Rail in the North of England

Briefing

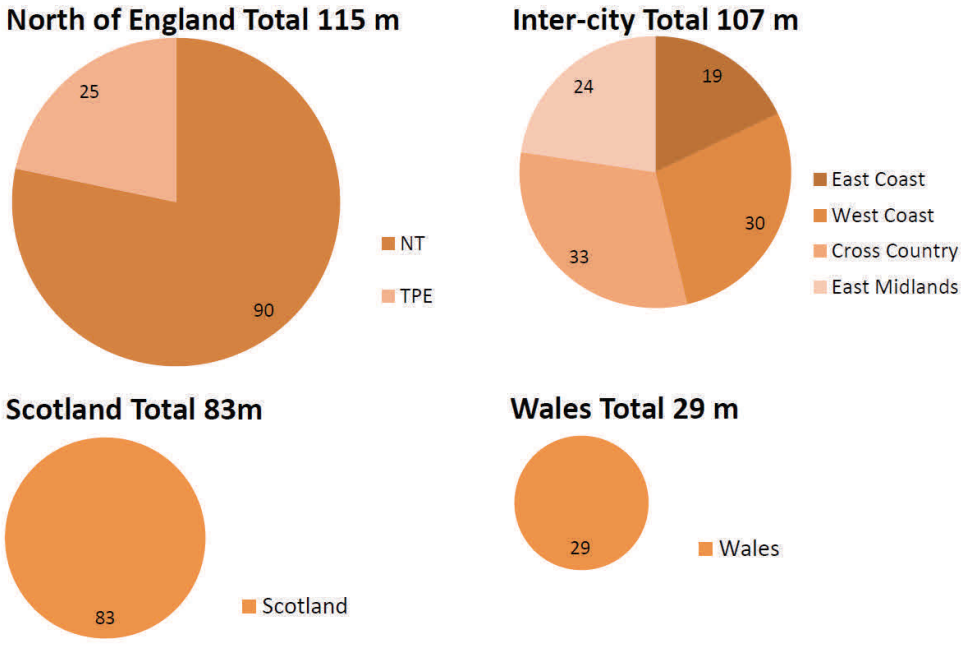
The rail network in the North of England is currently being examined as part of the re-franchising of the two main regional train operations. This process will define what the North's railway network will look like for the next decade and beyond. The Department for Transport and the Rail North local government consortium have set out their current views in a joint consultation document. This briefing contributes to this debate by setting out key facts and articulating the contribution which the regional rail network makes to the North's economy.

The North's railway network -- key facts and figures

Northern Rail (NT) and **TransPennine Express** (TPE) are the two key regional operators in the North of England. NT's operations tend to focus on shorter distance stopping services along key commuting corridors as well as some long distance rural services, while TPE operates longer distance services linking key centres and the larger stations in between. TPE also operates services between Manchester and Scotland.

Other train companies operate across the North, the largest of which, Merseyrail, carries 42 million passengers in the self-contained commuter network radiating from Liverpool. East Coast and Cross-Country trains complement TPE services in the corridor between the North East, York, Leeds and Sheffield, while East Midlands Trains complement TPE services between Liverpool, Manchester and Sheffield.

Figure 1. Passenger Numbers by train operator[i]



"Regional trains in the North of England carry more passengers than all Inter-city services combined"

Together, NT and TPE carry 115 million passengers per year. This number is greater than either the four national Inter-city operators combined or the Scottish and Welsh operators put together. NT and TPE manage around 20% of the stations in Great Britain and their services cover over 20% of the national network. NT, on its own, operates more daily services on the national network than any other train operator.

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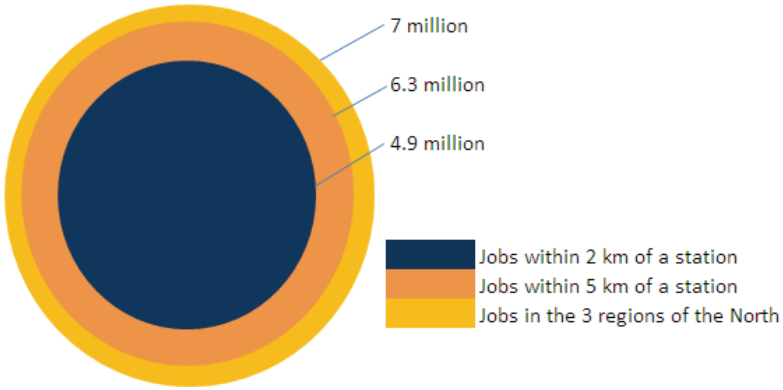
Regional railways connect the North's £265 billion economy

The three Northern regions are home to fifteen million people and seven million jobs, equivalent to 30% of the English population and 26% of the English workforce. Many of these jobs are in the most productive and fastest growing sectors of the economy. The central areas of Leeds and Manchester alone concentrate over 320,000 jobs, more than half of which are in high value added consumer and business services[ii]. Altogether, the three Northern regions generate £265 billion in Gross Value Added, placing the North of England somewhere between Denmark and Sweden in terms of overall economic output.

Rail networks play a key role in connecting workers to jobs and linking the North's key economic centres. Overall, 70% of jobs in the North are located within walking distance of a rail station[1] and a further 20% are a short cycle, drive or bus ride away[2].

Figure 2. Number of jobs in the catchment of rail stations across the three Northern regions[3]



"70% of jobs in the North are located within walking distance of a rail station"

Over the past three decades, Northern cities have seen their economies move away from manufacturing and towards a specialised service economy. This has been accompanied by an increasing concentration of service jobs in the largest urban centres. In the decade before the recession, the central areas of the largest cities in England saw an increase of 17% in financial sector jobs. In contrast, the increase in Greater London was only 3% over the same period[iii].

	Trips (m)[iv]	Average trip distance (km)[v]	Stations managed	Passenger Revenue (£m)[vi]	Operating subsidy (£m)[vii]
NT	89.9	24	463	216	324
TPE	25	64	30	179	52

	Route length (km)[viii]	Train-kms (m)	Services per day	Rolling stock (trains)[ix]	Rolling stock average age (Years)[x]
NT	2,716	44.6	2,550	313	24
TPE	1,250	17.4	300	70	7

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[1] 4.9million jobs within a 2km radius from rail stations served by Northern TPE and Merseyrail
[2] 5km radius
[3] Job numbers taken from the ONS Labour Force Survey

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Rail is booming in the North

As a result of these structural changes, regional railways are playing an increasing role in linking businesses, workers and households to a range of economic and social opportunities.

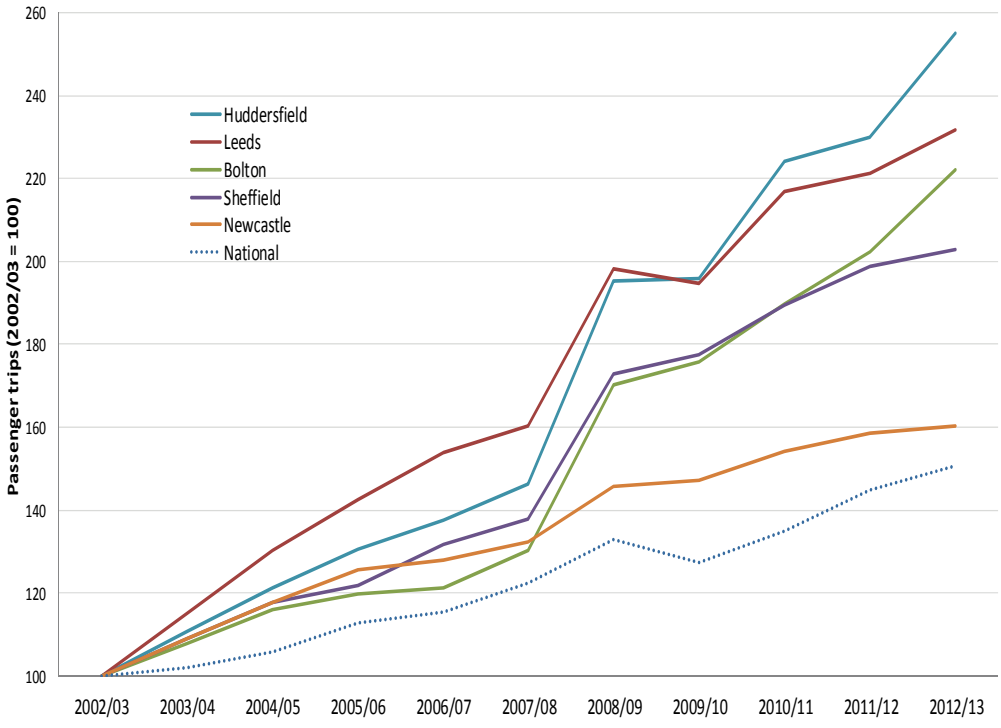
Over the past decade, rail passenger numbers in Northern cities have grown at an unprecedented rate. Rail travel now accounts for more than 20% of all peak trips (other than walking and cycling) into Leeds, Manchester and Liverpool city centres, a figure that has steadily risen over time. Passengers at many stations have more than doubled over the past decade, not just as the largest stations, such as Leeds and Sheffield, but also across smaller regional centres such as Bolton and Huddersfield.

"Rail travel now accounts for more than 20% of all motorised peak trips into Leeds, Manchester and Liverpool city centres"

Some commuter stations, which have seen local investment or service improvements, have seen even greater growth. At Newton-le-Willows station, half way between Manchester and Liverpool, rail demand more than trebled between 2002/03 and 2012/13.

Overall, demand on NT services has grown by 33% between 2004/05 (the start of the current franchise) and 2012/13. TPE passengers grew by a phenomenal 71% over the same period[xi].

Figure 3. Demand growth across a sample of stations in the North of England



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The rail network in the North of England plays a broad economic and social role

The regional rail network plays a much wider role than simply carrying commuters into the largest centres. NT and TPE serve over 500 stations along a network which is over 3000 km in length. Large tracts of the network provide vital connectivity to secluded rural locations and this infrastructure also plays a crucial for national rail freight and regional industry[xii].

Rural economy

The Northern network serves four National Parks, supporting the local tourist and leisure economy as well as providing wider social and economic benefits by taking journeys off rural roads and reducing pollution in these valuable and sensitive environments. Rural rail services also provide valuable lifeline services to local communities, connecting them with key services and employment opportunities.

Rural rail has shown signs of recovery through community rail partnerships, of which there are now twelve in the North. NT expects to see increases in footfall and fare-box revenue as the result of these initiatives[xiii].

"The three Northern regions are the origin or destination to 41% of all rail freight tonnage in Great Britain"

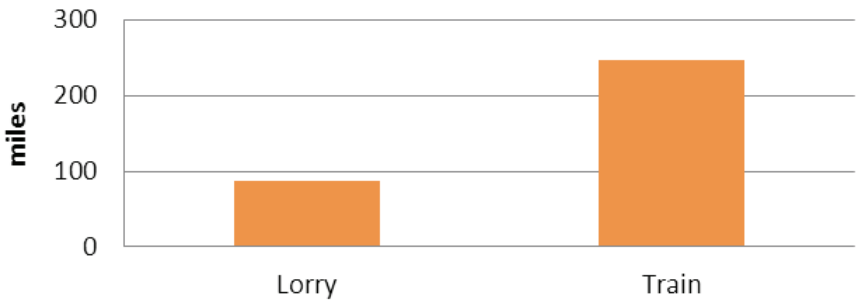
Freight and logistics

Transporting freight by rail removes heavy lorry traffic from our roads. An average freight train can replace around 50 lorry journeys reducing congestion, pollution and the cost of road maintenance[xiv]. The transportation of around 350,000 tonnes of stone from the Peak District by rail, is estimated to have taken 12,000 lorry journeys off the road[xv].

Overall, rail freight removes around 6.6 million lorry journeys from British roads every year[xvi]. This figure is expected to double by 2030, placing increased pressure on the rail freight network[xvii].

The rail network in the North of England carries large volumes of rail freight with total tonnage exceeding that of passenger trains on many rural lines such as Cleethorpes to Doncaster and Skipton to Carlisle. Overall, the three Northern regions are the origin or destination to 41% of all rail freight tonnage in Great Britain.

Figure 4. Distance in miles a tonne of goods can be transported by road and rail on a gallon of fuel



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The 'Investment Gap'

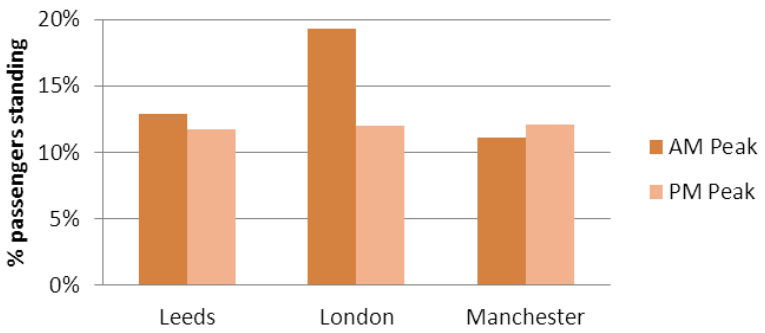
Despite the scale and economic importance of regional rail networks, the North has long suffered from a lack of transport investment. In 2004, the current NT franchise was awarded on a no-growth assumption, which has led to increasing over-crowding on many routes into key Northern cities.

This has created a situation where commuter services into Leeds and Manchester have some of the highest loadings anywhere in the country, with 45% of pm peak services in Leeds and 43% in Manchester with standing room only[xviii]. Overall, this means that 12% of all passengers out of Leeds and Manchester have to stand during the afternoon peak – a level similar to that experienced in London[xix]. The figure is even higher for TPE services, with 23% of passengers from Leeds, Manchester and Sheffield having to stand.

KPMG estimated that overcrowding on NT services could have already lost Leeds and Manchester around 20,000 new jobs by 2013/14, worth £500m in Gross Value Added[xx].

"Over 40% of pm peak services out of Leeds and Manchester are standing room only"

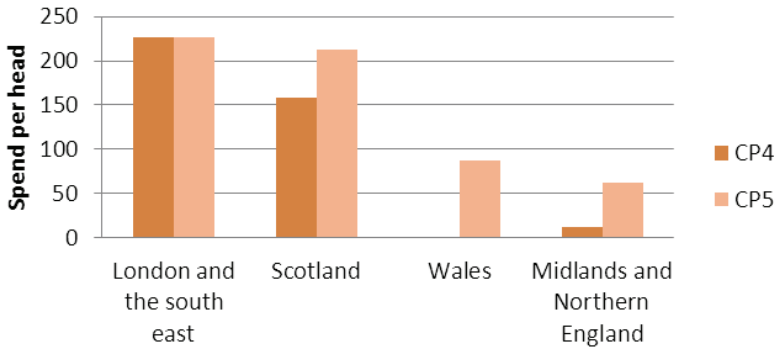
Figure 5. Overcrowding into key Northern stations and London



The lack of investment is also clear on the infrastructure side. Between 2009 and 2014 (Control Period 4 or CP4), the regions of the North and the Midlands attracted little more than £10 of rail infrastructure investment per head of population, compared to over £200 in London and the South East and over £150 in Scotland[xxi].

Despite significant investment in the Northern Hub and electrification, the prospects are not much better for CP5 (2014-2019), with the North and the Midlands expected to receive little more than a quarter of the investment per head as Scotland or London and the South East.

Figure 6. Rail investment spend per head of population: LSE, Scotland, Wales, North and Midlands (£ per head of population)



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"The regions of the North and the Midlands attracted little more than £12 of rail infrastructure investment per head of population, compared to over £226 in London and the South East"

The 'Investment Opportunity'

Rail demand in the North of England is expected to grow by at least 45% over the next fifteen years[xxii]. Additional investment in infrastructure, services and rolling stock would not only enable this growth but also allow the rail network to make an even greater contribution to the local economy.

Infrastructure

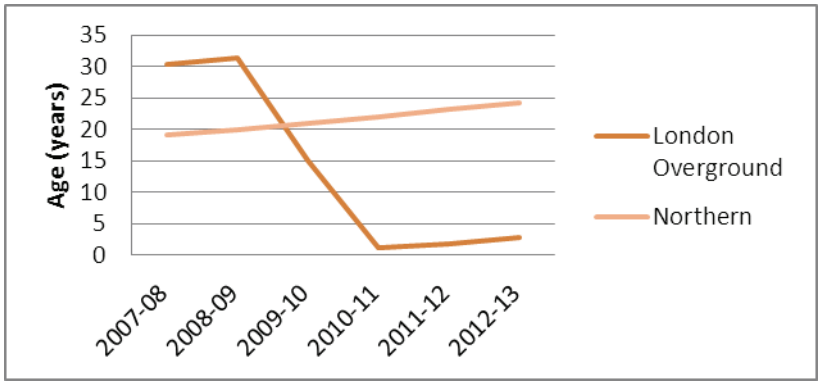
Incremental infrastructure investment, in particular through electrification, can generate significant benefits at relatively low cost. Benefits are achieved through reduced journey times and improved comfort and reliability, which lead to increased demand, revenue and lower operating costs.

The Northern Way suggested in 2009, that a major infrastructure upgrade could deliver additional fare-box revenues of £1.7bn, £4bn of economic benefits to the Northern economy, and total benefits to the national economy of up to £16bn[xxiii]. A number of the original proposals are being taken forward under the guise of the Northern Hub and rail electrification projects. However, the vast majority of the regional rail network will continue to be operated by outdated diesel trains. There is therefore huge scope for much more substantial improvements to take place.

Rolling stock

NT has had no brand new carriages since 1999, and relatively few additional carriages at all, since the franchise was awarded on a no-growth assumption in 2004. As a result, the average NT train is now 25 years old[xxiv]. Meanwhile, franchises providing commuter services in London and the South East shared 580 new carriages over the last 5 years[xxv] and London Overground has one of the most modern fleets in the country.

Figure 7. Average rolling stock age - NT and London Overground



Old diesel rolling stock is less reliable, more expensive to run and generates lower revenues than modern electric units. Replacement of NT's ageing stock would increase patronage, revenue and reduce operating costs.

Although there is currently significant investment in infrastructure electrification there is as yet no commitment from government to provide the modern electric trains required to capitalise on this investment. In order to get maximum return on infrastructure investment it is therefore essential to commit the funds required to upgrade the fleet.

Key myths and facts

Haven't regional networks in the North of England received high levels of investment and yet are still losing money?

The NT franchise was awarded on a no-growth contract in 2004, meaning that there has been little investment in rolling stock, infrastructure or additional services since. In reality, demand on NT services has grown by 33% and TPE by 71% since 2004.

On the infrastructure side, investment by Network Rail between 2009 and 2014 (Control Period 4) came to £12 per head of population in the North and the Midlands, compared to £226 in London and the South East, and £158 in Scotland[xxi]. Between 2014 and 2019, North and Midlands spending is expected to increase to £63 per head but will still be only around 30% of the figure in London/South East and Scotland.

But aren't London commuter and inter-city rail demand growing much faster than regional passenger demand?

Since 2002, passenger journeys have grown faster on regional rail (52%) than in London and the South East (47%)[xxvi].

Passenger demand at many stations in the North has grown at a phenomenal rate. For example, passengers at Leeds station grew by 132% between 2002/03 to 2012/13 (*Source: ORR*). This is significantly above the national trend and has been achieved despite overcrowding and a lack of investment[xxvii].

Since the recession in 2008, regional rail revenue (46%) has grown quicker than revenue from London and South East (37%) or from Intercity passengers (25%)[xxviii].

Doesn't the North of England receive a much higher subsidy than other services?

We believe that the ORR's financial analysis overplays the amount of subsidy received by passenger rail services in the North of England as it fails to fully take into account differences in investment and maintenance costs. It also fails to take into account the infrastructure cost due to the large volume of freight traffic which uses the North's rail network.

pteg's own analysis shows that regional rails share of government support is probably half that stated by the ORR.

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Key myths and facts

And aren't fares clearly too low in the North?

Average fare yields (revenue per passenger-km) on NT and TPE services are, respectively, 10p and 11p. This is similar to Scottish and Welsh train services and only marginally lower than some inter-city operators, such as East Coast (12p), or the national average (13p). This is despite the poor quality of rolling stock, overcrowding and lack of infrastructure investment.

Many commuter rail fares in London and the South East are significantly lower than those in northern cities. Take the example of an annual season ticket between Banbury and Oxford: at 39p/km this is a bargain compared to a cost of 52p/km for a similar distance journey between Stalybridge and Leeds. Even an annual season ticket between Oxford and London turns out to be cheaper at 46p/mile.

In fact, the typically shorter distance commuter in Northern cities pays a substantially higher fare per km than the typically longer distance commuter from London's wealthy commuter belt. Take for example, annual season ticket costs of £89p/km for East Didsbury to Manchester compared to figures of 50-57p/mile for a typical commute into London.

But even then, the difference is not as great as might be expected. For example, a journey between Watford and London takes around 20 minutes, with 7 peak trains an hour. In contrast, the fastest train between Macclesfield and Manchester, a similar distance apart, takes 25 minutes with the remaining 4 peak trains taking between an extra 5 and 15 minutes. Perhaps surprisingly, a Watford to London annual season ticket only costs an extra £4 per year for what is a substantial difference in service quality.

References

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[viii] ORR national rail trends 2012-13
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[xi] ORR National Rail Trends 2012-13 and TAS Rail Industry Monitor 2010
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[xiv] Freight on Rail, the Potter Group
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[xvi] Network rail (2013), Value and importance of rail freight
[xvii] Railway Strategies (2009) Rail freight forecast to double by 2030
[xviii] Government Statistics, table RAI0212
[xix] Government Statistics, table RAI0214
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[xxi] These figures refer to regionally identifiable expenditure and therefore exclude spending on some general purpose grants, for which spending is not disaggregated by Network Rail.
[xxii] DfT and Rail North (2014) Stakeholder Consultation: TransPennine Express Rail Franchise and Northern Rail Franchise
[xxiii] Northern Way and Network Rail
[xxiv] ORR, Average age of rolling stock by train operating company—table
[xxv] HoC Hansard Written Answers 21.0, Wednesday 1 July, 2009, Column 72WH
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