

THE SKIPTON – COLNE RAIL CORRIDOR

The New Transpennine Northern Link

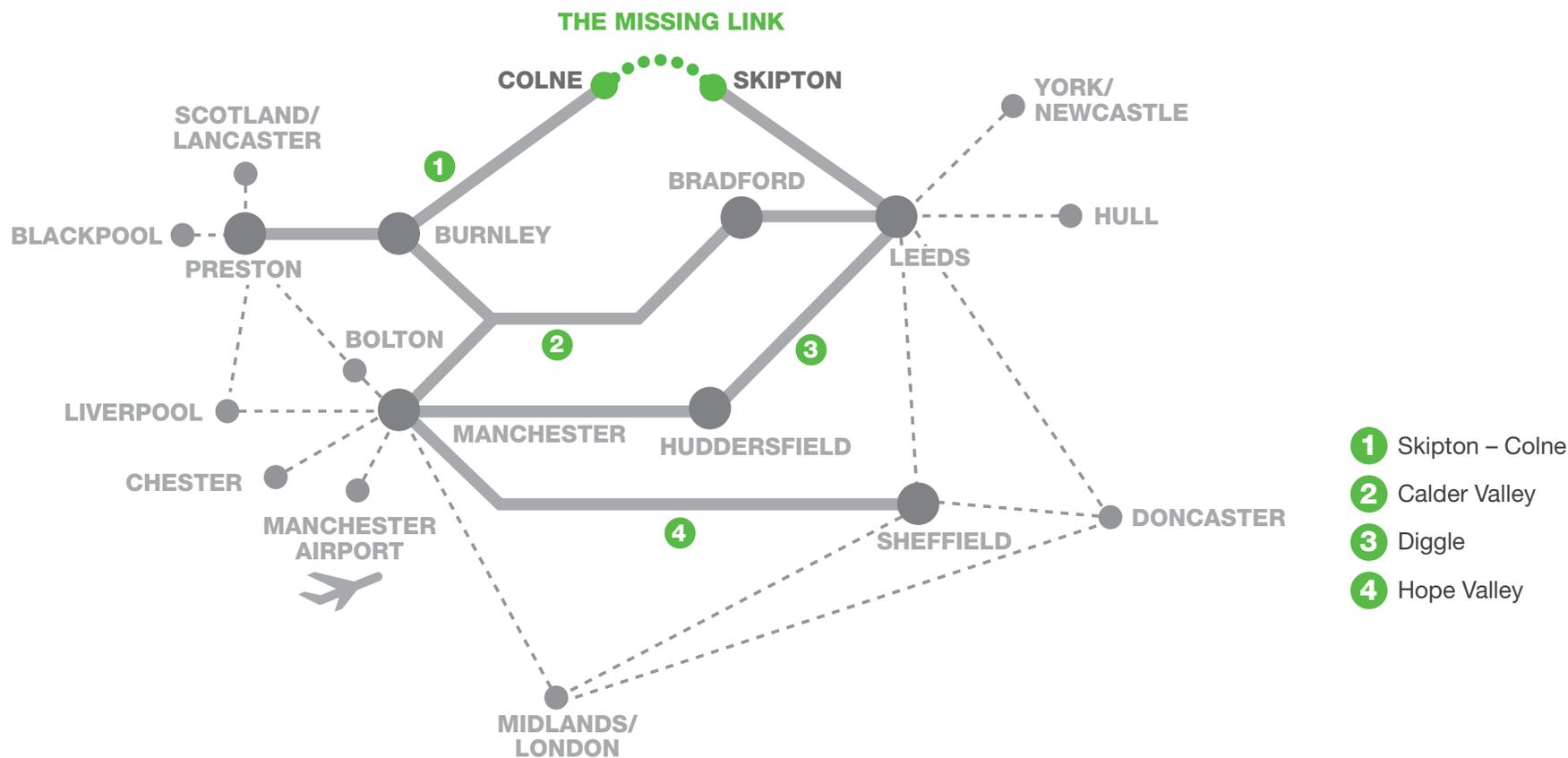


NOVEMBER 2020



ARUP

SKIPTON – COLNE: THE NORTHERN LINK



The Skipton – Colne rail corridor is home to around 676,000 people, 32,000 businesses, and nearly **200,000 jobs**.



The Rail Corridor will enhance connectivity, improve productivity, increase employment, foster innovation, and deliver inclusive growth.



A new **12 mile rail corridor** will be transformational – forming the North’s fourth trans-Pennine link, supporting the levelling-up of the East Lancashire and wider Northern economy.



The Skipton – Colne Rail Corridor will open up opportunities for communities across East Lancashire, spreading and **enhancing the economic benefits from Yorkshire**.

LEVELLING UP INFRASTRUCTURE AND THE ECONOMY

The current UK Government has made commitments to Level Up the regions within the UK to address regional inequalities and developing a new re-distributional agenda; this includes boosting the local economy by investing in skills, innovation, transport and culture.

The Government have stated they want to drive forward the biggest investment in the North for a generation and are committed to improving everyday journeys, to deliver the improvements that the North needs for the long term. Yet the current rail network is failing many communities, and holding back East Lancashire’s economic potential. The current rail line serving Colne is one of the least resilient and has some of the most cancelled services in the North.

It is critical that when levelling up of left-behind parts of the UK through infrastructure investment that the focus is on the parts of the country that can boost growth for the whole economy, such as East Lancashire. This includes linking areas of skilled labour and other workers to the projects that need them.

Government appraisal methods have made the justification for transport investment across the North harder compared with London and the South East.

As part of a revised HM Treasury Green Book, there has to be a stronger focus on levelling-up, whilst supporting local objectives in the strategic case. **Business case development must also develop better ways to capture social wellbeing, decarbonisation, and social impacts**, as well as new ways of capturing the benefits of different Government departments and ambitions. The Skipton – Colne rail corridor, as this document will highlight, can do just this.

Lancashire is currently updating their Local Transport Plan, and there have been recent plans to push ahead with a Devolution Deal for the County. **The Skipton – Colne rail corridor investment can complement and enhance local connectivity across Lancashire**, by strengthening local and regional connectivity, for passengers and freight.

Adopted by UN member states, **the 17 Sustainable Development Goals (SDGs) are an urgent call for action** by all countries to end poverty and other deprivation, and how these must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth, whilst tackling climate change.

The Skipton – Colne rail corridor also supports the following Government and regional policies:

| | |
|---|---|
| Industrial Strategy: Building a Britain Fit for the Future, HM Government, 2017 | ✓ |
| Northern Powerhouse Strategy, HM Government, November 2016 | ✓ |
| Transport Investment Strategy (TIS), Department for Transport, July 2017 | ✓ |
| Connecting People: A Strategic Vision for Rail, Department for Transport, November 2017 | ✓ |
| Rail Freight Strategy: Moving Britain Ahead, Department for Transport, September 2016 | ✓ |
| Integrated Rail Plan for the North and Midlands, Department for Transport, February 2020 | ✓ |
| Rail Network Enhancements Pipeline (RNEP): Moving Britain Ahead, Department for Transport, March 2018 | ✓ |
| Strategic Transport Plan, Transport for the North, February 2019 | ✓ |
| Long Term Rail Strategy, Transport for the North, January 2018 | ✓ |
| Lancashire Local Transport Plan, Lancashire County Council, Expected 2021 | ✓ |

In this document we set out how the Skipton – Colne rail corridor supports the following UN SDGs:



DELIVERING INCLUSIVE GROWTH

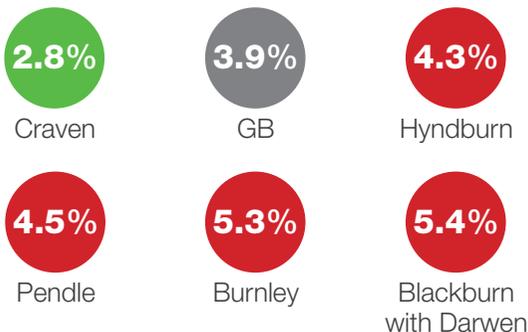
The Skipton – Colne rail corridor can improve inclusivity, health, and access to opportunities for all.

Parts of East Lancashire are some of the most deprived communities nationally, based on the 2019 Index of Multiple Deprivation (IMD), with the economic performance of East Lancashire trailing behind the rest of the North and UK.

Burnley, Blackburn with Darwen, Hyndburn and Pendle are the 11th, 14th, 18th, and 36th out of 317 local authorities respectively for their low IMD rank average in 2019, with the highest proportion of their neighbourhoods in the most deprived 10% of neighbourhoods nationally. This compares with Craven which was the 79th least deprived authority. Whilst Craven has a better ranking than neighbouring areas, it also has some clustering of deprivation around Skipton.

UNEMPLOYMENT

April 2019 – March 2020



Enhanced East-West connectivity (in terms of journey times, cost and resilience) across the Corridor would help to address the identified socio-economic inequalities and disparities and to enable people to access economic opportunities across the geography of the Corridor. It would enable increased cross boundary/cross county flows and movements and would provide increased opportunities to better connect people to employment and skills/learning and maximise the potential of the Corridor’s economic asset and business base.

The levels of car ownership are unequal within East Lancashire, with rural areas having higher levels of car ownership compared to the more built up, typically more deprived areas. Car users are also very dependent on the A56 and M65 corridors. Within areas of low car ownership, there is a reliance on public transport to access work, education and leisure opportunities. If they are not able to, they are very often left behind. It places greater need for increased investment in rail connectivity to open up these up to communities. **Rail connectivity can be an affordable, inclusive way for people to travel.**

GVA AVERAGE PER HEAD

below national average
above national average

| | |
|-------------------------|---------------------------|
| Hyndburn £17,401 | England £27,949 |
| Pendle £18,320 | Leeds £28,079 |
| Burnley £20,028 | Manchester £33,573 |
| Craven £25,690 | |



Evidence shows there are **massive agglomeration benefits with enhanced rail connectivity**. Currently there are around 176,000 jobs in East Lancashire, but improved access to Greater Manchester and the Leeds City Region will open up horizons, with the two growing city regions having nearly 3 million jobs. This can **allow the communities of East Lancashire to access a greater variety in occupations**, including greater skills matching. The Greater Manchester and Leeds City Regions are importers of workers, and also contain higher proportions of higher paid jobs due to clustering of similar industries and businesses. This contributes to the attractiveness of these areas in the North of England for businesses and commuters.

For current and future generations, we must **adapt our rail network to access these opportunities, and avoid a lack of rail connectivity being a barrier to accessing jobs, skills training, education, and other opportunities**. This can and must also ensure equality in terms of opportunities for all within these communities regardless of gender, ethnicity and ability.

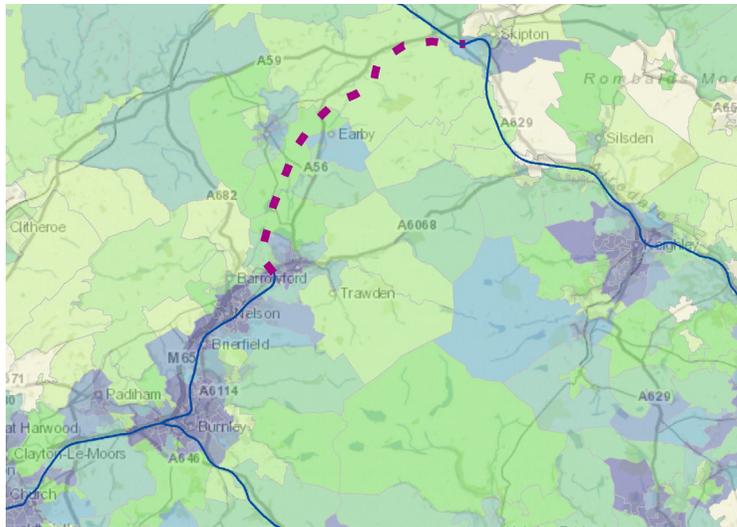
Analysis undertaken shows of the current East Lancashire Line compared with the Airedale Line.

| | Households with Access to a Car (% of Households) | Income (Disposable Household Income £ per Annum) | Level 4 Qualifications or Above (% of Population) | Economically Active (% of Population) |
|----------------------|---|--|---|---------------------------------------|
| East Lancashire Line | 69% | 1,493 | 18% | 65% |
| Airedale Line | 73% | 6,936 | 30% | 72% |

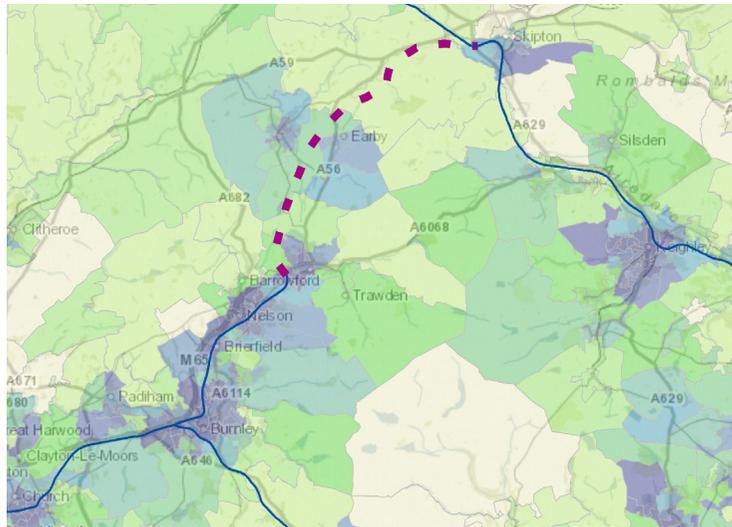


Colne viaduct in the centre of Colne, Lancashire

Index of Multiple Deprivation (IMD) Decile

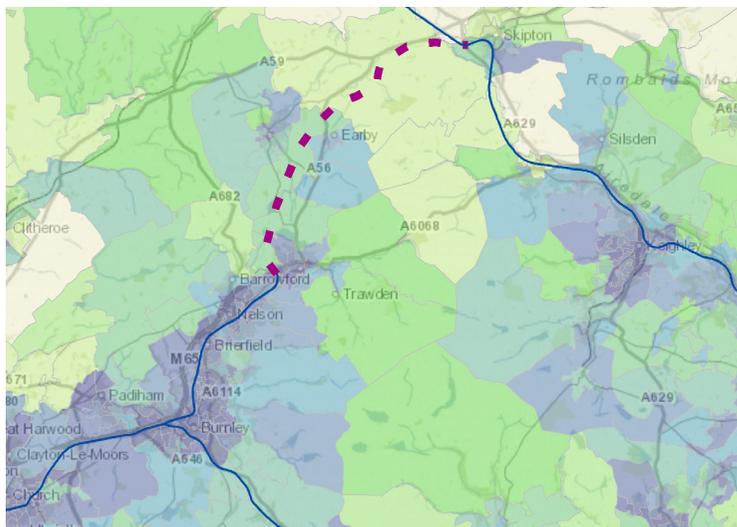


Education, Skills and Training Decile

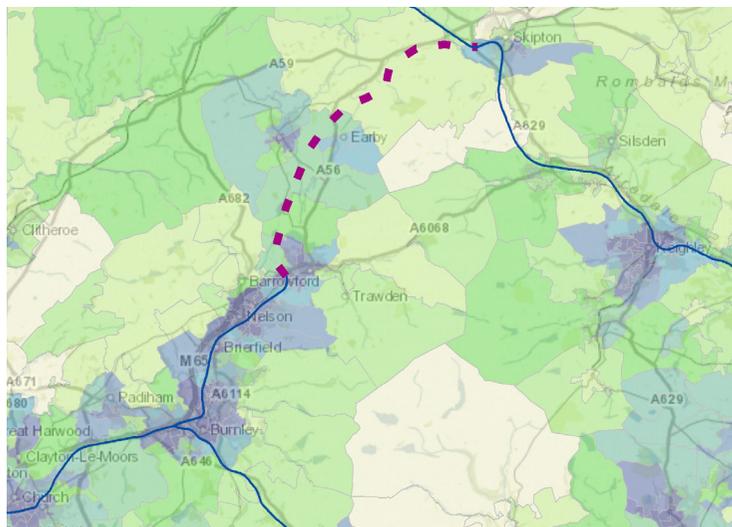


The maps show the areas of East Lancashire in dark blue with the greatest levels of multiple deprivation with the lighter green least deprived. The wider Skipton – Colne rail corridor crosses through many of these currently deprived areas.

Health Deprivation and Disability Decile



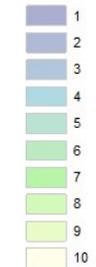
Adult Skills Sub-domain Decile



Legend

Skipton Colne

IMD_Decile

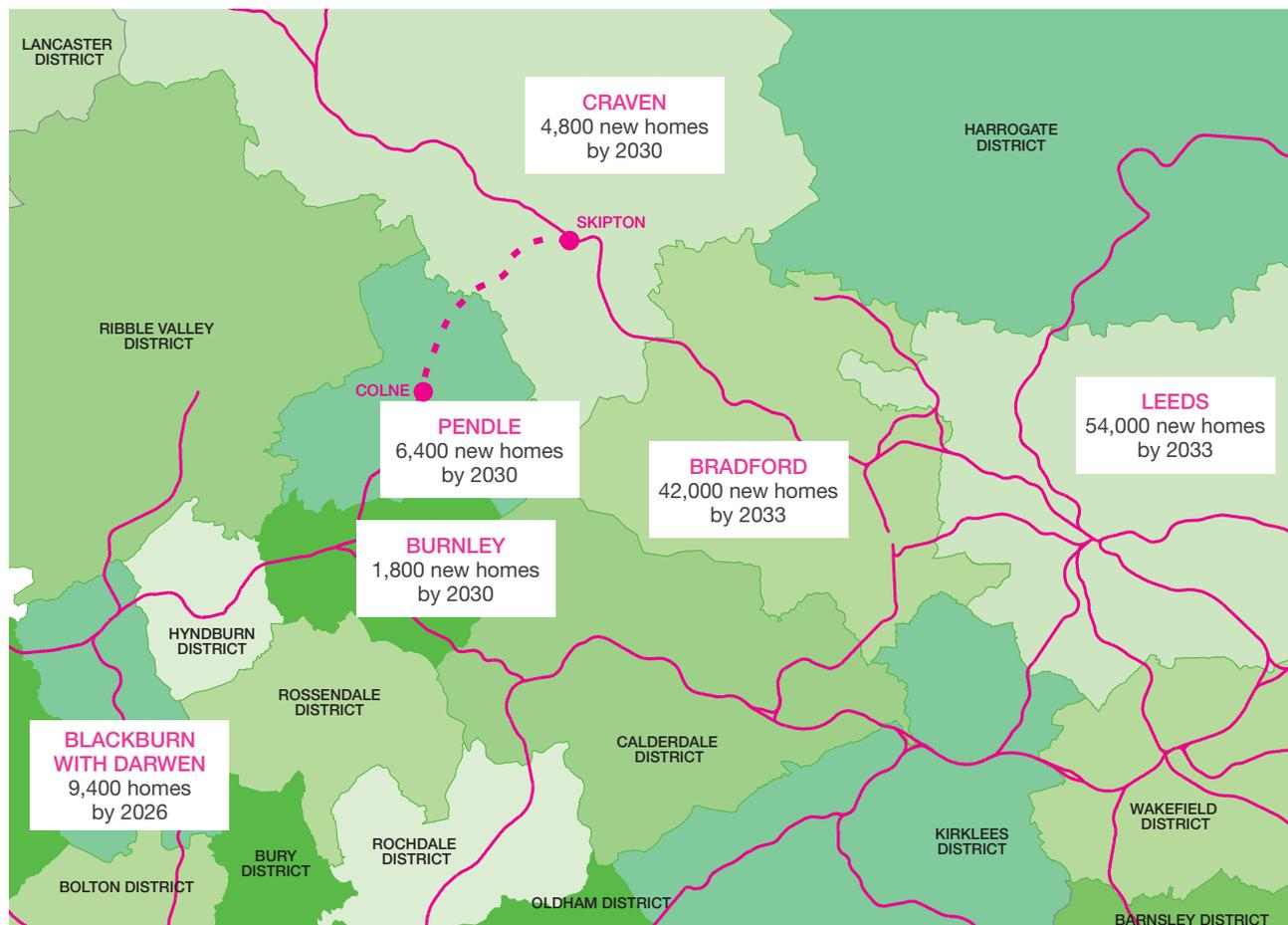


REGIONAL GROWTH AMBITIONS

The Skipton – Colne rail corridor can support the regeneration and development of thousands of new homes, creating enhanced sustainable communities.

By extending the already successful Airedale line in to East Lancashire, the Skipton – Colne rail corridor has the potential to unlock further land for housing development, creating new and diverse communities. Pendle and Craven have been identified as high growth areas for housing, with estimates of up to 6,400 (sites for 8,000 identified) and 4,800 houses required by 2030. In East Lancashire by 2030, an additional 20,000 homes would have been delivered. Homes for the North suggest that across the whole of the North up to 20,000 homes could be delivered per annum over the next three years.

There are also differences in house prices along the Rail Corridor, with existing house prices in Colne half of those in Skipton. In Craven the average house price is £153,500 (5.2 times the average net household income of £29,300) compared with £114,000 for Pendle (4.3 times the average net household income of £26,600). For comparison, Leeds average house price is £181,000 with average net household income of £45,000.



Public transport infrastructure will be a catalyst for unlocking additional land for housing and employment uses whilst also reducing pressure on the highway network. Since 2016, Homes England has been promoting the development and regeneration of land around railway stations to create more sustainable communities.

Improvements to connectivity can support and facilitate sustainable economic growth in East Lancashire by providing access to employment and training opportunities, widening labour markets and reducing costs to businesses. Nelson, Darwen and Todmorden have been identified as beneficiaries of the UK Government's Towns Fund within East Lancashire, in addition to Keighley and Shipley in West Yorkshire. The Towns Fund is intended for places with proud industrial and economic heritage but not always benefitted from economic growth in the same way as more prosperous areas. The fund aims to provide "transformative investment in transport, technology, skills and culture". Enhanced rail connectivity can help promote the ambitions of these towns and surrounding areas to transform and grow.

Recognising the potential changes to HM Treasury Green Book, and the Levelling Up agenda, **the Skipton – Colne rail corridor could be an exemplar case for how future appraisal and business case should be undertaken on transport schemes going forwards, placing greater emphasis on social value.** This is recognising wider economic factors should be better quantified and applied to the future business case. This includes social and natural capital benefits from the scheme. Further business case development will also look to bring the capital cost of the scheme down, with more work required to interrogate the estimate as part of the OBC.

The next stage of scheme development will also consider delivery phases, with a view that these may reduce risk, help build up patronage for any new/ extended rail services and may also introduce greater opportunities.



SUPPORTING REGIONAL CONNECTIVITY AND A GREEN ECONOMY

The Skipton – Colne rail corridor is a small, but crucial part of the rail in the North. It will become the North's fourth trans-Pennine rail link. It also supports the sub-national transport ambition by Transport for the North to achieve transformational economic growth by 2050.

HM Government is currently developing an **Integrated Rail Plan for the North and Midlands**. A key element for the NIC is what rail investment can support capacity and connectivity. The Skipton – Colne rail corridor can do this. The investment would also future proof the rail network to connect in to HS2 and Northern Powerhouse Rail, maximising the benefits and using the released capacity these schemes generate. It could allow opportunities for East Lancashire communities and businesses to connect with Northern Powerhouse Rail in Manchester, Bradford and Leeds all by rail.

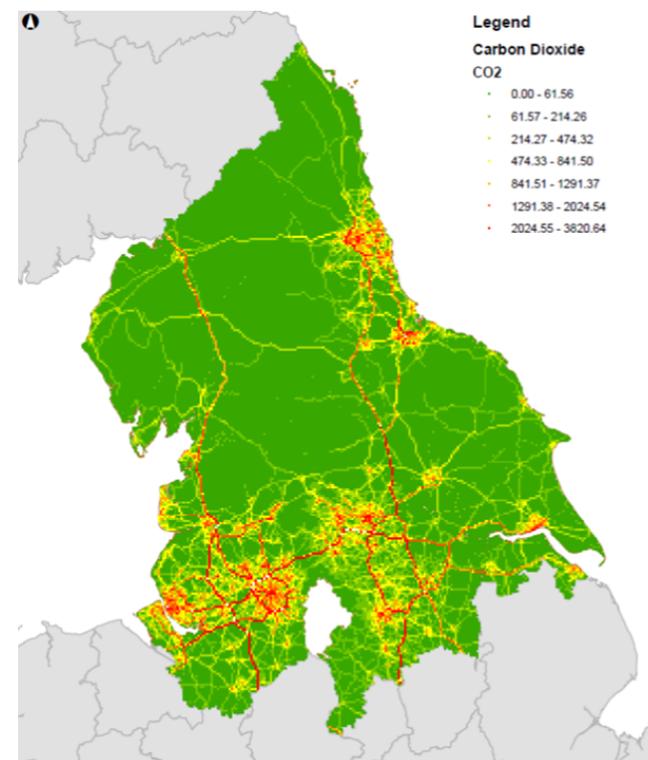
The recent funding announced by HM Government through the Restoring Your Railway Fund highlights how transport links, like Skipton – Colne, can be essential in levelling up opportunities, communities and economies.

Skipton – Colne is a quick win, and can demonstrate wider value for money, generate operational revenue, stimulate business and housing growth, and have minimum disruption to the existing rail network by actually providing resilience and capacity.

Across the rail corridor, there is currently an **East-West divide** when comparing the **East Lancashire and Airedale Lines**. The Airedale line is a high quality line with fast and frequent services, is electrified. The East Lancashire Line in comparison is one of the slowest and least reliable lines with long journey times to Manchester and Leeds for its distance.

The Skipton – Colne rail corridor can provide a low carbon passenger and freight route. In 2019, the UK Government passed legislation requiring the government to reduce the UK's net emissions of greenhouse gases by 100% relative to 1990 levels by 2050. Across East Lancashire, Pendle has been identified as Air Quality Management Area (AQMA) with a requirement to reduce Nitrogen Dioxide (NO₂) which may be a consequence of agriculture and road transport.

Freight by rail is 90% less polluting than freight delivered by heavy good vehicles. Freight moved by rail in the North is expected to grow by 40% between 2016 and 2050 based on tonnes lifted. In terms of tonne km, the growth is predicted to be 61.8% representing more trains needing to travel longer distances.

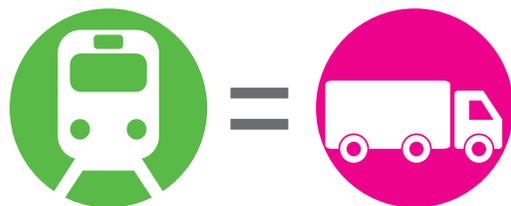


The North's road network is currently a high emitter of carbon dioxide, with the existing and future rail network offering a low carbon alternative.



The Skipton – Colne rail corridor can provide an additional trans-Pennine freight route, with W12 gauge clearance, supplementing the existing rail and road east-west routes, which are currently at or nearing capacity, and avoiding major bottlenecks such as the Castlefield Corridor and the M62. Currently the M62 is the only motorway standard East-West road link between Derby in the Midlands and Edinburgh in Scotland. The Skipton - Colne rail corridor, the lowest route across the Pennines and the only one without long tunnels would increase the number of available freight and passengers paths across the North.

Demand for freight using the Skipton – Colne rail corridor of 18, 775m long freight trains per day, making rail the sustainable, commercially advantageous, choice.



18 Freight Trains

1,080 HGVs



Credit: SELRAP

Freight and logistics are a key element of this corridor, connecting three of the UK’s largest ports, including the ports of Liverpool, Hull, and Immingham.

The scheme is also supported by Drax, the UK’s largest electricity supplier, as a key part of their carbon negative programme of electricity generation: bringing fuel from Liverpool to Drax Power Station.

The expansion of the deep-sea container port at Liverpool will likely result in an increase in freight traffic, an additional freight route could also help to futureproof the rail network and reduce the number of HGVs on the highway network.

This option can create a new freight route across the Pennines that would allow the latest generation of inter-modal containers to be carried on standard wagons to and from ports on the east and west coasts, supporting future global trading links from the UK. Skipton – Colne provides a solution to avoid convoluted routing and extended journey times.

With a package of rail interventions along the wider Central Pennines corridor, **with Skipton – Colne at the heart, a new rail corridor can be created that will support sustainable growth for businesses and communities for decades to come.**

A CLEAR, DELIVERABLE SOLUTION

The solution to support the transformation of communities in East Lancashire is a two track high quality railway between Skipton and Colne with capacity enhancement and gauge clearance to allow:

- One freight path per hour with W12 loading gauge route
- Two modern, passenger trains per hour
- Thousands of people per day to access jobs, education and skills training, and opportunities from East Lancashire through to West Yorkshire

With only 1% of trips from Lancashire to the Leeds City Region, in part reflecting poor connectivity, there is a huge opportunity to change the current labour markets and opportunities for people. **At present a rail journey from Colne – Leeds would take around 2 hours and 30 minutes with a change. The same journey by road would take, in the off-peak, around 1 hour and 15 minutes.** This is not a sustainable position for the future. Direct rail connectivity can provide a reliable, predictable journey time. This rail corridor offers the opportunity for people to move from cars to rail, reducing congestion and associated air quality impacts with new opportunities for park and ride.

| | Current JT by road | Current JT by rail | With Skipton – Colne – Transformational JT times by rail |
|--------------------|--------------------|--------------------|--|
| Colne – Leeds | 60 – 90 mins[1] | 136 min (1 change) | 50 mins |
| Nelson – Leeds | 60 – 85 mins | 131 min (1 change) | 62 mins (Phase 1), 57 min (Phase 2A) |
| Brierfield – Leeds | 60 – 85 mins | 128 min (1 change) | 65 min (Phase 1), 60 min (Phase 2A) |
| Burnley – Leeds | 60 – 85 mins | 67 min | 60 mins |
| Colne – London | 240 – 320 mins | 240 min (1 change) | 148 mins (with HS2, 1 change) |

Communities along the existing rail corridor in Nelson, Accrington, Skipton, Keighley and Burnley will have transformed connectivity for their communities, and the increased patronage and business that can be generated, and reinvested in the local community. Colne, Brierfield, Barnoldswick and Earby would experience even greater new, and enhanced connectivity.

Using a more targeted and refined trip-rate model, new analysis by Arup has demonstrated a two-way demand estimate for a future Earby Station of **106,390** (with a range of 52,452 –202,063) in the year 2029.

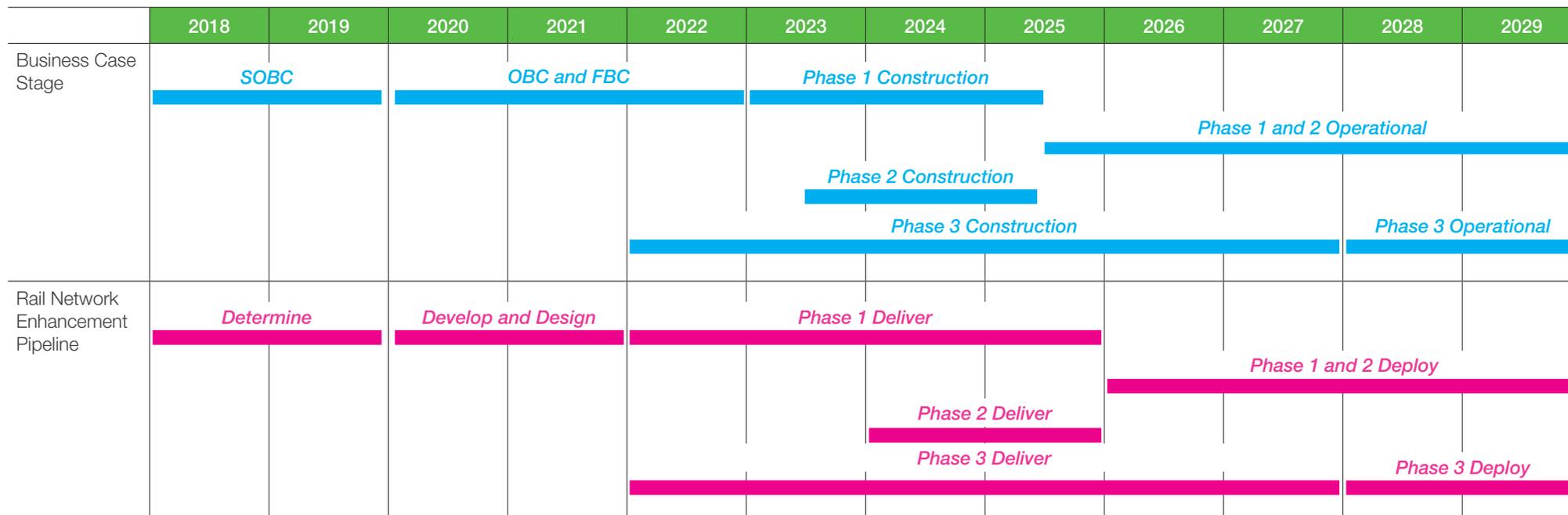
This estimate is based on a targeted set of comparator rail lines, with the selection of stations further refined based on socio-economic data that is comparable to the area around Earby. This evidence-led approach has resulted in a range of scenarios of which are higher than previous analysis on the Skipton - Colne route.

Additional demand at Colne station is expected, currently served by a low reliability service with limited journey opportunities. A good road access to the station from East Lancashire presents an opportunity for park and ride and a public transport interchange in Colne. New through services between East Lancashire and North and West Yorkshire provides opportunities for additional passenger demand for all the stations on the railway corridor.

Great progress has been made, but the momentum must be maintained by HM Government in taking forward this crucial rail corridor. **The Skipton – Colne rail corridor should form a key part of Network Rail’s Rail Network Enhancement Pipeline (RNEP).** Building on the successful completion of the SOBC, the process of implementing a multi-disciplinary team should take the scheme forward to GRIP3, and the production of an Outline Business Case (OBC).



A PHASED, DELIVERABLE PROJECT



The rail corridor enhancements could also be delivered in a phased approach, and with momentum could be operational by 2025/26.

Phase 1 Standalone 12 mile Skipton – Colne Construction

Phase 2 Colne Branch Upgrade – 6 mile modernisation and doubling between Colne – Gannow

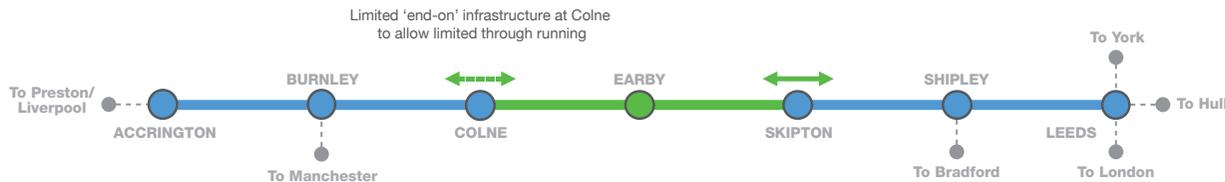
Phase 3 Coast to Coast – Provide gauge clearances and capacity works across the wider rail corridor for passenger and freight

PROJECT PHASING AND DELIVERY

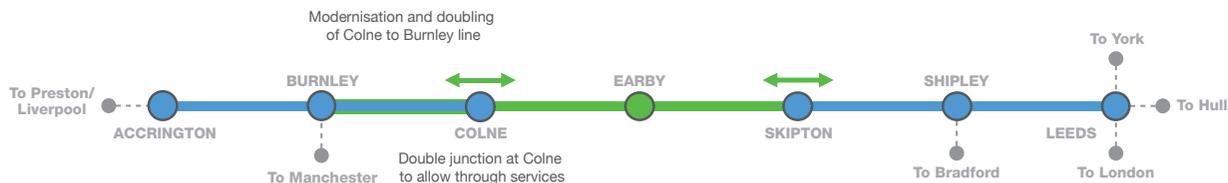
PHASE 1



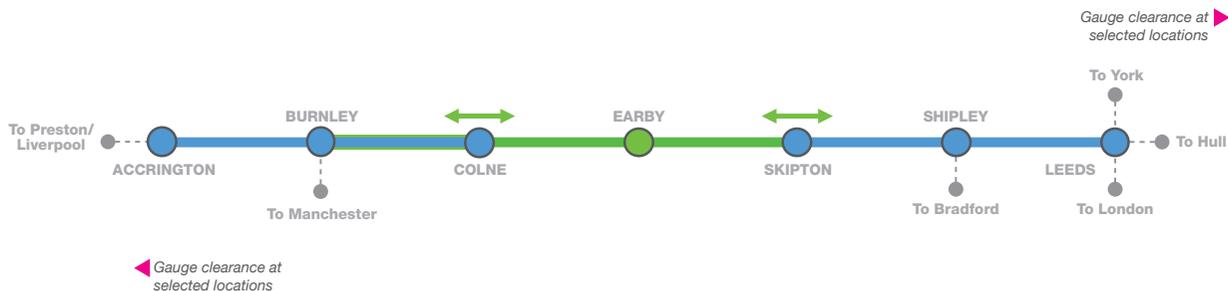
PHASE 1A



PHASE 2



PHASE 3



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This document was produced by Arup,
in collaboration with SELRAP



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