Reopening the Skipton-Colne rail line:
The ‘Northern Link’ project
Prospectus document September 2018
SELRAP is the Skipton and East Lancashire Rail Action Partnership: a community group which has been campaigning to re-open the Colne to Skipton railway for many years. SELRAP is a non-political organisation; however, it enjoys cross-party political support. Approximately 500 individuals and 50 businesses are members of SELRAP, all of these paying an annual subscription. SELRAP also enjoys very widespread community recognition and support, especially in the districts of Craven, Burnley and Pendle.

The Project’s Supporters

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1.0

Introducing the “Northern Link” Project

The project is to extend the successful Airedale line from Leeds into Pendle/Burnley, by reopening a short 12 mile length of “missing link” railway line between Skipton and Colne. The 12 mile line from Skipton to Colne is to be built on the formation of the currently-disused original route of 1848, which crosses the county boundary between Lancashire and Yorkshire in the central Pennines. This new “missing link” railway line will facilitate an important regional passenger service, by extending the successful Airedale line into the large towns which form the conurbation of East Lancashire. By linking Pendle & Burnley directly to both Leeds and Bradford city centres, this reopened rail line will boost employment opportunities, economic growth, urban regeneration and the availability of low-cost housing. Furthermore, as this route passes through the Aire Gap, the lowest crossing point of the Pennines, the “Northern Link” will also complete a new coast-to-coast East-West route. This will become the most easily graded trans-Pennine strategic rail freight corridor.

Finally, this “all-new” trans-Pennine rail route would:
- Interconnect with many other “Northern Powerhouse Rail” projects.
- Improve the resilience of the railway network in northern England.
- Ultimately this short line will become part of a modern and sustainable transport scheme, one that will benefit much of the economy and communities of “the North”.
- This project is fully compatible with both Transport for the North’s (TfN) and the Northern Powerhouse’s vision and objectives. Accordingly, the creation of this new trans-Pennine route could become an integral part of all of the other rail projects being proposed to create “the Northern Powerhouse”.

The project objectives are summarised on this “ticket”.

2.0

The Project’s Supporters

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3.0 The Existing Rail Services: A Tale of Two Halves

The 12 mile long railway line from Skipton to Colne was closed to all train services in 1970. This closure happened despite this short section of railway line having been recommended, in the Beeching Report, to be retained and developed since then, train services between Yorkshire and Lancashire have been run entirely separately: literally as “a tale of two halves”.

The rail line in Yorkshire has been steadily developed over several decades, including investment in new rolling stock. The Aire Valley train service (“Airedale line”) between Leeds and Skipton in Yorkshire was completely modernised and electrified in the 1990s.

This line in Yorkshire is widely recognised as now being one of the best patronised train services anywhere outside of London and the South-East. The Airedale line is described by Arriva Northern Trains as their “flagship line”. Therefore the communities in both West and North Yorkshire now have an excellent train service into Leeds and Bradford, along this modern Airedale line. This service is now used by over 9 million passengers per annum. Towns along the Airedale line have therefore prospered economically.

However, and in very marked contrast to the situation in Yorkshire, the situation in Lancashire is radically different. Today the large population of East Lancashire is languishing at the far end of a short “dead end” and dysfunctional branch line: a service which literally leads from nowhere to nowhere.

The train service along the branch line from Burnley to Colne is very infrequent and uses the notoriously slow and unreliable Pacer trains. This “service” regularly receives very poor passenger survey reviews. Furthermore, because this service is regularly cancelled, this short line has one of the worst records for train punctuality and reliability anywhere in the UK. It often has the worst official train reliability performance in the UK, as demonstrated in the official Office of Road and Rail (ORR) Public Performance Measure (PPM) statistics.

Today there is a huge disparity in the numbers of passengers who use the trains on either side of the Pennines. Interestingly, the populations living in each of the “two towns” of Skipton and Colne are not entirely dissimilar; these being 15,000 and 19,000 respectively. Therefore one would normally expect approximately equal numbers of residents to use the train services. However, some key facts tell the real story:

- Skipton station was used by over one million passengers during 2017 – and growing.
- Colne station was used by approximately 90,000 passengers in 2017.

Source: National Rail Passenger Statistics.

When compared with Lancashire, ten times more passengers use the trains in Yorkshire. Furthermore, and somewhat unbelievably, eleven times more people commute daily out from London up to central Leeds, commuting a distance of over 200 miles, than those who commute daily from nearby East Lancashire into Leeds, a distance of less than 50 miles.


These key facts say everything that needs to be said about this huge disparity in the quality and functionality of the rail services in this region: literally the two halves.

Accordingly, the towns of Pendle and Burnley have long languished in the economic doldrums. The existing transport links between Lancashire and Yorkshire, especially those rail links from Lancashire into the major city region of Leeds, are now widely recognised as being poor or non-existent (sources: Transport for the North and Lancashire County Council).

Over a period of many decades, this very poor transport connectivity has had a severely detrimental effect on the entire regional economy. The two constituencies of Burnley and Pendle are now officially classed as “two of the bottom five” most deprived communities to be found anywhere in the UK.

4.0 The Existing Economy: A Tale of Two Halves

North Yorkshire and West Yorkshire both now generally experience low levels of unemployment. There is strong evidence that many key businesses in these two counties are now finding it hard to recruit adequate numbers of trained and motivated employees.

However, in Lancashire, especially all of East Lancashire, certain large conurbations have consistently experienced high levels of unemployment, often for many decades. In some towns served by this very poor train service, long-term unemployment is institutionalised.

Currently this region of East Lancashire, which is principally the constituencies of Burnley and Pendle, are two of the five most economically deprived towns to be found anywhere in the UK. It is widely recognised that these long-term economic woes are exacerbated by very poor transport connectivity out to the surrounding city regions: especially to the big cities of the Leeds City Region and Manchester (sources: various Lancashire County Council-sponsored transport connectivity and economic reports).

There is a huge disparity in both quality of life and economic circumstances on either side of the Pennines: Yorkshire is affluent, while East Lancashire is poor.

The economic differences across the Yorkshire and Lancashire border can be shown by just one key statistic. House prices, long-recognised as a rough barometer of economic activity, are on average nearly double the value in Yorkshire when compared with house prices in Lancashire. This is despite there being only 12 miles between these two equally-sized towns. The comparison of prices for terraced houses is:

- Skipton (Yorkshire) - £154,936.
- Colne (Lancashire) - £84,083.
- Nelson (Lancashire) - £48,523.
- Pendle (Lancashire) - £48,523.

(Source: Rightmove Feb. 2016)

There is also a huge disparity in the quality of life between the two towns:

- Skipton won the Sunday Times Competition “Nicest Place to Live in the UK” in 2014.
- Pendle is classed as “nicest place to avoid”.

There is a huge disparity in the numbers of people who use the trains on either side of the Pennines: the population of Pendle is 10 times less than that of Skipton. The opening of the Skipton to Colne “missing link” will have a transformational effect on the transport connectivity for the population of approximately 200,000 who currently live in East Lancashire (source: ODG report, sponsored by Lancashire County Council, 2016).

This “Northern Link” will directly connect the residents of Burnley and Pendle to West Yorkshire and allow them to travel into central Leeds in less than one hour. It has to be said that a modern rail link through to the centres of Leeds and Bradford will promote – indeed transform – the prospects for investment, regeneration and economic growth throughout all of East Lancashire.
The “Northern Link” Project: Connecting Communities

5.1 Introduction
The project is simply to extend the existing Airedale line from Leeds, via the short 12 mile gap in the Pennines between Skipton and Colne, into Burnley and Pendle. Building the 12 miles of track - the “missing link” - will form a new and modern rail system. The fast rail line to be created by the new “Northern Link” is a total of 46 miles long.

The core section will run from Burnley in the west to central Leeds in the east, with a connection at Shipley onto the line to Bradford. This new line will thus reconnect all of East Lancashire (Burnley and Pendle) with all of Yorkshire, including the two economic drivers of Leeds and Bradford. At Leeds, it will interconnect to the UK’s intercity network.

The project will extend the existing high-frequency Airedale line passenger train services running from Leeds – which currently terminate in Skipton - to run through to serve all the towns in East Lancashire. Thus 200,000 people living in East Lancashire will be connected into Leeds and Bradford, with a journey time of less than one hour.

5.2 New Passenger Services
The core project is shown on this route diagram below.

Key Points for the New Passenger Services:
• Overall journey time from Leeds to Burnley Central is approximately 60 minutes.
• The new infrastructure will be double tracked throughout.
• The section from Skipton to Colne is new-build construction, on a greenfield site.
• The branch from Colne to Burnley is completely modernised.

• Passenger train frequency is a minimum of two per hour (30 minute frequency).
• The modern passenger train service will run weekends and evenings.
• Standard day return fares from Burnley to Leeds will be about £12.00.

5.3 New Passenger Train Services: Rolling Stock
Modern rolling stock is proposed to be used to provide this new passenger service, these trains being the same trains which are now on order for use throughout the rest of the Arriva Northern Trains franchise area. It is already a Northern Rail franchise obligation to introduce these new trains across northern England from 2018/19 onwards.

The exact number of train units and/or their configuration (the number of carriages per train) will need to be accurately determined during the next stage of feasibility studies.

However, initial feasibility studies have shown that probably only one or two additional three-car trains will be needed to cover the extended Airedale line service from Skipton to Burnley.
5.0 The “Northern Link” Project: Connecting Communities (continued)

5.4 Option of Electrification

The existing Airedale line is already electrified at 25kv, from Leeds out as far as Skipton. However, no decision has yet been taken as to whether to electrify the extended 20 mile route from Skipton via Colne to Burnley Rose Grove, including the new-build section from Skipton to Colne. Electrification is a possible option. This option of electrification will be reviewed and assessed during the next stages of the feasibility study. Passive provision for electrification will be made in the new infrastructure. However, it has already been confirmed that the extended Airedale line service from Leeds to Burnley Rose Grove could be effectively run with any type of modern train stock: either electric multiple units (EMUs) or diesel multiple units (DMUs) or a bi-mode multiple unit train (note: this was the outcome of a preliminary study undertaken by Arriva Northern Trains in summer 2017). This decision on whether, or not, to electrify will depend on two issues: the cost/benefit ratio of the electrification option and also UK government policy regarding climate change and carbon emissions. Accordingly, any government decision about whether the option for new electrification is, or is not, to be provided on the 20 mile section of line between Skipton and Burnley Rose Grove is a cost/benefit decision which can be taken independently of the decision about whether to initially approve and build the new 12 mile “missing link” itself.

5.5 The Existing Airedale Line (Skipton to Leeds and Bradford via Shipley)

The existing Airedale line is described by Arriva as their “flagship line” in northern England. As this existing 26 mile long railway line already has a very high level of passenger usage, with over 9 million passengers per year in Yorkshire. There is no need for it to be improved or altered as part of this project. There is already an entirely separate Network Rail scheme to upgrade the capacity of trains on this line, probably by lengthening some platforms and extending train lengths. This separate “capacity project” can be progressed independently of Skipton to Colne. However, to optimise the utility of the new East to West strategic rail freight route, some gauge clearance works are needed along the existing Airedale line (see section 10.5 below).

5.6 Rail Passenger Services within the East Lancashire Conurbation

Lancashire County Council (LCC) has prepared feasibility studies and budgets for its own proposed scheme for the total modernisation of the existing branch line between Colne and Burnley Rose Grove. This rail modernisation project has been proposed by LCC because of the existing severe road traffic congestion within the several towns which comprise the East Lancashire conurbation. Thus LCC has already recognised that the very poor level of service on the existing Colne to Burnley branch line service, currently just one train per hour, means that this existing rail service is simply not used by present-day short-distance travellers. Much of the potential demand for better rail passenger services is suppressed, simply because the existing train service is so poor and unreliable. There is therefore a considerable potential in this conurbation for a strong and sustained growth in the numbers of rail passengers who would use a modernised line. Furthermore, the LCC-sponsored studies of the “root causes” of road traffic congestion in the Pendle area, especially their studies of the notorious road traffic bottleneck at the eastern end of the M65 (as the motorway enters Colne), have shown that this road congestion is mostly caused by short-distance “travel to work” commuting, i.e. road traffic journeys solely within Pendle and Burnley. All of the LCC-sponsored detailed traffic surveys have shown that this road congestion in Colne is not, as is popularly imagined, being caused by longer-distance road traffic travelling onwards towards Yorkshire. This proposed modernisation project would be a total rebuild, doubling and electrification of this short, 8 mile long, branch line. The route of this “soon to be upgraded” railway line passes through a very densely populated urban area, in the constituencies of Burnley and Pendle. The total population living in close proximity to this section of existing railway line is approximately 150,000. This new train service will reuse the existing well-located stations within the town centres. Therefore all five of the existing railway stations have a very substantial population catchment area, mostly living within walking and cycling distance. This section of line will thus act as a local rapid transit system: allowing passengers to swiftly travel within the congested towns of East Lancashire. The modernised rail service will be a faster alternative to existing bus routes and car travel on congested local roads. Therefore this rail modernisation will improve the existing situation with regard to pollution, long delays and the very high road traffic accident rate in Pendle and Burnley.

Therefore, in addition to the longer-distance rail passenger traffic travelling across the county border to Yorkshire, it is anticipated that the introduction of new, high-frequency and modern train services within East Lancashire will generate a new and strong demand for short-distance passenger traffic within the East Lancashire conurbation - essentially commuting “travel to work” between Burnley and Pendle. LCC has proposed this modernisation scheme entirely separately to SELRAP’s own proposals for reopening the adjacent section of 12 miles of railway line from Skipton to Colne. As of 2018, this LCC-sponsored modernisation project is in the feasibility stages: publicly supported, but not yet funded.
5.7 Passenger Services beyond Burnley: Possible Extension to Accrington

Hyndburn Council (the town of Accrington and its surrounding district) strongly supports the extension of this project from Burnley to Accrington: i.e. extending the modernised passenger train services from Burnley Rose Grove the extra six miles out to Accrington. There is strong, cross-party, political support within Hyndburn for the extension out to Accrington, which is seen as becoming a key transport link to help developing employment opportunities and thus drive economic growth.

5.8 Connecting Passenger Services beyond Burnley to Central Manchester

The reopening of train services over the Todmorden Curve in 2016 allows passengers travelling from parts of East Lancashire - i.e. Accrington and Burnley’s Rose Grove and Manchester Road stations - to travel into central Manchester. These new passenger services have proved to be quite popular. The Todmorden Curve was a project sponsored by LCC and implemented by Network Rail. However, these new passenger services to and from Manchester do not directly serve Burnley Central nor any of the other existing stations in Pendle, such as Colne. Also the interchange facilities used to connect between these train services are very poor.

Burnley Rose Grove station is in a very accessible location, being ideally situated both close to a key M65 motorway junction and at the confluence of several major local roads. However, the existing passenger facilities at Burnley Rose Grove station are very poor. As part of this project, it is proposed to provide a simple, modern, integrated transport interchange at Burnley Rose Grove station. These new passenger facilities would be built on existing derelict railway-owned land, immediately adjacent to both the station and the M65 motorway. This improved station could thus become not only an interchange, but also an integrated railhead for the wider urban area of West Burnley and Padiham. Thus upon completion of the Skipton to Colne link, together with the improved interchanging opportunities at the newly modernised Burnley Rose Grove station, it will become possible for passengers to transfer directly off the extended Airedale line services (via the reopened Skipton to Colne line) and change onto trains travelling into central Manchester and beyond. Thus longer-distance journeys to destinations across North West England - such as Blackburn, Preston and Manchester Airport - would become far simpler and thus more practical.

5.9 Reconnecting the Wider Rail Network of Northern England

This “missing link” would also form part of the wider rail network across northern England, with a large number of interconnections to other passenger train services.

5.10 Connecting Communities across the North

The size of the two populations in Lancashire and Yorkshire that will be linked by this new route, and the remarkably small distance that is the gap between them, is shown on the urban luminosity map below.

- East Lancashire is centre left.
- All of Greater Manchester is bottom left.
- The narrow strip of dark blue in the centre is the Pennines.
- To the right-hand side are the twin cities of Bradford and Leeds.
- Bottom right is Halifax and all of Calderdale (including Batley).
- Existing rail lines are shown in solid unbroken black.

The very short length of the new railway line needed to link these very large populations is shown by the short dotted black line (across dark blue) at the top of this map.
Recent Economic Studies

6.1 Economic Reports
As the Skipton to Colne project links three large counties, it will improve transport connectivity and economic benefits across the entire Central Pennines transport corridor.

During the last three years two major reports have been prepared, which both studied the economic benefits arising from the improved regional transport connectivity that would accrue from the reopening of the Skipton to Colne line. These substantial reports were commissioned jointly by the three county councils (LCC, WYCA and NYCC) and their local enterprise partnerships (LEPs).

a. Output Development Group
In 2015, these three county councils commissioned the Output Development Group (ODG), which produced its final report in April 2015. This report concentrated on identifying the improvements to transport connectivity that building the Skipton to Colne “missing link” would bring to the region.

This final ODG report was extremely favourable to the Skipton to Colne project, noting that it would have – and we quote – “is transformational effect on the transport connectivity in this region”. This report was subsequently endorsed by all three county councils and therefore shortly afterwards a separate report was commissioned jointly by them.

b. Connectivity Study
Following soon after the results of the ODG report, a larger study of the economic benefits of improving transport across this Central Pennines corridor was commissioned by the three county councils in 2016. This report was prepared by consultants Cushman and Wakefield and Systra and the final report was published on 27th March 2017.

This report studied in detail the increase in economic activity that would come from building the Northern Link, including both regeneration benefits and the anticipated increase in economic activity (GVA). The report concluded by noting that there is a compelling economic case for building the Skipton to Colne link; the increase in GVA was predicted to be £43.47m per annum.

However, this report only looked at the benefits for the Pendle area; it forgot to include Burnley. Therefore, as the proposed Northern Link rail services will also include Burnley, the actual increase in GVA will be substantially above the figure given in the final report.

c. Endorsement by Three County Councils
On the basis of the evidence presented in these two reports, all three county councils – LCC, NYCC and WYCA - have given their support to the Northern Link project. All three have also endorsed the findings of the economic benefits that will be generated by the reopening.

However, following the publication of the Central Trans-Pennine East to West Connectivity Study, all three county councils have strongly indicated that they want the Northern Link scheme to be taken forward by TIN. This is understood to be for three reasons: the scale of the project; because rail project management expertise lies within TIN; and also because this project will have strategic significance for all of northern England.

d. TIN Central Pennines Corridor Study
This study was commenced in late 2017, led by the TIN-appointed consultants WSP. As of today (Aug 2018), this TIN report has not been completed. However, initial feedback from TIN has indicated that this report will build on the results of the previous two studies.

6.2 Project Organisation
In February 2018 it was confirmed by the Secretary of State for Transport, Chris Grayling, that the next stage of study, the Strategic Outline Business Cases (SOBC), would be taken forward by the DfT, working in partnership with TIN.

This process will be implemented in accordance with the government’s recently published Rail Vision document and also the suite of documents collectively called the Rail Enhancements Delivery Guidelines.

The Opportunities for Lancashire and Yorkshire

7.1 Opening up Employment Opportunities in Leeds and Bradford
The main benefit of this new passenger train service will be to bring all of Pendle and Burnley, a conurbation comprising a total population of approximately 200,000 people, within less than an hour’s travelling time of both central Leeds and Bradford.

Travel times from the towns in Pendle (e.g. Colne and Nelson) into central Leeds will dramatically improve; reducing from just under 3 hours today (Aug 2018) down to about 50 minutes. This transformational improvement in train travel times means that daily travel to work commute into Leeds and Bradford will, for the first time ever, become possible for many residents of Pendle. Travel times from central Burnley will also dramatically improve. All of central Burnley will be brought to within just 60 minutes of central Leeds, with a direct and modern train service. The existing Burnley Central station is, as the name suggests, extremely well located both for the many businesses that are clustered around the town centre and also for the University of Central Lancashire (UCLAN).

Thus the existing workforce living in Lancashire will be able to travel into Yorkshire for daily employment, instead of being confined only to employment opportunities within East Lancashire. Simply because both central Leeds and central Bradford will be brought to within one hour’s travelling time of all of central Burnley and Pendle, it is anticipated that huge employment opportunities will be opened up in both central Leeds and central Bradford. It should, however, be noted that, due to the long-term institutionalised and insular employment patterns in East Lancashire, it may take a few years for the growth of daily commuter traffic by rail to increase to the finally predicted passenger traffic levels.

Furthermore, in the longer term, employment in central Leeds is now being predicted to grow strongly, with approximately 150,000 new jobs expected to be created in the area around Leeds station within the next decade. This growth is expected to generate longer-term opportunities for continued development of rail passenger services.
7.0
The Opportunities for Lancashire and Yorkshire (continued)

7.3 Encouraging Investment in Manufacturing (including Aerospace) Industries

The population of East Lancashire has the highest proportion of its population employed in the manufacturing industry for any region anywhere in the UK.

Major manufacturing employers who are already based in East Lancashire are Rolls Royce; Safran Aerospace; Silentnight; Hope Engineering, etc. and in the wider Lancashire region, BAE Systems (British Aerospace) at several locations.

It is of particular note that East Lancashire is already designated, by both the government and LCC, as a key regional hub for UK strategic aerospace manufacturing. There are numerous world-class aerospace companies already based in the region.

Towns such as Barnoldswick, home to two Rolls Royce factories (see photo), will become far more accessible via the new and faster train service.

It is hoped that this project, by linking this “currently isolated” region directly into the major transport hub at Leeds and therefore into the entire national rail network, that this greatly improved transport connectivity will encourage more inward economic investment in advanced manufacturing.

Accordingly, it is expected that the Northern Link will encourage these large manufacturing and aerospace employers, many of whom already have a strong presence in this area, to invest in this region. In particular, this Northern Link project could encourage higher-value, high-technology businesses to invest in more advanced manufacturing facilities in this region.

This investment could in turn generate more travel to work opportunities, including for existing residents of West Yorkshire to travel westwards to new employment opportunities in East Lancashire.

7.4 Improved Transport Connectivity from Yorkshire into Manchester

The construction of the Northern Link will also give residents and businesses in some parts of North Yorkshire and West Yorkshire the opportunity to travel by modern public transport into central Manchester. The recent completion of other rail infrastructure projects in central Manchester (ie Ordsall Curve) has opened up many other possibilities for improved connectivity.

It may in the future become possible to travel easily to Manchester International Airport from some towns in West and North Yorkshire with only one change of train.

This improved connectivity from several key towns in Lancashire and Yorkshire to the major city of Manchester and also to its intercontinental airport would be an obvious economic benefit to both businesses and residents.

7.5 Educational Opportunities

In addition to the opening up of employment opportunities, including both business travel and daily “travel to work” commuting, there are a number of other travel opportunities that will be created by building the Northern Link.

In particular, the “missing link” project will open up a number of opportunities for young people to travel for education, especially by opening up links between the further educational colleges of Lancashire with the major universities and colleges of Leeds and Bradford. Students are well known to be major users of train services and it is anticipated that numerous opportunities will be opened up for travel between their homes and many different educational establishments.

7.6 Tourism and Recreational Opportunities

Along the length of this line from Leeds to Burnley there are no fewer than three World Heritage sites: Malham Cove, Bolton Abbey and Saltaire (pictured below). There are also, very close to existing stations, the Yorkshire Dales National Park and the Forest of Bowland, an Area of Outstanding Natural Beauty.

By dramatically improving this region’s transport connectivity for tourists and visitors, especially connectivity for visitors whose journeys originate in the cities of Greater Manchester and Leeds/Bradford, this Northern Link project will obviously increase visitor numbers to these areas.

The town of Skipton, “the Gateway to the Yorkshire Dales”, is already a major hub for tourism. It is estimated that 25% of Skipton’s existing employment is supported by tourism. This town will clearly gain from having much improved transport connectivity to Lancashire and Greater Manchester.

However, this new rail line will improve access to Forest of Bowland (an Area of Outstanding Natural Beauty, which lies in north Pendle) with the cities and towns of West Yorkshire. When compared to Skipton and the adjacent Yorkshire Dales National Park, there is a noticeable lack of existing tourism in the Forest of Bowland area.

It is therefore hoped to spread the economic benefits of greater visitor numbers across many different tourist destinations: not only to more destinations in Yorkshire, but especially to much of Lancashire. This short new railway line will therefore help to boost many small local and micro businesses in existing towns and villages.

Skipton’s opening up of tourism would be a great benefit to the town and the surrounding area. It is hoped that this project will not only attract more tourists to the area, but also help to boost the local economy.

Malham Cove, Bolton Abbey and Saltaire are all located along the same railway line as this new project, which would be an obvious benefit to these areas. By dramatically improving this region’s transport connectivity for tourists and visitors, especially connectivity for visitors whose journeys originate in the cities of Greater Manchester and Leeds/Bradford, this Northern Link project will obviously increase visitor numbers to these areas.
7.7 Housing

As noted above, house prices in Lancashire are only approximately half of the value of equivalent houses in nearby Yorkshire. Most of this difference can be put down to the East Lancashire region having much poorer transport connectivity.

The entire conurbation of East Lancashire contains a very large quantity of solid traditional housing stock, much of which is currently in a poor state of repair. A substantial amount of the existing housing stock in this region does not meet the government's decent homes standard, with much existing housing being under-used, vacant, or even derelict.

However, this new rail link will open up access to good employment opportunities outside of East Lancashire - thus making buying and improving these houses in Lancashire a viable proposition for many residents who want to travel to jobs in Yorkshire. Thus much of the existing housing stock, both occupied and unoccupied, will in the future be instantly transformed so as to be located very close to a new and modern high-quality public transport system (mostly within the ideal 800m walking distance). As this existing housing stock is located in densely populated urban areas, houses are therefore also close to shops and other local facilities, thus making it all a very sustainable location in which to live.

This Northern Link project will provide a total of six stations with a much improved train service. It will reuse and improve five existing rail stations. Four of these six stations are located within the existing town centres: at Burnley Central, Nelson, Brierfield and Colne.

The Northern Link project is therefore an opportunity to transform these poor-quality housing sites, with the potential to renovate and sensitively redevelop many existing old houses as micro-scale projects to become good-quality and also sustainable housing.

As noted above, existing house prices in Pendle and Burnley are extremely low - some of the cheapest houses in the UK. This existing housing therefore represents excellent value for money, especially for young people who are willing to invest in the work necessary to bring these houses up to a decent standard.

7.8 Larger Urban Regeneration Projects

This Northern Link project also has the potential to aid in the regeneration of large “urban post-industrial sites” in this region. There are a substantial number of opportunities to develop sustainable new housing and businesses, both on old industrial sites and also on currently vacant and derelict land.

Simply because of the historic pattern of Victorian-era development, when the housing and factory mills were all densely clustered together in the town centres, most of these potential large regeneration sites are located both close to the existing stations and also within the existing built-up urban areas.

Probably the best single example of the opportunities that will be created for urban regeneration within East Lancashire is at Brierfield Mills. This is a mixed-use redevelopment of the grand Grade 2 listed factory building, which once housed the former Smith and Nephew works.

This very large and historic regeneration site is next door to the existing, but currently dilapidated, Brierfield station, one of the five existing stations which would be transformed under these Northern Link proposals.

The residents living in the redeveloped Brierfield Mills would have the opportunity to travel to Leeds and Bradford in less than an hour, with Brierfield station being literally “on their front doorstep”. This improved transport connectivity would therefore massively boost the potential for urban regeneration of many “post-industrial sites”, such as this example at Brierfield Mills.
8.0

Benefits for the Rail Network of Northern England

8.1 The Rail Freight Capacity Issues across the Pennines

It is readily acknowledged by many of the major UK rail passenger and freight train operators that the whole of northern England’s rail network is now operating close to its capacity limits. This “lack of existing trans-Pennine capacity” is already a major operating constraint along the main rail transport corridor running between Leeds and Manchester.

There have been several studies undertaken of how to improve this East to West trans-Pennine capacity problem. Ongoing studies, by both TfN and Network Rail, are currently tasked with examining the options for increasing network capacity. However, no easy solutions have yet been proposed for upgrading the three existing trans-Pennine railway routes, which are all “few in number and already constrained”.

Furthermore, this capacity problem will probably worsen over the next few years. The planned increases in cross-Pennine passenger traffic will probably further restrict any opportunities to “path” any more freight trains between these ever more frequent and faster passenger services. This increase in traffic is being driven by the commitments contained within the two Arriva Northern Trains and Trans-Pennine train franchises.

This capacity issue is proving to be a major challenge for the UK’s largest rail freight operator, Drax, which provides approximately 7% to 10% of the UK’s total electricity generating capacity. Today Drax needs to route its biomass trains (see photo below), from the Port of Liverpool to the UK’s largest power station, via a very circuitous route.

8.2 East Coast to West Coast Strategic Rail Freight

The construction of this 12 mile long “Northern Link” between Skipton and Colne will also complete an “all-new” fourth trans-Pennine rail route. This new route could be ideal for the re-routing of some strategic rail freight travelling between the East and the West coasts. The Northern Link could therefore become a new strategic rail-freight route for transporting some products from the West Coast to East Coast destinations.

This new East to West route has been identified as being particularly useful for:

• Biomass traffic from Liverpool to Drax (and possibly other power stations).
• Intermodal traffic (swap-bodies) transiting from Ireland to Europe.
• Deep-sea (intercontinental) ISO container traffic, being landed at the Port of Liverpool.

Construction of this “missing link” could allow strategic freight traffic to be diverted via the new Skipton to Colne route, thus keeping it well away from the main bottlenecks of central Manchester. Importantly, this new trans-Pennine freight route, via the Northern Link, is not passing through any of the existing congested railway junctions in central Manchester. This would improve the capacity of those existing railways in the city.

The existing Aire Valley line in Yorkshire already has both the spare capacity and the existing infrastructure which is capable of handling long freight trains. The Aire Valley line from Skipton to Leeds and beyond is already fully equipped for the handling of bulk freight trains. Note: this “spare pathing” down the Aire Valley is a historical “left-over” from the cessation of long-distance coal trains. These coal trains used to originate in Scotland and travel to the East Coast power stations.) Heading east beyond Leeds the best route for freight trains is already cleared for W12 gauge running. At the present time, there is no East to West rail route cleared for W12 gauge running across the Pennines. Therefore to travel between Liverpool and Hull, a distance of approximately 130 miles, a detour of over 100 miles is required, via Lichfield in Staffordshire (or a detour via Scotland).

Therefore, as of today, not only is there no spare East to West rail freight capacity, there is also no rail freight route cleared to the vital W12 gauge anywhere across the Pennines.

8.3 Gradients for Strategic Rail Freight

The Skipton to Colne route passes through the “Aire Gap” in the middle of the Pennines (see map below). Therefore this “missing link” is naturally taking the lowest and flattest route that it is possible to take when building a railway from East to West across the mountainous central Pennines. Importantly, this entire route, via Skipton to Colne, requires no major new tunnels; it has only a few river crossings and there are no significant environmental constraints.

8.4 Strategic Rail Freight Route for Biomass and Bulk Traffic

As noted above, this new Northern Link route will become a continuous and well graded rail freight route. Construction of the initial 12 mile missing link would create a strategic East to West route suitable for bulk and biomass traffic. Drax Power, one of the UK’s largest rail freight customers, is a strong supporter of this project because of the obvious opportunities which exist to shorten and speed up its trains’ transit times.

8.5 Trans-Pennine Freight Upgrade; Container and Intermodal Traffic Route

The Port of Liverpool is well known to be ideally located not only for intercontinental deep-sea container traffic, but also for short-sea intermodal traffic, especially traffic travelling from Ireland to transit across the UK to ultimate destinations in Europe.

The key strategic traffic flows which have been identified as originating in the Port of Liverpool west to east across the Pennines are as follows:

• Intermodal to the Ports of Hull and Immingham.
• Intermodal to Doncaster Terminal.
• Deep-sea ISO containers to various destinations.

Liverpool Deepwater 2 is the largest port in northern England. Following a recent large-scale investment programme it now has considerable available/space capacity.

Drax train on convoluted journey (Credit - Chris Perkins)
Benefits for the Rail Network of Northern England (continued)

Construction of this new East-West strategic freight route is therefore an ideal opportunity to also modernise other small parts of the railway network. This would allow trains transporting deep-sea ISO containers and also short-sea intermodal traffic (at W12 gauge) to transit from East Coast to West Coast using a direct rail route. This minor modernisation would allow rail freight to compete with and relieve the M62 motorway.

Finally, with maritime cargoes being shipped to customers in northern England, there is also the long-term opportunity for the shipping lines to switch their unloading away from the traditional container “hub ports” of London, Felixstowe and Southampton, and move to the northern ports, such as Liverpool. This switch could significantly reduce the numbers of port-related, long-distance lorry movements travelling on southern England’s motorways and therefore help to reduce the UK’s total emissions of air pollutants.

Other Trans-Pennine Upgrades (Assisting Other Rail Infrastructure Projects)

Building the new Northern Link would not cause any disruption to the existing operational railway network. Furthermore, the early construction of the Skipton to Colne route would significantly increase the overall trans-Pennine train path capacity, and also potentially provide both a very useful diversionary route; providing both at a relatively low capital cost. This diversionary route could then potentially assist with the reconstruction of the three other trans-Pennine rail route upgrades - for example by providing a diversionary route during the Leeds-Manchester Trans-Pennine Upgrade (TPU) project. Therefore this “all-new missing link” - the Northern Link - could easily be used as a diversionary route during the reconstruction of the other three trans-Pennine rail routes now being proposed by TIN and the DfT.

Improve Resilience of the Railway Network in Northern England

The completion of an “all-new” fourth trans-Pennine rail link across the Pennines will significantly improve the resilience of the entire railway network of northern England.

Complementary to Other Northern Powerhouse Rail Projects

The ongoing redevelopment of a number of other government-funded railway projects in “the North” (as of April 2018) could improve the links to the Northern Link project:

a. Two recently opened new stations - Kirkstall Forge and Apperley Bridge - have both boosted passenger numbers using the existing Airedale line to the west of Leeds.

b. The electrification of various main lines between Liverpool and Manchester; around central Manchester and also the routes linking central Manchester with major towns in Lancashire (such as Preston and Blackpool) is expected to significantly increase overall passenger numbers travelling by train in Lancashire. These projects are now authorised and ongoing, with completion expected in 2019 and 2020.

c. The recent completion of the long-awaited Ordsall Curve project will offer a major improvement in rail transport connectivity across central Manchester. Very importantly, this new “missing link” will open up a direct route to Manchester International Airport from towns in both Lancashire and Yorkshire. Therefore commuting could become possible from East Lancashire to south Manchester.

All these other projects will naturally increase the numbers of rail passengers using the existing rail network in both Lancashire and Yorkshire. Thus the implementation of these projects will increase demand for travel between Lancashire and Yorkshire by rail and thus improve the overall business case for building the “Northern Link”.

The Northern Powerhouse: Developing the Economy

To successfully develop all of the prospects for long-term economic growth in the North, the primary concept underpinning the Northern Powerhouse idea, it is now widely acknowledged that major improvements are necessary to East-West transport links running across the North. In particular, a need has been identified to dramatically improve the speeds and capacity of those rail lines running across the natural dividing line of the Pennines.

Therefore both the DfT and also TIN are proposing many other improvements to the quality and frequency of rail passenger services across the whole of northern England. In addition, they have recently published proposals for Northern Powerhouse Rail (NPHR), linking major cities.

The Northern Link (Skipton to Colne) proposal is highly complementary to many of the other rail proposals now being planned and implemented. Therefore the proposed Skipton to Colne route should be studied as part of the wider programme of improvements of the railway network across all of northern England.
9.3 Coordination with HS2 and NPHR
The government is already committed to backing both the HS2 and NPHR projects. In the long term, these government proposals for better transport links across all of the Northern Powerhouse, for example to encourage the regeneration of Bradford and Halifax, are expected to considerably boost the overall numbers of rail passengers travelling in both Yorkshire and Lancashire. These HS2 and NPHR stations are to be regional transport hubs.

However, for the full economic benefits of HS2 and NPHR to be fully realised, it is essential that potential passengers are able to travel from their homes and businesses into the main HS2 and NPHR stations.

Uniquely, the Northern Link project is well placed to act as a major regional feeder service for both the HS2 and NPHR new rail services. The identified feeder opportunities into HS2 and NPHR are:

- At Leeds HS2 – from Lancashire to East Midlands, Birmingham and London.
- At Leeds and Bradford NPHR – into all NPHR destinations.
- At Preston HS2 – from Yorkshire to many destinations both north and south.

East Lancashire is currently isolated from all major national rail transport links. In the long term, combining both HS2 and NPHR with this new Northern Link will mean that there will be a transformational effect on national and regional journey times when travelling to and from East Lancashire.

9.4 Central Leeds after the Redevelopment around the HS2 Station
The proposed redevelopment around the Leeds HS2 station hub in Leeds, the entire area just to the south of the existing Leeds station, is expected to generate even more employment opportunities in Leeds. The existing population of East Lancashire will be ideally located to travel into Leeds, via the Skipton to Colne missing link, for these extra jobs after the HS2 related redevelopment is completed.

10.0 Project Scope

10.1 Introduction
The Northern Link project consists of only three parts:

2. Modernisation of 8 miles of existing railway line: from Colne to Burnley.
3. Localised gauge enhancements on the linking railway lines in two counties.

10.2 The New-Build Section: Skipton to Colne: 12 Miles Long
This new section of railway line will be relatively easy to construct, as the entire 12 mile route mostly runs through open and flat countryside.

The entire route follows the alignment of the currently closed railway built in 1848, which is still intact and complete. This route has been protected from almost all development since its closure in 1970. The track-bed is still intact and mostly being used as a footpath, one which is easily walked in just a few hours. The route is flat and near-level throughout. There are no major civil engineering challenges; with no tunnels, viaducts, nor other significant earthworks (embankments and cuttings) required.

One all-new intermediate station is to be built at “Earby and West Craven”, which will directly serve the town of Earby. The entire population (circa 4,000) will all be within easy walking or cycling distance. This station will also be a parkway station for the surrounding communities, serving a total population of approximately 20,000 who live in several nearby towns and villages. This will include the nearby town of Barnoldswick (population 11,000), which is the home of Rolls Royce in the North. This parkway function will be achieved by a combination of car parking, bus and taxi services, as well as cycling.

An important consideration in the Earby area must be that the new railway line is built without any level crossings - especially when crossing the busy A56 road. This important design criterion will be achieved by building a few short lengths of new road, probably including a short section of the “long mooted” LCC highways scheme for “the village’s by-pass” (note: this bypass route has been consulted on by LCC).

In the Earby area, there are approximately 30 existing homes which will be impacted by the new route; these residents will be entitled to generous compensation under the terms of the Land Compensation Act 1973.

There are very few utilities diversions needed, with the only major one being identified as the relocation of one medium-sized gas main, near Kelbrook.

Along the 12 mile route between Skipton and Colne, there are a number of crossings of the new rail line by minor roads, farm access tracks and public footpaths - approximately 25 in total. These minor crossings will all be designed and built as grade separated crossings.

A desk-top and on-site environmental survey, conducted in 2015 by a specialist environmental consultancy, stated that there are no significant environmental issues.

Five major all-new civil engineering structures will be needed at key locations:

2. Fourth Canal: new rail bridge over the canal.
3. Earby: various road diversions and bridges, including the A56.
4. River Aire, near Skipton: new bridge over the river and flood plain.
5. Skipton Bypass A629: new road overbridge.
10.3 Modernisation of the Existing Railway: Colne to Burnley: 8 Miles Long

The existing single track railway line from Colne to Burnley (Burnley Gannow Junction) is a length of track that is currently operational; however, it is currently poor quality railway infrastructure. Therefore this entire section is proposed to be generally upgraded and modernised.

Along the existing track-bed, which was downgraded to become a single line in the 1980s, it is proposed to relay a modern double track route. This new track will be aligned to the best possible new alignment, whilst working within the limits of the existing track-bed and the boundaries of railway-owned land. Some structural works are need, especially to the Brierfield covered way (under the A682) and also to upgrade many existing bridge parapets to comply with modern safety standards.

Five existing stations (all except one) will be retained throughout the East Lancashire conurbation: these are Colne; Nelson; Brierfield; Burnley Central; and Burnley Rose Grove. These five existing stations will be all be cleaned up and modernised. The scope of works at each station varies; in some cases little more than rebuilding the old platform facades is required. However, at other stations more substantial rebuilding works will be required. The improved station at Burnley Rose Grove needs modernising with bus, car parking and cycle facilities, so as to be able to serve the large town of Padiham, which is only a short bus journey away (circa 1 mile). Modern disabled access routes, proper ticketing facilities, passenger information systems and improved station signage must be provided at all stations.

10.4 One Station is Proposed for Closure

Today Burnley Barracks is one of the least used stations to be found anywhere on the UK rail network. For many decades this station has been “marooned and isolated”, because it was cut off from its natural population catchment area by the construction of the adjacent M65 motorway. Therefore this station is proposed for closure. It will be replaced by improving facilities at the nearby and better located Burnley Rose Grove station.

10.5 Gauge Enhancements on Linking Lines

In order to create the full trans-Pennine strategic freight link from East Coast to West Coast, all cleared to the desired W12 gauge (required for ISO and intermodal traffic), it will be necessary to carry out some structural gauge clearance works at isolated locations.

This "new W12 gauge cleared route" will link the existing W12 networks at each end of the Northern Link: at the West Coast Main Line (WCML) at Preston (Farringdon) and near to the East Coast Main Line (ECML) at Leeds (Whitehall/Stourton).

A summary of this work needed to improve and modernise the railway network is as follows:

**Lancashire: Gauge Clearances and Capacity Works**

From west to east across Lancashire, these gauge clearance and localised improvements have been provisionally identified by Network Rail as:

- Improved junction at Farringdon, south of Preston, of the WCML.
- Increase in allowable speeds across two viaducts: at Pleasington and Accrington.
- Localised works to several structures between Preston and Burnley.
- Check operation and safety of many existing level crossings.

**Yorkshire: Gauge Clearances and Capacity Works**

From west to east across Yorkshire, these gauge clearance and localised improvements have been provisionally identified by Network Rail as:

- Changes to track work in the Skipton station area.
- Track lowering at four or five structures between Skipton and Leeds.
- Revised track work and signalling at Whitehall Junction, west of Leeds station.
- Checking the capacity and pathing across Leeds Whitehall Junction.

Some other minor improvements to improve the network capacity for long 775m freight trains, often at key railway junctions, may/will be required. These are believed to be track work (i.e. improving loop lengths) and the associated signalling modifications.

It should be noted that some of these gauging and capacity issues on the existing rail network (as listed above) need to be coordinated with other major projects: for example with HS2 at Farringdon Junction and Trans-Pennine Route Upgrade (TRU) at Leeds Whitehall. In most cases, it should be noted that the requirements of this Northern Link project are the “junior requirements” – i.e. requirements which can probably be accommodated by designing the main works required for these larger projects in such a manner that the joint requirements are coordinated and integrated into the final design of the larger project.
10.6 Estimated Construction Costs

The final engineering design for this Northern Link project has not yet been completed. Therefore at this early stage, all construction budgets and programme durations noted in this document are obviously "preliminary budgets", with suitable risk allowances.

However, there are very few technical challenges involved with building this scheme. Also it is a greenfield environment, not a live operational railway line, which minimises risk.

Various professional consultancies have produced various "high-level" budgets, these budgets being based on the most probable design option. The project budget has been benchmarked against the very recent experience of the reopening of the "Scottish Borders" railway between Edinburgh and Tweedbank: a project which was both three times longer and also faced more challenging engineering across difficult terrain.

The "headline" budget figure is estimated at £100M (note: priced at 2016 costs) for construction of the 12 mile long new line between Skipton and Colne. This estimate is based on double track, a standard new signalling system and one new station at Earby.

The budget for upgrading of the 8 mile long line between Colne and Burnley Rose Grove is estimated at £40M - assuming that the branch line is to be temporarily closed and replaced by a bus for the duration of this construction work (note: all as described above).

If Skipton to Burnley Rose Grove was electrified at 25kv, this would require a budget of between £35M and £50M (note: in addition to the two construction costs noted above).

The gauging and capacity works to the linking lines in Yorkshire and Lancashire are currently not well defined; however, a rough estimate is between £100M and £150M.

These budgets must be verified after a more detailed engineering feasibility study has been completed. However, there are good reasons to believe that the Skipton to Colne project can be built as a relatively low-cost, low-risk railway project. It is important to note that some technical options would be cheaper than this headline budget figure while other options would be more expensive.

10.7 Estimated Construction Programme

Based on other recent UK experience of other similar railway projects, it has been estimated that construction durations for the core section of Skipton to Burnley Rose Grove will be:

- A two year lead-in period for completing the full engineering design; some compulsory purchase of land and obtaining all Parliamentary approvals, etc.

- Approximately a two year year long "main site-works" construction programme for the entire project, including testing, commissioning

- If the line is electrified, it would require an additional 3 month duration.