

## National Infrastructure Commission Call for Evidence Rail Needs Assessment for the Midlands and North

### Executive Summary

Sustainable connected places are essential to support thriving communities. Never has this been more apparent than right now as our nation responds and indeed looks to recovering from one of our greatest challenges yet. How we choose to do that nationally as a United Kingdom and locally as the Leeds City Region can pivot us on a new more sustainable trajectory which we have been pursuing.

Our response to the call for evidence covers both national and local infrastructure requirements and what could be delivered earlier to bring wider benefits. What we require is a plan for long term project delivery to address the following:

- Sustainable inclusive economic growth which helps deliver decarbonisation and drives recovery and rebalancing post Covid19.
- Delivering on local and national capacity and choice for rail passengers.
- Increased capacity for freight.
- A sequencing plan to deliver benefits much earlier and as they arise.

Whilst the following projects are all required, it is their collective ability to plug connectivity gaps that will enable the above objectives to be met and hence the need for an overarching plan to ensure that happens and happens quickly. The Trans Pennine route upgrade is long overdue and the uncertainty around the other projects does not help investment decisions and confidence in our economy. We suffer from severe constraints on our network, particularly the routes into and through Leeds and this is a good example of where each project is only taking a project specific view at the moment. Without a coordinated short, medium and long term plan however, each project is likely to store problems for the next or only consider certain market needs not the totality.

#### **HS2 Phase 2B -**

Completion between the Midlands and Leeds in full – every year of delay costs the Leeds City Region economy £1.7 billion. There is potential to deliver benefits sooner which includes early delivery of the HS2 station alongside a link south to Clayton North to enable early introduction of Northern Powerhouse Rail services to Sheffield.

#### **Northern Powerhouse Rail (NPR) -**

Delivery of the NPR network linking Leeds, Bradford and Manchester including a new through station in the centre of Bradford which could accommodate both NPR and Calder Valley services.

#### **Trans-Pennine Route Upgrade (TRU) -**

Completion by 2026 including electrification between Huddersfield, York and Selby and the Garforth touchpoint to provide additional capacity now to support economic recovery.

#### **Leeds Station –**

Pedestrian capacity – the station is at capacity in terms of passenger numbers and will fail by 2026 impacting services and constraining growth. £8 million needs approving this year to continue our partnership to develop an outline business case to meet forecast growth requirements and plan how to deliver this in a phased manner under the comprehensive scheme. This is business critical to achieving a sustainable travel hub.

Network capacity – track and platform capacity at and around Leeds station is severely constrained and a bottleneck which impacts the local, regional and national network. Network Rail have identified potential interventions that are required to deliver future train services and support

economic growth to 2043. This includes additional capacity on both eastern and western approaches to the station.

### **Electrification -**

A rolling programme to create an electrified City Region metro rail network starting with the Calder Valley line to decarbonise the railway and the economy.

### **Background**

The West Yorkshire Combined Authority (WYCA) working in partnership with the Leeds City Region Enterprise Partnership (LEP) operates to ensure that our region is recognised globally as a strong, successful economy where everyone can build great businesses, careers, and lives. We bring together local councils and businesses to achieve this vision, so that everyone in our region can benefit from economic prosperity and a modern, accessible transport network. In this context the City Region is defined as encompassing the districts of Bradford, Calderdale, Kirklees, Leeds and Wakefield.

The West & North Yorkshire Chamber represents businesses of all sizes and sectors who collectively employ  $\frac{1}{4}$  of the population of our region. The business organisation supports the growth of companies from start-up to maturity providing access to markets both home and abroad, facilitating international trade, providing finance, premises and support; it also provides a voice for the region's business community, facilitating dialogue and contributing constructively to policy strategies and consultations

We have four key objectives that will transform the Leeds City Region (City Region), unlocking its potential and deliver a regional powerhouse creating jobs and prosperity these are:

- **Boosting Productivity** – helping businesses to grow and bringing new investment into the region to drive economic growth and deliver jobs.
- **Enabling inclusive growth** – ensuring that economic growth leads to opportunities for all who live and work in our region.
- **Supporting clean growth** – growing our region's economy while also cutting CO<sub>2</sub>
- **Delivering 21<sup>st</sup> century transport** – creating efficient transport infrastructure that makes it easier to get to work, do business and connect with each other.

As both the Local Transport Authority and LEP, we need a planned and integrated railway that provides the backbone to delivering the objectives outlined above. This must include decision-making on the strategic development of the railway serving our region across all levels with the customer always at the forefront.

### Why do we need rail investment?

Economic Growth: Transport connects places, enabling people to travel for commuting, business and leisure purposes. Research, including most notably Eddington<sup>1</sup> in 2006, has shown that there is a positive relationship between infrastructure investment and economic growth and therefore a critical factor for the economy to function and grow.

The labour markets of all northern cities currently encompass their city regions, and they are limited by the connectivity of those places. Where investment is made in transport capacity and to reduce journey times, this enables cities to draw from wider pools of labour and allows households more choices on where to live. Providing better connections between northern cities, the Midlands and also to London underpins future commuting patterns and supports wider business interactions between firms, which will generate economic benefits for businesses and individuals across the UK.

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<sup>1</sup> Eddington, Eddington Transport Study: The Case for Action, December 2006

Economic recovery: The City Region has a very strong presence in the finance and insurance sector, and has also experienced the largest growth outside London in knowledge intensive sectors (professional scientific and technical services), all of which benefit the most from agglomeration (the productivity benefits of being better connected). As a result of our central location, the City Region is well placed to benefit from investment in transport infrastructure, to support recovery from the current Covid19 crisis and help rebalance the national economy.

Rebalancing the economy: The UK needs new rail infrastructure to improve reliability and performance and to provide capacity for growth. This will enable faster and more reliable journeys at present, enabling the rebalancing of the UK economy in a way that is sustainable, contributes to plans for de-carbonisation, improving air quality and supports our region's objectives.

The Government's industrial strategy makes it clear that tackling the UK productivity gap requires a more balanced approach to growth across the country and this will be even more important in a post Covid19 society. Investment in rail will create a substantial number of skilled and higher productivity jobs and will stimulate research and development in new advance technologies that will benefit the UK economy, particularly in the North and Midlands.

Tackling capacity and poor performance: Passengers across the City Region are poorly served by the rail industry, with low passenger satisfaction and operating performance due to chronic overcrowding, cancellations and late running trains. Most local services are operated by Northern and Trans-Pennine Express (TPE) both of whose performance is well below industry standard. For example, only 55.4% (Northern) or 41.0% (TPE) services arrived on-time and 3.3% (Northern) or 6.6% (TPE) services were cancelled in Q3 2019-20. In both categories TPE is the worst performing compared to other operators<sup>2</sup>. In terms of passenger satisfaction Northern is the lowest scoring operator with only 72% of passengers satisfied; TPE scored 79% and is the 4<sup>th</sup> worst operator<sup>3</sup>. The information provided on Northern is before the Department for Transport (DfT) stepped in an operator of last resort.

The factors behind the poor performance are multifaceted and complex but include a long-term lack of investment in both infrastructure and trains. The failure of government and/or Network Rail to deliver committed / expected infrastructure, particularly in Leeds and the Castlefield Corridor in Manchester, has exacerbated the problems.

What passengers want are rail services that are punctual, reliable, with a seat and less disruption from planned engineering work. It is difficult to operate a reliable network across the North because the network is congested as a result of a largely two track railway with national regional, local and freight services all competing for the same track capacity.

Investment in the Trans-Pennine Route Upgrade (TRU) which is currently proposed as capacity improvements and partial electrification between Leeds and Manchester is just addressing the immediate problems. The existing network needs to be improved addressing key capacity constraints at hubs such as Leeds, York and Manchester so the network is match-fit for the arrival of HS2 and NPR. Both HS2 and NPR are needed for future capacity and to improve connectivity and should be built as new lines rather than upgrading existing ones. Strategic alternatives to both exist but would be extremely disruptive to passengers and business if taken forward.

The rail industry had not responded quickly enough to deal with the big increases in passenger demand which had led to severe overcrowding on peak time services. For example, rail use at Leeds station has trebled over the past twenty years with an average of one million new trips added every year including over 1,000 extra peak morning trips. Both the current network in and

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<sup>2</sup> <https://dataportal.orr.gov.uk/media/1702/passenger-performance-2019-20-q3.pdf>

<sup>3</sup> National Rail Passenger survey Autumn 2019 - <https://d3cez36w5wymxj.cloudfront.net/wp-content/uploads/2020/01/27181442/Main-Report-Autumn-2019-240120.pdf>

station in Leeds at capacity with Leeds enduring the 4<sup>th</sup> worst overcrowding at peak times in the country.

Figure 1 highlights the potential future passenger growth at Leeds station under different scenarios agreed with DfT and all of which all indicate that the station will be at capacity in terms of passenger flows by 2026. The station cannot accommodate this scale of growth without major investment especially as the city centre is reliant on a single railway station.

## The importance of rail: future growth

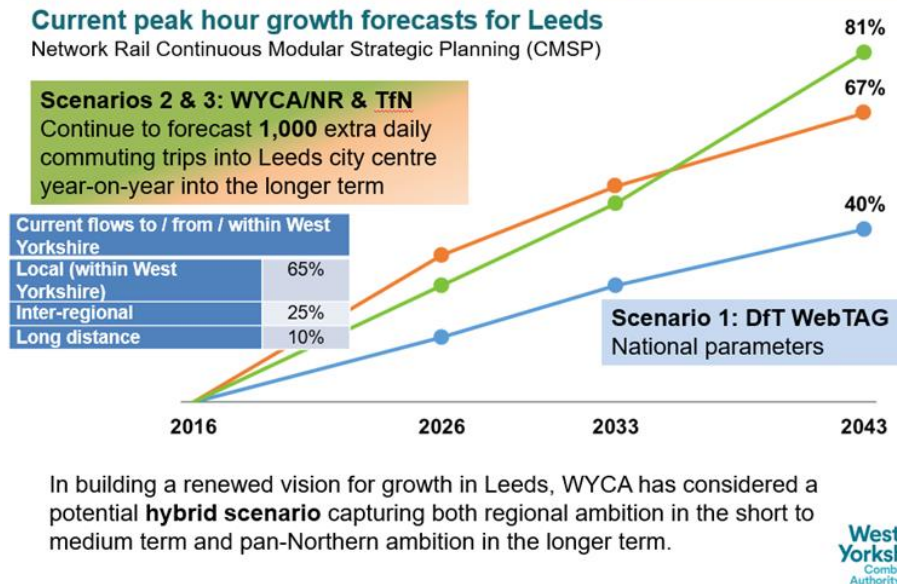


Figure 1 - Forecast rail growth in Leeds

**Reverse years of transport underinvestment:** There has been a long-term persistent underinvestment in regional transport. Over the past ten years the average annual public spending on transport has been £739 per capita in London, compared to £305 per capita in the North<sup>4</sup>. This means that for the last ten years London has received 2.4 times more public spending on transport than the North and this gap has been increasing. Work undertaken on behalf of HS2 East authorities highlights the scale of this underinvestment. If eastern authorities had received the same level of transport per person funding as London over the past decade, then £58 billion<sup>5</sup> more would have been spent across the eastern regions. Over the longer term, investing in rail infrastructure both locally and regionally across the North and the Midlands and fully joined up across policies will ensure that the North could become a net contributor to the national exchequer rather than a net taker.

Investments in HS2 / NPR / TRU are nationally important schemes and if supported by improvements to the local rail network will create a pipeline of strategic connectivity improvements, capacity enhancements and network wide electrification that will ensure we have national rail infrastructure fit for the 21<sup>st</sup> century.

To support our strategic objectives, we need the rail industry to deliver the following:

- **Capacity** –to reduce over-crowding and to cater for forecast growth in both passengers and freight traffic, as well as to allow more frequent services.
- **Reliability** – to improve reliability and resilience of the railway and provide a better-quality customer experience, seamless interchange between rail services and other modes to reduce car use.

<sup>4</sup> Institute for Public Policy Research – Transport Investment in the Northern Powerhouse – 2019 update.

<sup>5</sup> The case for the HS2 Eastern Leg (2020) – Volterra partners (supplied)

- **Connectivity** – reduced journey times and improved and new journey opportunities across all rail sectors, creating more attractive labour markets.
- **Emissions** – reduced to support a zero-carbon economy, improved air quality and to protect the environment.

We are currently developing a ‘Rail Vision’ for the City Region and our response to the questions set out by the National Infrastructure Commission provides our emerging thinking as we develop this. We would like to share our “Rail Vision” with you in due course. Figure 2 outlines the themes and outputs into which our rail requirements can be mapped:

Capacity	Connectivity
Track capacity	Journey times
On-train capacity	Frequencies
Station capacity	Access & integration
Freight options	Growth areas
Major projects	New stations / network gaps
Passenger	Implementation
Reliability / punctuality	Funding landscape
Information	Decision-making
Station quality	Industry structure
Rolling stock quality	Devolution agenda
Fares & ticketing	Cost effectiveness

Figure 2 - rail vision themes and outputs

To deliver our transport objectives we need a single strategic programme of investment in rail covering the next 30 years. The single programme must include:

- A phased programme of interventions at Leeds station which includes improving both pedestrian and operational capacity.
- Construction of TRU by 2026, including electrification between Huddersfield and York, and Selby.
- Early delivery of the Garforth HS2 touchpoint as a later phase of TRU improvements to speed up services to the North East and Scotland.
- Completion of HS2 Phase 2b between the Midlands and Leeds which includes the HS2 station in Leeds delivered as early as possible, alongside a link South to Clayton North to enable early introduction of NPR services to Sheffield.
- Delivery of the NPR network including a new station in the centre of Bradford incorporating both NPR and Calder Valley services and early delivery of a new line between Leeds and Bradford.
- A rolling programme of electrification to create an electrified City Region metro rail network that supports the Governments wider plans to decarbonise the economy, starting with the Calder Valley line.

The objectives outlined above are aligned with those proposed by Transport for the North (TfN), are complementary and offer opportunities for efficiencies and early benefits realisation. To ensure sustained economic growth over the coming decades, businesses will need to draw on pan-northern resources including access to labour markets, research centres and supply chains.

Building better, faster and more frequent transport links between key settlements and increasing the pool of workers to work in higher productivity urban locations will increase productivity across the wider economy. This will provide new opportunities especially for young people to specialise and allow a retention of skills and labour in the North.

## Leeds City Region

With a population of over 2.3 million people and a GVA of £70 billion per annum<sup>6</sup>, Leeds City Region is a growing and vibrant place with huge potential. Home to 90,000 businesses and a 1.4 million workforce we are the UK's largest regional financial centre with more manufacturing jobs than anywhere in the North. This makes us the largest City Region economy in the UK, with an output larger than nine EU countries and home to busiest transport hub in the North at Leeds station which serves 34 million passengers per annum.

We have seven universities, 91,000 students and 39,000 graduates with an additional 170,000 students in further education. A fast-growing young population, with more under 24-year olds than any other area outside the South East, the City Region is a leading UK location for foreign and direct investment with significant interest in the digital and business service sectors.

The recent devolution deal announced in the spring budget will unlock more than £1.8 billion in investment to drive up living standards through better transport, improved skills and stronger businesses, while tackling the climate emergency across the City Region. The agreement, the biggest ever of its kind, includes a government commitment to support the development of a West Yorkshire mass transit system, an investment fund to develop plans for future housing sites and a heritage fund which will support the creation of a new British Library North.

The City Region is central to rebalancing the national economy. We are well placed post Brexit and Covid19 as the economic, cultural and geographic gateway to Yorkshire and the wider Northern Powerhouse. As a City Region, we have a relentless focus on ensuring inclusive growth – promoting an economy that embraces diversity, nurtures our talent, and harnesses youth as key to our future.

- The City Region is a major connectivity hub for the Northern Powerhouse<sup>6</sup>, with Leeds alone having more train passenger numbers each than anywhere else in the North (100,000 per day), equivalent in size to London Kings Cross.
- A thriving digital and tech hub cluster with enormous capability to pioneer the next generation of technological change.
- A focus on skills for the future – the City Region has the highest concentration of higher education institutions outside of London, producing 18,000 STEAM graduates annually, and is a net importer of graduates.
- We lead the way in key future growth sectors, with key assets such as Health Tech cluster in Leeds, Huddersfield University's 3M Buckley Innovation Centre, NEXUS at Leeds University and Born in Bradford, the largest longitudinal study of childhood health research in the world. These institutions will enable the formation of the next wave of leading knowledge-based businesses.
- We are at the centre of high-speed rail engineering with the University of Leeds Institute for High Speed Rail & System Integration and the University of Huddersfield's Institute of Railway Research.
- We are passionate about supporting healthy lives that improve wellbeing and productivity – identified as a 'big idea' in our Local Industrial Strategy.
- Our region is regularly voted both the 'happiest' and the 'best place to Live' in the UK with outstanding natural and cultural assets.

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<sup>6</sup> <https://www.investleedscityregion.com/why-leeds-city-region/>

*Q1 - What potential investments should be in scope of the Commission's assessment of the rail needs of the Midlands and the North?*

We need a single integrated plan developed jointly with other local transport authorities whose scope should be a continued, long term, holistic investment in the railway across operations, maintenance, renewal and enhancement. This should be determined by a shared set of requirements for all markets (high speed/intercity, inter-regional, local and freight). This should be matched by a wider programme across other areas of economic, transport, social, environmental and other policy developed locally in order to maximise the benefits and complement strategic investment in rail.

The investments should form an integrated program delivered in a phased manner starting now to realise benefits in the short term. This will allow these major interventions for TRU, HS2 and NPR services and infrastructure programmes to be planned holistically with the rest of the railway and locally emerging mass transit plans to accommodate future growth and demand across all service types (passenger and freight) and must be future proofed as much as possible. This will allow the City Region to ensure the rail network is at the core of an integrated public transport system that supports its economic and spatial priorities.

What is required to deliver our objectives for the North, this region and the country is a fit for purpose and futureproof transport network, with HS2, NPR and TRU as its backbone. This must include major rail capacity improvement at and around Leeds station to ensure HS2 and NPR is not developed at the expense of affordably providing capacity for other local rail service improvements.

Due to the interdependencies between the different schemes, they need to be planned in such a way that they (a) become enablers for later programmes of work such as HS2 / NPR for more efficient delivery, (b) planned as a single programme so they are less disruptive and more efficient in build and operation, (c) they are not at the detriment of improving local capacity and (d) ensuring that released capacity is effectively planned across projects.

It is important to 'think outside the box'. For instance, early delivery of the HS2 station in Leeds, prior to the actual HS2 network could allow it to be redeveloped without causing significant disruption and we ask that as part of the Integrated Rail Plan, the early use for conventional services is looked at.

The following should be priorities for the assessment:

**Trans-Pennine route upgrade:**

East-West connectivity across the North of England has not received sufficient focus or investment including, in particular the Trans-Pennine corridor between York, Leeds and Manchester which suffers from poor reliability, slow journey times and severe overcrowding.

Any improvements to the TRU corridor will be spread beyond the boundary of any infrastructure investment in West Yorkshire and Greater Manchester due to the geographic extent of train services which operate along the corridor. Seven LEP areas across the North will directly benefit from TRU, which include the North East Combined Authority (NECA), Tees Valley, North Yorkshire, East Riding, the Liverpool City Region and Edinburgh & South East Scotland. These collectively account for over 80% of the North's economic output.

The economic benefit to the North from delivering these high-level strategic outputs are significant. It has been estimated that TRU will help to increase or accelerate development regionally with 5,500 houses, 18,300 jobs and £1.1 billion GVA per annum<sup>7</sup>.

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<sup>7</sup> Mott MacDonald TRU Strategic Economic Narrative, Technical Note 2018 – source Transport for the North

TRU needs to be a fully electrified route between Manchester, Leeds, York and Selby. As part of a second phase of TRU improvements east of Leeds, the Garforth touchpoint and new line to York should be delivered early as it will benefit local and inter-city services towards York and the North-East prior to the introduction of NPR. We have outlined our TRU 'asks' previously in a letter to the Secretary of State and this is provided as supplementary evidence.

### **HS2 Phase 2b:**

HS2 will carry over 300,000 passengers a day, releasing capacity on the existing rail network for both passenger and freight services by allowing the existing West and East Coast Main Lines (ECML), and the Midland Main Line, to be used in different ways, growing the overall capability of the rail network to meet future need.

HS2 is already at the centre of our LCR HS2 Growth Strategy already adopted and embedded in planning policy delivering our economic growth and transforming the rail and transport network serving the City Region and this is covered in a later response to question four.

The region cannot realise its growth ambitions without HS2 and the full eastern leg of HS2, HS2 East will reshape the economic geography of the UK, it provided the greatest opportunity to transform connectivity in the country. It will bring together the city regions centred on Leeds, Sheffield, Nottingham and Birmingham into a coherent and integrated economic zone of over thirteen million people, six million jobs and some of the UK's most significant manufacturing and business clusters.

The case for the eastern leg of HS2 between Birmingham and Leeds is very strong and set out in supplementary evidence (The case for the HS2 Eastern Leg - Volterra):

- The benefit-cost ratio is high with a BCR of 5.6<sup>8</sup> and significantly greater than that of the western Leg BCR of 2.6.
- 60% of the wider economic benefits of HS2 Phase 2 are on the eastern leg.
- It will release capacity on the ECML allowing new services to be developed, additional; placed serves and improve reliability (currently only 43.4% trains arrive on time)<sup>9</sup>.
- Annual GDP benefits arising directly from better Birmingham to Leeds connections alone are worth over £604m<sup>10</sup>.
- Every year the eastern leg of HS2 is delayed it costs the City region economy £1.7 billion<sup>11</sup>

The provision of a touchpoint between Leeds and Sheffield onto the classic rail network remains a requirement of the City Region to allow services from the South utilising HS2 infrastructure to travel beyond Leeds. This is important as the need to improve direct connectivity between Calderdale, Bradford and Kirklees to South Yorkshire and the Midlands is identified as a gap in service provision. In addition, it provides resilience in the network for East West connectivity. A touchpoint at Stourton does not offer the right solution in this respect and further detailed work is required to understand the requirements both as an optimum touchpoint from the HS2 network and other additional infrastructure to provide better links from Bradford, Halifax and Huddersfield to South Yorkshire and beyond.

### **Northern Powerhouse Rail:**

Delivered in full the NPR network will bring ten million people within 90 minutes of four or more northern cities, unlocking place improvements value up to £15 billion with GVA benefits estimated

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<sup>8</sup> -The Case for the HS2 Eastern Leg (2020) – Volterra partners (supplied)

<sup>9</sup>MAA - On Time moving annual average - <https://dataportal.orr.gov.uk/media/1702/passenger-performance-2019-20-q3.pdf>

<sup>10</sup> - HS2 East Economic Benefits – SYSTRA 2017

<sup>11</sup> The Case for the HS2 Eastern Leg (2020) – Volterra partners (supplied)



at £3.4 billion per year. It will increase rail demand by 400%, take 64,000 car trips per day off the road and support 35,000 more jobs in our city centres<sup>12</sup>.

Work continues over the next six months to identify a single preferred concept of how to connect Leeds, Manchester, Sheffield, Hull, Newcastle and Liverpool. While a number of options are under consideration both the TfN Board and the City Region are clear that the preferred NPR network includes:

- Improved reliability and speed between Manchester, Bradford and Leeds via a new line serving central Bradford.
- Leeds to Sheffield delivered through HS2 phase 2b and an upgraded electrified route between Sheffield and Clayton.
- Leeds to Newcastle via a Garforth touchpoint onto HS2 and significant upgrades to the ECML north of York.
- Significant upgrades to the existing line between Leeds and Hull.

Given the number of interfaces between the HS2 and NPR network, we welcome the Oakervee review findings that HS2 and NPR should be regarded as a single network, that both are needed and are equally important. However, the projects have been developed in isolation and therefore each only provides what is needed for its own programme. There is a lack of integration and visibility on the programmes' outputs, meaning options under development may not offer the right solution overall or be at the detriment of local services. Remitting both NPR and HS2 to become a network solution should resolve these inevitable scheme development tensions.

#### **In / around Leeds Station:**

Leeds station, the busiest in the North of England with 34 million passengers is a major hub and interchange servicing both the city and the City Region. Of those that work in Leeds city centre, 75% commute in from outside the district, making the station a critical economic infrastructure gateway for both the region and the UK. Passenger numbers have trebled over the past twenty years, with one million new journeys added on average each year and forecast to increase by 81% by 2043. In comparison with similar stations nationally, it consistently ranks towards the bottom in terms of passenger satisfaction.

In less than five years and by 2026, it is forecast that station will exceed capacity in terms of congestion at ticket gate lines and circulation between platforms and overbridges. This is a significant risk as an inhibitor of growth for our region.

We have worked collectively on a resolution to ensure this key national gateway remains fit for purpose. The Leeds Existing Station Programme (LESP) is focussed on resolving station user capacity issues, improving the passenger experience, better integrating and connecting the station with the city, building resilience to accommodate potential future rail programmes and enhancing the station retail offer. A strategic outline business case has been submitted to the DfT as part of the Rail Network Enhancements Pipeline (RNEP) process. The business case demonstrates there is a clear need for investment in the station and recommends an additional overbridge and/or changes to existing bridges, additional entrances to the station and improvements to the station concourses. We are now seeking Government endorsement on a 'Decision to Develop' the station along with £8 million funding for the next stage of work.

Redevelopment of Leeds station is a key element in both the LCR HS2 Growth Strategy and the Leeds Inclusive Growth Strategy which seeks to double the size of the city centre both physically but critically in terms of economic output. Leeds South Bank is sited next to the station and is home to the proposed HS2 station, a new city centre park which goes on site this year, already has over

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<sup>12</sup> [https://transportforthenorth.com/wp-content/uploads/Potential-of-NPR\\_TfN-web.pdf](https://transportforthenorth.com/wp-content/uploads/Potential-of-NPR_TfN-web.pdf)

10,000 students and new office, retail, leisure and housing developments. In a sustainable location, it will support the creation of 35,000 new jobs and 8,000 new homes.

Detailed design on the first stage of improvements at Leeds station is currently underway following a successful bid from the Transforming Cities Fund. This will provide 'access for all' to the main entrance at the station, improve pedestrian flows, connect the station to the city wide cycle network and provide the largest cycle hub in the North of England at the station. This phase is scheduled to be complete by 2023.

Whilst LESP is developing interventions to accommodate passenger growth within Leeds station, there will also be increasing demand for passenger and freight services across Leeds and the North of England. There are severe constraints on our network, particularly the routes into and through Leeds. As part of Network Rail's Continuous Modular Strategic Planning process (CMSP), several pinch points have been identified on the network in and around the Leeds area which include:

- Platform capacity at Leeds station.
- Constraints on the western and eastern approaches to Leeds station.
- Platform lengths at 29 stations across the City Region.
- Line capacity constraints between Armley Junction and Springs Junction.
- Platform capacity constraints at Bradford Forster Square and Castleford.

The study also suggests that growing passenger numbers will put pressure on capacity at Leeds station which is insufficient in the medium and long term. Key areas identified as constraints are:

- At station gate lines.
- Vertical circulation to platforms.
- Constraints around platform 17.

Potential interventions are detailed in the Leeds CMSP report<sup>13</sup> and indicate what is required to deliver future train services in the Leeds area to support economic growth to 2043. These include junction reconfigurations, increasing the number of tracks and platform extensions / reinstatements at various locations in and around Leeds station and across the City Region in addition to pedestrian capacity improvements at the station. The options provided are investment choices for potential funders to be considered for development and delivery. Network Rail are currently developing a strategic outline business case for those interventions required by 2026.

It is imperative that land is safeguarded as soon as possible in areas adjacent to Leeds station to ensure there is sufficient space to provide for future infrastructure requirements required by both CMSP and NPR. There is a significant risk that much of the required land may have been developed on by the time these proposals have been authorised.

### **Bradford Southern Gateway:**

Bradford has an annual economic output of £10 billion and is home to over half a million people, with a quarter of those under the age of eighteen making it the youngest city in the UK<sup>14</sup>. It is by far the largest city in England that does not benefit from regular, fast, national and inter-regional rail services and this poor connectivity has held it back economically in recent decades.

NPR with a stop in central Bradford will transform the city's connectivity, more than halving journey times to other cities including Leeds, Manchester, Liverpool and Newcastle. It would also play a major part in regenerating the city centre acting as a catalyst for new residential and commercial development, raising skill levels, connecting people to opportunities and building Bradford's

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<sup>13</sup> How can forecast growth and partners aspirations be accommodated in the Leeds area up to 2043 – Network Rail

<sup>14</sup> <https://www.investinbradford.com/media/1108/economic-strategy.pdf>

business base. By 2060, NPR is forecast to contribute £14.6 billion to the local economy and deliver 14,250 additional jobs<sup>15</sup>.

Bradford is already developing a strategic masterplan for a new Southern Gateway area of the city utilising £500,000 funding from central Government with a focus on housing, skills and inclusive growth. A new NPR station as a key hub in development of this new urban district and ongoing work in conjunction with TfN will consider what the best location for a new station is. This includes the possibilities of integrating it with the existing Calder Valley line, removing the turnback at Bradford Interchange and creating a new through station which would also improve services to Calderdale and East Lancashire.

### **East Coast Main Line:**

The City Region is on the ECML, which has not benefited from the same levels of investment as the West Coast Mainline, the latter had a major update costing £9 billion and completed in 2008. As a result, train services utilising the ECML suffer from poor reliability with 8.1% of London North Eastern Railway services (LNER) cancelled or significantly late against an industry average of 4.9%<sup>16</sup>. This unreliability has a detrimental cost of £62m per annum on local economies<sup>17</sup>.

The development of HS2 provides an opportunity to refocus the way in which the ECML operates south of Leeds utilising released much needed capacity on the network for local and regional services. Ongoing investment prior to HS2 opening is still required in the existing network to improve capacity, develop new services and, in particular, improve reliability.

### **Electrification:**

Only 26% of passenger routes across the City Region are electrified compared to 42% nationally, these being the ECML and the Airedale and Wharfedale lines to the North West of Leeds serving Bradford Forster Square, Skipton and Ilkley. This limits the ability to run electric services cross-city through Leeds and impacts both local and national targets with regards to air quality and de-carbonisation.

We are calling for a rolling programme of electrification across the City Region rail network which reduces the long term costs of operating the railway, allows the efficient operation of high frequency services benefiting from electrified rolling stock acceleration/deceleration profiles and provides rail infrastructure which is suitable for a low carbon future. An initial programme would include the Calder Valley line, Harrogate line and the five towns area of Wakefield as set out as tier one candidates in the 'Northern Sparks' report of the North of England Electrification Task Force<sup>18</sup>. This is on the assumption that TRU has electrified the railway between Manchester, Leeds, York and Selby.

### **Connectivity Gaps:**

Initial work undertaken on behalf of the City Region, TfN and DfT has looked at existing travel demand across West Yorkshire by all modes to identify connectivity gaps<sup>19</sup>. The travel demand analysis indicated that there are significant flows between all districts within the city region, large cross-boundary flows to other key centres in adjacent regions and sizeable long-distance cross - boundary flows.

Table 3 indicates where there are connectivity gaps in terms of rail. This illustrates where demand is high but public transport has a low market share often because of poor end to end journey times but frequency and a lack of direct services are also a factor. What is not indicated below are

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<sup>15</sup> [https://www.nextstopbradford.com/wp-content/uploads/2019/03/NPR\\_Bradford\\_Growth\\_Strategy.pdf](https://www.nextstopbradford.com/wp-content/uploads/2019/03/NPR_Bradford_Growth_Strategy.pdf)

<sup>16</sup> Based on a moving annual average from Office of Rail and Road data, 2018-19 Q4

<sup>17</sup> ECML: Benefits of Investment (Systra) – produced for ECML authorities – unpublished.

<sup>18</sup> [https://transportforthenorth.com/wp-content/uploads/EFT\\_Report\\_FINAL\\_web.pdf](https://transportforthenorth.com/wp-content/uploads/EFT_Report_FINAL_web.pdf)

<sup>19</sup> Leeds City Region – West Yorkshire Rail Connectivity Vision – Fore / Atkins Jan 2020 (supplied)

markets that do not currently exist but may do so in the future e.g. where road and rail links are currently poor, such as to East Anglia or to Glasgow.

District (between)	Local (within City Region)	Regional / National
Bradford	Calderdale, Kirklees, Leeds, Wakefield	Craven, East Midlands, Harrogate, Lancashire, Manchester
Calderdale	Bradford, Kirklees, Leeds, Wakefield	Manchester, Lancashire
Kirklees	Bradford, Calderdale, Wakefield	Barnsley, Sheffield
Leeds	Bradford, Calderdale	Harrogate, Barnsley, Lancashire, Rotherham, Lincolnshire
Wakefield	Bradford, Calderdale, Kirklees	Barnsley, Manchester, Rotherham, Selby

Figure 3 - West Yorkshire Connectivity Gaps by District (prior to HS2 / NPR / TRU)

*Q2 - Which set of rail investments do you believe would, together best unlock capacity within the Midlands and the North and best improve connectivity within the Midlands and the North?*

The North's railway is trying to serve too many different markets on a network that was progressively reduced in scale by British Rail. There is too much two-track railway running on alignments created by Victorian engineers serving a set of 21<sup>st</sup> century multi-market requirements. Investment is therefore needed to create new, future proofed, more direct / faster railways that enables the segregation of fast and slow trains, and which creates a radical uplift in capacity both new and released. This includes investment in HS2 phase 2b, NPR new lines, enhanced classic services, capacity pinch points and stations to serve a common set of requirements across all markets across the country, as evidenced in our response to question one.

Technical evidence on rail capacity analysis within West Yorkshire<sup>20</sup> provided separately (WYCA National Infrastructure Commission – Steer) indicates that much of our region's rail network is operating at capacity and will struggle to operate increased services without infrastructure and signalling improvements. The following sections of route are handling numbers of trains and service patterns close to the practical track capacity of the routes (issues by line):

- Harrogate line – poor signalling headways and platform capacity at Harrogate.
- Airedale / Wharfedale lines – poor signalling headways, single track sections, Shipley station conflicts.
- Huddersfield line- high occupation, Bradley junction and Heaton Lodge Junction.
- Calder Valley line – high occupation, conflicting moves at Bradford Interchange.
- Penistone line –capacity constraints on most single-track sections
- Hallam / Pontefract line – in excess of available capacity on many sections, insufficient capacity at Wakefield Kirkgate, Pontefract Monkhill and Castleford stations.
- York / Selby lines –significantly in excess of capacity between Leeds and Micklefield junction.

Potential infrastructure requirements are covered in the supporting technical evidence. The paper also considers alternatives to the proposed HS2 Stourton touchpoint. It concludes that providing a Clayton connection would be feasible but would require significant quadruple tracking of the West Riding line (Doncaster–Wakefield Westgate-Leeds) which would be expensive and duplicate HS2 provision. A connection south of Hare Park junction (Crofton) is suggested as a possible alternative.

<sup>20</sup> WYCA National Infrastructure Commission Response– Steer for WYCA, May 2020 (supplied)

Larger scale interventions are covered in figure 4. These need to be planned together in an integrated program that recognises that they are not discrete and have several interdependencies. Interventions are needed now at Leeds and the Castlefield corridor to address capacity and reliability issues. Sections of the HS2 and NPR network delivered early would benefit TRU such as early completion of the Garforth touchpoint to York section of HS2 phase2b.

Intervention	Capacity	Connectivity	Benefits
TRU upgrades	✓		Faster and more frequent services across the North of England
HS2 Phase 2b	✓	✓	Transformational journey time improvements between West Yorkshire, South Yorkshire, the Midlands and London. Releases capacity on ECML. New journey opportunities (East Midlands – West Yorkshire)
NPR	✓	✓	Transformational journey time improvements across the North. Releases capacity on existing lines. Much better connectivity for Bradford, New journey opportunities
Leeds Station	✓		Address capacity and reliability and deliver franchise commitments
Bradford Southern Gateway	✓	✓	New through station co-located with NPR will also speed up Calder Valley services
Electrification	✓		Increases operational efficiency and contributes to decarbonisation and improved air quality
Garforth touchpoint & HS2b to York	✓		Faster journeys to York and the North East.

Figure 4 - Large scale interventions to unlock capacity & connectivity

*Q3 - Within the set of investments, you identified, which individual investment(s) should be the highest priority?*

A key priority for the City Region is a comprehensive and all-encompassing investment plan for Leeds station, the busiest in the North, which includes early delivery of the HS2 station and also transformational improvements to the rail network between Leeds and Bradford, provided by NPR. By delivering this infrastructure early it will become an enabler for later phases of HS2 and NPR. If we don't get Leeds right, unlock capacity, improve reliability and allow the rail network to grow it is not just in the city region that will suffer economically but nationally as Leeds is a key node on the rail network.

Our economy is crying out in the short term for a more reliable railway that has sufficient capacity both to operate more services as per franchise proposals and to reduce overcrowding on passenger services. This means work on TRU and acceleration of the business case with regards to Leeds station capacity and the interventions indicated in the Leeds station CMSP should be started as soon as possible.

In the longer term, accelerating certain parts of both the NPR and HS2 programmes could benefit current services and infrastructure such as TRU. There are various opportunities to expedite delivery of some of the inter-dependant aspects of the two projects which we strongly believe should not continue to be seen as discrete entities but rather as part of an integrated whole under a long term rail vision. Two elements are highlighted in this regard.

- The Trans-Pennine route is at the heart of the NPR project and to the east of Leeds TfN has identified the desirability of a “touchpoint” at Garforth on the York and Selby main lines that allows the main NPR line to intersect with and utilise the main HS2 route towards York. There is already a strong case for this scheme as part of an increasingly needed capacity uplift

between Leeds and York where the mix of fast and slow trains increasingly points to the segregation of services which will ultimately come to the fore when NPR is delivered. Early delivery would achieve tangible benefits to reliability, journey time and the potential expansion on services on this busy mixed traffic route, not just for the City Region but for Tees Valley and Newcastle too.

- We welcome NPR's plan is to share with HS2 key elements of the route south of Leeds to provide NPR services into South Yorkshire and the Midlands. Therefore, reflecting the declared ambition for a "build from the North" ambition for HS2 it is believed that the early progression of key elements for the route between Leeds and Sheffield have the potential to accelerate the NPR network. This should include the T shaped HS2 station, platforms and viaduct on approach into Leeds, as well as the HS2 route in Yorkshire, south towards Clayton junction, the northern chord and Sheffield. This would deliver transformational journey time savings and improved inter-regional connectivity between the Sheffield City Region and Leeds City Region which are poorly connected.

*Q4 - 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?*

We believe that we already have our supporting policies in place and have followed an evidence led approach to identifying our connectivity challenges and solutions covering all modes. What we require is a commitment to deliver and fund with a governance arrangement that has a local decision-making role.

HS2 is already at the centre of the adopted strategy for delivering our economic growth and transforming the rail and transport network serving the City Region. The LCR HS2 connectivity strategy sets out how the region will work with Government, businesses, schools, colleges and universities to maximise the benefits from HS2 and other planned upgrades. The strategy aligns with the TfN's Strategic Transport Plan, as well as the West Yorkshire Transport Strategy to ensure that the public transport network can cater for an additional 146,000 full time equivalent jobs forecast across the city region by 2033.

The LCR HS2 growth strategy sets out six proposals on how HS2 will transform the City Region economy by providing a step change in connectivity for the City Region, a new world class gateway at Leeds station, be a catalyst for regeneration, inspire our people, develop our business and supply chain and be a magnet for investment and a cultural destination. The National Infrastructure Commission has been providing expert challenge through its city programme in this regard.

We have identified a prioritised a series of corridors where there is the greatest economic opportunity for transformational connectivity to:

- Enhance productivity by connecting all our important places with a focus on disadvantaged and peripheral groups and communities.
- Respond to partner councils' Local Plans and growth aspirations.
- Respond to pan-northern economic priorities with improved connectivity to North and South Yorkshire, Manchester/Lancashire, Humberside and the North East.
- Respond to regional carbon target of net zero CO<sub>2</sub> by 2038.
- Demonstrate integration and fit between different transport modes.

In addition to the HS2 connectivity strategy we also have several supporting policies and strategies which can be provided including:

- Leeds City Region Strategic Economic Plan.

- Local Industrial Strategy.
- West Yorkshire Transport Strategy 2040.
- Leeds City Region Housing Vision.
- NPR – Bradford Growth Strategy.
- Leeds Integrated Station Masterplan.

*Q5 - 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?*

There are two core elements with regards to reducing greenhouse gas emissions from transport, which are to de-carbonise the transport network and to support modal shift to more sustainable modes. Encouraging people out of their cars onto public transport or 'active travel' such as cycling and walking is key to cleaner air, lower carbon emissions and will also benefit public health.

The success of this hinges on how well the rail investments are set within a wider, complementary policy framework. If this is joined up, then the investments are likely to have a significant impact on reducing greenhouse gases and achieving net zero. Investments in rail will enable journeys that do need to be undertaken are through an integrated, active, public transport focussed and clean powered network. Mobility as a service will play a key role in developing a sustainable door to door transport network.

Authorities within the City Region have strengthened their commitment to local emission reductions through the declaration of a climate emergency and the setting of targets to reach net zero carbon emissions by 2038 with significant progress by 2030. To meet our target and comply with the Paris agreement, emissions must be reduced by 14.5% year on year.

The Combined Authority is working with partners in North Yorkshire on developing a zero carbon transport roadmap as part of a wider programme which will identify policies and strategies needed to decarbonise all sectors of the economy including power, construction and industry.

Currently in West Yorkshire transport is the largest emitting sector, responsible for 44% of emissions, with road transport the largest contributor (primarily private car use). With significant consumer and industry behaviour change to reduce travel demand and to shift journeys from private cars to active and public transport, it is this sector that could make a significant reduction in carbon emissions.

Emerging work (still in draft) indicates that to meet the climate change targets will require public transport capacity to be increased by 55% compared to today, which includes a 20% increase in passenger km by rail by 2030 and a 10% shift in freight movements from heavy goods vehicles to rail (or 67% increase in freight tonne per km)<sup>21</sup>. Therefore, rail is going to have to play a much bigger role to provide modal shift from car.

Therefore, significant electrification of both passenger and freight activity will be required to mitigate emissions. Currently only 26% of the West Yorkshire network is electrified compared to 42% of national network and well below the European average. As set out earlier in our response, we are calling for a rolling programme of electrification across the City Region rail network which will reduce the long term costs of operating the railway and allow the efficient operation of high frequency services to provide rail infrastructure suitable for a low carbon future. This supports Network Rail's Traction Decarbonisation Network Strategy which aims for an 80% electrified rail network by 2050.

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<sup>21</sup> North & West Yorkshire Emissions Reduction Pathways (Draft report) by elementenergy

An initial program in addition to full electrification of TRU between Manchester, Leeds, York and Selby should also include the Calder Valley line, the Harrogate line and the five towns area of Wakefield.

The City Region will benefit from £317m of investment from the Transforming Cities Fund which is being used to dramatically improve access to public transport, cycling and walking. This includes transformational schemes to improve multi-modal interchange and access to the train stations in Halifax, Dewsbury, Huddersfield, Leeds and Bradford<sup>22</sup>.

*Q6 - In addition to greenhouse gas emissions, what are the potential environmental effects (positive and negative) of the investments you identified?*

Many positive impacts from the proposed investments are the result of modal shift from road-based transport onto rail. Reducing traffic congestion has multiple benefits including reduction in greenhouse gases, air pollution, noise, traffic accidents and stress for those driving.

Currently across the North of England, 80% of commuting trips and 87% of freight movements are undertaken by road<sup>23</sup>. Investment in rail projects such as HS2 and NPR, which will improve both North - South and West – East connectivity and will relieve pressure on the parallel motorway corridors such as the M1 and M62. Forecasts for NPR indicate it could reduce road traffic by between 710 and 800 million car-km per year which is equivalent to taking 64,000 cars off the road each day<sup>24</sup>.

Any new infrastructure can have a negative impact on natural habitats, residential / employment sites, and general disruption resulting from construction. Undertaking major upgrades to existing lines is highly disruptive to existing services and passengers, costly and constrained by engineering and operational opportunities of improving rail lines designed in the Victorian area. Both HS2 and NPR must be new lines rather than upgrades, built off-line where possible to reduce impacts on the existing network but designed to have a minimal impact on the surrounding environment.

*Q7 - 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?*

By bringing people closer together transport shapes the growth of towns and cities and can be used to facilitate regeneration and development opportunities and create dynamic and attractive places. These benefits are hard to capture in traditional transport appraisal, but the wider economic benefits should not be underestimated.

Locally, studies have been undertaken to indicate how the introduction of transformational transport infrastructure contribute to regeneration. For example, Bradford is already undertaking work to ensure that the city is NPR ready, to guarantee it unlocks the economic and social opportunities that a city centre station would bring by being on the NPR network.

In 2018, Bradford produced a new and bold economic strategy that aims to raise GVA by £4 billion, get 20,000 more people into work, and raise those with NVQ 3 skill levels by 48,000. Having first-class transport connections is needed to help make that step-change, and support Bradford's ambitions to play its full part in the City Region and Northern Powerhouse.

The main component for Bradford's case is that the improved connectivity that NPR offers will support both Bradford's and the North's economy by acting as a catalyst for new residential and commercial development, by raising skill levels, connecting people to opportunities and building

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<sup>22</sup> Details of the transforming cities fund bid - <https://www.westyorks-ca.gov.uk/media/3372/lcr-tcf-sobc-final.pdf>

<sup>23</sup> <https://transportforthenorth.com/wp-content/uploads/At-a-glance-Strategic-Transport-Plan.pdf>

<sup>24</sup> Source – TfN response to the NIC



Bradford's business base. A city centre NPR station is forecast to provide a £14.6 billion boost to Bradford's economy and create up to 14,250 additional jobs by 2060<sup>25</sup>.

The city has secured £500,000 of Government funding to support master-planning to maximise regeneration opportunities from NPR. This is focussed on a 'Southern Gateway' located just to the south of the city centre with the NPR station as a key anchor. The masterplan will consider how to maximise the potential of the area to create a hub for innovative businesses and high quality residential and commercial development which is integrated into the city centre and the local transport network.

Our region has already commenced our long-term planning for Leeds station. The Leeds Integrated Station Masterplan (LISM)<sup>26</sup> is a comprehensive spatial and development plan which aims to provide a hub station to support both rail and the City's growth and connectivity in Leeds and the City Region. One of the first aims is to ensure the station has a comprehensive solution for when passengers step off the platform and can take safe passage to the station exits. This is to meet the holistic forecast growth in passenger numbers from all rail programmes which will occur in Leeds station to ensure services seamlessly integrate with HS2 and NPR with minimum disruption. Secondly LISM seeks to ensure that the station responds to, leverages and redevelops the surrounding area and in particular the South Bank to meet its potential and drive economic growth.

The South Bank which is adjacent to the existing railway station and proposed HS2 station, is a major new economic zone in the centre of Leeds. Already large-scale plans for employment and housing development are coming in response to the plans for a HS2 / NPR / classic rail hub station at the heart of this area. It is over 200 hectares in size is one of the largest city centre regeneration schemes in Europe. It is expected to deliver over 35,000 new jobs and 8,000 homes<sup>27</sup>. It will double the size and economy of Leeds city centre making it one of the largest centres for knowledge intensive jobs in financial and producer services in Europe

Providing faster and reliable services with improved access to better jobs, education, tourism and leisure will have a positive impact on people lives. It is important that there is an integrated plan which provides better links between intercity, regional and local networks. The role that stations play in this must not be missed and we must ensure that they act as mobility hubs with connecting transit systems which include tram, bus, cycle hubs and be accessible to all. By encouraging cycling and walking to stations and ensuring public transport actually connects to rail services rather than operating in isolation will reduce congestion, air pollution and provide better health outcomes for local residents

*Q8 - How would the costs and benefits of the investments you identified be distributed economically, socially and geographically?*

There is a massive North South gap in productivity and delivering a network of transport improvements across the North and Midlands has the potential to unlock significant economic growth, increase productivity, reduce carbon emissions and level up the economy. One of the key issues preventing households from accessing social and economic opportunity is transport poverty. This is defined as a combination of a lack of public transport availability and/or access to a motor vehicle which results in reduced labour market outcomes. Transport poverty is strongly correlated with social disadvantage with low income households more likely to face economic and social exclusion. Relieving transport poverty, lifting people out of deprivation and ensuring better economic activities is key to achieving inclusive growth, ensuring that no individuals or groups are left behind.

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<sup>25</sup> [https://www.nextstopbradford.com/wp-content/uploads/2019/03/NPR\\_Bradford\\_Growth\\_Strategy.pdf](https://www.nextstopbradford.com/wp-content/uploads/2019/03/NPR_Bradford_Growth_Strategy.pdf)

<sup>26</sup> <https://southbankleeds.co.uk/assets/documents/2017.11.03-Leeds-Integrated-Station-Masterplan-LR-v6-DS.pdf>

<sup>27</sup> Southbank Leeds Regeneration Framework – Leeds City Council

Figure 5 indicates how both HS2 and NPR connect those areas across the North and Midlands which suffer from transport poverty, so limiting access to employment opportunities. This needs to be linked to within-region transport investments to ensure the areas experiencing the greatest levels of socio-economic deprivation benefit.

## Eastern Leg Transport Poverty

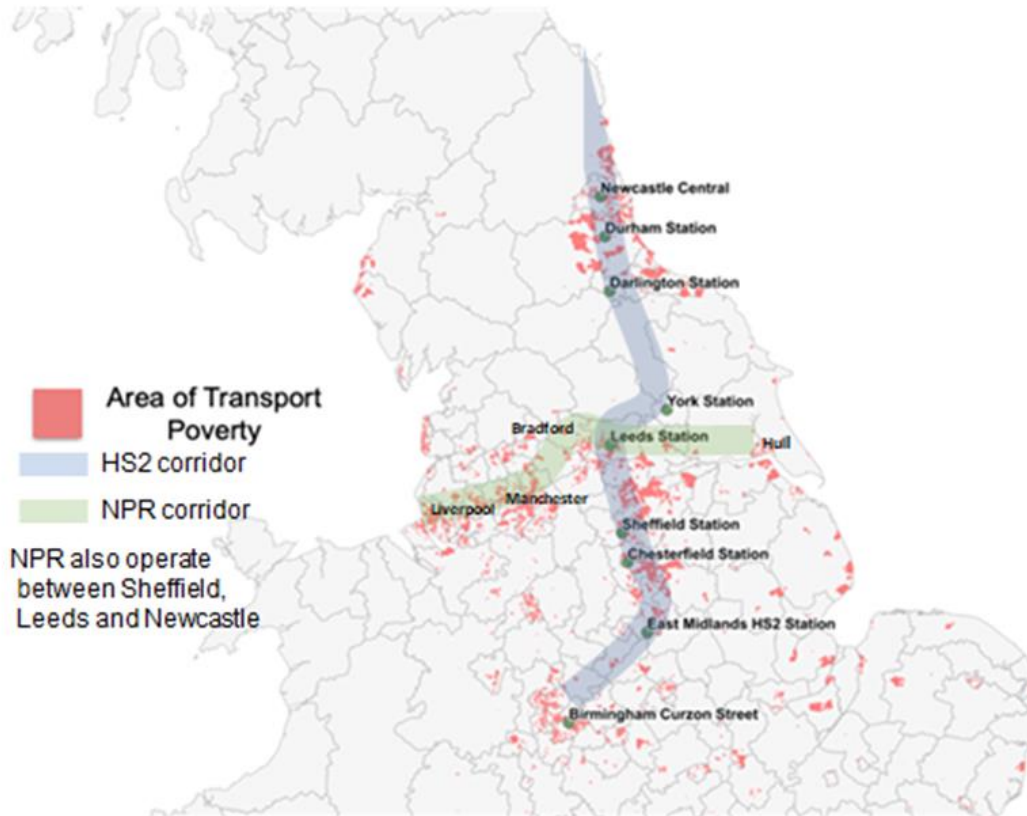


Figure 5 - Transport Poverty

The eastern leg of HS2 serves a population of thirteen million people and six million jobs, which is similar in size to Greater London. The purpose of HS2 is to deliver a new national network which will create 100,000 additional jobs along its eastern leg. This is one of the reasons why economically the eastern leg of HS2 outperforms the western one. The last time a comparison between the two was made the eastern leg had a BCR of 5.6 in comparison to 2.6 for the western leg<sup>28</sup>.

The NPR network will increase the population catchments of the largest cities by as much as 40% and four million more people will be within a 90-minute journey time to Leeds compared to today.

The Government wants to grow the UK's exports by 5%, enhance global competitiveness by making Britain a more attractive place to invest, strengthen links to Heathrow Airport and access to major ports to provide links to emerging markets. Both HS2 and NPR will strengthen local and national supply chains, reducing barriers to exporting by improving links to ports and airports. Access to larger labour pools will raise productivity levels. Supporting employment and skills measures are required to develop the science and engineering education to meet the demands for jobs generated.

<sup>28</sup> The Case for the HS2 Eastern Leg (2020) – Volterra partners (supplied)

**Q9 - Which set of investments would best improve rail connectivity with Scotland**

Improving links with the North’s neighbouring economies will play a critical role in realising the economic potential of both the North and the UK. Along the eastern corridor there are several key employment sectors which will benefit from agglomeration as a result of improved connectivity and access to a wider specialised workforce. These sectors include advanced manufacturing in the North East, Tees Valley and Sheffield City Region, health, life sciences and professional services in the Leeds City Region and the renewable energy sector along the East Coast.

Currently along the ECML and particularly between York and Scotland there are capacity, operability, timetabling, and reliability constraints along the corridor which is limiting economic growth and the movement of people. Effectively resolving these competing demands, particularly in the context of HS2 and NPR is crucial to realising the potential of the rail network in this area.

What is required is a new two track or higher speed line to Scotland via the East Coast connecting the population centres (which are much larger than along the West Coast) with journey times reduced towards a three-hour threshold. This would allow rail to compete more effectively against domestic aviation as well as car. An early quick win on this corridor would be delivery of the Garforth Touchpoint which would speed up services between the City Region, York, the North East and Scotland.

**Q10 - What would be the impact of the investments you identified on connectivity between the Midlands and the north, and other parts of the UK?**

Both NPR and HS2 are integral parts of the future rail network and it is essential that they are planned as part of a network together and not in isolation to it. There is now a clear opportunity to ensure that alongside TRU and improvements to the ECML, HS2 and NPR deliver a transformation in rail that can spread across the whole of the North.

Table 1 indicates the improvement in journey times that both NPR and HS2 would bring to Leeds and Bradford. It would bring an additional four million people and 135,000 extra businesses within 90 minutes of the City Region. Providing new rail infrastructure also releases capacity on existing lines allowing rail to serve local and regional markets more effectively and dependably. All this will help drive inclusive and transformational growth. More people will have access to opportunities, opening up a wider range of jobs that better match their skills. Businesses will be able to grow their supply chains and labour markets, making it easier to seek out opportunities across a wider range of markets in the North and beyond.

<b>Leeds to:</b>	<b>Current</b>	<b>Proposed</b>		<b>Bradford to:</b>	<b>Current</b>	<b>Proposed</b>
Birmingham	118 min	49 min		Birmingham	155 min	79 min*
London	131 min	81 min		London	180 min	100 min*
Sheffield	40 min	27 min		Sheffield	95 min	55 min*
East Midlands Hub	N/a	27 min		East Midlands Hub	n/a	49 min*
Newcastle	81 min	60 min		Newcastle	127 min	67 min
Manchester	55 min	30 min		Manchester	60 min	22 min

*Table 1 - Proposed Journey Time Improvements (in Minutes) as a result of HS2 / NPR*

\*Bradford – assumes a fifteen-minute interchange penalty at Leeds. This would be negated and journey times improved even further with a touchpoint between the HS2 and existing network to provide better links from Bradford, Halifax and Huddersfield to South Yorkshire and beyond.

Improving the rail infrastructure, speeding up services and providing more direct links provides a sustainable alternative to our congested strategic road network. This will promote modal shift not only from car to rail but also provides opportunities for rail freight to have a more competitive offer. There are significant freight and logistic sites, particularly along the motorway corridors which

require access to ports and population centres which could transfer goods via rail rather than Heavy Goods Vehicle.

*Q11 - What would be the impact of the investments you identified on international connectivity across the Midlands and the North?*

In a globalised and post-Brexit economy, good connectivity to international ports and airports is important in attracting greater inward investment and allowing businesses in the North to find new markets and more easily trade with the rest of the world. Creating a larger/stronger catchment for our airports will support growing the range and frequency of international connections which can then drive further growth right across the North.

International connectivity through Manchester Airport and our other regional airports supports the visitor economy, and universities, attracting international students and world-leading academics and encouraging knowledge exchange and research partnerships with the world's best academic institutions. Manchester Airport will benefit from having a rail station that serves both the HS2 and NPR networks in addition to its existing rail offer. An important quick win with regards to access to Manchester Airport is to provide new infrastructure on the Castlefield corridor in Manchester. This will increase capacity, improve reliability, and deliver additional services including Halifax and Bradford via the Calder Valley as committed in the Northern franchise.

A proposed new station on the Harrogate line will support sustainable access to Leeds Bradford airport, as well as acting as parkway for access to Leeds and Harrogate. This important commuter line also requires investment to boost capacity and a prime candidate for early electrification.

Further thought needs to be given to provide a link to HS1 to provide the North direct access to Europe without having to change at St Pancras in London. Given the need to respond to the climate emergency and that international connectivity plays a significant role in driving tourism, this would provide a sustainable alternative to travelling by air. It is our firm view that this will be a growing market in the years to come, and indeed our evidence<sup>29</sup> developed in 2016 supports this.

For freight, there is a need to reduce journey times to make transport by rail more competitive and attractive compared to other modes and greater flexibility with train paths so that goods can be moved when suppliers or customers require them. For the end-to-end freight journey to be as efficient as possible, the North needs better surface access to ports, airports, and intermodal terminals. There are some significant potential rail freight flows where existing network capacity and capability pose constraints. There are currently no suitable routes across the Pennines that can accommodate the largest inter-modal deep-sea shipping containers on standard wagons and many examples where rail freight journeys are agonisingly slow due to route requirements. For example, biomass shipments take eleven hours to travel between Liverpool docks and Drax power station which are 84 miles apart.

Rail freight journey times are often slow, due to circuitous route requirements. This can be due to several factors, including high infrastructure utilisation (which can reduce the availability of paths), gauge clearance and route capability constraints. Slow journey times erode rail's commercial competitiveness versus road transportation and serve as a barrier to attracting traffic to rail. Freight journey times must become quicker if the rail network is to facilitate and accommodate the requirements of a growing economy.

TfN have identified capacity pinch points on the rail network that need addressing and these are available in their Northern Freight and Logistics report<sup>30</sup>.

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<sup>29</sup> HS2 – HS1 Link Strategic Case; Systra for TfL, WYCA, SCR, NECA & WMCA - 2016

<sup>30</sup> <https://transportforthenorth.com/wp-content/uploads/TfN-Freight-and-Logistics-Report.pdf>