

Transport for the North (TfN)

Submission to the National Infrastructure Commission Call for Evidence

8 January 2016

Overview of TfN response

The North of England

The Northern Powerhouse is a **£290 billion** economy with a **15 million population**; there is a well evidenced narrative of the North, which articulates the relative underperformance of the economy when considered against its size and potential. This underperformance has been largely attributed to poor agglomeration, with strong evidence to reflect the correlation in addressing economic underperformance, through agglomeration made possible by improved transport connectivity. Transport for the North (TfN), therefore, are delivering a long-term, integrated transport strategy for the Northern Powerhouse, with March 2016 seeing TfN submit the first Strategic Investment Framework for a programme of integrated transport proposals to underpin a transport system for a Northern Powerhouse growth trajectory.

HM Treasury analysis shows that realising the ambition to rebalance the UK economy would be worth an additional **£56 billion** in nominal terms to the northern economy, or £44 billion in real terms equal to **£1,600 per individual** in the North. With this comes the inextricable relationship of improved connectivity and economic growth; not least when we review benchmark areas with substantially better transport links and long-term investment in integrated transport, we see a significantly improved economic outlook.

The Randstad region includes around half of the Dutch population of eight million people and it is bounded by the four cities of Amsterdam, Rotterdam, the Hague and Utrecht. The cities are linked by journeys of around 30 – 50 minutes, including an extensive road network and fast rail services every 15 minutes. These transport links are supported by local rail, tram and bus connections. They also include Schiphol airport, one of Europe's major airports, and Rotterdam port, which is linked by a waterway freight corridor and a dedicated freight railway. The Randstad generates around half of the Netherlands' GDP (£210bn in 2011).

The Rhine-Ruhr generates GDP of around £540bn per year (2011). It draws together 23 million people mainly from five large cities (Köln, Düsseldorf, Duisburg, Essen and Dortmund) and 10 smaller cities, working as one economic area. The region has the most heavily used Autobahn roads in Germany and a network of fast intercity, interurban and metro style rail services. It has one major international airport at Dusseldorf, with a high speed rail link to Frankfurt. Duisburg is the largest inland port in Europe supporting heavy industry and distribution parks.

The Northern Powerhouse in population is in the mid-range between the two comparators and has a number of other similar economic attributes; however, in both comparisons the performance of the productivity of the North is relatively lower.

The emerging Northern Independent Economic Review (IER) is clear that a strong blend of key sectors and capabilities delivering both jobs and high productivity are key to the Northern Powerhouse growth. The IER also draws attention to the historic underinvestment in transport infrastructure, which has (over the last decade) seen up to 25% less invested in the North per head of the population than the South East. This has over the last three years reduced to a 15% gap showing a compounded underinvestment over the last business cycle and beyond into the current; whilst, conversely, a 25% productivity gap continues between London and the Northern Powerhouse region.

Response to the NIC

The following document sets out the Transport for the North response to the National Infrastructure Commission call for evidence. It seeks to provide the evidence and highlight the scope of work underpinning the five central questions posed by the NIC call answering the fundamental overarching question of improving connectivity between cities in the north of England. We also pick up some of the key links between the Transport and the Energy question posed by the NIC.

The evidence provides the wealth of analysis available, this is part of a focused approach by TfN to answer robustly the question of how the Northern Powerhouse delivers the ambitious growth plans to 2050 and the fundamental role of better transport connectivity to achieve this.

There are five key points summarised from the call for evidence:

1. A long-term integrated transport strategy at the level of the North - It is imperative that transport investment at the level of the North is transformational and long-term, both in terms of planning and the commitment to investment. This requires a 2050 horizon integrated transport strategy with an underpinning investment commitment from government.

2. Robust evidence developed in partnership - Achieving a credible substantial technical analysis, delivered in partnership with government, is critical to the long-term investment plan. It is key that the right balance is achieved between delivering progress and producing the robust business case for change.

3. Programmes and sequencing - There is no single investment that will transform the North. There will need to be an intelligent balance between scale, location, deliverability and benefits for any scheme and, hence, the process of transforming transport at the level of the North will be achieved through integrated programmes across rail, highways, local and smart.

4. Innovative appraisal and economic assessment - TfN are at the forefront of innovative thinking in the approach to valuing transport impacts across a broader economic landscape

and ecosystem, with the first ever Independent Economic Review of the North drawing together the relationships between economic capability and the role of transport.

Underpinning the delivery of ambitious plans for transport connectivity in the North is effective devolved decision making at the level of the North. The plans will only work if the North has devolved autonomy and the funds to make the right decisions, at the right time. TfN must become an authority resourced and mandated to achieve the outcomes agreed with government.

Section 1: Introduction to response to the NIC call for evidence

Launched in October 2015, the National Infrastructure Commission, led by Lord Andrew Adonis, has a core task to review three key areas and the strategic direction to industry and government and provide a firm basis for planning and investment:

1. **Northern Connectivity: particularly identifying priorities for future investment in the north's strategic transport infrastructure to improve connectivity between cities, especially east-west across the Pennines**
2. London's Transport System: particularly reviewing strategic options for future investment in large scale transport improvements – on road, rail and underground – including Crossrail 2
3. Energy: reviewing how the UK can better balance supply and demand

Following a two-day fact finding exercise with the North of England in November 2016, the NIC launched the call for evidence with a **deadline of 8th January**. To support the NIC, TfN are providing a response to answer the first of these questions, i.e. **Northern Connectivity**.

TfN are clear that, in terms of transport connectivity, the NIC scope is not the full extent of the TfN remit nor would it be a fair request of the NIC to answer such questions since its inception in October 2015. However, although the scope of the geography has a broader, more inclusive reach through TfN, the synergies with the key outputs of the NIC are critical. Therefore, the TfN response seeks to set out clearly and concisely to support the NIC Exam Question **"Improving connectivity between cities in the north of England"**, whilst continuing to pursue the wider geography of TfN and the Northern Powerhouse.

The NIC question relates to east-west links. TfN's remit is to ensure the wider pan-northern transport connectivity across our city regions and LEP areas, where within this agenda both cities-to-cities and the wider connection of the northern geography is at the heart of our strategy.

Our response is also clear that, both in design and strategy, the north-south links and HS2 is integral to the future planning of the Northern Powerhouse transport network.

While TfN are aware that individual LEPs, city regions, combined authorities and local authorities will also send individual responses, the purpose of the TfN submission is to provide a core evidenced position on behalf of the North. This approach was agreed at the TfN Partnership Board on 21st December 2015, which is a meeting with full LEP and combined authority leaders, as well as the senior officers of HS2, Network Rail, DfT and Highways England.

Section 2: Response to the NIC questions on Northern Connectivity

Question 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)?

Key message: Evidence shows that the transformational ambition for the Northern Powerhouse will not happen without an equivalent transformation of transport investment in terms of a comprehensive programme of integrated strategic investments, with commitment to funding in the long term.

Jobs, enterprise and growth

Sir David Higgins for HS2 concluded that there is huge untapped potential for more trade and commerce across the Pennines, but that would require better connections than currently exist. This consensus of opinion formed the basis of the One North prospectus, which helped to scope out a vision for a connected Northern Powerhouse and confirmed the value of establishing Transport for the North.

HM Treasury analysis shows that realising the ambition to rebalance the UK economy would be worth an additional £56 billion in nominal terms to the northern economy, or £44 billion in real terms equal to £1,600 per individual in the North. With this comes the inextricable relationship of improved connectivity and economic growth, not least when we review benchmark areas with substantially better transport links and long-term investment in integrated transport, we see a significantly improved economic outlook.

In the north of England, productivity, overall job numbers and enterprise (e.g. business stock) have been historically on average much lower than we would expect to see if the North performed at the UK average. Indeed, the emerging research in the Northern Powerhouse Independent Economic Review shows a consistent 25% productivity gap and larger still against agreed comparator areas such as the Rhine Ruhr at up to 35%. In parallel over the last decade transport investment in the north of England was 25% lower than the rest of England, with a slight improvement seen over the last three years closing the gap to 15%; and with each year the compounded gap is increasing.

The Randstad region includes around half of the Dutch population of eight million people and it is bounded by the four cities of Amsterdam, Rotterdam, the Hague and Utrecht. The cities are linked by journeys of around 30 – 50 minutes, including an extensive road network and fast rail services every 15 minutes. These transport links are supported by local rail, tram and bus connections. They also include Schiphol airport, one of Europe's major airports, and Rotterdam port, which is linked by a waterway freight corridor and a dedicated freight railway. The Randstad generates around half of the Netherlands' GDP (£210bn in 2011).

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The Northern Powerhouse in population is in the mid-range between the two comparators, and has a number of other similar economic attributes. However, in both comparisons the performance of the productivity of the North is significantly less – i.e. the Northern Powerhouse has only 35% less population than the Rhine Rhur but has 47% less productivity, the Randstad has 53% of the population but 72% of the economic productivity of the NPH.

The Rhein-Ruhr has 23 million people and the GVA per capita of its strongest economic centre, Düsseldorf, is nearly twice that of Manchester or Leeds. Both agglomerations have substantially better rail connectivity than the north of England. Cities in the Randstad are generally linked by fast trains every 15 minutes, supplemented by slower stopping trains. Between Amsterdam, Schiphol Airport and Rotterdam a dedicated high speed service using part of the Amsterdam-Paris high speed railway was fully completed in 2009. Smart ticketing is available on all domestic rail services in the Netherlands, which is fully integrated with all other forms of local public transport.

In the Rhein-Ruhr area, cities are linked by up to eight trains per hour, and some city-to-city links average over 80 mph end-to-end speed. In common with other areas of Germany, local rail tickets in the Rhein-Ruhr are fully integrated with other forms of public transport. Düsseldorf Airport station is served by up to 300 trains per day and has fast, frequent links to all main centres of the agglomeration. Düsseldorf Airport handles almost exactly the same number of passengers as Manchester Airport.

Transport could play a key role to address this gap. For example, The Northern Way showed that improved Trans Pennine connectivity between Sheffield-Leeds-Manchester could create £6.2bn GVA. For road investments, reduced congestion leads to increased productivity due to shorter and more reliable journey times. The Highways England Delivery Plan demonstrates that if 112 individual schemes were delivered nationally between 2015 and 2020, this would generate £4 in long term economic benefits for every £1 invested.

Housing

The North of England has a consistent underperformance in the delivery of housing targets against local plans. There are a complex set of issues for housing, including: viability, latent expectant land values, infrastructure investment, spatial planning and direct investment in house building. Devolution deals have played a key part in starting to support some of these

issues. Beyond the site level issues supported by devolution plans, local network transport connectivity, wider transport connectivity plays a vital role in making new developments attractive and accessible, links labour markets and hence by reducing the distance and time between LEP areas and allows commuting of a wider catchment for housing demand. Furthermore, investment in the transport network that otherwise can't be afforded by the private sector corrects both the market failures of land viability and public goods. This is a consistent message in a number of the Northern LEPs' IERs. The government's acceptance of this issue is further illustrated in recent devolution deals and in the allocation of the Highways England funds for local transport schemes that support economic growth.

Question 2: What cost-effective infrastructure investments in city-to-city connectivity could address these weaknesses? We are interested in all modes of transport.

Key message: The most cost-effective method to address connectivity is through the delivery of an integrated transport strategy at the level of the North.

City-to-city connectivity is fundamentally about strategic road and rail with rail often being the most efficient key connector of cities. The importance of a long-term plan and investment commitment to drive cost effectiveness through phased delivery that maximises the multimodal opportunities is the imperative here. There is an invaluable role for TfN to draw together national agencies into one plan to get the best out of the total investment available and remove modal barriers. Cost effectiveness is about driving best value from the existing systems and infrastructure.

What investments?

This is the heart of the current question that TfN are answering on behalf of the Northern Powerhouse and presenting to government through the March 2016 TfN Strategic Investment Framework process and will continue to develop and ensure beyond this. The March 2015 Northern Transport Strategy identifies the following priorities:

- Transform city to city rail connectivity east-west and north-south through both HS2 and a new TransNorth (now referred to as Northern Powerhouse Rail) system, radically reducing travel times across this intercity network;
- Ensure there is the capacity that a resurgent North will need in rail commuter services, sufficient to meet travel demand;
- Deliver the full HS2 Y network as soon as possible, including consider accelerating construction of Leeds-Sheffield;
- Enhance the performance of the North's Strategic Road Network (SRN) through delivery of the committed first phase of the Roads Investment Strategy;

- Further enhance the long-term performance of the Northern SRN through a clear vision and strategy that embraces transformational investment and technology;
- Set out a clearly prioritised multimodal freight strategy for the North to support trade and freight movement within the North and to national/international markets;
- Better connections to Manchester Airport through TransNorth, whilst city regions consider connectivity to the North's other major airports; and
- Develop integrated and smart ticket structures to support our vision of a single economy across the North.

The Strategy also outlines the principles and commitments that underpin the TfN work streams for Rail, Road, Freight and Logistics, Local Strategic Connectivity, Smart and International Connectivity.

This work will come together, along with comprehensive background evidence, to culminate in an outline Strategic Investment Framework (SIF) in March 2016 and continue to evolve into the outline business plan.

TfN are clear that the SIF will have both breadth and focus, delivering an outline investment plan across multiple modes, supporting both capital infrastructure and service improvement and with both investments and investment benefits seen across the Northern Powerhouse. The emerging evidence is also clear that a comprehensive Northern Transport Strategy will be clear on infrastructure requirements as well as service improvements that must be delivered.

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

Key message: The evidence, particularly through the comprehensive analysis through TfN, is clear that no one, single investment will provide the panacea to set the Northern Powerhouse on its planned economic course. There may be a number of significant catalysts that, due to scale, will be critical to a first tier of investments, e.g. resolving the issue of capacity at city centre rail stations. However the evidence does not support yet what they will be; albeit it is clear they will be part of a bigger broader programme to create the real agglomeration benefit of the North.

Northern Powerhouse Rail must be seen in the long term for example the completion of HS2 will be vital in strengthening connectivity with the Midlands and London.

The One North prospectus notes that **“Rail is the means of travel that is growing strongest and the network will have to play a much increased role in the decades to come.** Better rail service provision offers improved connectivity, but the use of out-dated rolling stock and

infrastructure together with loosely integrated patterns of operation restrict the potential for improved quality of service. Our proposition has therefore been cast in terms of service requirements at a strategic level and an outline investment programme. Following investment, growing demand and lower operating costs may result in services becoming more commercially viable. The target is greater capacity, transformed connectivity and a means to drive down the level of public subsidy required for rail services.”

This effectively sets the context for the rail work: One North draws distinction between a very fast and frequent rail network connecting the main cities and Manchester Airport (i.e. Northern Powerhouse Rail) and city region networks that link to it (effectively the rail component of the local strategic connectivity work).

We are considering a number of network options and will soon be in a position to say which looks most promising in terms of delivering transformational benefits. Our approach has been to find synergies with existing committed schemes and, therefore, some schemes will lend themselves to being delivered earlier than others. Based on this methodology, we are currently working with TfN partners, Network Rail and HS2 Ltd to develop evidence that will inform which networks look most promising, and, hence, which corridors should be the priority for early phases of investment. The Northern Powerhouse Rail programme will sit alongside further upgrades to the ‘classic’ programme of enhancements set out in the Hendy review in tandem with franchisee-led enhancements to timetables and rolling stock. This includes the completion of improvements in CP5 and followed by CP6.

Manchester and Leeds are less than 40 miles apart – less than the length of the London Underground Piccadilly Line. Rail journey times are, however, more than twice Reading to London which is a similar distance. SERC¹ found that commuting between the Manchester and Leeds city regions is about 40% lower than expected given the characteristics of the two cities and the physical distance between them. A 20 minute reduction in travel time could be worth £6.7 billion to the economy, with most of this benefit spread across the wider North. This is about the same level of benefit estimated to the Leeds and Manchester city regions from HS2.

The North East Independent Economic Review showed that Newcastle to London journey times are currently slower than in 1991, with further work demonstrating that improvements could deliver £5bn in GVA.

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[http://eprints.lse.ac.uk/30806/1/Strengthening%20economic%20linkages%20between%20Leeds%20and%20Manchester_summary\(Isero\).pdf](http://eprints.lse.ac.uk/30806/1/Strengthening%20economic%20linkages%20between%20Leeds%20and%20Manchester_summary(Isero).pdf)

The One North Prospectus compares the North to two European agglomerations – the Randstad area of the Netherlands and the Rhein-Ruhr area in Germany. These have similar populations and both are made up of collections of competing/collaborating cities. In both, GVA per capita is higher than in the North. Seven million people live in the Randstad area and the GVA per capita of all five cities is higher than any city in the North of England, which highlights the correlation between significantly better transport connectivity and GVA (see Q1).

In both the Randstad and Rhein-Ruhr areas, timetables are integrated to offer attractive connections between fast and local services, and also integration with other forms of public transport. In the north of England, frequencies are in general lower as are average speeds. At a pan-northern level, tickets are not integrated with other forms of transport. Timetable integration does not happen in the same way as in the two agglomerations and timetable integration with other forms of public transport is very limited.

Question 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?

Key message: International Connectivity is a fundamental of the delivery of the Northern Powerhouse, creating connections to global markets. For airports, the Northern Powerhouse will need to articulate the function each facility is expected to play and consider the relative importance of measures to enhance their productivity as part of TfN's Integrated Transport Strategy. The North's rail/water ports will similarly need to be considered as vital nodes at which goods and services enter the UK and are transported to businesses. As a sector, logistics is a significant proportion of GDP with considerable latent demand. The north of England has traditionally been constrained by a lack of deep sea port capacity. This has led to the current situation where 90% of UK exports enter the country through the south coast ports, whilst 60% of that amount is consumed northwards of Birmingham.

Transport for the North recognises the critical importance of the North's connections to world markets. In developing priorities for investment within the North, we have prioritised connections to the North's most important ports and airports, improving access from across the North and establishing more effective networks for goods on the North's freight networks. To examine the North's connections with global markets, we are also establishing specific TfN work on international connectivity, and propose to establish a Commission on the International Connectivity of the North to examine this in more detail. The Commission, supported by appropriate analytical work and engagement with stakeholders, will consider the key markets that the North must improve access to, including inter-continental markets

served directly from the North. It will examine the North's existing connections, and those that we need to develop.

A number of specific issues and constraints have already been identified. The relative dominance of ports in the south of England mean that goods frequently travel unnecessary journeys within the UK to reach destinations in the north of England. A number of the North's ports and airports lack sufficient access to transport networks within the UK, particularly through the rail network. The cost of port and airport infrastructure can be very significant, and requires constant investment to attract new routes and retain existing connections. The risks from a failure to develop Heathrow Airport as an international hub will have significant implications in jeopardising flight connections internationally from the North of England via London. And the proposal of the Scottish government to half, and ultimately to abolish, Air Passenger Duty, will have a damaging anti-competitive impact on airports in the North.

Manchester Airport provides the most significant hub for passenger connectivity in the North, currently the third largest in the UK in terms of passenger traffic and the largest outside London. Manchester Airport rail connections form part of the current sequence 2 analysis for better rail connectivity across the North. The role of regional airports to provide access to global hubs, for example Heathrow, Schiphol, Frankfurt and Paris CDG, could be important.

Network Rail's Freight Market Study identifies the importance of the northern ports. Forecasts indicate the highest volumes to be to/from Immingham, where by 2043 more than 2 paths per off-peak hour are expected to be required comprising intermodal and coal traffic, and Teesport, which is expected to generate a requirement for between 1.5 and 2 paths an hour. It is expected that the Transport for the North freight strategy will identify the importance of the Port of Liverpool and other ports which have seen significant investment since the forecasts that inform the market study were produced.

A key part of the freight and logistics sector is ports. Overall the sector is responsible for 9% of employment in the UK, and is disproportionately focused on the north of England, which accounts for 24% of the national population but accounts for 56% of rail tonnes lifted, 35% of port throughput and 35% of road tonnes lifted. It is also home to 34% of UK large warehouse capacity. The north of England has traditionally been constrained by a lack of deep sea port capacity. This has led to the current situation where 90% of UK exports enter the country through the south coast ports, whilst 60% of that amount is consumed northwards of Birmingham.

This is set to change from the end of this year, when capacity enhancements at the Port of Liverpool will increase the size of ships that it can accommodate from 5% of the world's fleet as at present, to 95%. This will coincide with the completion of the widening of the Panama Canal and will mean that the Port can accept two mega post-panamax (13,500 TEU)

ships at the same time, doubling the Port's handling capacity from 750,000 TEU to 1.5m TEU, and with the potential to further increase capacity to 2.1m TEU.

The Northern Powerhouse is rich in port assets with Hull and Humber Ports which is the busiest trading estuary in the UK and fourth largest in Europe. Further significant development is planned at Teesport, where the Northern Gateway Container Terminal will ultimately be capable of handling 1.5m TEU annually.

These two developments, taken together, provide a link between transatlantic trade routes and markets in mainland Europe and, as such, have the potential to reshape the economic geography of the UK's freight and logistics sector. This will, in turn, lead to a significant increase in demand on the region's transport network and, in particular, on the key west-east road and rail routes which link to warehousing and distribution sites in the central belt. We are already providing evidence to Highways England's three Strategic Studies in the North, which suggest that HGV miles on the northern road network could increase by 25% between 2015 and 2045. Clearly this is not sustainable and it will be necessary to provide measures which support modal shift. In this, the opportunities provided by Northern Powerhouse Rail are key, and it will be vital that rail planners consider how rail freight services can best utilise some of the capacity released on the existing rail network including supporting the development of further Strategic Freight Interchanges.

The northern rail freight industry increases business competitiveness and the region's place as a hub for international trade. It unlocks capacity that allows more freight paths that compete more cost-effectively with road and improved connectivity to major ports, such as Liverpool. Traffic management creates the scope for more flexible timetabling that responds to demand.

Question 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?

Key message: TfN support a move to devolution to the correct spatial level, supported by government through sub-national transport bodies. The secondary legislation is underway, with the TfN Chair and Chief Executive in place and with an organisational budget available. TfN has democratic oversight from Local Transport Associations/ Combined Authorities and strong businesses input from Local Enterprise Partnerships. TfN will require a stronger role with national agencies to ensure that northern priorities are reflected in national programmes and that a strong direct relationship with government is maintained on longer-term infrastructure investment as part of a wider infrastructure plan. Direct influence over national funding streams would be beneficial, but there is also a recognition that local funding contributions may be necessary over time to make the most of long-term government funding.

Transport for the North is establishing a unique governance arrangement to enhance its role as the voice of the North on transport. The partnership now brings together representatives for the whole of the North, through Combined Authorities and Local Enterprise Partnerships, according to the specific structures of each sub-regional area, and with John Cridland as independent Chair. The Cities and Local Government Devolution Bill provides for a new statutory basis for Transport for the North. It allows the incorporation of the responsibilities for oversight of the Northern and TransPennine rail franchises by Rail North Ltd. By embedding the governance of TfN in the constituent transport authorities, we can deliver a clear strategic alignment between the cross-northern responsibilities of TfN, alongside the local transport priorities of all areas of the North. As a result of these measures, by 2017 TfN is expected to be the first statutory sub-national transport authority capable of overseeing and delivering substantial investment in the multi-model transport network across an area of 15 million people.

TfN is funded through a grant from central government, and this is likely to be the only firm basis of funding in the medium term. Cuts to local transport authorities make it impossible for them to currently meet the requirements for cross-northern transport without substantial additional support from government. Over time for TfN to take on greater responsibility for its effective delivery, and to absorb and manage more risk.

Core references

One North: A Proposition for an Interconnected North,
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The Northern Powerhouse: One Agenda, One Economy, One North. A report on the Northern Transport Strategy, TfN and HMG, March 2015,
<http://www.transportforthenorth.com/background.html>

The Northern Way Transport Compact, www.northernwaytransportcompact.com