

# Rail Needs Assessment for the Midlands & the North

Submission to the  
National Infrastructure Commission

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**RESPONSE BY IPFA MEMBERSHIP TO THE NATIONAL INFRASTRUCTURE COMMISSION,  
REVIEW ON RAIL NEEDS ASSESSMENT FOR THE MIDLANDS AND THE NORTH**

**DATED MAY 2020**

This document sets out the collective views of IPFA members on the consultation document issued by the National Infrastructure Commission (NIC) for their review of rail needs for the Midlands and the North.

IPFA is the global professional association that connects and promotes the collective interests of both public & private sector organisations, and professional individuals involved in infrastructure and energy, including transport infrastructure, planning, financing, and delivery.

IPFA and its members welcome the opportunity to input into this important consultation.

**General Comments.**

Whilst we are all impacted by the crisis both personally and within our respective businesses it is important to remain focused on the long-term benefits that investing in transport infrastructure can bring.

The IPFA believe that to stimulate the UK economy over the coming years post COVID-19, it is essential that investment in transport infrastructure takes place in the Midlands and the North. The current crisis coupled with an inertia from the Brexit process means that business needs confidence and certainty to stimulate further investment beyond the public sector.

On this point there have been many initiatives to develop public transport in the North of England that have had little effect. Indeed, the Northern Powerhouse concept was launched in 2014 and six years on the impact on actual improvements to stimulate economic growth are minimal. Partial devolution has created many plans and strategies. However, with post-2008 austerity and the disconnect between 'metro mayors' and HM Treasury for significant funds, there has been a perceived lack of 'levelling up'. Our view is "it is time to stop talking and get on with delivering a rebalancing of the UK economy"

So, we fully support the government's ambition for an infrastructure revolution but believe the need to move now and demonstrate real commitment to deliver is both timely and essential for the long-term recovery of the UK economy.

We are also very mindful of the cost pressures on government to bear the financial impact of COVID-19 and the IPFA would very much like to discuss with the NIC, how the government and private sector can work in partnership to help solve some of the financing questions around future rail investment. We strongly believe the private sector can help and is part of the solution.

To support the NIC in the process there are a number of areas in our evidence that we would welcome a meeting with commissioners to discuss further.

**1. What potential investments should be in scope of the Commission's assessment of the rail needs of the Midlands and the north?**

**- In answering this question, please consider the terms of reference for the Integrated Rail Plan, particularly that HS2 Phases 1 and 2a are out of scope.**

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- Whilst HS2 is out of scope, the question is what further investment is required to unlock the potential of HS2. HS2 will have a limited impact unless connectivity is created enabling region wide benefits. This is reflected by its benefits-cost-ratio. Investment in the North and Midlands needs to be consistent with this objective.
- As with any major project there will be many issues to consider on structuring the optimum delivery model. Experience from past major infrastructure projects (many transport projects included) evidence that large complex bespoke projects are very challenging to deliver, almost always significantly overrun both time and cost, create challenges around managing and mitigating risks, involve many disparate but key stakeholders and require a high degree of governance to ensure public money is managed well. Recent lessons learned from successful alliancing (e.g. London Bridge) indicate that integrated project teams and collective incentivisation offer a way forward away from hierarchical direct delivery target cost procurement.
- The success of HS2 as a critical piece of national infrastructure, with the ability to contribute positively to reshaping the economy for future generations, can best be achieved by stepping back and reviewing past experience and drawing too on the experience of models of large scale big businesses to determine how best to structure a delivery model that will give confidence, certainty and assurance. Many commercial, technical, operational, financial, regulatory, and legal issues will need to be assessed and solutions created to drive the outcomes and achieve optimum value for money and management and mitigation of risk.
- This is not the starting point however as first will be the need to identify the strategic specification and investment priorities. But part of identifying and prioritizing them will be to consider their deliverability including:
  - Buy-in from all key stakeholders (such as HMT, DfT, MCLG, DfE, IPA, Network Rail, HS2 Ltd, Cabinet Office, UKGI, ORR, Mayoral bodies in the Northern Powerhouse) to ensure a joined-up collaborative approach right from the outset to this major project with all major bodies championing the project
  - The right sequencing of mega-projects that considers selection through an integrated collaborative lens. This will need to consider how construction skills are developed through apprenticeships at the right time to service individual mega-projects.
  - Integration with Network Rail, wider HS2 Ltd, Mayoral transport strategies and funding strategies to avoid HS2 being developed in a silo either from the wider conventional network or from inter-city/regional transport networks This should also include regional air travel to drive the decarbonisation agenda. We do however expect the Williams review to also create a framework to address this area.
- Connectivity to HS2 will unlock economic benefits if it is effective. To enable this, it is essential that we consider wider transport strategies that are being developed in individual urban areas that will eventually connect to the high-speed network. This will include the Birmingham Transport Plan, Sheffield City Centre Plans etc. Without considering such strategies the connectivity benefits may not be realised. In addition, we believe the NIC should take in to account a wider range of proposed



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developments stimulated by rail investment funded by property investors and local government pension funds.

- We believe that any conclusions from the NIC should incorporate the need for a rail freight strategy, both for products produced within the UK or global markets. In both situations, future proofing ro-ro facilities (e.g. hydrogen fuel or charging points for road bound freight) at strategic rail heads should be considered. The UK government is already incentivising the mode shift for businesses through its Mode Shift Revenue Support (MSRS) scheme. Under this scheme, government provides the additional operating costs to companies to transfer to rail and water from road.
- The electrification of some existing lines operating in the Midlands and the North should also be considered within the scope of the Commission's assessment. It is also worth noting that passenger rail is significantly more electrified than freight, another area which should be considered. Electric trains have quicker acceleration and are lighter, causing less wear to tracks, reducing maintenance requirements. They also require less fuel and produce fewer CO2 emissions (of relevance to questions 5 and 6). Diesel bi-mode trains, while useful in fulfilling a transitional role, would not be appropriate as a permanent solution to fulfil the requirements of net-zero by 2050. Depending on usage levels electrification may not justify the investment cost on some particular lines – other options e.g. battery may be suitable for intra-urban connectivity.
- HS2 Phase 2b is currently scheduled for 2035-40. A series of local interventions should be considered and implemented as part of a wider investment programme over the coming 15-20 years, which would form part of the Integrated Rail Plan for the Midlands and the North. It would be intended for these interventions to act as enabling works for the wider programme and allow early benefits to be realised. This would run concurrently and support the timeframe required to assess longer-term commuter trends and demand post-COVID-19.

### **2. Which set of rail investments do you believe would, together:**

**a. best unlock capacity within the Midlands and the north?**

**b. best improves connectivity within the Midlands and the north?**

- The focus must be on what is required to stimulate economic growth. Rail passenger growth has been significant the Midlands and North and is restricted by both capacity and connectivity. IPFA does believe it would be wholly appropriate to review potential changes resulting from the COVID-19 crisis, to establish any changes in travel patterns. However, there are many areas that we know require investment now based on current capacity demands so any review needs to be completed in a timely manner and not prolonged. We also believe projects that improve productivity of people should be taken into account. Currently services across the north of England do not enable productive work whilst travelling. In such case journey time is not the issue, the issue is enabling people to be productive whilst travelling.

### **3. Within the set of investments you identified, which individual investment(s) should be the highest priority?**



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**a. Please explain your rationale for this and how this would affect the phasing and sequencing of the full set of investments you identified.**

- The main criteria to establish priorities is covered in question 1.
- Both Midlands Hub and Northern Powerhouse Rail (NPR) strategy document set out the provision of new build and upgrade of existing infrastructure. Upgrades can be notoriously difficult to estimate in terms of cost and programme due to a lack of asset integrity knowledge. However, they are often cheaper, less carbon intensive and their benefits are quicker to realise than the planning and funding of large capital mega projects.
- We also believe that HS2 Phase 2 will not be a success without investment in connecting infrastructure, both in the Midlands and the North. To be clear, this infrastructure is all modes of travel, not just rail. In fact, the connectivity to lower carbon modes of transport is essential to meet the 2050 Net Zero legislation and this will be covered further under question 5.
- We believe an assessment should be completed on the most appropriate delivery models to deliver this work. This assessment should consider the fall off in delivery performance of Network Rail during CP5 and their role in delivering many of the incremental enhancement projects being proposed.
- The delivery capacity of the UK construction industry is a key factor in assessing the capacity available to deliver investment.
- Decisions such as HS2, CP6, Crossrail appear to be stand alone and not take a holistic view on industry capacity both today and in the foreseeable future. We recommend that a review of the industry capacity and procurement options available to establish the timing and prioritisation of projects.
- This should be set against the wider context of prioritising reuse of existing assets as opposed to construction of carbon intensive new infrastructure. This is notwithstanding the political preference for large projects that provide a platform for manifestos.

**4. What supporting policies need to be in place to deliver the benefits of the investments you identified? If there are any dependencies with other investments/policies, how confident are you that these supporting policies will be put in place?**

Having the right supporting policies (and associated processes) is critical to achieve effective, efficient, value for money outcomes.

A thorough review of the HMT Green Book appraisal and evaluation is required to create business cases that truly reflect the benefits to the regions and their environment. Indeed, the IPFA would welcome a meeting with the NIC to explore this area further.

In setting out a clear funding policy to support the rail needs of the Midlands and the North it is essential that proper consideration is given to funding and financing options. Especially given the economic conditions created by the current COVID-19 crisis. Again, the IPFA would welcome a further discussion

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in this area, building on its submission to The Infrastructure Finance Review in March 2019. We believe that there are opportunities to packaging up connectivity projects (e.g. people movers, light rail, bus) at rail heads and encouraging private finance, based on a range of options, i.e. not just based on fare revenue. Indeed, there are more potential opportunities around stations and potential new pieces of infrastructure with appropriate changes to current policies. Network Rail's "Open for Business" is meant to focus on this area and we believe the NIC should consider why this has had limited success at part of the review.

Given the scale of planning and investment on programmes like HS2, Network Rail, CP4 and 5, we believe a review should be conducted to enable appropriate project delivery, looking at additional areas to the Green Book.

These may include:

- Faster and simpler planning processes to enable the projects to be quickly identified, designed, and implemented;
- Compulsory land acquisition policies that properly compensate for blight;
- Land value capture as part of the assessment process, we would offer the Ministry of Housing, Communities and Local Government (MHCLG) as best practice in this area;
- More efficient procurement processes;
- Regeneration and redevelopment to be aligned to ensure HS2 opportunities can be maximized – including commercial, retail, residential, transport hubs as catalyst for change;
- Integrated national and regional transport policies and strategies – rail, road, airports, ports – that take into account the views of relevant devolved administrations and local regional stakeholders;
- Rail freight policy to support decarbonisation agenda;
- Consider linkage and alignment to Industrial Strategy and harnessing Northern Powerhouse in support of developing economic policy focused on levelling up;
- Technology and its application to rail construction and on-train rider experience;
- Supply chain resilience;
- Skills development, rail and construction apprenticeships, coordination with academic institutions and industry to reduce the skills shortage gap;
- Encouragement of wider Construction industry innovation through the HS2 platform that can drive innovation benefits for wider Industrial Strategy and export market and;
- Examining how the National Audit Office's recent reports on major infrastructure projects have been implemented. This is specifically related to the perceived skills gap within government departments to provide oversight. In addition, to the rail delivery capability for electrification works and subsequent systems integration.

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**5. What impact would the investments you identified have on greenhouse gas emissions? In particular, how would they affect the UK's ability to meet its domestic and international targets, including the Paris Agreement and net-zero?**

**a. In answering this question, it would be helpful if you could consider the expected decarbonisation of road transport, as set out in the Commission's National Infrastructure Assessment and Freight Study.**

- Generally, transport generates ~14% of greenhouse gas emissions. Present trends (excluding the impact from COVID) indicated that passenger and freight activity will more than double by 2050. Rail is among the most energy efficient modes of transport for freight and passengers. Mass transport provides economies of scale that reduce energy consumption and emissions per unit transported. Electrified rail facilitates dependence on carbon-free and renewable energy sources. High speed access also would also increase the rail market share in comparison with less energy efficient modes of transport e.g. air transport and emergency vehicles.
- All transport modes must individually and collectively respond to the climate change challenge appropriately. Despite of the COVID-19 challenges at present, the climate crisis is the biggest issue facing us all and we should be striving for a 'zero carbon' transport network. If the transport industry makes no effort on this front, it will be morally bankrupt and more successful legal challenges such as Heathrow third runway may be expected. The successful litigators in the Heathrow case have signaled that they will target HS2 and Highways England's RIS2 capital programme (mostly northern projects).
- High speed rail to well-connected transport hubs in the North and Midlands will lead to a significant reduction of domestic air travel. This should form part of the decarbonisation agenda for an integrated transport strategy.
- More cars and freight lorries off the road and lower aviation emissions will overall contribute to net zero carbon target.
- However, rail in general, will face challenge from the potential rise of Mobility as a Service (MaaS) systems that will offer 'connected and autonomous vehicles' powered by 'clean' energy facilitating ride sharing to the 'last mile'. Regarding the expected decarbonisation of road transport, so rail has to offer a combination national electrification powered by clean energy and a digital rail technology that can offer efficient reliable point-to-point services between urban and suburban connectivity hubs. Other factors such as air pollution from brake dust should also be considered as part of this balanced perspective.

**6. In addition to greenhouse gas emissions, what are the potential environmental effects (positive and negative) of the investments you identified?**

- We do also recognise the negative impact other environmental factors, in addition to greenhouse gases from construction. Construction of infrastructure does have a negative impact on air quality, sounds, ecology, land quality, noise and vibration and we believe a lot more



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can be done to mitigate these issues by a combination of innovation within the construction sector and further changes to government policy. This has been covered in question 4.

The high-speed rail programme should be used as a catalyst to move away from infrastructure's carbon intensive reputation. Government funding should be set aside to target a net-zero build by 2040. This should prioritise design principles to prevent and minimise the amount of construction required followed by technologies, which reuse and recycle.

Procurement and program strategies need to incentivise the supply chain to make these changes (e.g. through KPIs, decarbonisation competitions). This is already being seen from clients placing procurement weightings on social value. Any outcomes should be considered 'open source' and distributed effectively throughout industry.

There needs to be some consideration of the prioritizing visual amenity over the carbon cost of construction. Implementing large civils works to reduce the visual and noise impact leaves semi-permanent alterations to the natural environment on top of the additional cost, time and carbon spent designing, constructing, and maintaining these large earth, concrete or steel structures. The whole life cost, including returning sites to nature needs to be a consideration prior to making these long-term commitments.

**7. Aside from those delivered by improved connectivity and greater capacity, what broader impacts on people's quality of life could the investments you identified have?**

Some already covered in Question 6 earlier. There is vast potential to accelerate growth in isolated or underperforming areas of the country, which aligns with government's levelling up plans. Better connectivity helps with current housing shortage and provides opportunities for people to maintain access to good employment options and hubs, while living in 'healthier locations' (e.g. areas with higher availability of health services, better air quality, etc).

Spatial disparity of economic activities may rise in the Midlands and the North after the introduction of high-speed rail connections to certain hub points. The disparity would tend to rise between the cities with high speed rail and those without high speed rail, as the former gets better accessibility. Therefore, it is important that HS2 Phase 2b is considered as part of a wider series of investments as has been advocated previously.

**8. How would the costs and benefits of the investments you identified be distributed economically, socially, and geographically?**

This question raises a fundamental issue, are Britain's Railways a passenger funded asset that exists as a business or are they a taxpayer funded asset that enables economic growth. We believe it is the latter in an efficient delivery model enabled by a mix of both public and private finance.

There is substantial potential for sub-sovereign financing of infrastructure and also for the mobilisation of a far greater proportion of people's savings toward building useful infrastructure (rather than say Building Society deposits that in the end feed through to mortgages and higher property prices). This latter pool of capital is, thus far, a massively under-used resource.





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The strategic studies for both Northern Powerhouse Rail, Midlands Connect and HS2 cite the creation of jobs and increased connectivity. HS2 is part of the UK Conservative manifesto pledge to “level up every part of the UK”. However, each UK region has a different set of regional imbalances and are at different stages of economic development, as outlined by the by the UK2070 Commission. Consequently, enhancing social value needs to have needs to have a regional focus. As an example, the West Midlands region where Phase 2a passes has the lowest mainland percentage (77%) of those who have attained secondary education. This is compared to Greater London (87%). There is an opportunity to use the prioritisation of regional upgrades to educate and prime a workforce around a specific set of low-carbon infrastructure skills to meet the challenges of the net-zero pledges by the government. Investing in skills through National Colleges for High Speed Rail (NCHSR), in Birmingham and Doncaster, as well as the learning the lessons of the legacy use of the Tunnelling and Underground Construction Academy (TUCA) in Ilford are important. However, there has to be an improvement in the establishment of these hubs, with the NCHSR having received a bailout loan from the Department from Education in 2019 due to low levels of recruitment.

The call in the Oakervee Review for an integrated rail plan is welcomed. However, this plan cannot be a standalone and needs to sit in a matrix of strategies including the delay National Infrastructure Statement, that tie to a UK spatial plan that addresses how infrastructure investment, as well as other forms, can be used to enhance social value and reduce the level of inequalities across the UK.

**9. Which set of investments would best improve rail connectivity with Scotland?**

When considering the connectivity across the north, the current approach to HS2 2b wherein Manchester and Leeds would be termini is unhelpful to greater connectivity. Both should be through stations that enable through trains from London / Birmingham / Liverpool to run through them to Preston / Glasgow / York / Newcastle / Edinburgh as part of Northern Powerhouse Rail. That may cost more for each station and its vicinity, but it would open up far more connectivity, including England-Scotland, and reduce the London-centric approach.

**11. What would be the impact of the investments you identified on international connectivity across the Midlands and the north? – Please consider the impact on both ports and airports?**

There is no doubt that COVID-19 will cause a significant reduction in air travel demand for a number of years. However, we must always remember infrastructure strategies must be considered for the longer-term benefit. Our view is more effective public transport connectivity between airports will reduce the need for further airport expansion.

The ability to move goods from ports to the place of consumption or further processing is of vital importance to the UK economy: rail freight has a key role to play in enabling these logistics chains to function efficiently, removing lorries from the road network thus providing environmental, safety and decongestion benefits. It is therefore important that the needs of rail freight users and operators are fully integrated in the assessment of the rail needs of the Midlands and the North. Of course, rail freight functions across the national rail network, with material being transported across the UK to and from ports, so the rail investments in the Midlands and the north need to integrate into the wider network

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A number of international airports, particularly the East Midlands Airport, Manchester Airport and Birmingham International Airport would become appealing options among a much wider catchment area, as a result of better rail connectivity across the region.

There also becomes greater scope for air-rail partnerships. Many air journeys currently involve two flights with a transfer at a hub airport. The investments proposed (mainly HS2 Phase 2b) potentially may replace air journeys by a rail journey and a flight, and a transfer between them at the hub airport. The west coast mainline route modernisation leading to the Dec 2008 timetable change resulted in a significant reduction in Manchester to London air transport demand. By using air-rail partnerships, the airline still retains this link while passengers move to high speed rail, but under the airline's control and buying the tickets. Air-rail partnerships in conjunction with high speed rail networks have the potential to mitigate environmental impacts of air travel and relieve airport capacity.

The response was prepared by an IPFA Working Group of 14 individuals chaired by Simon Kirby at Nichols Group. The Working Group members who wish to be named are noted below.

- Greg Stevens, **Abundance Investment**
- Jonathan Turton, **Arup**
- Tim Danvers, **Atkins**
- Dominic Richardson, **Gowling WLG**
- Turkekul Dogan, **Gulermak UK Ltd**
- Matthew Shepherd, **Oxera Consulting LLP**
- Juliet Reingold, **Simmons & Simmons**
- Tammy Samuel, **Stephenson Harwood**
- Frederick Levy, **Turner & Townsend**
- Ahmad Khattab, **WSP**

To ensure the views noted are representative of the IPFA membership, this submission was sent to a wider group of members who also contributed their feedback. This submission reflects the collective views of IPFA members and not solely the views of the individuals involved or the organisation's that they represent.



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