2HQ

Dear Sir/Madam,

The IET's response to the National Infrastructure Commission consultation on Connecting Northern Cities

In response to your call for evidence, we would like to submit our comments to the enquiry questions on the above topic.

The Institution of Engineering and Technology is Europe's largest professional engineering and technology organisation. The members represent a wide range of expertise, from technical experts to business leaders, encompassing a wealth of professional experience and knowledge.

This response has been compiled on behalf of the IET Board of Trustees by the IET’s Transport Policy Panel. The panel consists of senior representatives from industry, academia and government.

If the IET can be of any further assistance please do not hesitate to contact me.

Yours faithfully,

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Head of Policy

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Connecting northern cities

1. To what extent are weaknesses in transport connectivity holding back northern city regions (specifically in terms of jobs, enterprise creation and growth, and housing)?

- The complex geography of the North is matched by the complexity of the Northern and Transpennine rail network, which has the largest number of stations of any region. However, current average express and stopping rail speeds around 100 km/h and 50 km/h respectively are too slow to achieve virtual intensification, and even vehicle automation could not much increase door-to-door speeds on current roads (Manchester-Leeds average 70 km/h via M62).

- The proposed Manchester-Sheffield expressway under the Pennines will increase connectivity across the south Pennines and will reduce pressure on the M62, which in turn could be utilised better for connectivity between West Yorks and Manchester.

- HS3 could operate in the same way as Cross-Rail in as it could provide a high speed, high capacity core across the Pennines allowing increased connectivity between points beyond each end of the core. HS3’s introduction needs to be timed to coincide with a future re-letting of both the Northern and Transpennine franchises, under the control of Transport for the North or another similar overarching authority, to ensure this connectivity is achieved.

- Poor capacity, longer journey times and poor linkages into railheads - compared with the south east - disadvantage the north and hold back commuting opportunities and access to employment. Lack of simple ‘clock face’ timetabling as found on the Underground make commuting between northern centres harder and less attractive. This makes the northern workforce less flexible and mobile than that found in the south east.

- It is considered the following pressing issues are weaknesses in transport in northern regions;
  - M62 over capacity
  - Long Transpennine rail journey times
  - Substandard secondary road links, particularly between south Yorkshire and Manchester
  - Lack of rail capacity on the two main rail corridors, (Stanedge and Hope Valley routes) and only one secondary route (Calder Valley Line)
  - Poor quality linkages into railheads (rail) and onto the M62 (road)
  - Surface access to Leeds / Bradford Airport, and it’s lack of motorway access or any form of rail link.
2. What cost-effective infrastructure investments in city-to-city connectivity could address these weaknesses? We are interested in all modes of transport.

- Expansion of electrification beyond Transpennine spine to include other Transpennine routes and feeder lines. Also, expansion to more destinations (Hull, Scarborough, north Wales) to allow greater range of through cross-Pennine journey destinations, (in the same way Cross-Rail and Thames-Link will do this for London and the south east)

- Sheffield to Manchester 'M67' motorway extension.

- HS3, to be built along the lines of CrossRail, with a high speed, high capacity core section and multiple destinations on each side of the Pennines.

- More integration between HS2 terminals in Leeds and Manchester and the HS3 alignment.

- Improved linkages to main rail heads, (road and rail) and better road connectivity within west Yorkshire and Greater Manchester to reduce reliance on the M62 for short journeys.

- Expansion of Broadband and digital services to offset the naturally harder terrain found in the north, which will always impose some degree of journey time and capacity penalties compared to the south east.

- Focus on (relatively) small scale improvements to routes into the large cities to allow better access to the HS2 terminals from larger parts of the regions.

- Given the size and long term investment, there needs to be a clear strategy on which ‘future vision’ is adopted. The strategy can be a network of roads with continuous movement of vehicles whose effect is likely to be more sprawl rather than urban intensification; or greater reliance on rapid links between and within intensified areas of habitation and employment.

- Increasing digital infrastructure is also important in improving connectivity and making transport systems smarter, for example wider adoption of smart motorway technologies. Technology has the potential to reduce congestion and improve passenger experience and should be considered within any infrastructure strategies.

3. Which city-to-city corridor(s) should be the priority for early phases of investment?

- Leeds / Manchester (electrification, motorway improvements and HS3)

- South Pennine (electrification and new 'M67' motorway)

- North Pennine / Calder Valley corridor (Leeds – Bradford – Halifax – Preston), (electrification and road and rail alignment improvements to increase connectivity into Cities and reduce pressure on the M62)

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There currently appears to be a focus on achieving very fast nominal journey times between cities, which may be a false target. Although journey times between Leeds and Manchester (for example) do need to be significantly reduced, this should not involve striving to achieve arbitrary targets at the expense of better wider connectivity. For example, very high speed services between Leeds and Manchester that did not stop at Huddersfield would be of only limited value. Services on the Underground achieve good end-to-end journey times that provide attractive commuting options by using very regular, fast accelerating trains but still serve many intermediate stops along their routes.

4. What are the key international connectivity needs likely to be in the next 20-30 years in the north of England (with a focus on ports and airports)? What is the most effective way to meet these needs, and what constraints on delivery are anticipated?

- A decision needs to be made on the future road and rail surface access to Leeds Bradford Airport (LBA). Although expansion and improvement of LBA is favoured by the Leeds and Bradford regions, when viewed more widely it might be better to concentrate on Manchester International Airport. This offers more opportunity for expansion than the constrained site of LBA does and has (and will always have), much better surface accessibility. For most of the North, focussing on enhanced access to MIA, with its better mix of short and long haul destinations, would be a better proposition.

- Improvements to access into Humber ports, for increased freight use and to allow ports to develop other flows as coal importation diminishes. Further exploitation of the E20 pan European route and promotion of Transpennine routes as a land-bridge between mainland Europe and Ireland. As coal use in the UK falls, it is likely that the Humber ports will need to refocus on other freight flows such as intermodal traffic. This will require better rail links (including electrification of the south Humberside rail line between Grimsby and Doncaster) and improved road accessibility.

5. What form of governance would most effectively deliver transformative infrastructure in the north, how should this be funded and by whom, including appropriate local contributions?

- The North is moving in the right direction, with the formation of City regions along the general lines of the former Integrated Transport Authorities, and the devolution of spending decisions from Whitehall. The formation of an overarching ‘Transport for the North’ will allow for a truly regional, strategic direction to be taken and mitigate the inevitable tensions that will arise between the City Regions.

- It is also encouraging to see TftN having a role in specifying the new Northern and Transpennine Express franchises. This follows the long-standing role that Mersey Travel have had in specifying and managing the Mersey Rail franchise and it is hoped that in the future these franchises can be completely devolved to TftN. The coming challenges of integrating the northern rail franchises into HS2 operation and the opportunities presented by HS3 will require this to happen. The aspiration is that ultimately, TftN can grow into a similar organisation as TfL, in terms of the range of its powers.
• Similarly, there needs to be more local control of the activities of Highways England in the north, to allow closer coordination between the local highway authorities and HE. One target could be that ultimately, the 'franchise' under which HE operative the trunk road network in the north should be devolved and managed by TftN.