West Yorkshire Combined Authority

West Yorkshire Rail Strategy

A vision for rail in the region

January 2021

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1 Executive Summary

Ambition

1.1 We want our region to be recognised globally as a place with a strong, successful economy where everyone can build great businesses, careers, and lives supported by a superb environment and world-class infrastructure.

1.2 In establishing a new vision for rail in West Yorkshire, it is vital we understand how rail can play a significant role in delivering against the long-term ambitions we have in place for our region, focusing on our four priorities and in the context of the climate emergency.

Boosting productivity

Supporting clean growth

Enabling inclusive growth

Delivering 21st century transport

1.3 The railway contributes to our long-term ambition and priorities for our region by:

- Facilitating a shift towards more sustainable and efficient modes of travel.
- Efficiently connecting communities to opportunities throughout our region.
- Improving productivity by increasing the reach of labour markets.
- Providing an alternative to the road network for the transport of freight.

1.4 In considering how rail can help to achieve our objectives, we have developed a set of high-level principles for rail to help shape the development of the Rail Strategy:

- Address critical capacity issues across the rail network.
- Enhance passenger experience to create a high-quality journey offer.
- Address significant disparity in the current rail service offer.
- Facilitate an integrated transport network with attractive door-to-door journeys.
- Support the decarbonisation of the rail network.

1.5 Rail transport is, in almost all markets, an order of magnitude more energy- and carbon-efficient than alternative modes. With our commitment to become a net zero carbon economy by 2038, rail has a significant role to play in our region.

1.6 Our ambitious Connectivity Plan for the region aims to create easy, seamless, door-to-door journeys. The Plan identifies priorities across different forms of transport and how they will integrate as one single system.

1.7 Supporting our Connectivity Plan, the new West Yorkshire Rail Strategy will set out our ambition for ‘heavy rail’. This Rail Vision is the first product of the new Rail Strategy.

Scope

1.8 With an ever-changing economic, transport and rail policy context, it remains important that West Yorkshire has a rail strategy that is both current and, at the same time, adaptable to the ever-changing world. The strategy needs to support us to:

- **Existing commitments** – Work in partnership with the rail industry to secure delivery of committed improvements.
- **Future priorities** – Influence the rail industry and help to shape the development and delivery of future interventions.
- **Investment pipeline** – Guide development of rail priorities for the region and establish inputs to a coherent programme.
- **Passenger focus** – Challenge the industry to maintain high standards of passenger experience and service delivery.

1.9 It is vital that we have a Rail Strategy that reflects the specific needs of our region and the implications for the development of rail. The strategy needs to support us to:

- **Local priorities** – Represent local priorities for rail considering the challenges and opportunities faced in the region.
- **The role of rail** – Establish the role of rail within the wider transport mix across the short, medium, and long term.
- **Spatially specific** – Develop proposals that reflect local priorities and the spatial aspects that make our region unique.
- **Role of the region** – Look beyond boundaries to consider the role of the region within wider Northern and national context.

1.10 Four key themes have been established to help shape our vision for rail in West Yorkshire and will guide the development of the new Rail Strategy:

- **Capacity** – focussing on the ‘supply-side’ of the railways – including track capacity to allow services to operate, train capacity to provide space for passengers, and station capacity to allow our rail hubs to accommodate passenger needs.
- **Connectivity** – focussing on the ‘demand-side’ and the travel needs of our region – considering how places are connected by rail and specifically including destinations served by rail, service frequencies, and journey times.
- **Standards** – focussing on the ‘quality’ aspects of the rail journey – including reliability and punctuality, the standard of facilities at our stations and on the train, and the wider passenger experience such as fares and ticketing.
- **Implementation** – a cross-cutting theme focussing on the landscape for effecting change – including aspects relating to funding, cost-effectiveness, decision-making, the changing shape of the rail industry.

1.11 Across each of these four broad themes, a range of specific areas for intervention are being considered in the development of our new Rail Strategy – presenting opportunities to influence the future shape of the rail offer throughout West Yorkshire.

Context

1.12 Rail transport in our region is a critical enabler of sustainable and socially inclusive economic growth, enabling improved standards of living and quality of life:

- It expands labour markets and product markets - together, these factors drive agglomeration – and attracts investment into our region.
- It provides vital links from areas of deprivation to opportunities throughout our region – and enhances quality of life for all users.
- It provides a gateway to the rest of the country and to the wider world – for commercial and leisure passenger travel, and to convey goods.

1.13 The COVID-19 crisis has brought unprecedented disruption and a collapse in public transport use – with lasting impacts expected that will change the way we travel for good. We have identified a range of implications for the development of our Rail Strategy:

- Clear short-term focus on the evolving situation and recovery – our strategy must be alive to the challenges and opportunities of changing travel markets.
- Our strategy needs to look beyond the current situation to the medium and longer term – we need to establish a clear 'vision' for rail and aim to shape the future.
- We face an increasingly uncertain future – we need a flexible strategy that plans for a range of possible futures and focuses on growing a diverse range of markets.

1.14 Major issues that have been identified as constraining the attractiveness of rail, and so its effectiveness in meeting our objectives, include:

Current challenges for rail	*Poor integration of services*
Severe capacity constraints	*Lack of alignment with land use*
Slow journey times	*Reliance on diesel traction*
Low service frequencies	*Poor reliability and punctuality*
Severe on-train crowding	*Door-to-door journeys ignored*
Poor quality rolling stock	*Poor value for money fares*
Variable station standards	*High levels of public subsidy*

1.15 Against this background, there are a number of clear opportunities that align well with rail's potential to create a vital need to upgrade the railway:

Current opportunities for rail	*"Levelling-up" agenda*
Climate Emergency declaration	*Rail industry reform*
COVID-19 crisis and recovery	*Government's Integrated Rail Plan*
Post-Brexit competitiveness	*Trans-Pennine Route Upgrade*

Priorities

1.16 A programme of engagement with local partners has been undertaken across the region. Interactive workshops have been held with our Transport Committee to gather inputs on priorities for rail, including in-depth district-by-district sessions with members.

1.17 From this engagement activity, key messages on priorities have been drawn – presented in the form of vision statements that will guide the development of our Rail Strategy:

Our priorities – we will continue to make a strong case for enhancements across our region, with rail vital for the success of the economy, inclusive growth, and tackling the Climate Emergency, and being at the heart of wider regional strategies.

Social inclusion – we will pay particular attention to the rail offer in deprived and disconnected communities, ensuring sustainable modes are competitive, and addressing cost of travel as a significant barrier for particular groups.

Barriers to travel – we will address disparity across the region, communities with little or no access to the network and areas where the service offer is very poor, and focussing on delivering frequency, reliability, and simplicity for passengers.

Wider markets – we will make the case for growing the role of rail in serving wider journeys, including access to health and education, supporting leisure and tourism, and placing a greater emphasis on expanding the role of rail for freight.

Rail investment – we will work in partnership with the industry to press for major investment as part of a long-term integrated strategy, building on commitments and extending the reach of major projects to secure the best outcomes for our region.

Capacity constraint – we will focus on addressing critical bottlenecks as a high priority, where track, train, and station capacity cause misery for passengers, stifle the potential of rail, and restrict economic growth across the region.

Maximise existing – we will endeavour to realise the full potential of the current rail network, extending the reach of station catchments, with emphasis on improving station access, service frequencies, and integration within rail and between modes.

Door-to-door – we will focus on the full journey, rail travel as part of an integrated transport network, including access to the network, the growing role of local multi-modal ‘hubs’, making connections work, multi-modal fares and ticketing, and ensuring access for all.

Local connectivity – we will place a far greater emphasis on enhancing local rail services, including how they integrate with other rail services and wider modes of transport at natural hubs and nodal points across our region.

Quality standards – we will push for high quality standards throughout our region, reflecting the varied needs of passengers in understanding the network, accessing information, and making the journey – including safety throughout the journey – and with a focus on non-regular users.

1.18 With a clear need to work in partnership across the industry, and a view to greater collaboration in strategic planning going forwards, early engagement has also taken place with our Train Operators Forum, with Network Rail, and with Transport for the North.

1.19 Engagement has underlined the importance for the strategy to address local accessibility. This implies a focus not just on major projects, but also on local barriers to accessing the network, better integration with other modes, and joined-up information and ticketing.

Vision

1.20 We have set out our vision for the future of rail in our region, identifying specific areas for enhancement, and shaping investment in the region's rail network through to the medium and longer term.

1.21 Our vision considers a range of key themes – outlined below:

Connectivity needs

Our vision for rail must have connectivity needs at its heart. We must fully capture these in an integrated way – without compromising the ability to improve rail travel for any particular part of our region or section of society.

- All rail markets and journey purposes – including both passenger and freight.
- All rail service types – including local, inter-regional, and longer distance travel.

We have identified clear gaps in rail connectivity – within our region and beyond – where we see strong travel demand potential being held back by poor existing rail connections.

Journeys must be considered in their entirety – door-to-door – to understand what a successful network looks like. We must provide for the unique characteristics of West Yorkshire – connecting places and people in a polycentric region. This requires:

- A comprehensive network with wide geographic coverage.
- A door-to-door integrated travel solution.
- Simplicity, predictability, and reliability for passengers.
- Every stop as a gateway to the wider world.

Our vision is to enable travel from anywhere in West Yorkshire to anywhere else in the region, at least twice per hour, at the same time each hour, all day, and every day – seamlessly, simply, reliably, and without worry about ticketing.

We have set an ambitious target that all journeys – from door to door – should be possible in a journey time that is no greater than the off-peak, uncongested, car journey time.

We present a range of 'connectivity concepts' for the public transport network which aim to support us in achieving our objectives – these concepts include:

- Comprehensive integration of rail with bus, walking, and cycling.
- A single system rather than a set of disjointed independent services.
- Fast direct services for the most important high-volume rail flows.
- Rail-to-rail and bus-to-rail interchange hubs throughout our region.
- Interchange as simple, convenient, and reliable as the best in the world.

For all local rail passenger services, we have established clear and consistent service frequency standards – to address existing poor levels of service and significant disparity:

- **2 trains per hour** – Minimum standard for all established local rail services. Some 'emerging' routes should see phased improvement to reach this level.
- **4 trains per hour** – Higher frequency 'turn-up-and-go' services on core routes into our main urban centres – particularly to and from Leeds.
- **6 trains per hour** – 'Enhanced' services connecting our major centres with the regional centre in Leeds, plus hubs providing multi-modal interchange.

Capacity needs

With the connectivity needs of our region at the heart of our vision, we have analysed the future capacity requirements of the rail network in the region – considering the need to accommodate:

- Expected growth in rail passenger demand.
- Service enhancements to meet our frequency standards.
- Wider connectivity aspirations designed to increase the role of rail.
- The increased future role of rail freight services.

Looking out to a longer-term horizon of 2040, we have identified solutions to provide the required capacity – spanning both rolling stock and infrastructure enhancements.

To meet expected growth in demand and reduce overcrowding we will need longer trains or more frequent services – an extra 60 carriages by 2024 and a further 70 by 2040.

We have identified that substantial infrastructure work will be required to support the needs of our region in the medium and longer term – with specific interventions across four broad categories:

- **Platform lengthening** – to allow longer services to run on routes throughout our region.
- **Signalling enhancements** – to make better use of heavily-used sections of the network.
- **Capacity enhancements** – focussed on key junctions and stations across the region.
- **Four-tracking of key sections** – to enable separation of services at critical bottlenecks.

We have set out 'how' and 'when' these critical capacity enhancements should be delivered – a timeline out to 2040 shown as a series of 'configuration states' – grouping schemes into delivery packages as we step up through our connectivity and capacity needs.

Major programmes

HS2 and Northern Powerhouse Rail must be developed in an integrated manner to release vital rail capacity on existing routes which could be utilised for enhanced local and regional services, as well as increased freight traffic.

Improvements must be integrated with local and intra-regional rail throughout our region. We need key pieces of infrastructure to be delivered as part of a single, joined-up plan:

- **HS2 Eastern Leg** – Completion of HS2 Phase 2b east between Leeds and the Midlands. This includes early delivery of the Leeds HS2 station along with a link south to a junction with the existing network.
- **Northern Powerhouse Rail (NPR)** – Delivery of the full NPR network linking Leeds, Bradford, and Manchester – with a new through station in the centre of Bradford to accommodate both NPR and Calder Valley services.
- **Trans-Pennine Route Upgrade (TRU)** – Completion in full by 2026, including electrification between Huddersfield, York, and Selby, and the Garforth touchpoint, to provide additional capacity now to support economic recovery.
- **Leeds Station** – With the station approaching pedestrian capacity, investment is urgently required. We also need to create significant additional capacity on the eastern and western approaches to the station to relieve the current bottleneck.
- **Electrification** – A rolling programme to create an electrified City Region rail network, starting with the Calder Valley line, to decarbonise the railway and the economy, and to open up opportunities to transform connectivity.
- **East Coast Main Line (ECML)** – Continued investment in this vital economic artery – optimising links to London – and which will remain critical after HS2 is delivered.

Decarbonisation and electrification

- **Modal shift** – We will prioritise measures to encourage mode shift from road to rail travel – and attracting new passenger and freight travel to rail.
- **Electrification** – We will strongly support the need for a rolling programme of electrification – ultimately covering all routes in our region.

Reliability and punctuality

- **Network capacity** – We need investment in additional capacity in the rail network – performance must form a major element of work to identify future rail infrastructure capacity requirements.
- **Network resilience** – We need a more resilient rail network – with a clear focus on mitigation and prevention measures associated with the wide range of drivers of poor performance.
- **Passenger experience** – We will continue to influence the rail industry to put passengers at the heart of rail operations planning – working as "one team" with a focus on passenger-focussed performance monitoring and information provision.

Rail stations and access to the network

- **Passenger experience** – We will make our rail stations attractive and pleasant places, well rooted in their communities, and perceived at all times as safe – with consistent and high standards to enhance the image of public transport as a whole.
- **Access for all** – It is a fundamental principle that all stations – throughout the network – must be fully physically accessible to all members of the community.
- **Maximising potential** – We will expand the reach of our rail stations into wider communities across the region – looking beyond the immediate station area – and ensuring the stations themselves provide the necessary facilities to maximise use.

Rolling stock quality

- **Passenger experience** – We will promote development of a consistent rolling stock offer for each category of journey type – suited to the market being served.
- **Productivity benefits** – We will push to maximise productive time on trains with a clear need for adequate seating capacity and high-quality digital connectivity.
- **Rail as a choice** – We will strive for a high-quality travelling ambience – such that rail travel becomes a positive choice, rather than a "distress purchase".

Rail freight

- **A growing role** – We strongly advocate the growth of rail freight for both the transfer of existing flows to rail and the clean growth of new businesses.
- **Planning strategy** – We will keep a clear focus on critical operational factors which must be met to maximise the full potential of rail freight.
- **Major projects** – We will continue to influence the development of major projects to ensure that greater emphasis is placed on expanding the role of rail for freight.

Safety and security

- **Industry best-practice** – We will continue to support the development and application of world-leading practice on safety throughout the rail industry.

- **Modal shift** – We will continue to promote strategies rooted in the benefits of associated with modal shift towards rail as an inherently safe mode of travel.
- **Industry challenge** – We will use our position as an independent body to raise challenges with regard to safety and security that reflect local conditions.

Fares and ticketing

- **Simplicity** – We will call for improvements to reduce the complexity of fares and ticketing – aiming for a system which simple, clear, and easy to use for passengers.
- **Value for money** – We will support measures to ensure passengers achieve best value for money for their travel – whilst tackling issues relating to affordability.
- **Passenger needs** – We will endorse changes to the fares and ticketing system to better suit changing travel patterns and passenger needs – integrated across all modes of travel.

Network gaps

- **New opportunities** – We will assess the potential of network gaps identified across our region – both in terms of new passenger and freight connections.
- **Wider modes** – We will consider the potential of wider modes in assessing the case for network gaps as part of our wider Connectivity Strategy.

New stations

- **Deliver commitments** – We will focus on successfully delivering our programme of new stations serving Elland, Thorpe Park, Leeds Bradford Airport, and White Rose.
- **New priorities** – We will consider further opportunities for the development of new stations where there is potential for a strong case to be made – actively pursuing opportunities to shape major programmes.
- **Maximise potential** – We will expand the reach of our existing rail network into wider communities across the region through enhancements aimed at improving network capacity, station facilities, and access to the network.

Implementation

- **Industry structure** – We will continue to make the case for substantial reform of the industry towards a simpler, integrated structure – and one which integrates decision making across ‘track and train’.
- **Devolution agenda** – We will continue to push for devolved budgets and decision-making, including a more rational and integrated approach to service planning and accountability.
- **Partnership working** – We will, together with our own transition to a Mayoral Combined Authority, consolidate and develop our partnerships with the railway - delivering our vision will require strong partnership working, with sufficient funding to support our ambitions.

1.22 Realising our vision will not be simple or rapid. The strategy will need to focus closely on implementation – not only identifying the infrastructure needed to achieve this vision, but also ensuring that existing major projects are delivered in the best way possible.

1.23 It will also entail working closely with other transport modes within the overall integrated Connectivity Plan, as well as ensuring that coverage of the railway itself is optimal, and therefore considering the potential for network expansion within this multimodal context.

Strategy development

1.24 As the first product of the Rail Strategy, the Rail Vision sets out ambition for the way in which the railway needs to serve the region, its people, and businesses in the future. The Rail Vision will be subject to public engagement as part of our wider Connectivity Plan.

1.25 Beyond the Rail Vision, development of the full Rail Strategy will translate the high-level objectives, outcomes, and outputs contained in the vision into interventions across the full scope of rail policy. Crucially, this will include prioritisation.

1.26 Work to develop the new Rail Strategy in full, including detailed technical work, continues. Alongside the outcome of public engagement, this will enable the strategy to be finalised in 2021. Members and Local Authority partners will continue to be engaged in the process.

Structure of this vision

1.27 The structure of this vision document is as follows:

- **Ambition** – Setting out our ambition for the region, understanding how rail can play a significant role in delivering against our long-term ambitions, and establishing objectives for the Rail Strategy.
- **Scope** – Setting out what we need the Rail Strategy to help us do, why this is vital for West Yorkshire, and what we need the strategy to capture in terms of the specific geography, timescales, and themes.
- **Context** – Setting out the role of rail within our region – both now and in the future – and the challenges and opportunities that need to be considered in the development of our Rail Strategy.
- **Wider policy** – Setting out the wider policy landscape that our new Rail Strategy sits within, the key interfaces between the range of strategies in scope, and how policy development can be integrated.
- **Priorities** – Setting out our priorities for the future of rail in our region – the needs of passengers and businesses – established through engagement with the West Yorkshire Transport Committee.
- **Vision** – Setting out our vision for the future of rail in our region, identifying specific areas for enhancement, and shaping investment in the region's rail network through to the medium and longer term.
- **Strategy development** – Setting out our next steps in moving from vision to strategy, building on the extensive work, and moving toward a detailed view of how we aim to deliver enhancements aimed at achieving our objectives.

2 Ambition

Setting out our ambition for the region, understanding how rail can play a significant role in delivering against our long-term ambitions, and establishing objectives for the Rail Strategy.

Our ambition for West Yorkshire

2.1 We want our region to be recognised globally as a place with a strong, successful economy where everyone can build great businesses, careers, and lives supported by a superb environment and world-class infrastructure.

2.2 In establishing a new vision for rail in West Yorkshire, it is vital we understand how rail can play a significant role in delivering against the long-term ambitions we have in place for our region, focusing on our four priorities.

Boosting productivity

Helping businesses to grow and bringing new investment into the region to drive economic growth and create jobs

Supporting clean growth

Growing our region's economy while also cutting CO_2

Enabling inclusive growth

Ensuring that economic growth leads to opportunities for all who live and work in our region

Delivering 21st century transport

Creating efficient transport infrastructure that makes it easier to get to work, do business and connect with each other

2.3 Our Transport Strategy sets ambitious targets to grow the number of journeys made by sustainable modes that contribute to realising this ambition, and above all, point to an ongoing need for the railway in West Yorkshire to accommodate further significant growth.

- 75% more trips made by rail by 2027
- 25% more trips made by bus by 2027
- 300% more trips made by bicycle by 2027

2.4 Focussing on the outcomes we want to achieve, and how rail outputs can support the desired outcomes, the railway contributes to our long-term ambition and priorities for our region by:

- Facilitating a shift towards more sustainable and efficient modes of travel for all journey purposes, with an increasingly competitive rail offer open to communities throughout the region.
- Efficiently connecting communities to employment, learning, social, and leisure opportunities, improving career prospects, promoting healthier lifestyles, and increasing social mobility.
- Improving productivity by increasing the reach of labour markets to connect the right people to the right jobs and bringing regional and national economies closer together.
- Providing an alternative to the road network for the transport of freight, helping to reduce congestion, improving air quality and urban amenity, and reducing carbon emissions.

2.5 As demonstrated by the above, in aiming to achieve our overall ambition we are clearly focussed on understanding the needs of, and delivering outcomes for, both existing and new passengers and users of the railway throughout our region.

2.6 Partnership working is fundamental to everything we do. Delivering our vision will require the Combined Authority to work in strong partnership with the rail industry, with local partners across the region, and with sub-regional and national transport bodies.

Objectives for the Rail Strategy

2.7 Building on the long-term ambitions we have in place for our region, we have developed a range of high-level objectives designed to shape further development of the Rail Strategy. This has considered our four overarching priorities, how rail can support these, and also what we need the new Rail Strategy itself to achieve.

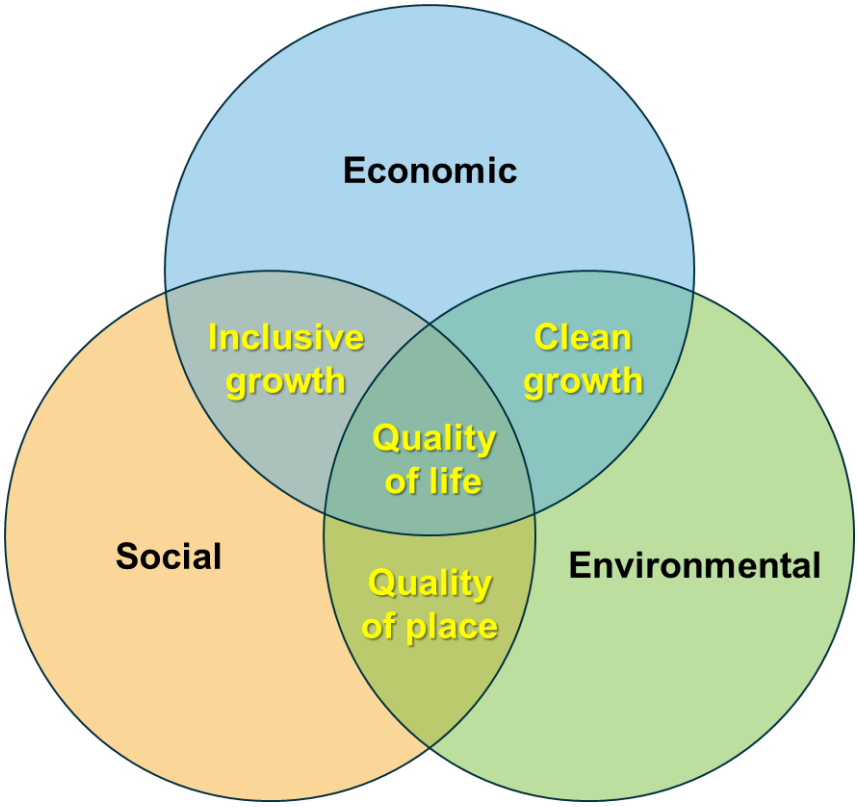
2.8 Sustainability needs to be an essential foundation for our new Rail Strategy. As part of the wider integrated transport system, we need rail to make a positive contribution to the economic, social, and environmental sustainability of the communities it serves throughout our region.

2.9 The following diagram sets out the interaction between the three key pillars of sustainable development. Within this, it is clear to see how our priorities for the region can be viewed.

- **Boosting productivity** – firmly rooted in the aspect of economic sustainability – with a focus on investment to drive economic growth.
- **Enabling inclusive growth** – where social and economic sustainability overlap – with a focus on development that is ‘equitable’ in social terms.
- **Supporting clean growth** – where environmental and economic sustainability overlap – with emphasis on development that is ‘viable’ in environmental terms.
- **Delivering 21st century transport** – this priority can be viewed separately as it relates to outputs that are required to support our wider priorities.

2.10 Beyond our four established priorities, there are wider aspects that it is essential for the Rail Strategy to consider in terms of our ambition and the desired outcomes.

- **Quality of life** – placing general well-being of individuals and society at the heart of sustainable development – considering balanced outcomes across all aspects.
- **Quality of place** – where social and environmental sustainability overlap – with a focus on the balance between the built and natural environment.



2.11 In bringing together our overarching priorities for the region, the key pillars of sustainable development, and the role that rail can play in helping to achieve out ambition, a range of objectives have been developed for our Rail Strategy.

Economy

- Increase access to employment, education, and services.
- Improve connectivity to current and future growth areas.
- Increase the ability of businesses to provide goods and services.
- Reduce cost to providers, users, and wider society.

Social

- Expand travel horizons for communities with poor public transport accessibility.
- Connect deprived communities with economic opportunities across the region.
- Improve access to health & education – especially for deprived communities.
- Expand the role of rail for a wider range of journeys – including leisure & tourism.

Environment and the Climate Emergency

- Enable the transition to a zero-carbon economy.
- Encourage use of sustainable modes – reducing car use.
- Contribute to reducing transport emissions – supporting improved air quality.

Quality of life and quality of place

- Support a high quality of life by providing inclusive mobility and access to amenities.
- Improve the health and well-being of the people living and working in the region.
- Contribute to an enhanced sense of place within transformed cities, towns, and neighbourhoods.

Tackling the Climate Emergency

2.12 Following declaration of a Climate emergency in June 2019, the Combined Authority are working alongside a wide range of partners to ensure the Leeds City Region is a net zero carbon economy by 2038 at the latest, with significant progress by 2030.

2.13 This bold ambition builds on years of work between City Region partners to reduce carbon emissions and the opportunities presented by the unique assets our region has in the form of low carbon energy generation.

2.14 To meet our target and to comply with the Paris Agreement, emissions must be reduced by 14.5% year-on-year with output levels being halved every five years.

2.15 Meeting this challenge will require urgent and collaborative action across all sectors of our economy. However, it will also empower our region to build a modern, sustainable economy supported by an efficient transport network and world class infrastructure.

Carbon Emissions Reduction Pathways

2.16 The region is now in the process of identifying and detailing technology options, measures, policies, and interventions required to deliver its targets. This work will contribute to the region's climate strategy through delivering the following objectives:

- Develop technically robust emissions reductions pathways for the power, buildings, industry, transport, land use and agriculture sectors, to enable the region to meet net-zero emission reduction targets.
- Identify key milestones, decision points, policies, and interventions that can drive the transition toward these outcomes, including timeframes of actions and roles of stakeholders in delivering actions.

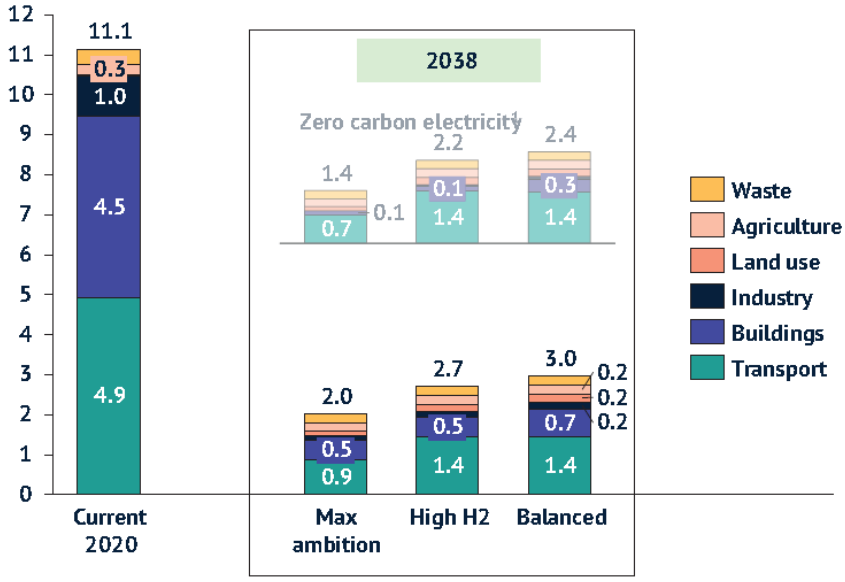
2.17 Three emission reduction pathways have been developed – one aiming to reach net zero as quickly as possible and a further two to reach net zero in 2038. Scenarios include both technological change and demand reduction / behaviour change – aiming to identify the scale of what needs to be done in the region to achieve net zero.

2.18 The scenarios developed are as follows:

- **Pathway 1: Baseline** – likely emissions outcome with current policies
- **Pathway 2: Max Ambition** – how quickly we could technically reduce emissions
- **Pathway 3: High Hydrogen** – Hydrogen leading efforts to decarbonise
- **Pathway 4: Balanced** – balanced technology mix to achieve decarbonisation

How do the pathways compare to each other?

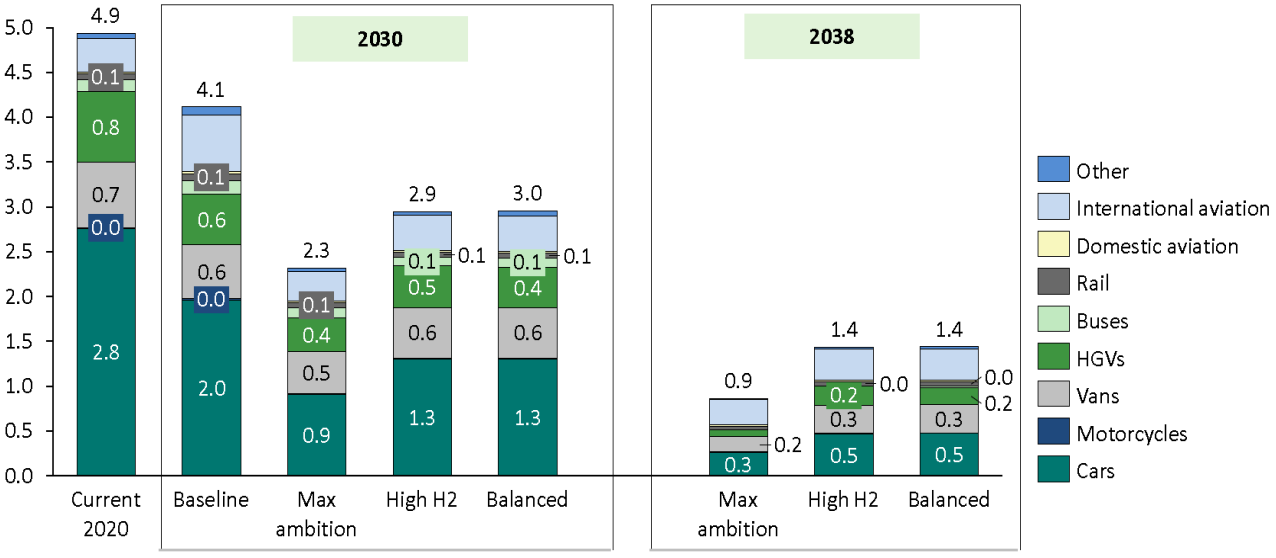
Transport emissions compared with current ($MtCO_2e$/year)



2.19 Transport is responsible for almost half of all emissions in our region. Under all scenarios transport emissions would need to see considerable reduction – playing a significant part in contributing towards meeting our net-zero targets.

Where do the pathways take us for transport?

Transport emissions compared with current ($MtCO_2e$/year)

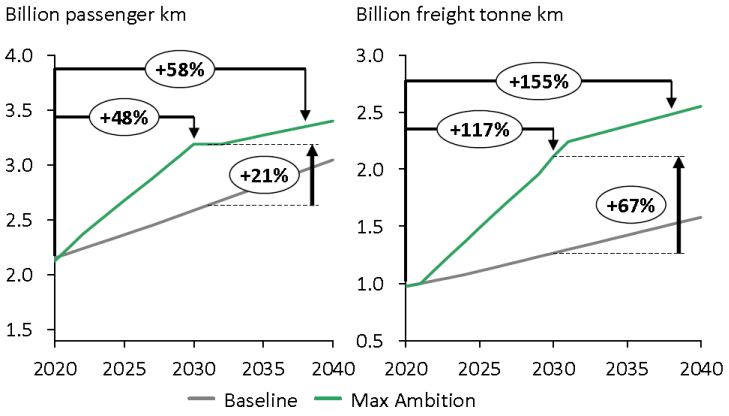


2.20 Rail contributes only a small fraction of overall transport emissions in our region – whilst 89% of all transport emissions being due to road transport, with more than three-quarters of that due to cars and vans.

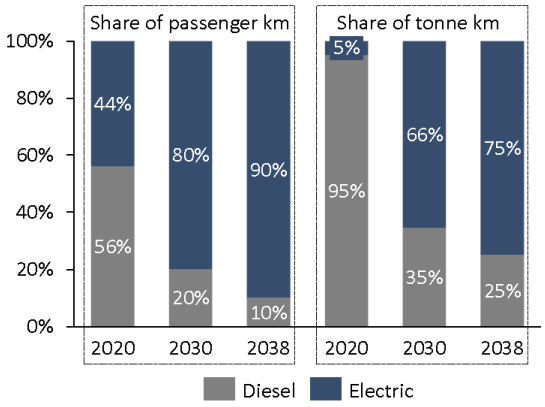
And what does it mean for rail?

Max Ambition

Required growth in future rail use

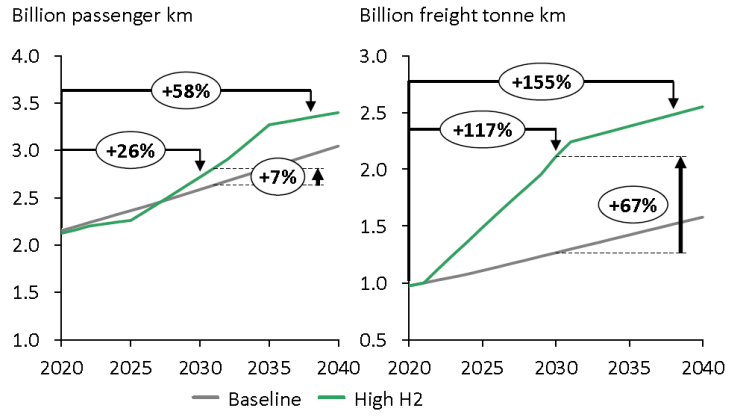


Required growth in electric rail share

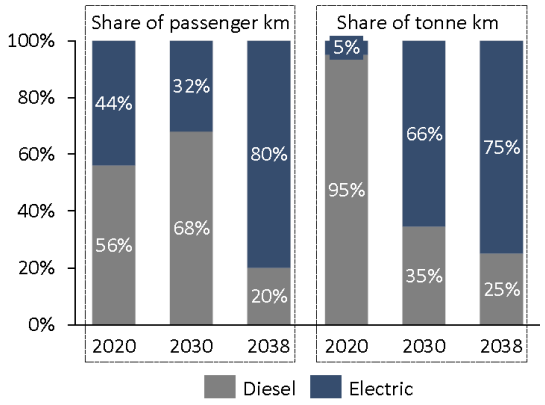


High Hydrogen / Balanced

Required growth in future rail use



Required growth in electric rail share



2.21 Rail transport of all types is, in almost all markets, an order of magnitude more energy- and carbon-efficient than alternative modes, and therefore has a significant role to play in helping to reduce overall emissions from transport in our region.

2.22 In line with our commitment to become a net zero carbon economy by 2038 at the latest, the implications of the Carbon Emissions Reduction Pathways scenarios for rail are clear:

- **Passenger growth** – we must pursue a strategy which aims to attract and accommodate continued strong growth in rail travel through to the longer term.
- **Freight growth** – under all scenarios the role of rail freight increases significantly – we must support a 10% shift of freight from heavy goods vehicles to rail.
- **Electrification** – the creation of an electrified rail network is fundamental in any scenario – both in terms of reducing emissions and facilitating modal shift.
- **Ambition** – under all scenarios the end point remains the same – we know where we need to get to – the 'choice' of pathway will only reflect our level of ambition.

West Yorkshire Connectivity Infrastructure Plan

2.23 The West Yorkshire Combined Authority, alongside Bradford, Calderdale, Kirklees, Leeds, and Wakefield district councils, is developing a Connectivity Infrastructure Plan. The aim is to better connects all of our places, communities, and economic assets, within the region and beyond. We will work with our communities and stakeholders to develop and deliver it.

2.24 In 2017, the Combined Authority adopted the West Yorkshire Transport Strategy 2040, setting out our policy framework for improving transport. Our Connectivity Infrastructure Plan is an extension of this – it sets out a long-term transport infrastructure investment programme for the next 20 years, providing a spatial picture of where investment is most needed.

2.25 The Plan is an evidence-led approach to identifying our connectivity challenges and solutions, consistently applied across the whole geography of West Yorkshire – aiming to enhance economic performance by connecting all of our important places, and in doing so, help deliver inclusive growth by giving particular attention to the connectivity needs for our currently more disadvantaged and peripheral communities.

2.26 Our Plan seeks to make the most of investment in national transport infrastructure. Major upgrades of existing lines are vital – most notably the need for completion of the Trans-Pennine Route Upgrade in full by 2026. The arrival of HS2 to Leeds presents a once-in-a-generation opportunity to radically transform the region's economy. Our Plan also aligns with Transport for the North's proposed investment in strategic infrastructure, such as Northern Powerhouse Rail.

2.27 These investments will ensure good connectivity to national and international destinations and will contribute to rebalancing the UK economy with greater investment and enhanced productivity in the North. But, fundamentally, our Connectivity Infrastructure Plan is about ensuring that the planned investment in HS2 and NPR works for all parts and communities of our region.

2.28 We believe we have an ambitious, yet realistic long-term plan that sets the trajectory for change. This plan will help make the case to Government for longer-term local transport budgets to deliver improvements, including unlocking the government's infrastructure fund linked to the West Yorkshire devolution deal.

Strategic Priorities – spatial view

2.29 In developing our Connectivity Infrastructure Plan, we are identifying a set of options for improving transport infrastructure and connectivity to be delivered up to 2040. The Plan covers bus, rail, cycling, walking, digital demand-responsive transport, other innovative solutions, and car. It also covers future mass transit for our region, which encompasses more than one potential mode, including rail-borne modes. The Plan identifies how these forms of transport work will be integrated, to form a coherent network that offers easy, seamless, door to door journeys.

2.30 The Connectivity Infrastructure Plan illustrates the strategic transport interventions necessary within the region to help meet the transport modal targets and regional priorities set out. The Plan identifies where investment is most required – proposals for a forward pipeline of transport infrastructure improvements – providing a spatial picture of our transport investment priorities.

2.31 As the plan is further developed, options for improving connectivity will be identified in a number of spatial plans that show which transport modes and interventions are understood to provide the most appropriate solution for a particular geography and need.

Strategic Priorities for development and delivery up to 2040

2.32 Strategic priorities identified by the Connectivity Infrastructure Plan include the following:

Relationship with the Rail Strategy

2.33 Our new Rail Strategy, building on the foundations set out within this vision document, is one of a number of key modal and thematic documents which underpin the overarching Connectivity Infrastructure Plan. The two key areas of work will continue to be developed hand-in-hand, as well as ensuring integration in the strategies being developed across wider transport modes and wider sectors.

Principles for rail development

2.34 In considering how rail can help to achieve our objectives, we have developed a set of high-level principles for rail to help shape the development of the Rail Strategy in more detail. In summary, we need to:

- Address critical capacity issues across the rail network.
- Enhance passenger experience to create a high-quality journey offer.
- Address significant disparity in the current rail service offer.
- Facilitate an integrated transport network with attractive door-to-door journeys.
- Support the decarbonisation of the rail network.

2.35 In line with our overarching priorities for the region, there is a clear alignment between these principles and our priority: ‘Delivering 21st century transport’.

2.36 Building on these high-level principles, our vision must enable rail to play a full role in an integrated transport network with attractive door-to-door journeys, increasing rail’s reach by designing straightforward connections with other modes and, where appropriate, by directly connecting new markets to the network.

2.37 Whilst we will aim to realise the full potential of the existing rail network throughout our region – extending the reach of station catchments, with emphasis on improving station access, service frequencies, and integration within rail and between modes – it is also vital that we also consider whether rail serves everywhere we would want it to.

2.38 In developing our new Rail Strategy, we will consider the merits of expanding the current extent of the rail network in our region through dedicated areas of work including ‘network gaps’ and ‘new rail stations’, as well as in presenting our priorities for the development of existing major programmes including HS2 and Northern Powerhouse Rail.

Looking beyond the vision

2.39 In establishing a new vision for rail in West Yorkshire, we set out our aspirations for the region at a high level. Looking beyond the vision, development of the Rail Strategy will translate the high-level objectives into outcomes, and then into specific outputs.

2.40 The final chapter of this document will outline how we intend to move from the high-level vision into the development of a detailed Rail Strategy, and then subsequently moving onto how we intend to implement the strategy.

3 Scope

Setting out what we need the Rail Strategy to help us do, why this is vital for West Yorkshire, and what we need the strategy to capture in terms of the specific geography, timescales, and themes.

Purpose of the strategy

3.1 Building upon the ambition and objectives that have been established for the new Rail Strategy, as set out in the previous chapter, we can be clear in terms of what we need the new strategy to help us do from a practical point of view.

3.2 As highlighted below, there are four key aspects from which the new strategy will have an important role to play in supporting the work of the Combined Authority and local partners across West Yorkshire.

Existing commitments	Work in partnership with the rail industry to secure delivery of committed improvements
Future priorities	Influence the rail industry and help to shape the development and delivery of future interventions
Investment pipeline	Guide development of rail priorities for the region and establish inputs to a coherent programme
Passenger focus	Challenge the industry to maintain high standards of passenger experience and service delivery

Vital need for a new strategy

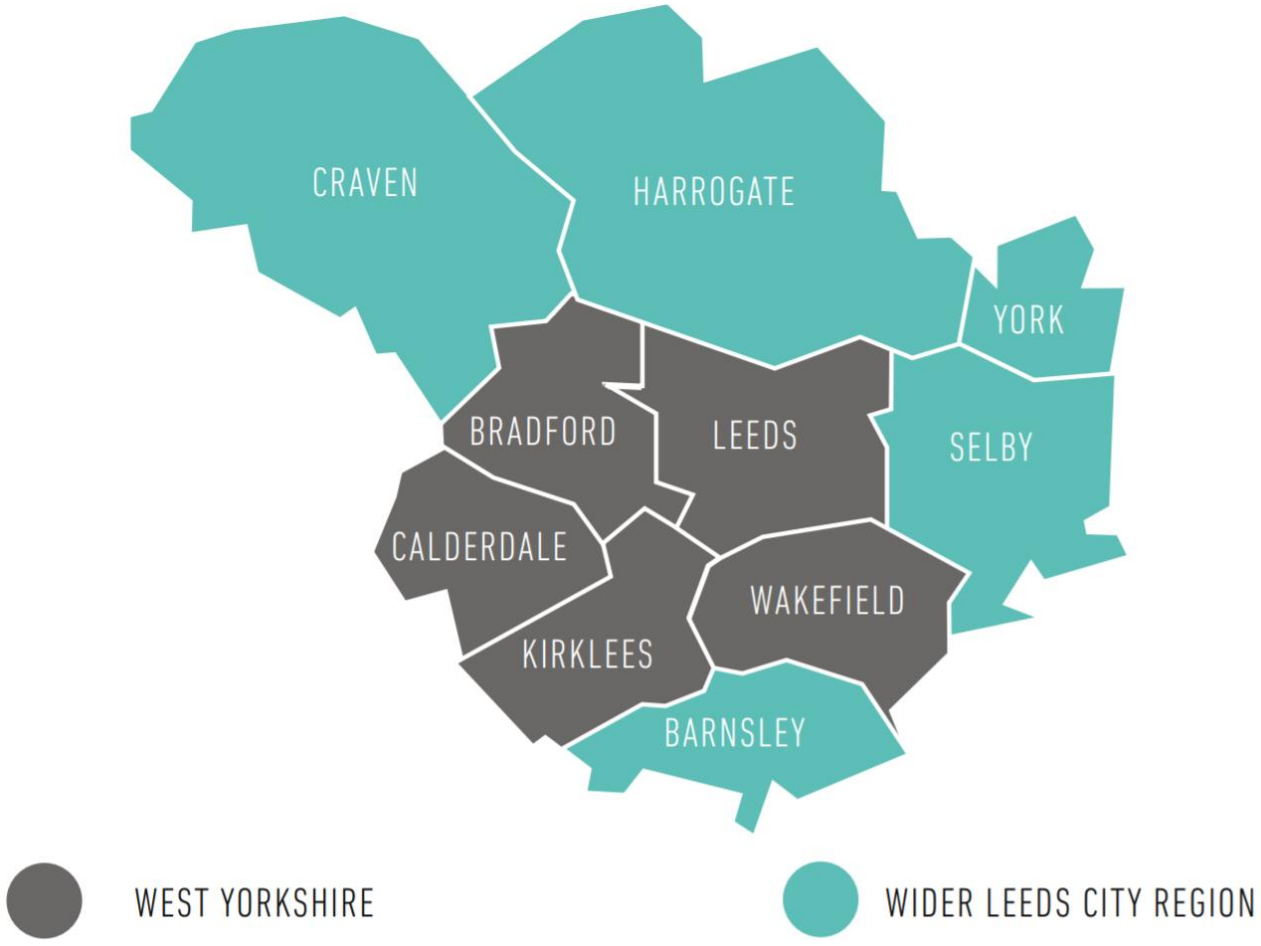
3.3 The time is right for a renewed vision for rail in West Yorkshire, and for further work to establish a detailed strategy to guide our work in shaping rail investment that will impact our region.

3.4 It is vital that we have a Rail Strategy that reflects the specific needs of our region. The following graphic sets out key differentiators that clearly set out why we need a new strategy that is both specific to our region and specific to the development of rail.

Local priorities	Represent local priorities for rail considering the challenges and opportunities faced in the region
The role of rail	Establish the role of rail within the wider transport mix across the short, medium, and long term
Spatially specific	Develop proposals that reflect local priorities and the spatial aspects that make the region unique
Role of the region	Look beyond boundaries to consider the role of the region within wider Northern and national context

Geography

3.5 The new Rail Strategy is focussed on the West Yorkshire region, and specifically reflects the ambition and priorities across the five partner authorities.



3.6 Whilst we are primarily focussed on West Yorkshire, there is a clear need to recognise significant links to wider areas and across varying geographic scales.

- **Leeds City Region** – recognising strong cross-boundary links with neighbouring areas within Yorkshire, the importance of the wider travel to work area with Leeds at the centre, and the operational nature of the rail services across the region.
- **Pan-Northern** – reflecting vital strategic connections across the North and between the major economic centres, but also significant connections into neighbouring regions, notably into Greater Manchester and South Yorkshire.
- **National** – recognising the place at which West Yorkshire sits on the national rail network, with key strategic links both North-South and East-West, and with particular significance for longer-distance business and leisure travel.

The West Yorkshire rail network

Timescales

3.7 We need our new Rail Strategy to set out the needs for our region across a wide-ranging timescale – from addressing urgent issues in the here and now through to establishing our priorities for development of the railways in the longer term.

3.8 Across this broad scope, we need the strategy to strike a balance in terms of effectively guiding our activities in delivering against specific objectives in the short term whilst also standing the test of time with an ambition that looks out to a horizon of 2050, and to do so in a way that reflects the inherent uncertainty that this timescale brings.

- **Short term** – focussing on the continued recovery of rail demand and services, continued influence in securing the delivery of existing commitments, and shaping the future of rail 'franchises' that meet the needs of our region.
- **Medium term** – ensuring we focus on bridging the gap between current issues and existing commitments in the short term and the delivery of major projects in the longer term – recognising the need for continued investment.
- **Longer term** – influencing the shape of future priorities in a way that maximises the potential of rail in meeting the needs of our region through the development and delivery of a holistic, integrated plan for rail within the wider landscape.

Themes

3.9 Four key themes have been established to help shape our vision for rail in West Yorkshire and will guide the development of the new Rail Strategy.

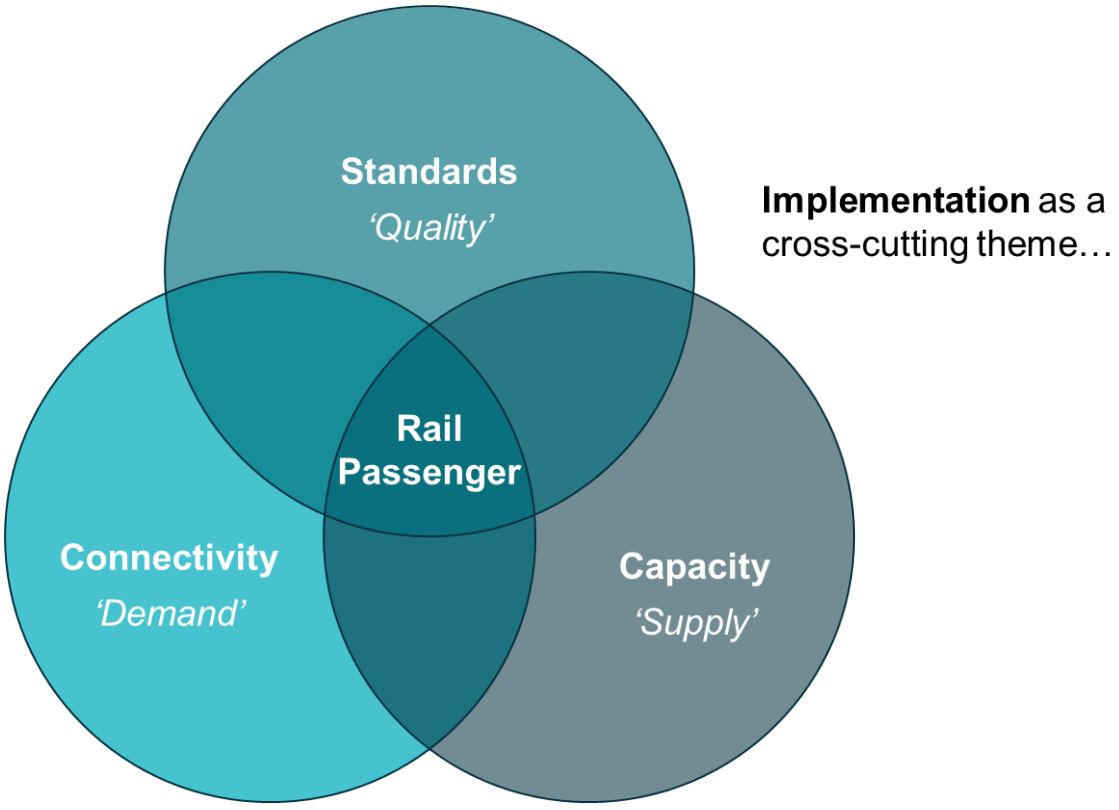
- **Capacity** – focussing on the 'supply-side' of the railways – including track capacity to allow services to operate, train capacity to provide space for passengers, and station capacity to allow our rail hubs to accommodate passenger needs.
- **Connectivity** – focussing on the 'demand-side' and the travel needs of our region – considering how places are connected by rail and specifically including destinations served by rail, service frequencies, and journey times.

- **Standards** – focussing on the 'quality' aspects of the rail journey – including reliability and punctuality, the standard of facilities at our stations and on the train, and the wider passenger experience such as fares and ticketing.
- **Implementation** – a cross-cutting theme focussing on the landscape for effecting change – including aspects relating to funding, cost-effectiveness, decision-making, the changing shape of the rail industry.

3.10 There are significant overlaps and inter-dependencies between these four broad themes that need to be kept firmly in mind in terms of developing our new Rail Strategy. These overlaps are illustrated in the diagram that follows.

3.11 As a clear example, the ability to enhance connectivity through increased rail service levels needs to be carefully considered in conjunction with the requirements in terms of network capacity, and also in a way that ensures a high standard of performance in terms of reliability and punctuality.

3.12 As is shown in the diagram below, it is vital that the passenger is placed firmly at the centre of our new strategy for rail.



3.13 The following outputs, set out across the four broad themes, will each be addressed specifically in the development of our new Rail Strategy. These outputs demonstrate the key opportunities that the new strategy will have to influence the future shape of the rail offer throughout West Yorkshire.

Capacity
Track capacity
On-train capacity
Station capacity
Freight options
Major projects

Connectivity
Journey times
Frequencies
Access & integration
Growth areas
New stations / network gaps

Standards
Reliability / punctuality
Information
Station quality
Rolling stock quality
Fares & ticketing

Implementation
Funding landscape
Decision-making
Industry structure
Devolution agenda
Cost effectiveness

4 Context

Setting out the role of rail within our region – both now and in the future – and the challenges and opportunities that need to be considered in the development of our Rail Strategy.

Rail in our region

The role of rail

4.1 The railway already plays an important and varied role in the lives of West Yorkshire's residents and businesses. It helps people get to work, goods get to market, and enables users to reach leisure, social, health and education opportunities. It does this for journeys which are made locally, regionally, nationally, and internationally.

4.2 Our railway currently performs some of these roles better than others. For example, where a good standard of rail service is provided in West Yorkshire when compared to the private car, it can achieve commuter market shares comparable to those seen in London and the South East. A high-quality rail offer as part of a comprehensive and wider integrated transport mix is a key ingredient in the delivery of our objectives.

4.3 The railway does not currently perform strongly in all travel markets, and it needs to do so if our region is to achieve its objectives. For example, rail's market for travel between parts of our region and Greater Manchester is not what we aspire it to be given the size of the travel market. Even more markedly, there are travel markets within West Yorkshire where rail's share is poor. These tend to be for journeys that do not involve travel to / from central Leeds, for journeys requiring interchange between services, as well as where the quality of the rail offer is not what we aspire to.

4.4 Rail is also self-evidently only one of several modes of transport. Whilst attempts by the rail industry have been made to better integrate, the railway is governed in a way which means it is focussed on itself, rather than as being a part of the wider transport mix. This does not help encourage a significant number of journeys to be made across transport modes and services, nor attracts users to interchange.

4.5 Rail currently consumes a significant proportion of the country's transport budget. As a public good, it is important that this investment is put to best use. For West Yorkshire, this means rail helping us achieve our objectives by making big in-roads into the huge travel market share enjoyed by the private car. We need these journeys to switch to public transport to achieve our goals.

Why rail matters

4.6 Rail transport in our region is a critical enabler of sustainable and socially inclusive economic growth, enabling improved standards of living and quality of life:

- **It expands labour markets** – it increases the pool of labour available to business, enabling the quality and quantity of employment to improve, and in turn driving productivity increases.

- **It expands product markets** – by linking businesses to their customers – rail freight does this by conveying physical products, and passenger rail by enabling the service sector to have ready access to its clients.
- **Together, these factors drive agglomeration** – that is, the coming-together of previously separated economies in a way which strengthens them, with the whole being greater than the sum of their parts.
- **It provides vital links from areas of deprivation** to those of opportunity in the form of education and employment.
- **It enhances quality of life** and supports the service and leisure economy by providing sustainable access to tourist attractions and amenities, such as retail and cultural centres and areas such as the Yorkshire Dales.
- **As a gateway to the rest of the country** – for commercial and leisure passenger travel, and to convey goods from the region to their markets – and enabling us to trade with businesses elsewhere, as well as drawing visitors into our region.
- **As a gateway to the wider world** – connecting our region directly, via the Channel Tunnel, with Continental economic hubs, as well as the ability for passengers to travel by rail to the near Continent and reducing reliance on aviation.
- **In attracting investment** – good rail connectivity is an increasingly essential factor in making our region an attractive location for businesses to invest in – especially in the context of the move towards a service-oriented economy.

4.7 There has been significant growth in use of the passenger railway in our region over the last two decades:

- In the twenty years to 2017, the use of Leeds station has more than trebled, with an average of over a million extra rail trips added every year to / from Leeds alone.
- Where a high-quality rail offer is provided, such as on the Airedale and Wharfedale lines, up to 85% of commuting journeys into Leeds are made by rail.

4.8 Freight's critical role for our region's economy includes delivering the fuel on which the Aire Valley power stations are dependent, conveying building materials from the Dales, delivering oil and other raw materials for industry, and carrying ever-increasing volumes of goods of all types in intermodal containers both internationally and domestically.

4.9 Rail transport of all types is, in almost all markets, an order of magnitude more energy- and carbon-efficient than alternative modes, in particular road and aviation:

- Even using current traction (including diesel trains), per tonne-km, rail freight's CO_2 emissions are 11% of those of road vehicles. Similarly, passenger rail is around ten times less energy-intensive than car or air transport, and around 3-4 times better than bus, with typical load factors. These advantages will only increase as rail is electrified and the electricity grid moves to non-carbon sources.
- A 5% modal shift of freight from road to rail would save 4.6 million tonnes of CO_2 each year – this is twice rail's current total emissions for freight and passenger services combined.

4.10 Uniquely amongst mainstream powered transport modes, rail has long-since been able to make direct use of non-carbon and renewable energy sources, without being constrained by a reliance on battery or hydrogen power. It does this using long-established technology – in the form of electrification. In contrast to other modes, electrification also increases the efficiency and effectiveness of rail rather than compromising it.

COVID-19 implications

Rail Strategy implications

4.11 The COVID-19 crisis has brought unprecedented disruption to society, to the way in which our economy functions, and has clearly resulted in a collapse in public transport use that has affected rail especially strongly.

4.12 There is a growing sense that we will see lasting impacts that will change the way we travel for good – where we travel to, why we travel to certain places, when we travel, and the modes we choose to suit our new travel needs.

4.13 At this point in time, it is too early to say with any confidence that we know what the future holds in terms of the reshaping of rail travel markets – we face an uncertain future in the short term. We need our Rail Strategy to reflect this uncertainty.

4.14 We have identified a range of clear Implications which will set the tone for the continued development of our Rail Strategy:

There is a clear **short-term focus** on the evolving situation and the recovery of travel markets with work taking place across modes and industries. We need to keep closely involved as restrictions ease and passengers return.

The Rail Strategy **needs to look beyond** the current situation – into the medium and longer term – and crucially reflecting the fact that development of the railways can take considerable time to implement.

We need to understand the **longer-term impacts** that COVID-19 will have on the nature of demand for rail travel. We need to extend work focussed on recovery to capture the lasting impacts and changing markets.

We need to consider **supressed demand** as a significant factor. In normal times, our region faces issues including severe overcrowding and a particularly poor rail offer in many places – any spare capacity will quickly backfill.

Our strategy must be alive to **changing markets** and the challenges and opportunities this will present. Impacts will vary by place and by journey type – reduced commuting / business travel – increased leisure travel – growing role of wider centre.

We face an increasingly **uncertain future** – emphasising the need for flexibility within the Rail Strategy. We need to plan a resilient railway for a range of possible futures and to focus on growing a diverse range of markets.

We need to establish a clear **'vision' for rail**. We should aspire to shape the future, not just react to it – considering 'policy on' scenarios of the future that we want to help shape – and considering a multi-modal perspective.

4.15 Whilst the COVID-19 crisis may result in lasting change to the way we travel, our region and the places within it will undoubtedly see rail travel return, albeit different to the patterns we have become accustomed to.

4.16 We must continue to plan for growth in rail across our region – for economic, social, and environmental reasons. Our objectives are clearly supported by a shift towards sustainable modes, and rail in particular, and we must continue to encourage rail growth.

4.17 This need is clearly demonstrated in our emerging strategy aimed at tackling the Climate Emergency – clearly showing that we need to pursue continued investment in enhancing the rail network and services to meet both passenger and freight needs of our region.

Challenges and opportunities

Current challenges for rail

4.18 Major issues that have been identified as constraining the attractiveness of rail, and so its effectiveness in meeting our objectives, include:

- **Severe capacity constraints** on the network suppress demand and constrain growth. After decades of "rationalisation" of rail infrastructure followed by sustained demand growth, the network is essentially full, and major interventions are required to enable modal shift and for rail to accommodate the new mobility that an inclusive, sustainable, and prosperous regional economy will demand.
- **Journey times are slow** in many parts of our region – for example, the 30 miles from Leeds to Todmorden generally take around one hour, even after recent improvements, and the 14 miles from Pontefract to Leeds take over half an hour.
- **Low frequencies** also render the service less attractive – several routes still have weekday frequencies of only one train per hour; Sundays are particularly poor with some services only operating once every two hours and certain routes having no trains at all. There are also "parliamentary" routes served by skeleton services, such as to Goole or from Pontefract to Sheffield / York.
- **On-train crowding** is severe across most services in and out of our key centres – particularly Leeds – at peak times, and also occasionally at peak times. In some cases, passengers cannot even fit on the trains, let alone be seated.
- **Poor quality rolling stock** – many of our trains provide a very poor passenger experience, are uncomfortable, with only basic facilities, and are in some cases technically obsolescent.
- **Station standards are variable**, and many stations are inaccessible to many members of the community, such as those with mobility challenges – routes to and from our rail stations are often not clear, safe, and welcoming to all users.
- **Integration is poor** – train services do not connect well with one another, nor is the bus network consistently designed to link with rail and enable each mode to perform to its best ability.
- **Lack of alignment with land use** – in recent times, rail industry planning has not been aligned with wider economic and population changes across our region – for example, significant housing growth across the Five Towns area.

- **Reliance on diesel traction** – which continues to affect large parts of the network in our region – is in rail terms inefficient and polluting and continues oil-dependency and carbon emissions (even if still superior in these terms to other modes).
- **Reliability and punctuality levels are poor** – partly a result of the overcrowded network and obsolescent equipment – Leeds is one of the very worst locations on the national network for creating delays to trains – delays which are then exported to other locations, creating a poorly performing network as a whole.
- **Door-to-door journeys ignored** – too often, especially at times of disruption, but also in service planning, the focus is not on the passenger's overall journey needs.
- **Poor value for money fares** – a widely held perception – repeatedly the finding of regular Transport Focus surveys. Rail fares compare poorly with international peers, particularly when average incomes and service quality are considered.
- **High levels of public subsidy** – at the same time, the railway continues to require relatively high levels of public financial support, especially when compared in international terms, by reference to the outputs provided. The impacts of the COVID-19 crisis on passenger revenues also presents a significant challenge.

4.19 In consequence, notwithstanding strong performance on those corridors where there has been investment and a higher-quality service is regularly provided, rail's lacklustre performance contributes to low overall modal shares for public transport for many types of journey, especially off-peak and leisure travel.

Opportunities for rail

4.20 Against this background, there are a number of clear opportunities that align well with rail's potential to create a vital need to upgrade the railway:

- **Climate Emergency declaration** – recognition of the climate crisis as a genuine emergency aligns directly with rail's unique properties in terms of zero-carbon potential and energy-efficiency. This, and the shifting policy landscape towards decarbonisation, strongly implies a recognition of the role of rail in achieving this.
- **COVID-19 crisis and recovery** – while the crisis has led to a collapse in public transport use, especially strong for rail, and can be expected to lead to long-term changes in travel behaviour, the increasing recognition of the need for an economic recovery plan to "build back better", and to include capital investment to boost the economy, should stand rail investment in good stead.
- **Post-Brexit** – as described above, an efficient railway is a vital part of a business-friendly and successful economy. The need to ensure Britain's competitiveness after Brexit should also drive a willingness to enhance our railway network.
- **"Levelling-up" agenda** – transport infrastructure, and rail in particular, has been widely cited as one of the main factors underlying the North – South divide. A clear consensus is developing that any government serious about "levelling-up" and closing the divide should target investment directly into rail in the North.
- **Rail industry reform** – the rail industry itself is expected to go through an overdue reform process to tackle ingrained structural issues of inefficiency, perverse and conflicting incentives, and a lack of focus on the passenger and freight customer. This includes moving away from a franchise-based system and towards a more

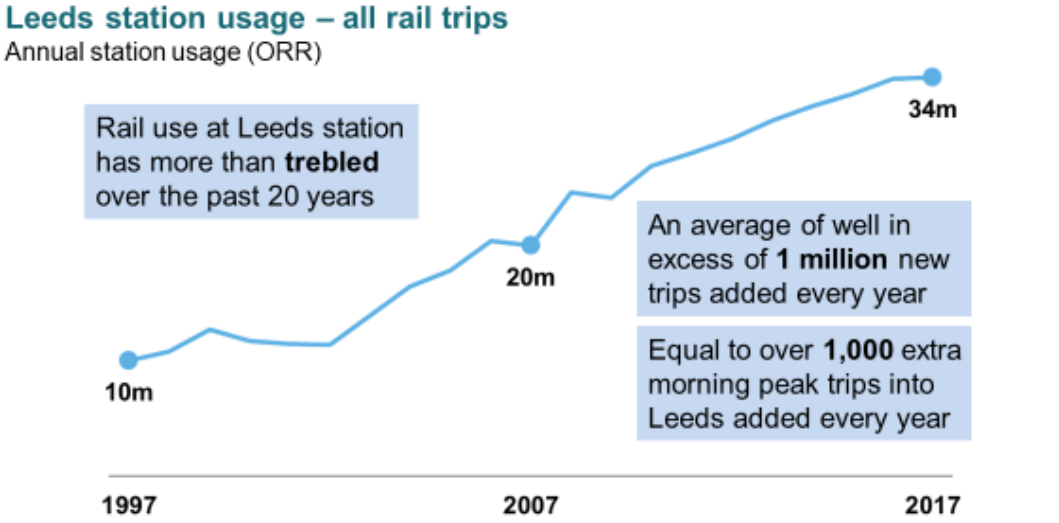
integrated system, with a clear link between objectives and outcomes – enhancing the case for improving services and making enhancements easier to deliver.

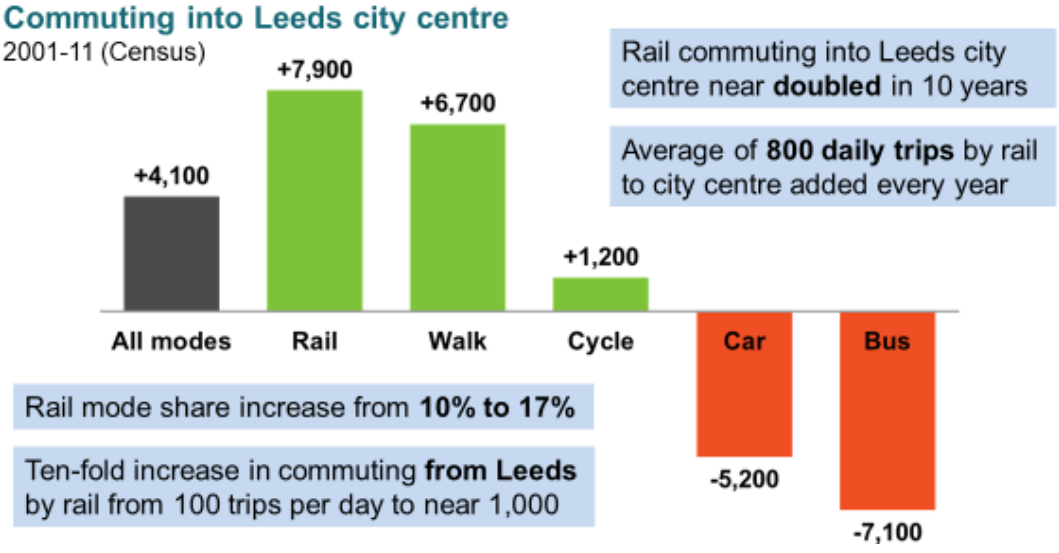
- **Integrated Rail Plan** – since the Oakervee Review into HS2, there has been an increased recognition that projects should not be seen in isolation – leading to the Integrated Rail Plan being developed by government. It is hoped this will ensure that HS2 and NPR are developed as part of an integrated network, complementing regional networks, rather than conflicting with investment in vital local services.
- **Trans-Pennine Route Upgrade** – there appears to be a clear recognition that this programme of upgrades is urgently needed and should be specified to include full electrification of the York – Manchester artery as well as capacity improvements that unlock local connectivity and allow regular freight across the Pennines.

The case for growth

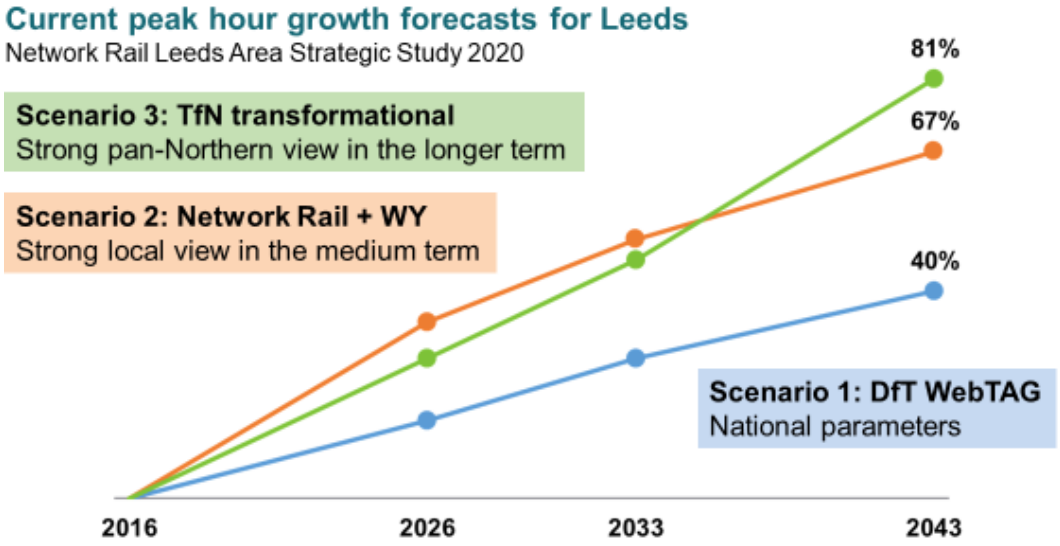
4.21 As part of wider rail industry long term planning for the Leeds area, Combined Authority officers have been actively involved in the development of rail passenger growth forecasting – in partnership with Network Rail, DfT, and Transport for the North.

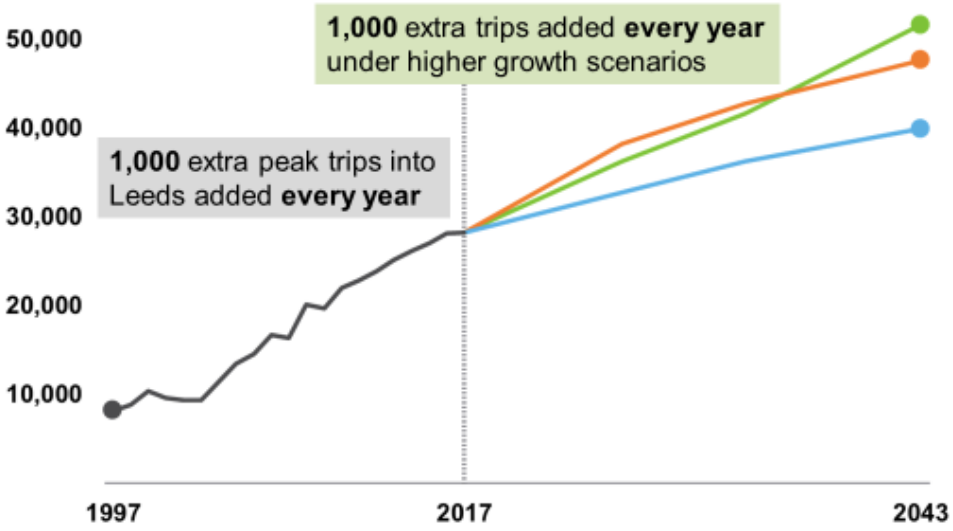
Recent rail growth





Future rail growth





	Rail growth	Economic growth
Recent	Use of Leeds station has more than **trebled** over the past 20 years Over **1 million** new journeys added every year on average in this time **1,000** new trips added every year into Leeds in the morning peak	**Expanding** labour market for central Leeds with longer distance rail trips Economic **restructuring** with growth in key knowledge-intensive sectors Rapid rise in **office completions** with increasing city centre share
Future	New growth scenarios present a **range of futures** for Leeds **Highest growth** scenarios continue strong recent trend seen at Leeds Forecasts **align** with the highest previous industry forecasts	Substantial new city centre office development in the **pipeline** Forecast for **43,000** net new jobs in Leeds city centre by 2043 Ambition for growth to **double** the size of Leeds city centre

5 Wider policy

Setting out the wider policy landscape that our new Rail Strategy sits within, the key interfaces between the range of strategies in scope, and how policy development can be integrated.

Policy landscape

5.1 Economic and transport policy is established at a national level by Government, at a sub-national level by Transport for the North, at a regional level by the West Yorkshire Combined Authority, and at a local level by the metropolitan districts that together make-up West Yorkshire. There are policies and strategies at each of these levels that are relevant to the development of the rail network and services across our region.

5.2 There are also a number of projects that are of such a scale that plans and policies are developed at national, sub-national and local level to both facilitate the proposals and maximise their beneficial impacts. Principal amongst these are Network Rail's plans for the Trans-Pennine Route Upgrade, the Government's proposals for HS2 and Transport for the North's plans for Northern Powerhouse Rail.

5.3 In 2017, the Combined Authority adopted the West Yorkshire Transport Strategy 2040, setting out our policy framework for improving transport. Our Connectivity Infrastructure Plan is an extension of the Transport Strategy – and this in turn is supported by the development of our new West Yorkshire Rail Strategy. An outline of the Connectivity Infrastructure Plan, and the interaction with our emerging West Yorkshire Rail Strategy is included within the 'Ambition' section.

5.4 The diagram below provides a high-level summary of the policy landscape within which our West Yorkshire Transport Strategy 2040 sits, alongside our emerging Connectivity Infrastructure Plan, in considering the range of policies and strategies across the range of geographic scale:

	Plans	Policy	Projects
National	Transport decarbonisation plan	Industrial strategy Transport investment strategy Climate change act	High Speed 2
Sub-national	Independent economic review	Transport for the north strategic transport plan	Transpennine Route upgrade Northern Powerhouse Rail
West Yorkshire	Strategic economic plan/framework Local industrial strategy Leeds city region housing vision Leeds city region green & blue infrastructure strategy	West Yorkshire Transport Strategy 2040	Connectivity Infrastructure Plan
District	District transport strategies	Local development plans	

5.5 Looking beyond this high-level policy landscape, there is a broad range of policy and strategy – ranging from the national level to the local level – which is of particular relevance to the development of our new West Yorkshire Rail Strategy.

5.6 We consider the implications of policy and strategy established both externally – by wider industry partners at a higher geographic scale – and internally – across a broad range of sectors by the Combined Authority itself and by local district partners within the region.

5.7 The following sections set out the range of policies and strategies that we have identified and indicate the specific relevance of each to the development of our new Rail Strategy.

Interfaces – external policies and strategies

5.8 There is a broad range of important policies and strategies – spanning Government, the Department for Transport, Network Rail, and Transport for the North – which have clear interfaces with our emerging West Yorkshire Rail strategy.

Policy / strategy	Summary	Impact on our Rail Strategy
National		
Blake / Jones Review *Government*	Review of the way in which passenger rail services are delivered and decisions on service planning are made – in the wake of the May 2018 timetable debacle	The principle of "putting the passenger first" is fundamental to our approach to the Rail Strategy, including building services around clear evidence of need, and ensuring they are provided in a way that is robust and passenger-focussed. We will use the Rail Strategy to set out our future role within the rail industry.
Williams Review *Government*	Comprehensive review into the structure of the rail industry at all levels, including the roles of infrastructure providers, passenger and freight train operators, regulators, and governance bodies. Expected to recommend far-reaching reforms including a move away from the franchising system.	While the Rail Strategy will not focus directly on industry structure, the implementation of this strategy's recommendations will be a critical theme. In this context, it is recognised that the current structure has in many respects failed passengers (and arguably prospective freight customers) in terms of creating inefficiencies and perverse incentives and has made enhancements difficult to deliver.
Rail Freight Strategy *Department for Transport*	Four priority ideas are identified where further action could empower rail freight to achieve its potential – innovation and skills, network capacity, track access charging, and telling the story of rail freight.	Sets the context for the growth of rail freight nationally and identifies steps that could help deliver this growth alongside regional and wider national interventions.
Freight Network Study *Network Rail*	Sets out a national level view of how freight is likely to develop in rail over the coming decades.	Informs our Rail Strategy on freight development, including in particular identifying existing trends, challenges, and opportunities.

Traction Decarbonisation Network Strategy *Network Rail*	Developed in parallel with the CMSP process (see below), sets out a clear national strategy for the movement of the railway towards post-carbon operations, with the emphasis on electrification, supported by other technologies in certain instances, in the context of rail playing an increased role due to its inherent advantages in carbon terms.	Directly informs our Rail Strategy on decarbonisation and aligns closely with existing WYCA policies in particular on network electrification. Expected to be followed by regional daughter documents.
Sub-national		
Integrated Rail Plan – North and Midlands *Department for Transport*	Plan being developed in conjunction with the National Infrastructure Commission to achieve better integration of major projects such as High Speed 2 and Northern Powerhouse Rail with one another and an aim to improve alignment of policy objectives.	Optimisation of these existing schemes, including in particular their integration with wider rail priorities (such as regional networks), is a fundamental imperative for the West Yorkshire Rail Strategy.
Strategic Transport Plan *Transport for the North*	Plan outlines how up to £70 billion of investment could rebalance decades of underinvestment in the North and contribute towards an additional £100 billion in economic growth. Representing the first time local leaders have spoken as 'one North' on this topic.	Strategic Development Corridors work can support our Rail strategy recommendations towards the major schemes and future pipelines of rail investment throughout our region.
Long Term Rail Strategy (LTRS) *Transport for the North*	The framework for how rail in the North of England should be developed over the next 20 years, including in particular setting 'Desirable Minimum Standards' for many aspects of the rail system.	Ties in with our aims for the strategy to support all aspects of the rail experience – capacity, fares, station quality, simple understandable journeys, etc. – and the integrated development of the rail network to serve all markets. Many of the standards in the LTRS are based on, or align closely with, existing WYCA standards.
Continuous Modular Strategic Planning (CMSP) *Network Rail*	Locally focussed work to identify current and future rail infrastructure needs in the short, medium, and longer terms, based primarily on forecast trends in passenger and freight demand. Particularly relevant CMSP modules include Leeds (published 2020), the northern East Coast Mainline (published 2020) and Doncaster (in progress).	CMSP work informs our Rail Strategy and is informed by it. For example, WYCA has worked closely with Network Rail in developing the CMSP studies listed, and the studies provide a strong base on which our aspirations for improved rail connectivity will build.

Interfaces – internal policies and strategies

5.9 The railway already plays an important and varied role in the lives of West Yorkshire's residents and businesses. Reflecting the vital and wide-reaching role that rail plays in our region, rail features at the heart of wider policies and strategies across West Yorkshire.

Policy / strategy	Summary	Impact on our Rail Strategy
Regional		
West Yorkshire Transport Strategy 2040 (adopted 2017) *WYCA*	Overarching strategy document that sets the principles for the Connectivity Strategy and, in turn, for the strategies flowing from that, including the Rail Strategy.	The Rail Strategy must be in line with the Transport Strategy and cognisant of the work being done beyond the railway across all modes of transport.
West Yorkshire Connectivity Strategy *(in development)* *WYCA*	An overall approach to connectivity that takes the view that transport should not be a barrier to people accessing jobs, to businesses choosing to invest in West Yorkshire, and to improving the quality of life of residents and visitors. Improvements in transport are a catalyst for change across all these objectives.	The immediate parent document to this Rail Vision and the emerging Rail Strategy. A connectivity pipeline of future transport interventions covering bus, rail, cycling, walking, and urban transit proposals, as well as demand responsive transport / future mobility solutions will be created – which needs to be considered in conjunction with the vision of rail provision and how passengers access the railway. The need for improved integration across all sustainable transport modes will dictate much of the approach to rail connectivity.
West Yorkshire Connectivity Investment Plan (in development) *WYCA*	This sits below the Connectivity Strategy, setting out how the interventions needed to deliver that strategy translate into specific schemes, and how / when these should be delivered.	This document will include schemes identified by the Rail Strategy alongside those relevant to rail identified in other source documents, such as Network Rail's CMSP work. Further detail is provided in the 'Ambition' section.
Leeds City Region HS2 Growth Strategy (adopted 2018) *WYCA*	A strategy for integrating HS2 with the wider network, the use of released network capacity, and the optimisation of HS2 itself.	Forms part of evidence base, in particular as regards the role of HS2 and the opportunities it presents.
West Yorkshire Bus Strategy (adopted 2017) *WYCA*	A strategy to create a modern, integrated, and innovative bus system which puts customers first.	Forms part of evidence base, in particular as regards better integrating bus and rail services.

West Yorkshire Local Cycling and Walking Implementation Plans (in development) *WYCA*	Identifying improvements to walking and cycling networks both to enable more sustainable journeys and to better integrate our range of modes, as all bus and rail journeys start with walking or cycling to access to the network.	Forms part of evidence base, in particular as regards better aligning rail services with walking and cycling provision – with a focus on access to rail stations.
West Yorkshire Future Mobility Strategy (consultation late 2020) *WYCA*	Investment in Future Mobility within West Yorkshire represents a desire for a step change in mobility across the region that is firmly focussed on local needs, places, and people, providing benefits for the region, including the hardest to reach communities that could be left behind as technology moves forwards.	We need to consider the role of rail in a strong and resilient transport system where future mobility modes are integrated with existing services. The Rail Strategy needs to ensure rail initiatives remain inclusive and accessible and, whilst utilising technology to improve the customer experience, also ensure that groups who are not digitally enabled are still able to access the benefits of this technology.
West Yorkshire Carbon Emission Reduction Pathway (CERP) (consultation late 2020) *WYCA*	Sets out at a high level the types of measures that are needed for the region to meet its obligations and targets, in particular the transition to net-zero carbon by 2038, with transport forming one of the greatest challenges.	Rail has a particularly strong role to play in transport decarbonisation, primarily from modal shift from car, lorry, and air, but also from completing the decarbonisation of the railway itself, primarily via electrification. Further detail is provided in the 'Ambition' section.
Transport Recovery Plan *WYCA*	The transport-focussed plan for the economic recovery post COVID-19 for the travelling public of West Yorkshire covers public transport, ticketing, and information, walking and cycling, and road travel – also considering wider goals relating to inclusive growth and environmental sustainability.	The goal of the plan ties in with the Rail Strategy and the new strategy will need to reflect any new systems / infrastructure that could be brought forward due to the pandemic.
Local		
District Transport Strategies *Local Authorities*	Documents setting out the visions of individual local districts alongside a summary of transport schemes to be considered.	Evidence of district priorities and aspirations to be fed directly into the Rail Strategy, based on these policy documents also but supplemented by extensive consultation.
Local Development Plans *Local Authorities*	Sets out local authorities' policies and proposals for land use in their areas, guiding day-to-day decisions on planning matters.	Evidence of local priorities and aspirations to be fed directly into the Rail Strategy, based on these policy documents but supplemented by extensive consultation.

6 Priorities

Setting out our priorities for the future of rail in our region – the needs of passengers and businesses – established through engagement with the West Yorkshire Transport Committee.

Transport Committee engagement

6.1 Combined Authority officers have embarked on a programme of engagement with local partners across the region. Interactive workshops have been held with our Transport Committee to gather inputs on priorities for rail, including in-depth district-by-district sessions with members.

6.2 From this engagement activity, key messages on priorities have been drawn – presented in the form of vision statements that will guide the development of our Rail Strategy:

Our priorities – we will continue to make a strong case for enhancements across our region, with rail vital for the success of the economy, inclusive growth, and tackling the Climate Emergency, and being at the heart of wider regional strategies.

Social inclusion – we will pay particular attention to the rail offer in deprived and disconnected communities, ensuring sustainable modes are competitive, and addressing cost of travel as a significant barrier for particular groups.

Barriers to travel – we will address disparity across the region, communities with little or no access to the network and areas where the service offer is very poor, and focussing on delivering frequency, reliability, and simplicity for passengers.

Wider markets – we will make the case for growing the role of rail in serving wider journeys, including access to health and education, supporting leisure and tourism, and placing a greater emphasis on expanding the role of rail for freight.

Rail investment – we will work in partnership with the industry to press for major investment as part of a long-term integrated strategy, building on commitments and extending the reach of major projects to secure the best outcomes for our region.

Capacity constraint – we will focus on addressing critical bottlenecks as a high priority, where track, train, and station capacity cause misery for passengers, stifle the potential of rail, and restrict economic growth across the region.

Maximise existing – we will endeavour to realise the full potential of the current rail network, extending the reach of station catchments, with emphasis on improving station access, service frequencies, and integration within rail and between modes.

Door-to-door – we will focus on the full journey, rail travel as part of an integrated transport network, including access to the network, the growing role of local multi-modal ‘hubs’, making connections work, multi-modal fares and ticketing, and ensuring access for all.

Local connectivity – we will place a far greater emphasis on enhancing local rail services, including how they integrate with other rail services and wider modes of transport at natural hubs and nodal points across our region.

Quality standards – we will push for high quality standards throughout our region, reflecting the varied needs of passengers in understanding the network, accessing information, and making the journey – including safety throughout the journey – and with a focus on non-regular users.

6.3 Officers at our local authority partner councils have also been engaged through our Chief Highways Officers group and through additional one-to-one sessions with each district partner authority.

6.4 With a clear need to work in partnership with the industry, early engagement has also taken place with our Train Operators Forum. With a view to greater collaboration in strategic planning going forwards, consideration is being given to a greater focus of this group on the medium to long term needs of the region.

6.5 Local engagement and initial analysis to date has underlined the importance for the Rail Strategy to address local accessibility, with an emphasis on enhancing local services. This implies a focus not just on major projects, but also ways to address barriers to accessing the network, including access to stations, better integration with bus services and future urban transit proposals, as well as joined-up information and ticketing.

6.6 The new Rail Strategy will provide the overarching context that sets the tone for the Combined Authority's ongoing involvement in a wide range of strategic rail activities. Each area of work will draw on the priorities established as part of the development of the new strategy.

7 Vision summary

Setting out our vision for the future of rail in our region, identifying specific areas for enhancement, and shaping investment in the region's rail network through to the medium and longer term.

The future of rail in our region

7.1 Our vision for the rail network is best understood by considering a future journey in West Yorkshire, showing how the various themes within our emerging Rail Strategy contribute to delivering that vision.

Our vision of a journey

The journey begins at the traveller's front door. While she has used public transport before, she has not previously made this particular journey, but she is not put off by this, because the system is simple and legible – real-time information is easily accessible, consistent, and available to all.

She does not live within walking distance of a rail station, but the twice-hourly bus service – all day, every day – connects her village to a station, and every bus has a convenient onward train connection in each direction. This station is a local transport hub which she is familiar with using because of the variety of buses and trains that connect with one another – her own local bus service is the gateway to the wider world.

As a local transport hub, the station has attractive and modern facilities, including ticket retail, toilets, and a heated waiting room – in addition to the basic standards provided at all stations such as ample covered waiting and seating areas, internet access, good lighting, and built-in features that make the passenger feel safe at all times of day and night.

The clear information screen next to the bus stop confirms that the train, due in five minutes, is on time. The transfer from bus to train is a few metres' walk – weather-proof, step-free, and by a well-signed and intuitive route – personal mobility issues do not create a hurdle for her, nor had she brought her young son in his buggy.

Having already 'checked in' to the public transport network when she boarded her bus, there is no need to think about ticketing – the system automatically calculates the cheapest fare once she has reached her final destination.

On a different day, she might have chosen to cycle to the station, taking advantage of ample free, secure, and weather-proof parking for her bike. Some passengers still need to use cars to access the railway, taking advantage of secure parking – and the opportunity to charge their cars' batteries – or being dropped at the convenient drop-off point.

An easy, level step from the platform takes her onto the train itself, on its way to the urban centre – a few minutes after she alighted from her bus. Finding a seat is not an issue – despite increases in demand for rail – even at peak times standing is the exception rather than the rule. The days of passengers left behind at stations are as much a memory as the cancellations and delays that used to leave the passenger high and dry.

The smooth-riding, rapid, and quiet train – enabled by comprehensive electrification of the network that has eliminated carbon emissions from rail in the region – has comfortable seats that enable the unique landscapes of our region to be enjoyed. Our traveller may choose to plug her device into the charging points – catching up on work, social networking, or on-board entertainment – making use of the fast internet connection which is not defeated by the line's numerous tunnels. Her sense of personal safety and confidence in her journey are bolstered by the informed and visible on-board staff.

Arriving on time at the city's hub station, if our traveller were making a longer-distance journey or simply continuing to another part of our region, she would scarcely need a timetable. The clockface-timetable is arranged with departures in all directions within the next ten minutes – the same system that works twice every hour all day, every day, at every rail hub. For those on the busiest lines, up to six trains run every hour and it is simply a case of "turn-up-and-go". The urban bus and mass transit networks too are oriented so that seamless interchange is the norm – in many respects there is little difference between the passenger's experience of each mode.

However, in this case her destination lies a short distance away in the city centre. Given it is uphill, she uses her transport subscription – again without need to worry about ticketing – to remove an electric bike from the station's dock to the door of that destination.

Thanks largely to the seamless interchange, the overall journey has taken – door to door – less time than if she had chosen to drive – it has been more relaxing than driving, and, even if she had been travelling as part of a group today, slightly cheaper.

Our passenger is not the only one to benefit from the realisation of our vision for rail. The freight customer too can expect rail to contribute to an integrated and zero-carbon end-to-end logistics solution which guarantees reliable and fast shipping on a multimodal network that does not trade off the passenger against the freight customer but has allowed both to flourish as part of a transport system that enables inclusive and sustainable economic growth while enhancing quality of life.

Realising the vision

7.2 Realising our vision will not be a simple or rapid task, and the Rail Strategy therefore will focus closely on implementation. This includes not only identifying the infrastructure needed to raise the railway to the capability and capacity standards the Vision implies, but also ensuring that existing major schemes such as HS2, Northern Powerhouse Rail, and the Trans-Pennine Route Upgrade are delivered in full and in the best way possible.

7.3 It will also entail working closely with other transport modes within the overall integrated connectivity plan, as well as ensuring that the coverage of the railway itself is optimal, and therefore considering the potential role of new stations and network gaps against this multimodal context.

7.4 The following sections of this document set out our vision for the wide range of specific themes – as illustrated in the journey example above – in greater detail.

Connectivity needs

7.5 Our vision for rail must have our connectivity needs at its heart. We must fully capture these needs in an integrated way – without compromising the ability to improve rail travel for any particular part of our region or section of society:

- All rail markets and journey purposes – including both passenger and freight.
- All rail service types – including local, inter-regional, and longer distance travel.

7.6 We have identified clear gaps in rail connectivity – within our region and beyond – where we see strong travel demand potential being held back by poor existing rail connections.

7.7 Journeys must be considered in their entirety – door-to-door – to understand what a successful network looks like. We must provide for the unique characteristics of West Yorkshire – connecting places and people in a polycentric region. This requires:

- A comprehensive network with wide geographic coverage.
- A door-to-door integrated travel solution.
- Simplicity, predictability, and reliability for passengers.
- Every stop as a gateway to the wider world.

7.8 Our vision is to enable travel from anywhere in West Yorkshire to anywhere else in the region, at least twice per hour, at the same time each hour, all day, and every day – seamlessly, simply, reliably, and without worry about ticketing.

7.9 We have set an ambitious target that all journeys – from door to door – should be possible in a journey time that is no greater than the off-peak, uncongested, car journey time.

7.10 We present a range of ‘connectivity concepts’ for the public transport network which aim to support us in achieving our objectives – these concepts include:

- Comprehensive integration of rail with bus, walking, and cycling.
- A single system rather than a set of disjointed independent services.
- Fast direct services for the most important high-volume rail flows.
- Rail-to-rail and bus-to-rail interchange hubs throughout our region.
- Interchange as simple, convenient, and reliable as the best in the world.

7.11 For all local rail passenger services, we have established clear and consistent service frequency standards – to address existing poor levels of service and significant disparity:

- **2 trains per hour** – Minimum standard for all established local rail services. Some ‘emerging’ routes should see phased improvement to reach this level.
- **4 trains per hour** – Higher frequency ‘turn-up-and-go’ services on core routes into our main urban centres – particularly to and from Leeds.
- **6 trains per hour** – ‘Enhanced’ services connecting our major centres with the regional centre in Leeds, plus hubs providing multi-modal interchange.

Capacity needs

7.12 With the connectivity needs of our region at the heart of our vision we must seriously consider the capacity that we require – both on the network and on our trains – to make this vision a reality.

7.13 We have analysed the future capacity requirements of the rail network in the region – considering the need to accommodate:

- Expected growth in rail passenger demand.
- Service enhancements to meet our frequency standards.
- Wider connectivity aspirations designed to increase the role of rail.
- The increased future role of rail freight services.

7.14 Looking out to a longer-term horizon of 2040, we have identified solutions to provide the required capacity – spanning both rolling stock and infrastructure enhancements.

7.15 Passengers face travelling on crowded rail services in our region on a daily basis. Many passengers on peak services are required to stand for large parts of their journey, and in some cases are unable to board at all due to severe overcrowding.

7.16 To meet expected growth in demand and reduce overcrowding we will need longer trains or more frequent services. By 2024 we are likely to need an extra 60 carriages – with a further 70 carriages expected to be required by 2040.

7.17 We have identified that substantial infrastructure work will be required to support the needs of our region in the medium and longer term – with specific interventions across four broad categories:

- **Platform lengthening** – to allow longer services to run on routes throughout our region.
- **Signalling enhancement schemes** – designed to make better use of existing heavily-used sections of the network.
- **Capacity enhancement schemes** – typically focussed on key junctions and stations across the region.
- **Four-tracking of key sections of route** – to enable the separation of overlapping services at critical bottlenecks.

7.18 We have set out ‘how’ and ‘when’ these critical capacity enhancements should be delivered – a timeline over the next twenty years shown as a series of ‘configuration states’ grouping schemes into delivery packages.

7.19 We have identified five ‘configuration states’ covering up to 2040 – as we step up through our connectivity and capacity needs – designed to show a set of logical steps through which the future rail network in our region can be developed.

7.20 The capacity needs we have identified will shape our work with the wider rail industry as we move towards achieving our ambition for rail in our region.

Major programmes

7.21 Investment in rail is crucial to economic prosperity in our region – in attracting investment and creating jobs, in tackling capacity and connectivity constraints which hold back our growth, and in planning our economic recovery in the wake of the COVID-19 pandemic.

7.22 As the North's busiest transport hub, Leeds Station is pivotal as the lynchpin hub to these three programmes. More widely, we need a rolling programme of electrification across the region's network and substantial continued investment in our established major routes.

7.23 HS2, Northern Powerhouse Rail (NPR), and the Trans-Pennine Route Upgrade (TRU) provide once-in-a generation transformational opportunities for our towns and cities. We need a commitment for long term, integrated project delivery – to achieve:

- **Balanced growth** – sustainable inclusive economic growth.
- **Capacity relief** – delivering local and national rail capacity.
- **Sequencing** – a delivery plan designed to deliver benefits much earlier.
- **Improved journey times** – both within and outside the region.

7.24 Integration is especially important for West Yorkshire as almost all inter-city services are operated on a mixed-use railway. Much of our network is operating at capacity and will struggle to operate increased services without infrastructure improvements.

7.25 If developed and delivered in an integrated manner as the North needs, HS2 and NPR can release vital rail capacity on existing routes which could be utilised for enhanced local and regional services, as well as increased freight traffic.

7.26 Improvements must be integrated with local and intra-regional rail – isolated programmes could have negative impacts on such rail services which play vital roles in our region. We need key pieces of infrastructure to be delivered as part of a single, joined-up plan:

- **HS2 Eastern Leg** – Completion of HS2 Phase 2b east between Leeds and the Midlands. This includes early delivery of the Leeds HS2 station along with a link south to a junction with the existing network.
- **Northern Powerhouse Rail (NPR)** – Delivery of the full NPR network linking Leeds, Bradford, and Manchester – with a new through station in the centre of Bradford to accommodate both NPR and Calder Valley services.
- **Trans-Pennine Route Upgrade (TRU)** – Completion in full by 2026, including electrification between Huddersfield, York, and Selby, and the Garforth touchpoint, to provide additional capacity now to support economic recovery.
- **Leeds Station** – With the station approaching pedestrian capacity, investment is urgently required. We also need to create significant additional capacity on the eastern and western approaches to the station to relieve the current bottleneck.
- **Electrification** – A rolling programme to create an electrified City Region rail network, starting with the Calder Valley line, to decarbonise the railway and the economy, and to open up opportunities to transform connectivity.
- **East Coast Main Line (ECML)** – Continued investment in this vital economic artery – optimising links to London – and which will remain critical after HS2 is delivered.

Decarbonisation and electrification

7.27 The world faces a climate emergency. Moving towards a post-carbon society has moved centre-stage. Our region has pledged to become net-zero carbon by 2038. Transport – especially road transport – is the largest contributor of emissions in our region.

7.28 Rail enjoys strong natural advantages in that it is energy-efficient and is suited to electrification – with technology that is mature, efficient, and technically simple. Combined with renewable power sources, rail can be close to zero-carbon in day-to-day operation.

- **Modal shift** – We will prioritise measures to encourage mode shift from road to rail travel – and attracting new passenger and freight travel to rail.
- **Electrification** – We will strongly support the need for a rolling programme of electrification – ultimately covering all routes in our region.

7.29 A zero-carbon railway for West Yorkshire is wholly achievable and must be aligned to an attractive railway which carries a higher share of traffic. We must place public transport and active modes at the heart of our strategy, while pursuing decarbonisation.

7.30 Electrification will be the greatest single weapon in our armoury, enabling efficient, cost-effective, productive, and attractive rail services with low or zero carbon emissions.

Reliability and punctuality

7.31 Reliability and punctuality, together referred to as ‘performance’, are critical for rail in our region. Poor performance is a major barrier to travelling by rail.

7.32 ‘Reliability’ relates to the cancellation of services – ‘punctuality’ focuses on whether they arrive at their destinations on time. The “short-forming” of trains – where fewer carriages than scheduled are provided – is also a significant issue, notably at peak times.

- **Network capacity** – We need investment in additional capacity in the rail network – performance must form a major element of work to identify future rail infrastructure capacity requirements.
- **Network resilience** – We need a more resilient rail network – with a clear focus on mitigation and prevention measures associated with the wide range of drivers of poor performance.
- **Passenger experience** – We will continue to influence the rail industry to put passengers at the heart of rail operations planning – working as “one team” with a focus on passenger-focussed performance monitoring and information provision.

7.33 In building confidence in an integrated public transport network, performance must be a top priority – we must focus on creating a more resilient railway which minimises both the likelihood of poor performance and the magnitude of the impacts.

7.34 We must promote a suite of interventions to move towards a railway where reliability and punctuality cease to be a significant concern influencing passengers’ choices, and where freight customers can have full confidence that rail will deliver.

Rail stations and access to the network

7.35 Stations are the gateways to our rail network – while rarely the true start or end of a journey, they provide the traveller's first and last interaction with, and impression of, the railway. Our stations must be high quality environments that are fit-for-purpose.

7.36 Stations are a vital stage of the door-to-door journey, and to grow use by all groups, the type, quality, and level of amenity of station facilities, as well as the ability to access the station, are all important factors that impact on travel choice.

- **Passenger experience** – We will make our rail stations attractive and pleasant places, well rooted in their communities, and perceived at all times as safe – with consistent and high standards to enhance the image of public transport as a whole.
- **Access for all** – It is a fundamental principle that all stations – throughout the network – must be fully physically accessible to all members of the community.
- **Maximising potential** – We will expand the reach of our rail stations into wider communities across the region – looking beyond the immediate station area – and ensuring the stations themselves provide the necessary facilities to maximise use.

7.37 Our vision for rail stations is to enable the successful contribution of the rail network to achieving socially inclusive and sustainable economic growth in a post-carbon society, by:

- Acting as attractive gateways to the railway network.
- Forming an active part of an integrated public transport system.
- Providing comfortable, safe, and pleasant waiting environments.
- Ensuring that the high standards provided are well maintained.
- Providing accurate, timely, clear, and accessible information.
- Optimising physical links between stations and their direct catchments.
- Being seen as key nodes at the heart of wider walking and cycling journeys.
- Being rooted in communities and seen as assets in their own right.
- Playing a role in attracting investment and regenerating catchment areas.

7.38 All stations must be fully accessible to all members of the community – this means the ability to use all station facilities, not just access to platforms and onto trains. A national programme to bring the entire system up to standard must be a firm commitment.

7.39 There is no single standard for all stations – while some basics such as shelter, lighting, information, and seating are a minimum, stations vary widely in their usage and function. The facilities required at rail stations across our region will be designed to reflect:

- **Typology of place** – e.g. regional or sub-regional centre, local centre, etc.
- **Function** – e.g. residential area, employment hub, leisure destination, key interchange location, mixed functions, etc.
- **Usage levels** – Including the potential of stations rather than current footfall, which may at present be suppressed by poor service levels and / or facilities.

Rolling stock quality

7.40 The quality of trains serving our region's railway forms a significant part of the overall passenger experience – which is altogether vital for encouraging modal shift in favour of public transport and sustainable modes.

7.41 We need to make the train an attractive place for the passenger to spend time – rather than a last choice – whether it be for a daily commuting journey, a productive business trip, or to travel on a family holiday.

- **Passenger experience** – We will promote development of a consistent rolling stock offer for each category of journey type – suited to the market being served.
- **Productivity benefits** – We will push to maximise productive time on trains with a clear need for adequate seating capacity and high-quality digital connectivity.
- **Rail as a choice** – We will strive for a high-quality travelling ambience – such that rail travel becomes a positive choice, rather than a "distress purchase".

7.42 We will promote a rolling stock strategy which reflects the differing needs of different types of passenger – accounting for the mixed markets served by many routes across our region – and also the changing passenger expectations brought about by the COVID-19 crisis.

7.43 We must also ensure that efforts to enhance rolling stock across the rail network in our region also take account of significant wider factors including accessibility to all users and service performance and reliability.

Rail freight

7.44 Rail freight can be a highly energy-efficient and cost-effective means of transporting goods of a wide variety. When electrically powered, it can be effectively zero-carbon. In recent decades, rail has struggled to make progress against road competition in many markets.

7.45 In a modern sustainable economy, the rail network needs to provide for both freight and passenger services, and it is often the case that capacity provision that would help rail freight to run would also be beneficial to passenger flows.

- **A growing role** – We strongly advocate the growth of rail freight for both the transfer of existing flows to rail and the clean growth of new businesses.
- **Planning strategy** – We will keep a clear focus on critical operational factors which must be met to maximise the full potential of rail freight.
- **Major projects** – We will continue to influence the development of major projects to ensure that greater emphasis is placed on expanding the role of rail for freight.

7.46 Rail freight must be allowed to grow through modal shift, as well as new and increased economic activity – providing an alternative to the road network for the transport of freight, helping to reduce congestion, improving air quality, and reducing carbon emissions.

7.47 Rail freight can play a vital role in the sustainable development of the economy of our region whilst enhancing quality of life and transitioning to a post-carbon society.

Safety and security

7.48 Safety on Britain's railway has been a success story both in terms of international comparisons and comparisons with other modes. This safety record forms a strong argument in favour of rail in terms of encouraging modal shift from road to rail.

7.49 A strategy aimed at achieving modal shift can only succeed if the passenger (and society as a whole) have confidence in every aspect of its operation, and that must include confidence in safety, as well as perceptions of personal security.

- **Industry best-practice** – We will continue to support the development and application of world-leading practice on safety throughout the rail industry.
- **Modal shift** – We will continue to promote strategies rooted in the benefits of associated with modal shift towards rail as an inherently safe mode of travel.
- **Industry challenge** – We will use our position as an independent body to raise challenges with regard to safety and security that reflect local conditions.

7.50 Those travelling in our region should not consider safety or security to be significant concerns influencing decisions on the use of public transport. We will achieve this by building on the world-leading safety record and increasing rail's modal shares.

7.51 The railway must not only effectively protect the personal safety of its passengers but be seen to actively do so. Measures to maximise security and "visible safety" must extend across all areas and at all stages of their journey through to the final destination.

Fares and ticketing

7.52 However efficient, reliable, comfortable, and fast the rail system may be, it cannot be effective in achieving its objectives if the railway is perceived as offering poor value for money and / or having a complex ticketing system that deters travel.

7.53 The rail fares system in Britain has changed relatively little since the 1990s and no longer reflects how we live and work. We need a system that can fit around how people live their lives and travel, and that ensures that they get the best fare for the journey they make.

- **Simplicity** – We will call for improvements to reduce the complexity of fares and ticketing – aiming for a system which simple, clear, and easy to use for passengers.
- **Value for money** – We will support measures to ensure passengers achieve best value for money for their travel – whilst tackling issues relating to affordability.
- **Passenger needs** – We will endorse changes to the fares and ticketing system to better suit changing travel patterns and passenger needs – integrated across all modes of travel.

7.54 The fares and ticketing system should help to simplify end-to-end journeys – integrated across all modes of transport – and increase the attractiveness of public transport to current and potential passengers.

7.55 As the economy and transport network of the North evolve over time, there may be a case for a new structure which is better equipped to cater for the aims set out above.

Network gaps

7.56 There are increasingly vocal campaigns to expand access to the railway or to close gaps in the network – often the reinstatement of historic routes – but also sections of railway that never existed but bridge a clear gap to make the network more effective.

7.57 West Yorkshire has seen considerable recent success in the large number of stations opened or reopened on existing lines. However, West Yorkshire has yet to see any full reopenings of historic routes, nor any new-build alignments.

- **New opportunities** – We will assess the potential of network gaps identified across our region – both in terms of new passenger and freight connections.
- **Wider modes** – We will consider the potential of wider modes in assessing the case for network gaps as part of our wider Connectivity Strategy.

7.58 We will identify potential additions to the rail network – or for use by wider modes – that could significantly increase the railway's ability to achieve our objectives, by spreading the benefits of passenger and freight rail transport more widely.

7.59 Our work will be linked to emerging work on rail connectivity concepts, wider work on regional connectivity, and on other forms of future mass transit, as well as being informed by current thinking on HS2 and NPR.

New stations

7.60 We have a strong recent history in successfully developing and delivering new rail stations. A further four new station proposals – to serve Elland, Thorpe Park, Leeds Bradford Airport Parkway, and White Rose – are in advanced stages of development.

7.61 We must now reflect on the emergence of new strategic and spatial priorities, including the emergence of new growth areas, added focus on inclusive growth, and the declaration of a Climate Emergency, along with wider changes to the transport landscape.

- **Deliver commitments** – We will focus on successfully delivering our programme of new stations serving Elland, Thorpe Park, Leeds Bradford Airport, and White Rose.
- **New priorities** – We will consider further opportunities for the development of new stations where there is potential for a strong case to be made – actively pursuing opportunities to shape major programmes.
- **Maximise potential** – We will expand the reach of our existing rail network into wider communities across the region through enhancements aimed at improving network capacity, station facilities, and access to the network.

7.62 We have identified a range of potential new station locations that we believe demonstrate potential for a strong case, and where we recommend further development work.

7.63 Three broad categories have been identified which capture particular challenges that we expect to face – the need for wider infrastructure upgrades, the need for rail timetable solutions to be developed, and the need for new or extended rail services to be introduced.

Implementation

7.64 Our submissions to the Williams Rail Review supported the case for substantial reform of the rail industry – to deliver a structure that is much simpler, integrates decision making across 'track and train', and with devolved budgets and decision-making.

7.65 We need an industry that we can much more readily do business with, to drive efficiency, and to ensure much greater accountability. The cost of both operations and enhancements must become more affordable for rail to realise its full potential.

7.66 Government has confirmed that remaining rail franchises will be terminated – moving to a 'concession' based model for the long term. This should deliver a more rational and integrated approach to service planning and accountability.

7.67 There is a strong indication that government intend to deliver substantial industry reform. Together with our own transition to a Mayoral Combined Authority, we will consolidate and develop our partnerships with the railway as follows:

- Co-ordination of investment of planning activity.
- Co-investing in rail facilities and services.
- Integrated strategy-making.
- Holding the railway to account on behalf of passengers.

7.68 Delivering this vision will require strong partnership working with the rail industry, with sufficient funding to support our ambitions. We will also continue to work closely with our partners across the region, with neighbouring authorities, and with Transport for the North.

8 Strategy development

Setting out our next steps in moving from vision to strategy, building on extensive work, and moving toward a detailed view of how we aim to deliver enhancements aimed at achieving our objectives.

Moving from vision to strategy

8.1 The Combined Authority is producing a Connectivity Plan for the region. With an aim to create easy, seamless, door-to-door journeys, this ambitious plan identifies West Yorkshire's priorities for different forms of transport and how they will integrate. The plan aims to deliver a significant shift to public transport use – bus, rail, and a new form of urban mass transit – and cycling and walking.

8.2 The Connectivity Plan includes daughter documents that outline the ambition for each mode of transport as part of the holistic 'whole'. The new West Yorkshire Rail Strategy is the document that will fulfil this purpose for 'heavy rail', the Rail Vision being the first product thereof.

8.3 As the first product of the Rail Strategy, the Rail Vision sets out West Yorkshire's ambition for the way in which the railway needs to serve the region, its people, and businesses in the future. The Rail Vision will be subject to public engagement as part of the Connectivity Plan suite of documents.

8.4 Beyond the Rail Vision, development of the full Rail Strategy will translate the high-level objectives, outcomes, and outputs contained in the vision – through development and implementation of specific actions – into interventions across the full scope of rail policy. Crucially, this will include prioritisation.

8.5 Work to develop the new West Yorkshire Rail Strategy in full, including further detailed technical supporting work, continues in the meantime. Alongside the outcome of the public engagement, this will enable the Rail Strategy to be finalised in 2021. Members and Local Authority partners will continue to be engaged in the process.

Vision in detail

Summaries by theme

Connectivity needs

1 Our vision for the future of rail in West Yorkshire must have our connectivity needs at its heart. It is vital that we consider the needs of our region in a way that is comprehensive – fully capturing our requirements in a balanced and integrated way – without compromising the ability to improve rail travel in the future for any particular part of our region or section of society. In terms of future needs, it is essential that we capture:

- All rail markets and journey purposes – including travel for commuting, business, education, and leisure purposes.
- All levels of geographic scale – including local, inter-regional, and longer distance travel requirements.
- The needs of both passenger and freight travel – and ensuring we plan for balance between the two.

2 This section presents a summary of high-level market analysis that we have undertaken to inform the development of this vision for rail – focussing on identifying gaps in passenger rail connectivity throughout West Yorkshire and the wider Leeds City Region. The analysis presented demonstrates the importance of rail for connecting places and people in a polycentric region.

3 The graphics included within the following pages attempt to present a clear picture of the broad links within our region where we have identified a need to improve rail connectivity in order to provide for our future requirements. These graphics have been specifically designed to illustrate the following:

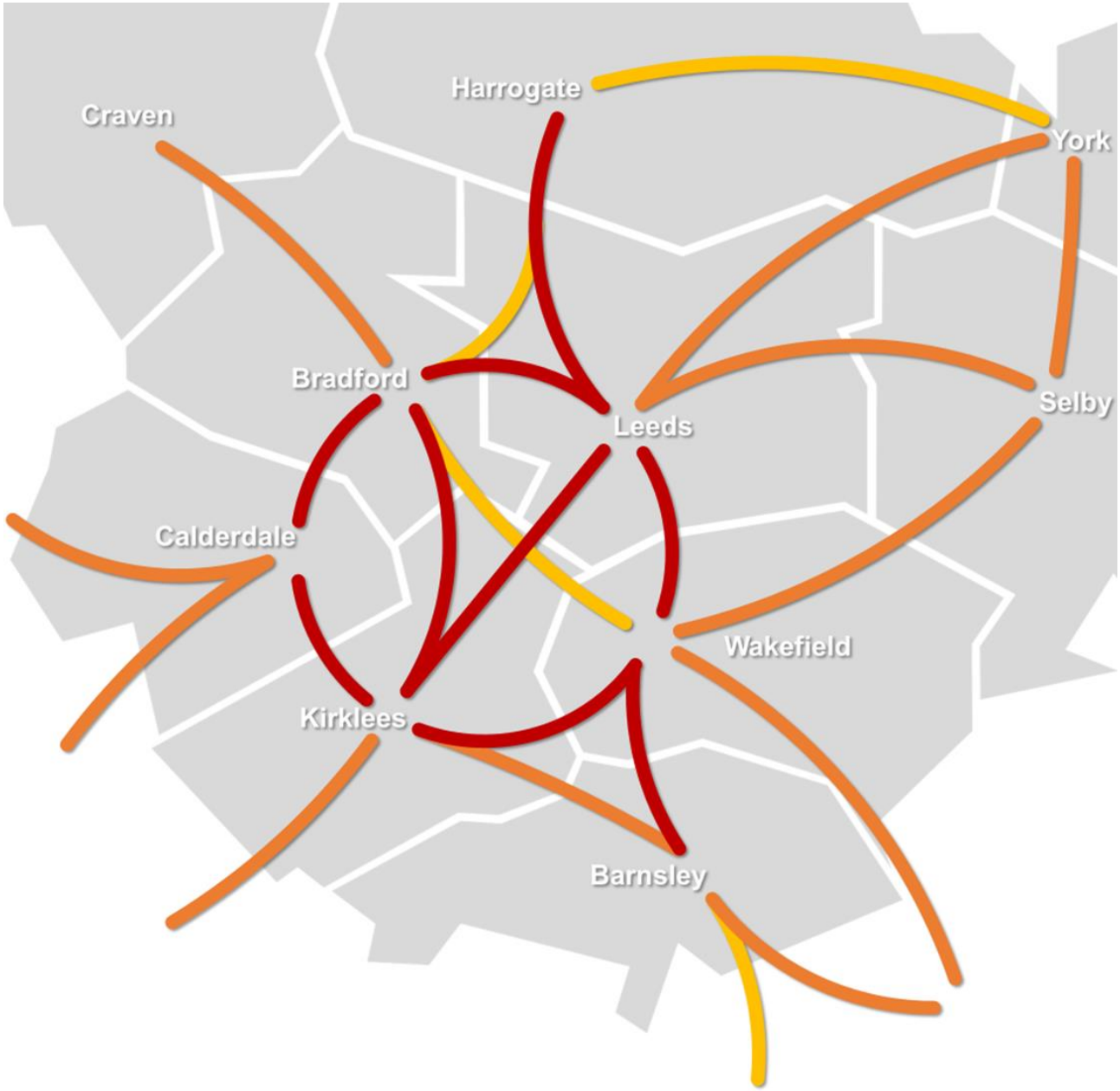
1. **Existing travel demand** – capturing travel by all modes in order to demonstrate where rail has the potential to grow into new markets.
2. **Existing rail connectivity** – showing the relative strength of existing passenger rail connections in terms of the service offer provided.
3. **Rail connectivity gaps** – building on the two aspects set out above, identifying strategic gaps in existing rail connectivity where there is a clear difference between strong potential travel demand and relatively poor existing rail connections.

4 Whilst the focus of the analysis presented is on strategic gaps identified in relation to passenger rail services, we also capture broader rail connectivity requirements in some detail within wider sections of this vision document – notably:

- The **‘major programmes’** section sets out our needs relating to inter-city and longer distance connectivity and the outcomes we are working to secure.
- The **‘local service frequency’** section captures our more detailed requirements in terms of local rail connectivity required for all stations across West Yorkshire.
- The **‘connectivity concepts’** section establishes our needs in relation to rail as part of the wider transport network – including integration with other modes.
- The **‘capacity needs’** section builds on our holistic view of connectivity needs across all travel markets in establishing our rail network capacity requirements.

Existing travel demand across the region

5 Flows for all modes of transport and for all journey purposes:

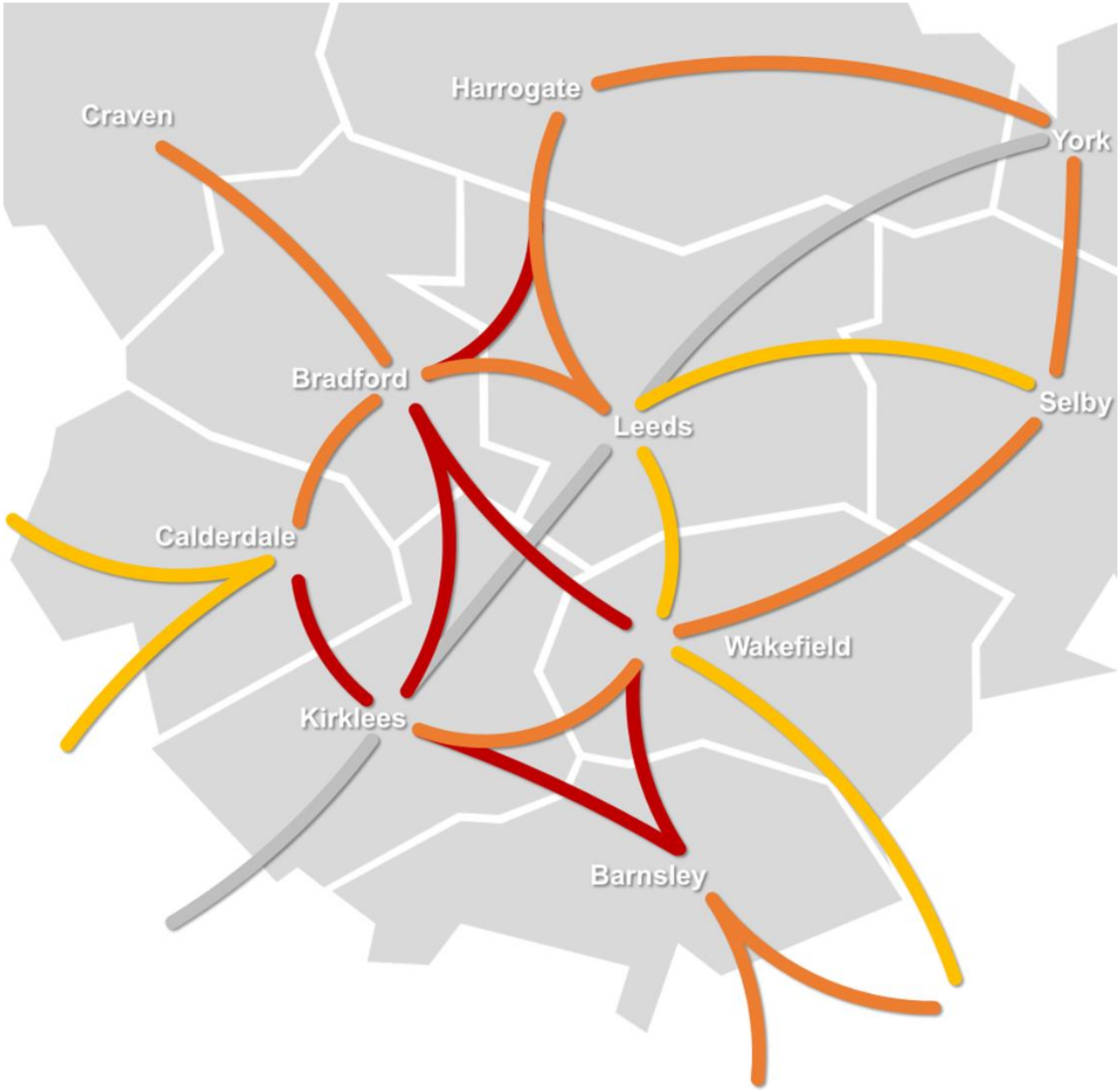


6 Overall travel markets between districts in West Yorkshire, the wider Leeds City Region, and neighbouring regions across the North of England – including existing travel by all modes of transport and covering all journey purposes.

- **High travel flows:** Significant flows connecting all neighbouring districts within West Yorkshire and into the wider city region.
- **Medium travel flows:** Large cross-boundary flows, flows to other key centres, and longer trips within the city region.
- **Lower travel flows:** Sizeable longer distance cross-boundary flows and markets with potential for growth within the region.

Current rail connectivity across the region

7 Service offer accounting for journey time, frequency, and the need to interchange:



8 A measure of existing rail connectivity on key strategic links between districts in West Yorkshire, the wider Leeds City Region, and neighbouring regions across the North of England – considering journey times, frequency of rail services, the need or otherwise to interchange, and the distance of the connections being provided.

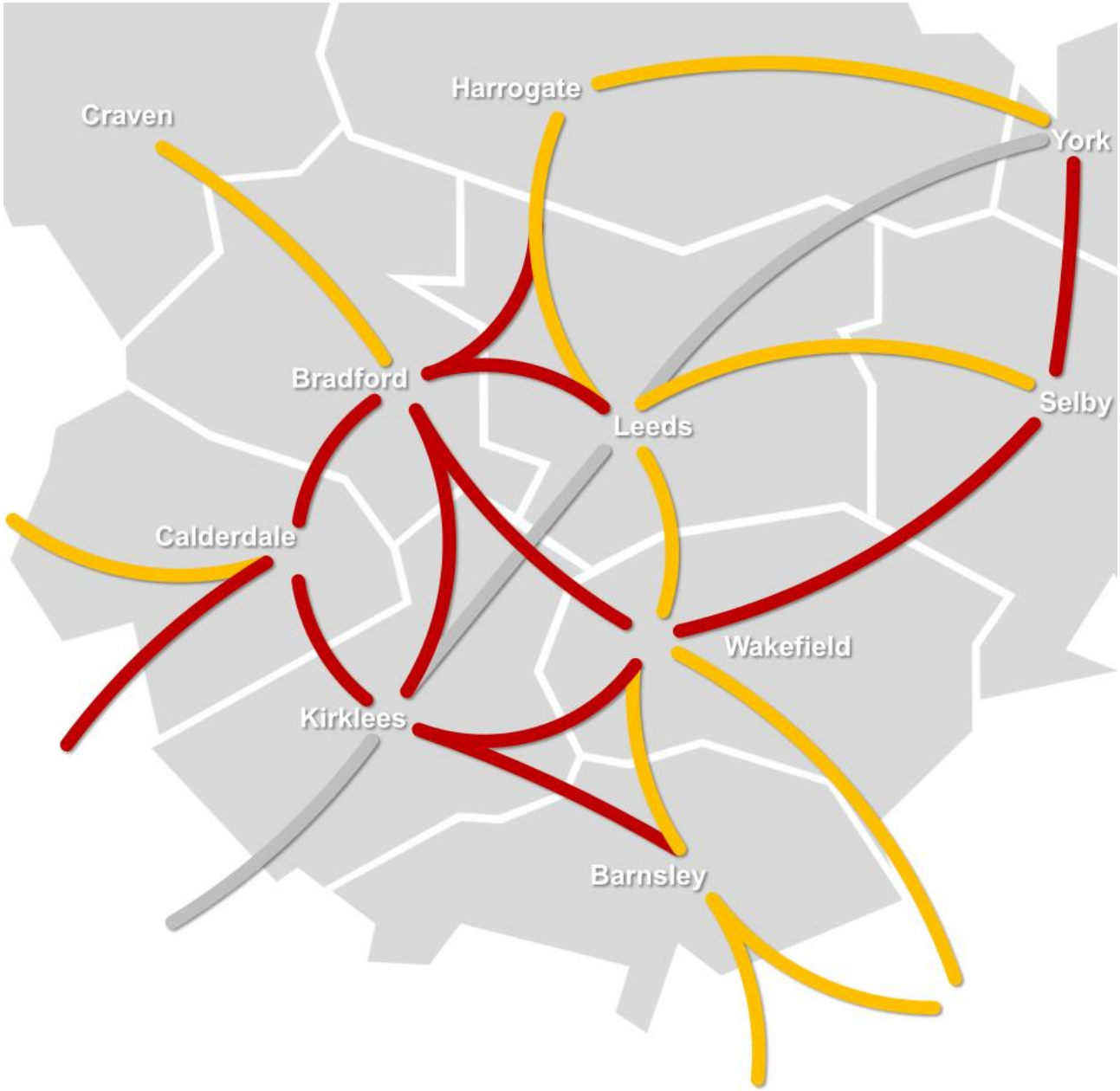
Very poor connectivity: Vital connections between district centres across the region – with poor service levels requiring improvement.

Poor connectivity: Established connections within West Yorkshire and the wider region which show clear room for improvement.

Satisfactory connectivity: Relatively stronger existing connections with room for further improvement in line with our aspirations.

Gaps in rail connectivity gaps across the region

9 Flows where the rail service offer fails to provide for strong travel demand:



10 Strategic gaps in existing district-to-district rail connectivity where a clear difference has been identified between strong potential rail travel markets and a relatively poor existing rail service offer – specifically capturing high demand flows across all modes, low public transport mode share, and poor rail connectivity.

'First order' rail connectivity gap: Strategic links with the greatest 'gap' between rail travel market potential and existing connectivity.

'Second order' rail connectivity gap: Further links across the region where significant gaps have been identified.

11 Building on the previous graphic, the following table sets out the specific rail connectivity gaps that have been identified by this high-level market analysis.

‘First order’ rail connectivity gap
Bradford – Calderdale / Kirklees / Leeds / Wakefield / Harrogate / Manchester **Calderdale** – Bradford / Kirklees / Manchester **Kirklees** – Bradford / Calderdale / Wakefield / Barnsley **Leeds** – Bradford **Wakefield** – Bradford / Kirklees / Selby
Barnsley – Kirklees **Harrogate** – Bradford **Selby** – Wakefield / York
‘Second order’ rail connectivity gap
Bradford – Craven / Lancashire **Calderdale** – Leeds / Wakefield / Lancashire **Kirklees** – Sheffield **Leeds** – Barnsley / Harrogate / Selby / Lancashire / Rotherham / Lincolnshire **Wakefield** – Calderdale / Barnsley / Rotherham / Manchester
Barnsley – Leeds / Wakefield **Craven** – Bradford **Harrogate** – Leeds / York **York** – Harrogate / Humberside

Longer distance connectivity

12 There are connectivity gaps between the North and other areas of the UK. Journey times between London and destinations on the East Coast Main Line have not experienced the improvements that have been seen elsewhere. Some major Northern cities – such as Bradford – lack direct connectivity to other major cities, such as Birmingham (which is also still two hours from Leeds), while others have no direct link to London.

13 Connectivity between West Yorkshire and Wales is also poor, and the same can be said for connections to Glasgow, parts of the East Midlands, and the South Humber area. Important centres of growth, such as Cambridge, and areas to the south and east of London also have no direct links to West Yorkshire.

14 The vast majority of long-distance rail services that currently connect West Yorkshire with other major centres operate to and from Leeds itself. Other main centres tend only to have direct inter-city services when they are located on the natural route, such as Huddersfield towards Manchester and Wakefield towards London, Sheffield, and the Midlands.

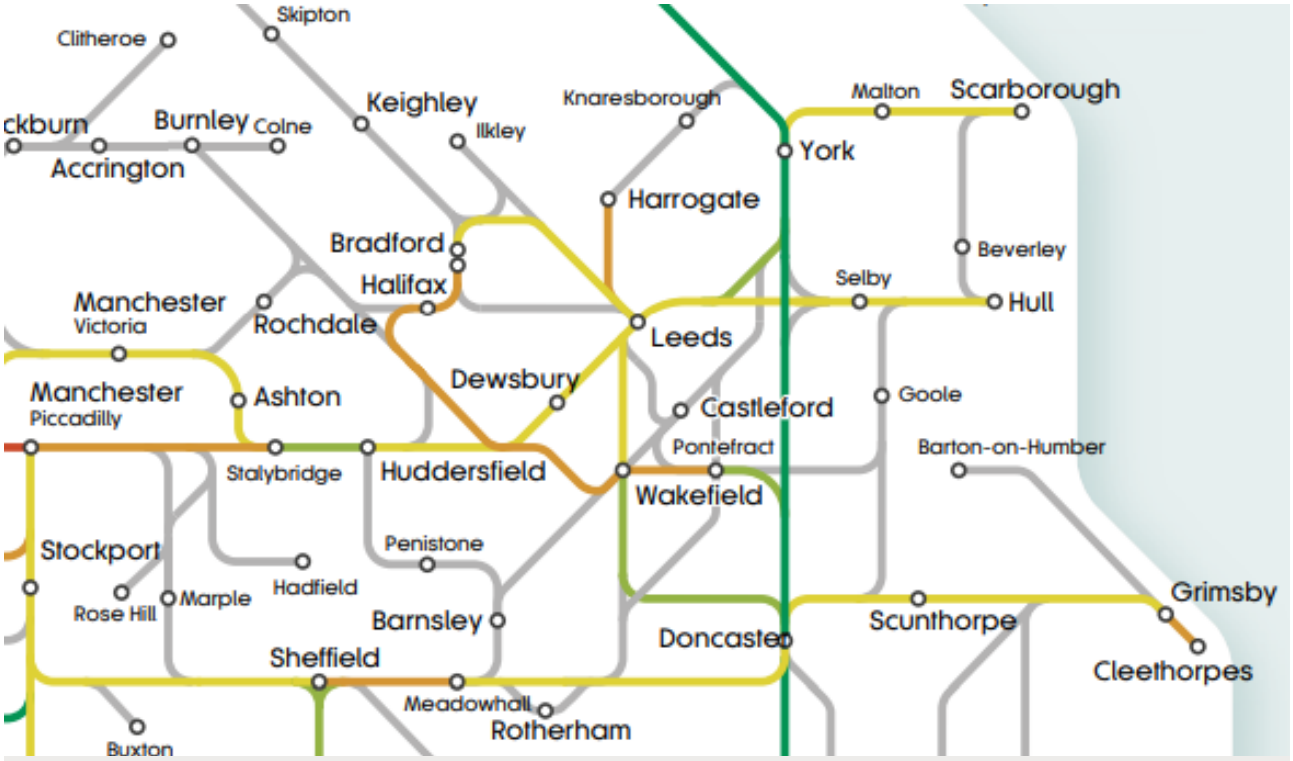
15 Bradford in particular has far fewer inter-city services, with fewer still from Halifax or from other centres such as the Five Towns. Such direct services as are provided, including from Bradford, Airedale, and the Harrogate line via Leeds to London, and from Bradford via the lower Calder Valley and Wakefield to London, are highly valued by their users and have

helped to develop rail markets and the regional economy. Huddersfield too is expected to gain a new direct London service shortly, albeit limited in frequency.

16 There may be scope to expand such direct long-distance services, but the case for these needs to be balanced against the value of frequent but non-direct services in a simple and reliable service structure, as well as against the potential implications for total network capacity. However, the benefits brought by these existing highly valued direct services must remain as a key consideration in future service planning.

17 It is important to West Yorkshire that its businesses can readily access important suppliers, markets, and collaborators beyond the North of England, particularly in key centres such as London, Edinburgh, and Birmingham, among wider economic centres across the country, and beyond to destinations on the continent.

18 HS2 will provide a step-change in north-south connectivity. For these longer-distance journeys, rail will have key journey time advantages relative to road travel, as well enabling direct access to central locations. When average journey speeds are overlaid onto a network schematic, as in the figure below, the lower average speeds across key east-west routes can be clearly seen.



Average speeds of selected long-distance / inter-urban services

***Source**: Transport for the North – Long Term Rail Strategy*

19 Improved east-west rail connectivity would support greater agglomeration, productivity, and efficiency across the North of England, and enable cities in the North to develop stronger economic links and function as one combined economic region. This will grow labour markets enabling better matching of employee skills and allow more inter-city linkages between businesses.

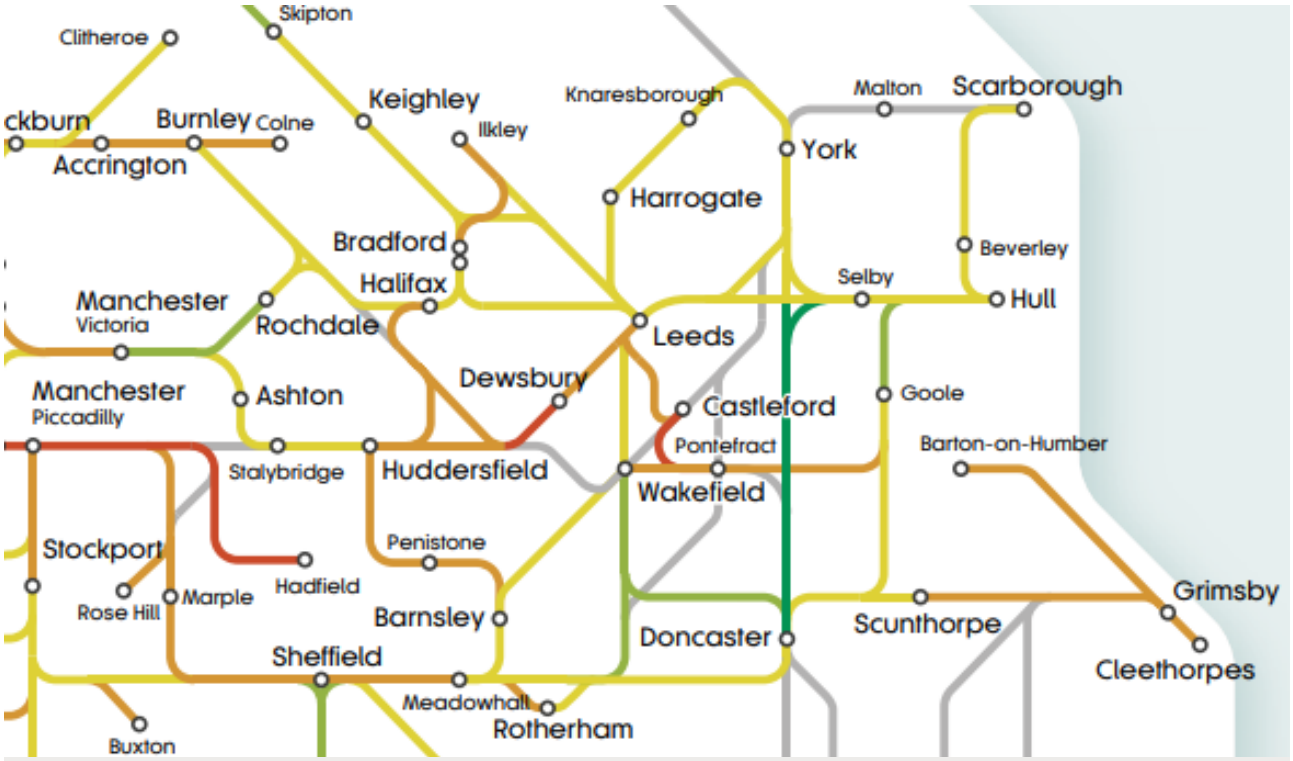
20 The growth of the Northern economy will drive, and will be dependent on, increased business-to-business travel between its economic centres. The rail network will need to enable this travel to be undertaken as quickly and efficiently as possible and must offer a viable and attractive alternative to road-based transportation.

21 Connectivity between the North's centres, in terms of service frequencies and journey times, is too often poor, extending the perceived distance between centres and acting as a barrier to travel. Issues such as overcrowding and poor on-board facilities can make rail travel unproductive, effectively removing one of rail's key advantages over other modes.

22 As set out in Transport for the North's Strategic Transport Plan, a step change in the level of rail connectivity between the North's largest cities is required to support opportunities and choices to the next generation of workers and businesses. It also has potential to release capacity on the existing rail network for freight and other local services.

Local rail journey times

23 Poor local rail journey times are a significant issue throughout our region. As shown below, all local routes across our region operate at below 40mph, below 30mph in many cases, and even below 20mph in some extreme cases. Poor journey times severely limit the attractiveness of rail relative to other modes of transport, particularly where poor journey times are combined with a low service frequency.



Average speeds of selected local / suburban services

***Source**: Transport for the North – Long Term Rail Strategy*

24 The Combined Authority has a long-standing target that station-to-station rail journey times should be no slower than 75% of the off-peak, uncongested, car journey time. This target reflects the principle that access to and from the railway adds to the total journey time, so the rail journey component needs to be consistently faster than driving if rail is to be competitive. This useful and straightforward measure is proposed to be retained.

25 In addition, however, a target that more directly reflects the capabilities of the public transport network as a whole, considering real-world door-to-door journey times, is highly desirable, to help guide progress towards our objectives relating to modal shift, social inclusion, and sustainable opportunities. Our target – wherever possible – is that any start to end journey – from door to door – should be possible in a journey time that is no greater than the off-peak, uncongested, car journey time.

26 While this at first glance appearing a less challenging target than that set out above, this is not the case, because it includes access to and egress from the public transport network, as well as journeys by bus and other modes to connect to the true origins and destinations of passengers, plus time spent interchanging. Maintaining such a stretching target will help to focus resources on real-world journeys, on optimising interchange and integration between modes, on addressing the 'weakest links' in the journey chain, and on the ways in which people travel to and from stations and stops to make use of the network.

27 This approach is likely in some cases to drive specific sets of journey time targets on the rail network. Where convenient and quick interchange is to be a regular standard feature of a clockface timetable, this will dictate that trains will need to arrive at, and depart from, interchange nodes at particular times, in order that the connections can all meet at those nodes. For example, where there are connecting nodes between buses and trains that run twice per hour, then a journey time of slightly less than half an hour between those nodes is highly desirable for the system to work efficiently with simple, passenger-friendly timetables and easy interchange.

28 Our targets will be overlaid onto existing rail-specific journey time targets, where they are relevant, to make sure that faster trains actually do translate to faster real-world journeys for passengers, rather than into increased waiting times at connection points.

Connectivity concepts

29 The purpose of any transport system is to link origins – places containing people wishing to travel or goods to be moved – with destinations. Any such journey needs to be considered in its entirety – door-to-door – in order to understand what is needed for a successful network.

30 Walking, cycling, or car travel often involve a simple direct journey, door-to-door, from origin to destination. This does not apply to public transport, which in most cases provides links between one stop or station close to the origin, and one close to the destination.

31 Access to the origin station and the journey onward from the destination station must be considered for public transport to be attractive. However, in a complex network, with a variety of origins and destinations, there are various ways in which origin station and destination station can be connected:

- **Directly**, by a through rail service connecting origin and destination.

  …or…

- **Indirectly**, with interchange – between rail services (changing trains) and / or between modes (e.g. bus and train).

- **On a 'turn-up-and-go' frequency**, as with an urban metro service.

  …or…

- **On a timetabled basis**, where the traveller plans arrival at the origin station around the departure time.

32 Different combinations of these properties present a range of 'connectivity concepts' for the public transport network. At present, the rail offer in West Yorkshire is patchy – inconsistent services provide varying passenger experiences, with little integration between rail services, and less still with other modes such as bus. As a result, the railway's effectiveness in providing high-quality mobility and an alternative to less sustainable modes is highly variable, and often not optimal.

33 We need to provide for the characteristics of our region, and the objectives we are seeking to achieve, against the strengths and weaknesses of different concepts for different types of journey. This will allow us to recommend an overall approach that can be applied across the network to achieve consistency while reflecting the widely varying areas and markets we serve.

34 Our primary focus is on passenger services – both within the region and connecting us to the wider world – but the role of buses and other modes including future urban transit proposals, to enhance integration and achieve a more effective door-to-door journey experience, is also considered. The scope for the recommended connectivity concept must also ensure that rail freight has its proper prominence on the network forms.

Achieving objectives and outcomes

35 Consideration of connectivity concepts needs to reflect the characteristics of our region, as well as the implications of our objectives relating to the economy, social inclusion, environment and the climate emergency, quality of life, and quality of place. Achieving our objectives implies, in particular:

- Modal shift from car (and, for longer journeys, aviation).
- Easy access to employment centres, education, and other services.
- Increased overall mobility – provided in a sustainable way and particularly targeting those suffering accessibility deprivation.
- A consistent network across the region enabling a levelling-up of accessibility.

36 Our region's rail network does some things well – such as commuter "heavy lifting" into Leeds and inter-city passenger services – but it must do more. As part of the overall sustainable transport solution, it needs to expand into new markets or those where it is currently weak, in particular those where the car dominates and those where there are limited opportunities to access jobs and education.

37 A wide variety of origins and destinations need to be attractively and cost-effectively linked on our network. Achieving this will necessitate:

- A **comprehensive network** with wide geographic coverage.
- A **door-to-door** integrated travel solution.
- **Simplicity**, **predictability**, and **reliability** for passengers.
- **Every stop as a gateway** to the wider world.

The West Yorkshire context

38 West Yorkshire has distinct characteristics which are relevant to network planning:

- **The region is polycentric** – While there is some "hierarchy" of places within West Yorkshire, there is no one dominant centre – despite much current rail provision centred around Leeds. There are also significant flows to other neighbouring centres such as Manchester, Sheffield, and York.
- **Challenging topography** – Much of our region, especially in the west of the region, is characterised by valleys which concentrate population and transport routes along narrow and confined corridors, and are separated by significant hills which can form a barrier to all forms of transport.
- **Rail network coverage** – Much of the region is served to some degree by the rail network, but with notable exceptions. However, this does not mean that current rail service geography is in all cases aligned to the main travel flows.
- **Population densities** – While our region as a whole is densely populated, this varies greatly. An attractive public transport network must offer consistent levels of service to provide simplicity and ease of use – but providing this in such a region will be a challenge. A variety of solutions may be needed.

Our approach to connectivity concepts

39 In considering the factors that make West Yorkshire unique, and learning from best practice elsewhere, we will show how a balanced and achievable connectivity concept can benefit our region. We will set out what it would mean for the rail network, for the passenger experience, and for the role of rail within wider transport – with a clear focus on what is needed to be successful in achieving modal shift and delivering enhanced, socially inclusive, and sustainable mobility.

40 Our recommendations will be geographically specific, setting out the role of different places on the network, how services should interact, the service levels and routings required, and of the role of other modes to interact with and complement rail as part of an integrated transport network. This will give a sense of the "feel" of future travel around our region, in terms of the nature of the passenger experience and how it will differ from today's journeys.

41 Development of our vision will help to inform future rail infrastructure planning by identifying the forms of connectivity that the future network must be capable of supporting. We will also consider the challenges that are likely to need to be tackled in delivering this vision.

42 We need to establish the right balance between direct services and high-quality interchange-based connectivity. On the rail network, flows which should be served be direct services will include those which:

- Are physically capable of being served directly, given the rail geography; and
- Are already high-volume flows, such as "natural" commuting and education flows into and between the main district centres; or
- Show high growth potential either from modal shift if a direct rail service were provided, or by serving future growth areas (new markets); or
- Link identified multimodal interchange hubs together.

43 Where direct services cannot be provided, interchange must be radically better than it is now, both between rail services and between bus and rail (as well as with future modes such as light rail / tram). Interchange – both within rail and between rail and other modes – must become a seamless experience, with hub stations designed to provide a high-quality passenger experience.

44 The location of hubs will be identified based on the nature of places themselves, but also crucially by reference to transport geography. For example, some rail stations at junctions, such as Huddersfield, are naturally suited to acting strong rail-to-rail interchange nodes, but others (such as Dewsbury) less so, simply because of rail network geography. Conversely, Mirfield and Ravensthorpe might become such nodes despite the settlements being smaller.

45 Similarly, identification of bus-rail interchange locations, as well as potential interchange with future proposals for urban transit, will be based not only on the nature of places and station catchments areas, but also by the form of surrounding road networks and opportunities for bus and rail services to be integrated effectively.

Our vision

Connectivity concepts

46 Our vision of passenger connectivity:

- Allows travel from anywhere in West Yorkshire to anywhere else in the region, at least twice per hour, at the same time each hour, all day, and every day – seamlessly, simply, reliably, and without worry about ticketing.
- Makes every station and stop across our region into a true gateway to a single integrated transport network.
- Provides an attractive option for a wide range of journeys – not just flows into the main centres.
- Connects our region efficiently to the rest of the country and beyond to wider international destinations.

47 To achieve this, it will:

- Genuinely and comprehensively integrate rail with bus, future urban transit proposals, and other sustainable modes throughout our region.
- Make the railway – and the wider public transport network – operate as a single system rather than a set of disjointed independent services.
- Provide fast direct services wherever practicable for the most important high-volume rail flows.
- Establish rail-to-rail and bus-to-rail interchange hubs throughout our region, with hub stations designed to provide a high-quality passenger experience.
- Design timetables, stations, fares, ticketing, and information so that interchange is as simple, convenient, and reliable as the best in the world.

Local service frequency

48 The frequency of local rail services across West Yorkshire forms a vital part of our vision for the future of rail. Overall train service levels, inequality between places within our region, and disparity across days of the week and times of the day all present clear challenges to be addressed.

49 The section focuses on local services which cater for the majority of rail journeys that take place within our region. Our vision for the future of longer distance and inter-city rail connections is captured separately in dedicated sections within this document.

Challenges

50 We need to address significant variation in the frequency of local rail services across our region. Whilst some areas are well served, many are poorly served and there is a clear lack of consistency in service provision which increases this disparity.

51 Rail services in West Yorkshire have a strong focus on journeys to and from Leeds. With a diverse range of key centres, our region is well placed to take advantage of the enhanced role that rail could play in enabling journeys to and from wider centres. Connections between centres, often more ‘orbital’, are generally poor.

52 Whilst there has been a natural focus on catering for demand into major centres at peak times, disparity between peak and off-peak service levels, a lack of early morning and late evening services, and limited Sunday services significantly limit wider journey opportunities.

53 Journeys that involve changing between services are limited by the frequency of the weakest leg of the journey, and by timetables that do not coordinate arrival and departure times at interchange nodes – both between rail services and between rail and bus – and there is a clear need to address the current lack of integration.

Priorities

54 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of local rail service frequencies:

- **Frequency standards** – We will establish a clear and consistent set of service frequency standards including a minimum standard frequency of two trains per hour across all passenger routes as well as higher frequency ‘turn-up-and-go’ services on core radial routes with at least four trains per hour.
- **Wider journey opportunities** – We will strive to increase opportunity through alignment of peak and off-peak service frequencies, better and more standard frequencies for early morning and late evening services, and the development of enhanced service levels on Sundays.
- **Passenger-focussed** – We will promote development of regular ‘clock-face’ services with passenger-friendly timetables, frequencies aligned across different routes, coordinated timings at key nodes to make interchange easy, and timetables considered in conjunction with connecting bus services.

Our vision

Frequency standards

2 trains per hour or higher	The **minimum standard** to be achieved for all established local rail passenger services on routes throughout our region. Some **'emerging' routes** should see a phased improvement – initially focussing on introducing a regular one train per hour service. Including vital local connections into **neighbouring areas** – Greater Manchester, South Yorkshire, North Yorkshire, and Lancashire.
4 trains per hour or higher	Higher frequency **'turn-up-and-go'** services on core radial routes into our main urban centres – particularly to and from Leeds. Including **combined services** where routes converge on approach to our key urban centres. Aspiration to see the **majority of stations** on core radial routes served by four trains per hour to and from Leeds.
6 trains per hour or higher	Further **'enhanced'** services connecting our major centres with the regional centre in Leeds. Local services in conjunction with **overlapping services** providing inter-regional and long-distance connectivity. Aspiration to see **local hubs** providing multi-modal interchange facilities served by six trains per hour to and from Leeds.

Wider journey opportunities

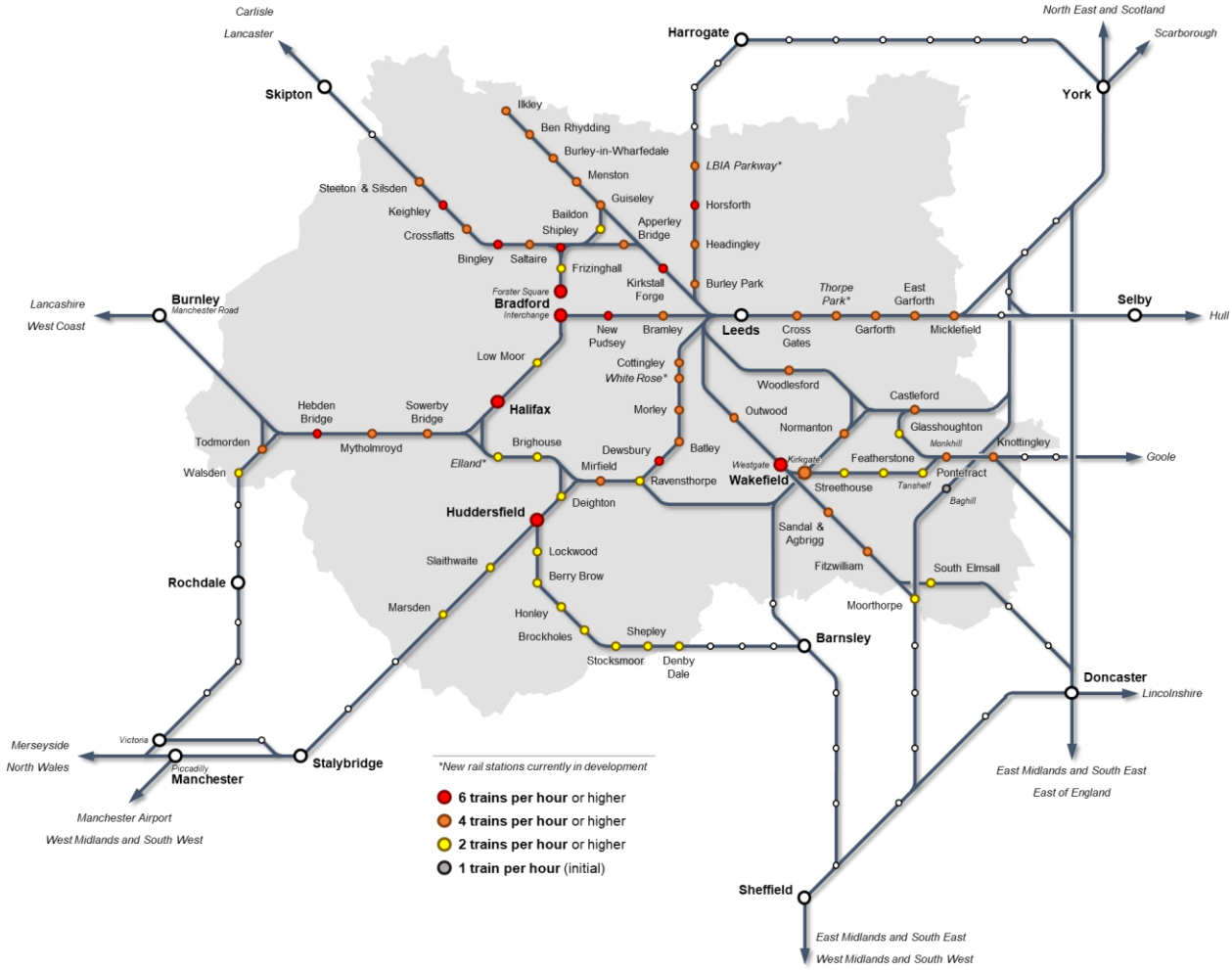
Peak and off-peak	**Aligning peak and off-peak** service frequencies to provide equal opportunity across a wider range of journey opportunities. Higher frequencies **balanced with longer trains** – where required – to provide additional capacity at peak times.
Early / late / Sundays	Improving **early morning and late evening** travel opportunities by extending and improving service frequencies. Expanding **Sunday service levels** to match the frequencies seen on weekdays and Saturdays.

Passenger-focussed

Clock-face services	Establishing **regular 'clock-face' services** with timetables that are passenger-friendly. **Reliable interchange** between train services for journeys involving a change of trains – with joined-up timetables.
Integration with bus	Enhanced **connections with bus services** through integrated planning and joined-up timetables and frequency standards.

Spatial vision

55 The graphic below shows an illustrative view of our vision for local rail service frequencies applied to all stations within our region (with some stations in neighbouring areas shown). The frequencies shown represent the frequency of services in one direction of travel – focused on travel into the predominant urban centre – in most cases this relates to services towards Leeds as the regional centre.



Our rail service requirements

56 Our Rail Strategy work is combining target service levels for local, inter-regional, and long-distance passenger services, plus freight, into an indicative train service specification. This is based on known aspirations, existing policy, and extensive stakeholder consultation.

57 By translating these inputs into specific future train services which deliver the standards set out in this Vision, and adding a representation of the freight services we envisage as operating, this gives a view of the likely demands which will be made in future on the rail network in terms of the volume of trains running.

58 In turn, and when taken together with other factors such as timetable principles – for example, how trains connect with each other at interchange hubs – and journey time aspirations, this allows us to identify the capacity and capabilities that our rail network will need to achieve in order to deliver the Vision.

59 Our initial view on specific future train services required to achieve our vision has been taken as a direct input to our emerging assessment of capacity needs to get to the rail network that our region needs. The following chapter sets out how we are developing a logical series of interventions to move us towards achieving that network.

Capacity needs

60 With the connectivity needs of our region at the heart of our vision for the future of rail, and in taking a balanced and integrated approach that recognises the needs of all rail markets, we must seriously consider the capacity that we require – both on the network and on our trains – to make this vision a reality. We must also consider the way in which the capacity enhancements we can be delivered – both 'how' and 'when' we address critical issues.

61 Passengers face travelling on crowded rail services in our region on a daily basis. In particular, many passengers on peak services into and out of key centres such as Leeds, Bradford, Huddersfield, and Wakefield are required to stand for a large proportion of their journey. In some cases, passengers are unable to board the services they intend to travel on due to severe overcrowding. This issue is also often made worse by poor service delivery, in the form of late, cancelled, and short-formed trains.

62 As a key component of our Rail Strategy for West Yorkshire, the Combined Authority has commissioned detailed work to analyse the future capacity requirements of the rail network in the Leeds City Region. In assessing future capacity needs, this study has considered a range of inputs, including:

- Expected growth in rail passenger demand over the medium and longer term – see **'context'** section.
- Service enhancements required to meet minimum frequency standards – see **'local service frequency'** section.
- Wider connectivity aspirations designed to increase the role of rail in our region – see **'connectivity needs'** section.
- The increased future role of rail freight services across the network in our region – see **'rail freight'** section.

63 This analysis has investigated how these connectivity enhancements will affect capacity requirements in the Leeds City region over the next 20 years – looking out to a longer-term horizon of 2040 – and what mitigations can be made to provide the required capacity. The proposed solutions span both rolling stock and infrastructure enhancements.

Rolling stock capacity

64 In seeking solutions to provide adequate capacity on our rail services across our region, this study has considered the introduction of longer trains, providing more carriages and more seats, or more frequent services, or a combination of both.

65 To meet expected growth in demand and reduce excessive overcrowding by 2023/24, approximately 60 additional carriages are expected to be required. To meet further growth in demand in the longer term – by 2039/2040 – approximately 70 further carriages are expected to be required.

66 To support the introduction of longer trains on routes across our region, it has been identified that a programme of station platform lengthening would be required. As an alternative, there may be locations where the use of 'Selective Door Opening' technology could be considered to be appropriate, however this would be subject to further review.

Network capacity

67 Through this detailed capacity study, it has been identified that substantial infrastructure work will be required to support the connectivity needs of our region in the medium and longer term. In broad terms, the required infrastructure falls into three categories:

- **Four-tracking of key sections of route** – to enable the separation of overlapping services at critical bottlenecks.
- **Capacity enhancement schemes** – typically focussed on key junctions and stations across the region.
- **Signalling enhancement schemes** – designed to make better use of existing heavily-used sections of the network.

Configuration states – the 'how' and 'when'

68 Our most recent work has taken the requirements identified on a route-by-route basis across the Leeds City Region rail network – both in terms of rolling stock capacity and network capacity – and provides a consolidated view for the requirement of the region's network as a whole.

69 The outputs from this work remain subject to refinement – but the early findings are presented here to demonstrate the emerging priorities and the scale and distribution of intervention that is likely to be required.

70 A timeline for these interventions over the next twenty years has been developed. The timeline is shown as a series of 'configuration states' which combine dates of need with convenient groupings of schemes into delivery packages. In other words, these have been designed to show a set of logical steps, through which the rail network in our region can be developed, to support the delivery of our ambition for future rail connectivity.

71 Five emerging 'configuration states' have been defined as set out below:

Configuration State 1 (CS1) – containing interventions required by around **2023/24**. Supporting train lengthening is the major component – it recognises that between now and 2023 any wider infrastructure works other than platform lengthening is very unlikely to be delivered.

Configuration State 2 (CS2) – containing interventions required by around **2027/28** to support enhanced train services needed from this date.

Configuration State 3 (CS3) – containing interventions required by around **2030/31** to support enhanced train services needed from this date.

Configuration State 4 (CS4) – containing interventions required by around **2034 to 2036** to support enhanced train services needed from this date.

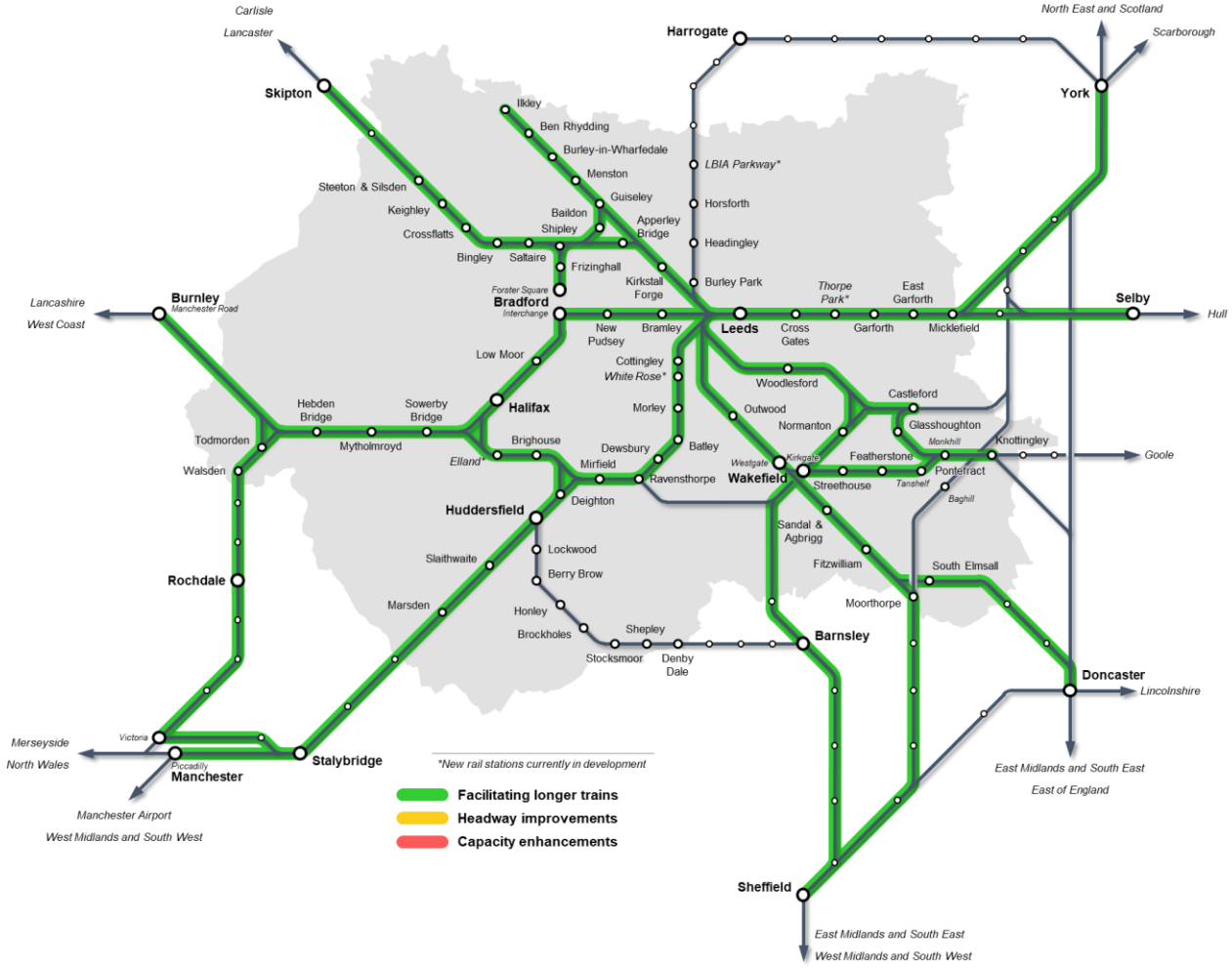
Configuration State 5 (CS5) – a more complex view containing interventions required:

- By around **2039/40** to support enhanced train services needed from this date.
- To deliver additional services to support wider connectivity aspirations not yet met.
- To deliver NPR and HS2 services which utilise parts of the existing 'classic' rail network.

72 Detailed outputs from the study are provided on the following pages – outlining the specific requirements identified under each of the five configuration states outlined above.

Configuration State 1 – 2023/24

How we get to a future rail network which supports our ambition for rail



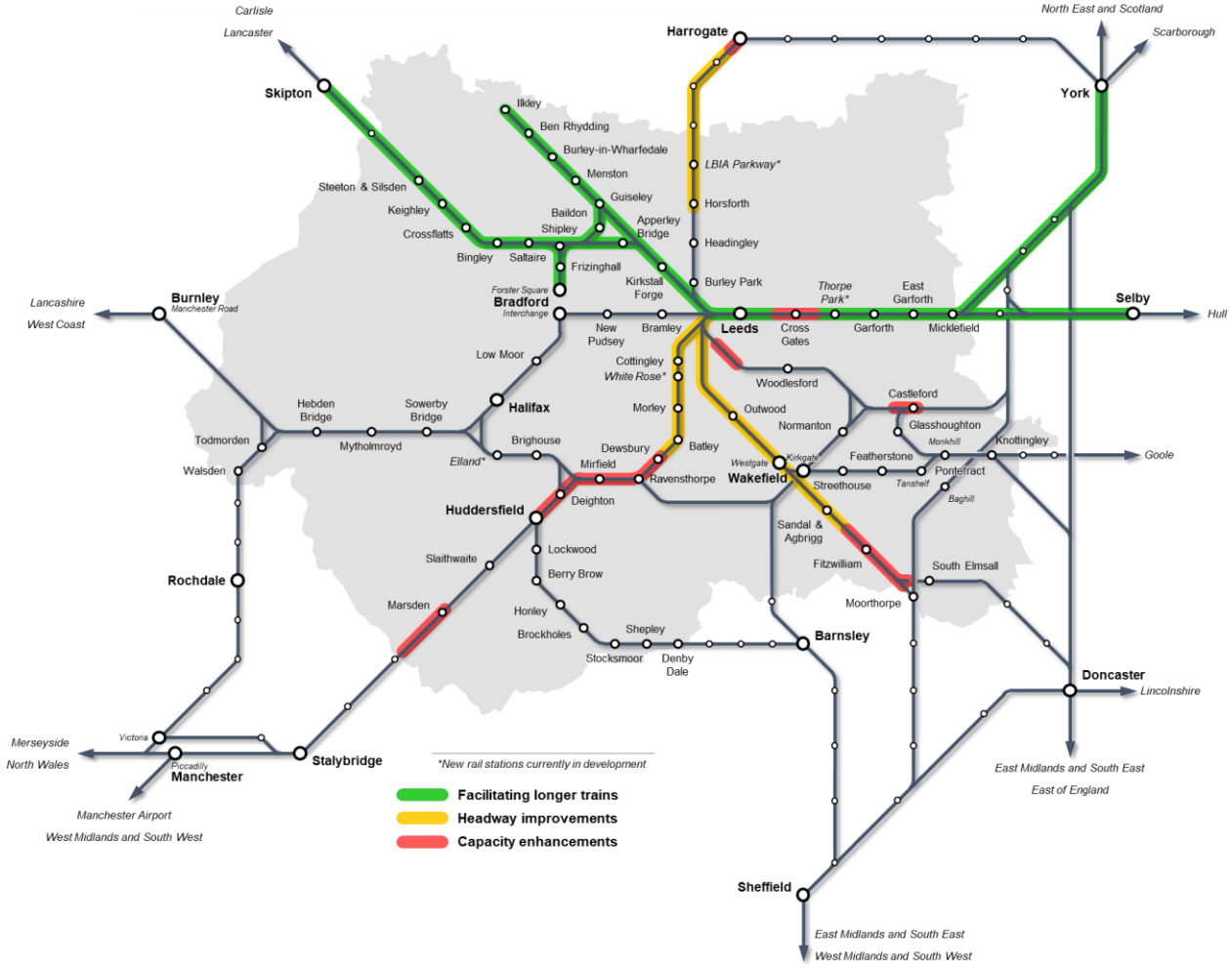
Platform lengthening (or use of Selective Door Opening) to accommodate:

- 6 car x 24m length electric trains on all Wharfedale and Airedale lines
- 6 car x 24m length trains on all services using the Calder Valley lines (in particular to include platforms 3 and 4 at Bradford Interchange)
- 6 car x 24m length trains on all services via Dewsbury (in particular to accommodate terminating trains at Huddersfield and Leeds)
- 5 car x 24m length stopping trains between Doncaster / Sheffield and Leeds via Fitzwilliam
- 3 car x 24m length trains between Knottingley and Leeds (all routes)
- 3 car x 24m length stopping trains between Sheffield and Leeds via Barnsley
- 4 car x 24m length stopping trains between York / Selby and Leeds via Garforth

73 Interventions designed to allow our stations to accommodate longer trains will clearly need to be developed hand-in-hand with the requirements we have identified in terms of the need for significant additional rolling stock to support service provision throughout our region – as set out earlier within this section.

Configuration State 2 – 2027/28

How we get to a future rail network which supports our ambition for rail



Platform lengthening (or use of Selective Door Opening) to accommodate:

- 8 car x 24m length electric trains on all Wharfedale and Airedale lines
- 5 car x 24m length stopping trains between York / Selby and Leeds via Garforth

Signalling enhancements:

- Between Harrogate and Horsforth
- Between Hare Park Junction and Leeds
- Between Dewsbury and Leeds
- Track and signalling alterations to improve turn round flexibility at Harrogate

Four tracking enhancement schemes required between:

- Hare Park Junction and South Kirkby Junction
- Neville Hill West Junction and a location between Thorpe Park and Garforth

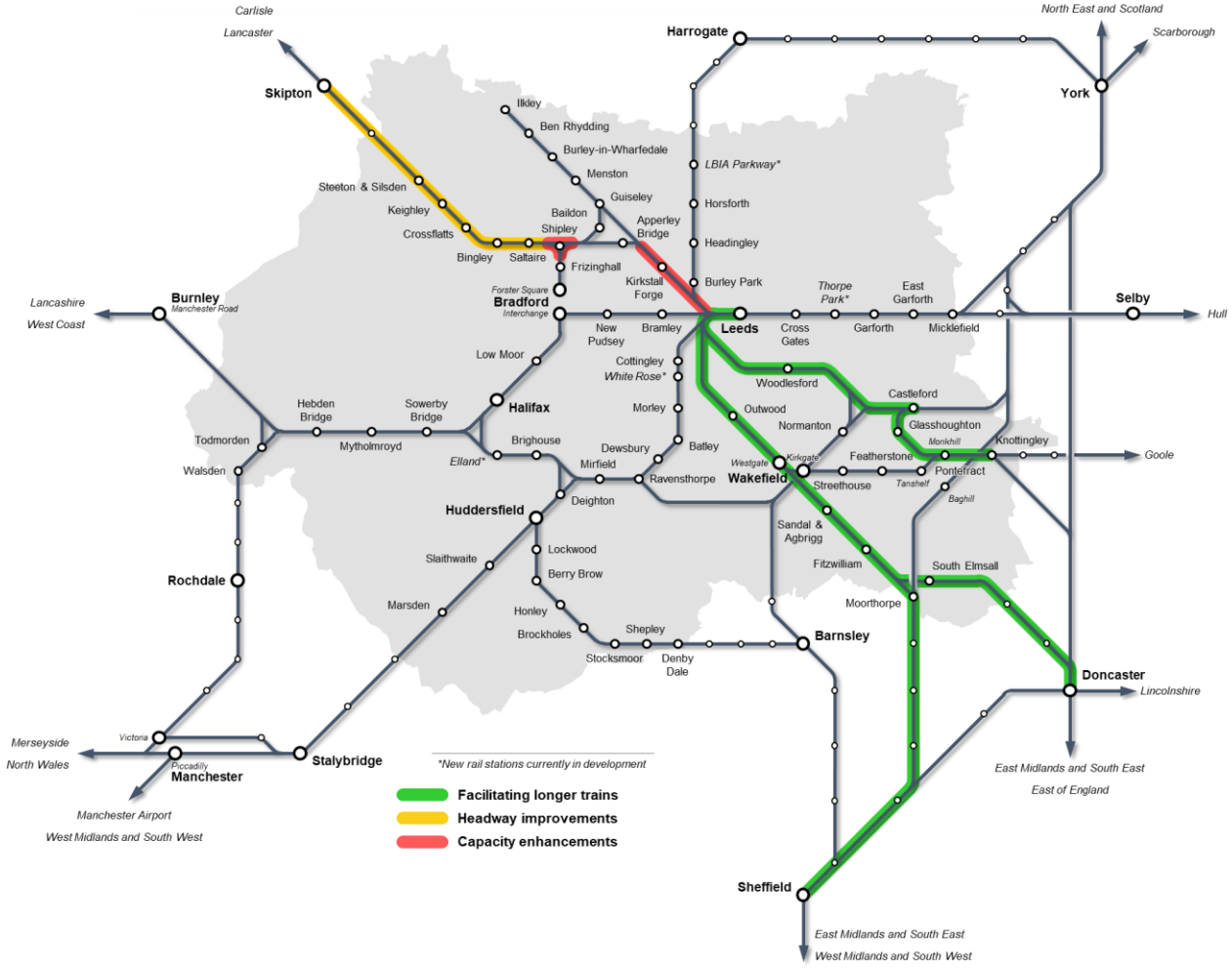
Track capacity enhancements at:

- South Kirkby Junction – grade separation required
- Engine Shed Junction – at a minimum to give 750m clear standage between there and Whitehall East Junction and preferably conversion to double lead junction)
- Castleford station – including reinstatement of platform and additional crossover to allow trains from Pontefract to reverse in Platform 2

All Trans Pennine Route Upgrade (TRU) schemes

Configuration State 3 – 2030/31

How we get to a future rail network which supports our ambition for rail



Platform lengthening (or use of Selective Door Opening) to accommodate:

- 6 car x 24m length stopping trains between Doncaster / Sheffield and Leeds via Fitzwilliam
- 4 car x 24m length trains between Knottingley and Leeds via Castleford

Signalling enhancements:

- Between Skipton and Shipley

Four tracking enhancement schemes required between:

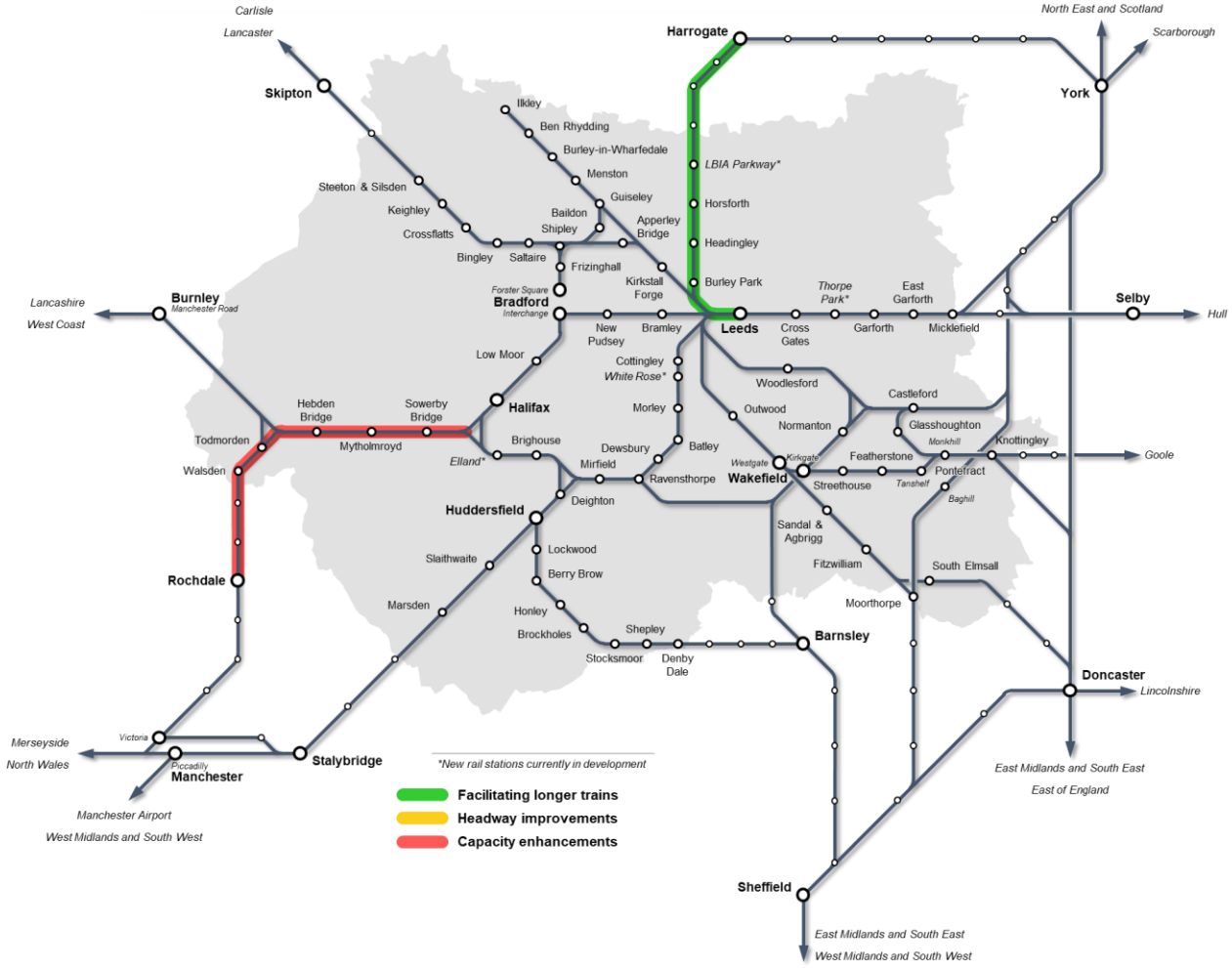
- Apperley Junction and Armley Junction

Track capacity enhancements at:

- Shipley

Configuration State 4 – 2034 to 2036

How we get to a future rail network which supports our ambition for rail



Platform lengthening (or use of Selective Door Opening) to accommodate:

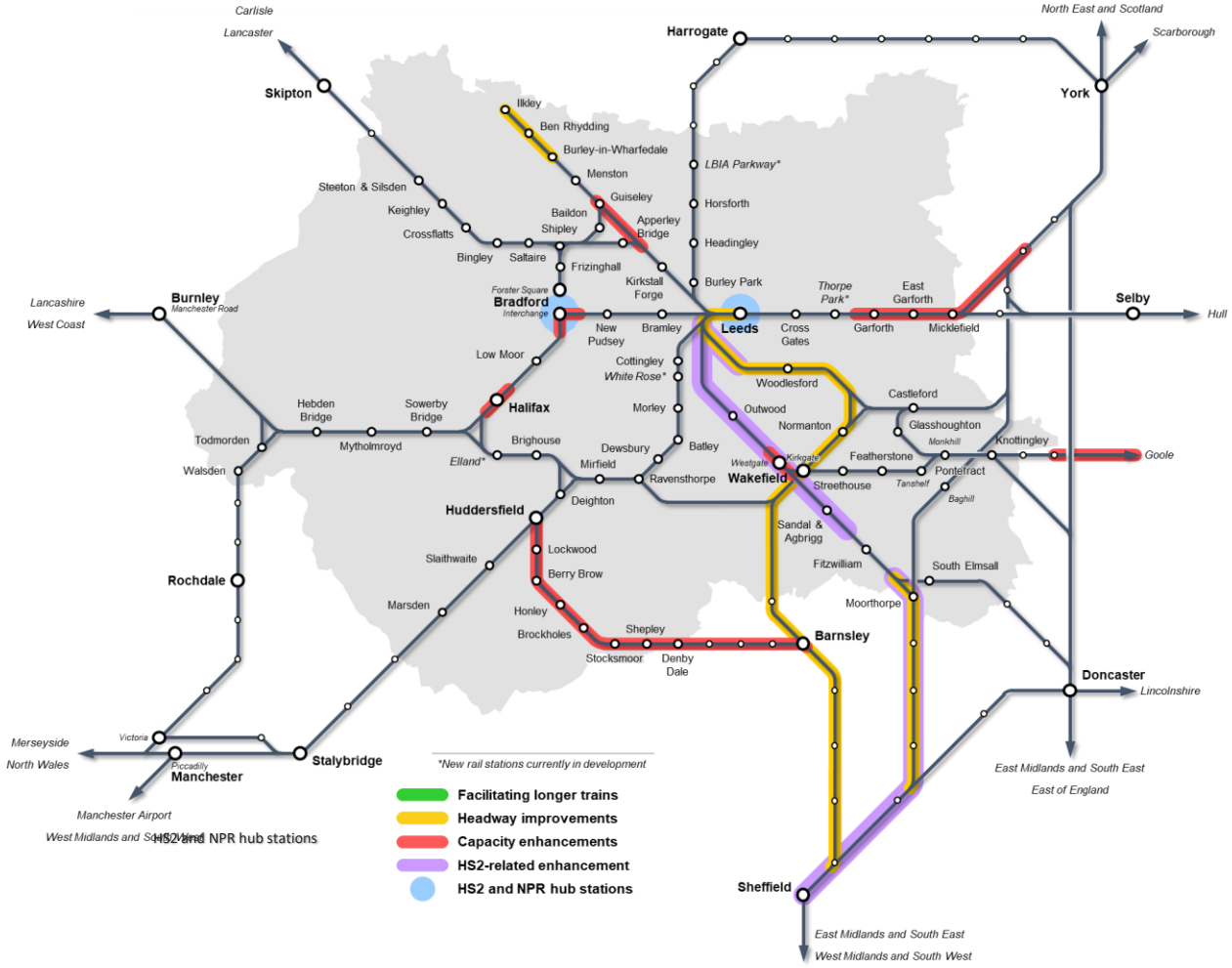
- 5 car x 24m length stopping trains between Harrogate and Leeds

Track capacity enhancements:

- Between Rochdale and Milner Royd Junction

Configuration State 5 – 2039/40

How we get to a future rail network which supports our ambition for rail



Signalling enhancements between:

- Burley in Wharfdale and Ilkley
- Aldwarke / Swinton and Moorthorpe
- Methley Junction and Leeds
- Meadowhall and Altofts Junction via Barnsley and Wakefield Kirkgate

Track capacity enhancements:

- Between Springs Junction and Apperley Junction
- Between Mill Lane Junction and Bradford Interchange
- At Halifax station
- Between Huddersfield and Barnsley
- At Wakefield Westgate station
- Between Hensall and Goole

HS2 and NPR:

- Interventions necessary to permit the operation of HS2 services on the classic network so that they can operate through services beyond Leeds station
- Four tracking at a location between Thorpe Park and Garforth and Church Fenton

Wider considerations

Leeds station area

74 Our detailed work to date to analyse the future capacity requirements of the rail network in the Leeds City Region has initially considered each individual corridor in isolation. It is important to note that, at this stage, we have not yet considered the capacity of the Leeds station area. Further detailed analysis is planned to follow which will specifically capture the requirements in and around this critical network capacity bottleneck.

Wider rail network

75 Whilst our wider Leeds City Region study does offer a broad geographic coverage across the full region, it is important to note that there are likely to be wider network capacity constraints – beyond our boundaries – which may affect the delivery of our connectivity requirements. In particular, we note dependencies on track capacity in the Manchester, Sheffield, York, and Doncaster areas which may constrain or alter any practical West Yorkshire solution.

Major programmes

76 Investment in rail is crucial to the economic prosperity of the Leeds City Region. Not just in terms of attracting investment and creating jobs, but in the immediate future as we continue to tackle capacity and connectivity constraints which hold back our growth while planning our economic recovery in the wake of the COVID-19 pandemic.

77 HS2, Northern Powerhouse Rail (NPR), and the Trans-Pennine Route Upgrade (TRU) provide once-in-a generation transformational opportunities for our towns and cities, improving connectivity, capacity, and prospects for wider integration.

78 Leeds Station is pivotal as the lynchpin hub to all three programmes. As the North's busiest transport hub, it requires investment around track, platform, and pedestrian circulation capacity to manage ever-increasing demand for rail travel.

79 Alongside this is the need for a rolling programme of electrification across the region's rail network, plugging any gaps where HS2, NPR, and TRU will not see this work completed. This will decarbonise our railways and support even greater levels of connectivity and economic growth.

Strategic objectives

80 For West Yorkshire and the wider North, we need a commitment for long term, integrated project delivery to address the following objectives:

- **Balanced growth** – sustainable inclusive economic growth which helps deliver decarbonisation, drives recovery and rebalancing post COVID-19.
- **Capacity relief** – delivering enhanced capacity to support growth in local, inter-regional and long-distance services.
- **Sequencing** – any phasing strategy must be planned in an integrated manner to maximise deliverables at early stages without compromising the end stage.
- **Improved journey times** – an integrated network delivering improved connectivity within and outside the region.

81 **An integrated network** – rail improvements must be developed in an integrated manner with local and intra-regional rail in mind. It is especially important for West Yorkshire as almost all inter-city services are operated on a mixed-use railway. Much of our region's network is operating at capacity and will struggle to operate increased services without infrastructure improvements.

82 Rail investment needs to be considered in a holistic manner – isolated major programmes on a shared network could have negative impacts on the local and intra-regional rail services which play a key role in connecting people to places, jobs, and amenities. There should also be a strong focus on key hubs such as Leeds and Bradford which play a key role in an integrated network.

83 In our submission to the National Infrastructure Commission's 'rail needs assessment for the midlands and the North' we focussed on key infrastructure projects which needs to be delivered, but planned in such a way that each should be an enabler for another:

- **HS2 Eastern Leg** – Completion of HS2 Phase 2b east between Leeds and the Midlands. This includes early delivery of the Leeds HS2 station along with a link south to a junction with the existing network.
- **Northern Powerhouse Rail (NPR)** – Delivery of the full NPR network linking Leeds, Bradford, and Manchester – with a new through station in the centre of Bradford to accommodate both NPR and Calder Valley services.
- **Trans-Pennine Route Upgrade (TRU)** – Completion in full by 2026, including electrification between Huddersfield, York, and Selby, and the Garforth touchpoint, to provide additional capacity now to support economic recovery.
- **Leeds Station** – With the station approaching pedestrian capacity, investment is urgently required. We also need to create significant additional capacity on the eastern and western approaches to the station to relieve the current bottleneck.
- **Electrification** – A rolling programme to create an electrified City Region rail network, starting with the Calder Valley line, to decarbonise the railway and the economy, and to open up opportunities to transform connectivity.
- **East Coast Main Line (ECML)** – Continued investment in this vital economic artery – optimising links to London – and which will remain critical after HS2 is delivered.

HS2

84 The Leeds City Region is ready to welcome HS2. We have an ambitious growth strategy which forecasts a £54 billion economic boost and an additional 50,000 jobs by 2050 based on the eastern leg of HS2 coming to Leeds and the transformative change it will bring.

85 Businesses and investors are already choosing our region because of HS2. Growth had begun but is being stifled by the uncertainty surrounding HS2's future. Similarly, the impact of the COVID-19 pandemic on the economy of our country cannot be underestimated, and the benefits of HS2's eastern leg will be critical to this recovery.

86 There is also an immediate threat to investor confidence which would crucially undermine this recovery before it has really begun. The announcement to deliver a hybrid bill for Phase 2b western leg ahead of the phase 2b eastern leg has created uncertainty which makes attracting and retaining investment in our towns and cities even more difficult.

87 Every year that the eastern leg is delayed is estimated to cost the region £1.7 billion. Committing to building the eastern leg of HS2 at the same time as the western leg is vital to rebalancing the economy.

88 There is also the potential to accelerate these benefits for the Leeds City Region and towns and cities along the eastern leg by delivering the HS2 Station at an earlier stage. Failing to do so would leave our regions reliant on Victorian infrastructure at a time when we need investment - in our railways and our economies - more than ever.

Northern Powerhouse Rail

89 There needs to be a clear and connected programme of work which combines HS2 Phase 2b eastern leg with Northern Powerhouse Rail. More than 100 towns and cities on existing railway lines could benefit from faster and more frequent journeys, thanks to the capacity and connectivity created by HS2 and NPR.

90 Delivering the NPR network between Leeds, Bradford, and Manchester, including a new through station in Bradford city centre which can accommodate Calder Valley services, will transform connectivity across the region, encouraging growth in labour markets, increasing innovation levels throughout the region, creating jobs for local residents, and building supply networks.

91 NPR would provide faster and more frequent journeys between our towns and cities, along with a major increase in seating capacity available on routes which are already burdened by significant overcrowding. However, these benefits can only be truly realised if NPR is combined with improved local rail infrastructure and the additional capacity that would be created by HS2's eastern leg.

92 In principle, HS2 and NPR must be delivered together – the two are reliant on one another, HS2 sharing at least 80km of its track with NPR across the North of England, and creating the important link to Sheffield, along with the investment in new station capacity.

93 Capacity released by HS2 would lead to a large increase in seats for passengers starting journeys at stations on the ECML including Wakefield – and could double the seats available on evening peak services from Leeds towards Wakefield and Doncaster.

Trans-Pennine Route Upgrade

94 The importance of the Trans-Pennine Route Upgrade work in providing the additional capacity we need to support our region's economic recovery cannot be underestimated.

95 Completion of TRU in full by 2026, including electrification between Huddersfield, York, and Selby, and delivering the Garforth Touchpoint – a new link connecting the existing rail network with the HS2 network to the east of Leeds – to create onward benefits to Newcastle will deliver significant economic benefits. These include unlocking land for the delivery of 5,500 houses per year and helping to create 18,300 jobs and add £1.3 billion GVA to the economy over the next 30 years.

Improvements to Leeds Station and network capacity

96 Leeds Station is key to transport connectivity in the North of England. As the North's busiest transport hub, Leeds Station welcomes more than 34 million passengers every year, with 75% of these travelling from outside the city's boundaries.

97 Yet Leeds Station occupies a relatively small footprint, and if rail usage continues to grow at the current predicted rate – reaching 45 million passengers per year by 2026 – without significant interventions the Station will exceed capacity. This will mean passengers being unable to board trains, stifling the growth of the city and wider regional economy. It will also hamper efforts to reduce region's carbon impact and create more gridlocks on the

road network, trapping us in a cycle where less sustainable methods of transport become more favoured as rail travel becomes less desirable.

98 We have a comprehensive plan to turn this around and have begun delivering its benefits – but we need more support. Along with the Transforming Cities Funding to transform the station entrance which we have already secured, we are also seeking £8 million from the Rail Network Enhancement Pipeline within the Department for Transport, to progress a comprehensive design and outline business case to help the station manage this growing passenger demand. There is already an effective delivery partnership in place to develop and deliver these proposals.

99 At the same time, we face track and platform capacity constraints at and around Leeds Station, creating a bottleneck which impacts the local, regional, and national network. These issues mean Leeds causes the third highest number of delay minutes every year, behind only Clapham Junction and Birmingham New Street.

100 Unless action is taken now, Leeds Station will reach capacity in six years' time. Meaning severe overcrowding and a more unreliable train service... This will stifle Leeds' growth and the growth of the Northern economy. Our comprehensive plan to improve Leeds Station will be delivering benefits to local people and the region within just 18 months.

101 Network Rail's recently-completed 'Leeds Area Strategic Study' has identified specific interventions in and around Leeds – altogether designed to accommodate forecast growth and aspirations between now and 2043. With a focus on Leeds Station and the immediate approaches, these interventions include:

- Platform capacity at Leeds station.
- Constraints on the western and eastern approaches to Leeds station.
- Line capacity constraints between Armley Junction and Springs Junction.

102 Because of the pivotal nature of Leeds and its approaches, getting this area right in terms of unlocking congestion and providing train capacity is critical for West Yorkshire and the Leeds City Region as a whole – and its impacts are felt far wider across the North. The next step is Government support to begin delivering these interventions.

Electrification

103 A rolling programme to create an electrified City Region rail network starting with the Calder Valley line to decarbonise the railway and the economy. This work should start with the Calder Valley line because of its importance in linking Leeds to Bradford, Halifax, Rochdale, and Manchester.

104 Only 26% of passenger routes across the City Region are electrified compared to 42% nationally. This limits the ability to run electric services cross-city through Leeds and impacts both local and national targets with regards to air quality and decarbonisation. We are calling for a rolling programme of electrification across the City Region rail network which reduces the long-term costs of operating the railway, allows the efficient operation of high frequency services, and provides rail infrastructure which is suitable for a low carbon future. In addition, electrification to existing and new rail freight depots will enable the region to fast track the decarbonisation of its logistics networks and supply chains.

East Coast Main Line

105 The City Region is on the East Coast Main Line, which is a key strategic rail route, stretching more than 500 miles, from Inverness and Aberdeen, through key stops at Edinburgh, Newcastle, and York to London.

106 A third of the UK population lives within 20 minutes of an East Coast Main Line station and together they deliver 41% of the UK's GDP. However, constraints on the line can lead to significant disruption and in 2018, 12 major incidents occurred costing the UK economy an estimated £46 million.

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

Released Capacity from Major Programmes

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

109 Alongside faster journeys, HS2 delivers substantial benefits for capacity release for both passenger and freight services by allowing the existing West and East Coast (south of York) Mainlines, and the Midland Mainline, to be used in different ways, growing the overall capability of the rail network to meet our needs.

110 If developed and delivered in an integrated manner as the North needs, NPR is likely to release rail capacity on existing routes. This can be utilised for freight as well as improved local and in-regional services. In our region this could enable better services, more stations, or both on the following routes:

- The Calder Valley.
- The Huddersfield Line.
- The Hallam Line.
- The Wakefield Line / East Coast Main Line / Midland Main Line.
- The Pontefract Line.

Decarbonisation and electrification

111 With wide recognition that the world faces a climate emergency, moving towards a post-carbon society has moved centre-stage. Our region has pledged to become net-zero carbon by 2038. Transport is the largest contributor of carbon and other greenhouse gas emissions in our region. Passenger and freight road transport is especially emissions-intensive, as is aviation.

112 Rail enjoys very strong natural advantages in that it is inherently energy-efficient, is naturally suited to electrification, and with technology that is mature, efficient, and technically simple. Combined with renewable power sources, rail can be close to zero-carbon in day-to-day operation.

Challenges

113 Even if regional, national, and global targets for decarbonisation are met, adaptation to climate change will be essential, with implications for transport as for of all areas of life. Greater magnitudes of climate change will amplify this challenge significantly.

114 While requiring significant upfront capital investment and some disruption during delivery, rail electrification not only reduces carbon emissions but also lowers operating and maintenance costs, reduces the cost of rolling stock, eliminates local air and water pollution, and reduces noise nuisance, while improving journey times, efficient use of scarce network capacity, and reliability.

115 Electric cars are becoming more popular as technology improves. However, the physical disadvantage of cars in terms of energy-efficiency remains. Wide adoption will place a great burden on the electricity generation network – it is not clear to what extent non-carbon and renewable sources will be able to fill the gap.

116 Whilst it is technically feasible to power trains using batteries or hydrogen fuel cells – avoiding the need for full electrification – on current levels of technological advance, the range and performance of such trains is likely to remain limited to being suited only to low-density, low-traffic, low-speed, and short-distance passenger routes.

117 Adaptation to climate change is already an issue for rail – with more frequent and severe events affecting the network. It is expected such challenges will increase. The network will need to be increasingly resilient to such challenging events.

Priorities

118 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for decarbonisation and electrification of rail in our region:

- **Modal shift** – We will prioritise measures to encourage mode shift from road to rail travel – and attracting new passenger and freight travel to rail – with a clear focus on the contribution that rail can make to decarbonisation.
- **Electrification** – We will strongly support the need for a rolling programme of electrification – ultimately covering all routes in our region – supported as a way of enhancing capacity, connectivity, and cost-effectiveness of the railway.

Our vision

Decarbonisation

119 Public transport as a whole, and rail within it, will play a pivotal role in future mobility and future freight transport needs. A strategy that places public transport and active modes at its heart, while pursuing the decarbonisation of public transport, is likely to be the best strategy to mitigate negative impacts of increased mobility that arise from improvements to quality of life and enhanced economic activity.

120 The ambition of a zero-carbon railway for West Yorkshire is wholly achievable and realistic. This must be aligned to a railway which is attractive, and which contributes to wider transport decarbonisation by carrying a higher proportion of passenger journeys and freight movements – achieved both through modal shift and through new sustainable mobility.

121 Our policies designed to enhance the effectiveness and attractiveness of rail will also support decarbonisation. There is a clear synergy with policy priorities identified for the region in relation to social inclusion, economic opportunity, clean growth, access to labour, air quality, noise, and quality of life.

Electrification

122 In a densely populated region with busy, mixed-traffic railways, electrification will be the greatest single weapon in our armoury, enabling efficient, cost-effective, productive, and attractive rail services with low or zero carbon emissions.

123 We envision a rolling programme leading ultimately to electrification of all mainline railways serving our region, alongside strengthening the physical and operational resilience and flexibility of the network in order for it to be able to adapt to the growing challenges presented by the impacts of climate change in the future.

124 Decarbonisation fits closely with the wider reasons to support a growing railway. This in turn implies:

- Increased capacity for passengers and freight – on each train and on the network.
- Improved connectivity, with attractive, simple, and quick door-to-door travel opportunities that are accessible to all.
- Simple service patterns and close integration between services to maximise the efficiency as well as attractiveness of bus and rail.
- A regional rail network that is the gateway to the wider national network.
- Attractive connectivity to closer international destinations – an alternative to flying.
- The specific requirements of rail freight being at the heart of network planning.

125 The priority of decarbonisation provides a strong drive towards intervention to strengthen the role of the railway for passenger and freight. We will reflect and support this objective through measures which enhance the attractiveness, efficiency, and capacity of rail.

Reliability and punctuality

126 Reliability and punctuality, together often referred to as 'performance', are critical for rail in our region. 'Reliability' relates to the cancellation of train services – whereas 'punctuality' focuses on whether they arrive at their destinations on time. The "short-forming" of trains – where fewer carriages than scheduled are provided – is also a significant issue, notably at peak times.

127 There is strong evidence that poor performance is a major barrier to travelling by rail – seen most obviously and publicly in the aftermath of the May 2018 timetable change when a collapse in punctuality and a surge in cancellations and short-formed trains saw rail services in much of the North become perceived as almost unusable.

Challenges

128 The railway in the North is busier than it has been for decades. The lack of capacity is a concern – especially at peak times. There is very little 'room for error', and a single delay can quickly become a wider collapse in punctuality. It can be considered the greatest single driver of poor performance on the rail network across the North.

129 In simple terms, poor performance is often a function of the network being "full up", and so it requires much greater discipline to operate reliably. However, even with perfect operating discipline, it is impossible to run a reliable railway if wider causes of poor performance are not also tackled – with factors ranging from technical train and infrastructure failures to natural events and staffing issues.

130 Poor performance also fuels a mistrust of interchange – passengers will be reluctant to change trains if the connection "may not make" – a major barrier to unlocking new connectivity by integrating timetables between services.

131 Performance is equally critical for freight. Some commodities are naturally time-sensitive, such as intermodal containers and mail. Profit margins for commercial rail freight are thin, so efficient cycle times of trains are essential to compete with other modes. Punctual arrival is in many cases a contractual imperative for rail freight.

Priorities

132 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of improved reliability and punctuality:

- **Network capacity** – We will establish a clear case for investment in additional capacity in the rail network – with performance forming a major element of the Rail Strategy work assessing future rail infrastructure capacity requirements.
- **Network resilience** – We will emphasise the need to develop a more resilient rail network – including a clear focus on mitigation and prevention measures associated with the wide range of drivers of poor performance.
- **Passenger experience** – We will continue to influence the rail industry to put passengers at the heart of planning for rail operations – including a clear focus on passenger-focussed performance monitoring.

Our vision

Reliability and punctuality

133 Performance must be a top priority, and our focus needs to be on creating a more resilient railway which minimises both the likelihood of poor performance and the magnitude of the impacts. Only in this way can an attractive network be created and, through reliable connections for a wide range of journeys, confidence be built in an integrated rail and public transport network.

134 The vision for the Rail Strategy is to use a suite of interventions to move towards a railway that reaches performance levels such that punctuality and reliability cease to be a significant concern influencing passengers' choices, and freight forwarders can have full confidence that rail will deliver.

135 It can therefore be seen that we need our railway to be able to:

Avoid causes of poor performance arising in the first place.
Mitigate the magnitude of disruption that arise directly from such events.
Minimise the spread of delay to services across the wider network.
Manage the impact of the disruption on passengers' actual journeys.
Recover from delay and restore normal services as quickly as possible.

136 We will continue to influence the industry to:

- Minimise delay incidents through steps to make the railway a robust and resilient system.
- Minimise the impacts of disruption events through sound operating strategies alongside resilient infrastructure which provides "fall-back" options.
- Manage journeys with the passenger and freight customer put first and by ensuring information is clear and accurate.
- Employ a "one team" approach to fixing problems and to providing clear communication to enable passengers to adapt their journeys accordingly.

Performance monitoring

137 Our vision needs to be supported by a monitoring system that is built around real-world journeys – to ensure that the railway puts the passenger and freight customer first.

138 Despite recent improvements, established performance measures are based on the operation of train services – which has been seen to drive perverse behaviour such as connections not being held for passengers interchanging between services – and alternative measures based on real-world journeys must be pursued.

139 Vital measures to routinely monitor if the correct number of carriages are provided for each train service must also be developed fully.

Rail stations and access to the network

140 Stations are the gateways to our rail network – while rarely the true start or end of a journey, they provide the traveller's first and last interaction with, and impression of, the railway. Stations are a vital stage of the door-to-door journey, and to grow use by all groups, the type, quality, and level of amenity of station facilities, as well as the ability to access the station, are all important factors that impact on travel choice.

141 The quality and fitness-for-purpose of stations cannot be ignored in any rail strategy that is to be successful in achieving modal shift towards public transport and promoting socially inclusive and sustainable access to opportunity and amenity.

Challenges

142 Key to achieving our objectives will be considering each vital aspect of the rail journey as one element within a journey from door to door. If any aspect of that chain is broken by poor service provision, the system will not be successful – and the quality of our stations is a vital link in that chain.

143 The Combined Authority already has an investment programme focused on station gateways in our major centres, but there is strong recognition that in order to grow rail patronage in line with our ambitious targets, we need to ensure all our existing stations are performing to their maximum potential.

144 Rail stations are often places of interchange between rail services, and even more often interchange between rail and another mode – bus, taxi, car, or an active mode. Stations can also function as local facilities hubs in their own right, for example for shops and cafes, hosting valuable services to local communities.

145 The current slow progress of the rail network towards providing 'access for all' at stations throughout the network is not acceptable from an equalities viewpoint and needs to change.

Priorities

146 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of rail stations and network access enhancements:

- **Passenger experience** – We will make our rail stations attractive and pleasant places, well rooted in their communities, and perceived at all times as safe – with consistent and high standards to enhance the image of public transport as a whole.
- **Access for all** – We will insist, to all partners across the rail industry, that it should be a fundamental principle that all stations must be fully physically accessible to all members of the community.
- **Maximising potential** – We will expand the reach of our rail stations into wider communities across the region – looking beyond the immediate station area – and ensuring the stations themselves provide the necessary facilities to maximise use.

Our vision

Rail stations and access to the network

147 Our vision for rail stations is to enable the successful contribution of the rail network to achieving socially inclusive and sustainable economic growth in a post-carbon society, by:

- Acting as attractive gateways to the railway network.
- Forming an active part of an integrated public transport system.
- Providing comfortable, safe, and pleasant waiting environments.
- Ensuring that the high standards provided are well maintained.
- Providing accurate, timely, clear, and accessible information.
- Optimising physical links between stations and their direct catchments.
- Being seen as key nodes at the heart of wider walking and cycling journeys.
- Being rooted in communities and seen as assets in their own right.
- Playing a role in attracting investment and regenerating catchment areas.

148 It is a fundamental principle, not an aspiration, that all stations must be fully physically accessible to all members of the community. Physical accessibility means the ability to use all station facilities – not just access to the platforms and onto trains, but accessible waiting areas, toilets, ticket retail, and information systems. A comprehensive rolling programme to bring the system up to standard must form a commitment at national as well as regional level – and this must be integrated with improvements to local walking and cycling routes to ensure high quality access for all.

Station function

149 There is no single appropriate standard for all rail stations – while some basics such as shelter, lighting, information, and seating are a minimum, stations vary widely in their levels of usage and in the functions they serve. We will address the issue first by defining categories of station, and then the level of facilities that should apply to each category. Informed by wider work, stations will be categorised by reference to three main criteria:

- **Typology of place** – e.g. regional or sub-regional centre, local centre, etc.
- **Function** – e.g. residential area, employment hub, leisure destination, key interchange location, mixed functions, etc.
- **Usage levels** – including the potential of stations rather than current footfall, which may at present be suppressed by poor service levels and / or facilities.

150 The future roles of stations, and the quality of their facilities, are closely linked to the way in which the railway will evolve within our region's wider spatial strategy. Creating a more integrated public transport network which facilitates a step-change in multi-modal journeys will create a geography where more rail stations assume roles as interchange hubs. For such a concept to be successful, it is vital that stations are designed to fulfil that function, such that interchange is physically easy, intuitive, simple, and stress-free.

Rolling stock quality

151 The quality of trains serving our region forms a significant part of the overall passenger experience. Our objectives are dependent on modal shift in favour of public transport and sustainable modes, as well as attracting new mobility to these modes. Achieving this will mean increased capacity, improved connectivity, as well as affordable fares – but these will not be sufficient if the trains themselves do not provide an attractive experience.

152 The section focuses on the quality of rolling stock for passenger journeys. Wider areas relating to rolling stock – notably freight services, quantity of rolling stock, procurement, decarbonisation, and electrification – are captured elsewhere within this document.

Challenges

153 The passenger perception of rolling stock serving our region is mixed. With a variety of markets served – including long-distance, interurban, commuting, and semi-rural regional – rolling stock varying from brand new to 40 years of age, and six different train operators providing passenger services, the experience is highly inconsistent.

154 The types of rolling stock used are not necessarily suited to the markets served – an issue exacerbated by the mixed markets served by many routes across our region. Differing passenger needs have to be accommodated, varying by journey purpose, physical ability / mobility, solo travellers / groups travel, and wider personal tastes.

155 Rolling stock quality has been repeatedly cited by passengers, politicians, and wider stakeholders as an area of significant dissatisfaction for many journeys, especially on commuting and regional services. The Northern train operators have historically tended to score poorly on such criteria, but they have not been alone.

156 With the industry moving away from the franchising model where rolling stock has largely been left to train operating companies, the future will see a more direct approach to rolling stock strategy on a wider whole-industry strategic planning level.

157 The COVID-19 crisis may result in lasting impacts in terms of passenger expectations in relation to rolling stock – including a lower tolerance of crowding, higher expectations of cleanliness, and increased awareness of on-board air quality.

Priorities

158 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of rolling stock quality enhancements:

- **Passenger experience** – We will promote development of a consistent rolling stock offer for each category of journey type – suited to the market being served.
- **Productivity benefits** – We will push to maximise productive time on trains with a clear need for adequate seating capacity and high-quality digital connectivity.
- **Rail as a choice** – We will strive for a high-quality travelling ambience – such that rail travel becomes a positive choice, rather than a “distress purchase” chosen despite the quality of the passenger experience.

Our vision

Rolling stock quality

159 Our vision is for a standard of rolling stock quality which:

- Makes the train an attractive place for the passenger to spend time – rather than a last choice – whether it be for a daily commuting journey, a productive business trip, or to travel on a family holiday.
- Provides a consistent passenger experience in line with the nature of the journey – and addresses current disparity in the quality of rolling stock across our region.
- Reflects the differing needs of different types of passenger – and in a way that accounts for the mixed markets served by many routes across our region.
- Reflects the long-term impacts of the COVID-19 crisis in terms of increased passenger expectations.
- Is cost-effective, operationally efficient, and environmentally responsible.

160 Rolling stock quality covers a very wide variety of factors, which may be considered to a greater or lesser degree in the Strategy:

- Service performance and reliability.
- Accessibility to all users.
- Overall ride quality – including noise and vibration levels and comfort of seats.
- Accommodation – including space per passenger (both seating capacity and provision for standing passengers) as well as space for luggage and cycles.
- Arrangements – including seating layout, provision of tables, door locations, and the design of windows and lighting.
- Facilities – including passenger information systems, on-train catering, first-class accommodation, seat reservations, toilet provision, passenger safety and security features, and internet connectivity together with power supplies.
- Features useful for operators – e.g. CCTV and other monitoring equipment.

Links to wider areas

161 It is also important to consider links to other Rail Strategy workstreams that are being progressed (to the extent that each is considered to be in scope):

- Capacity – while linked to forecast demand, it is important to ensure that efficiently maximising capacity does not happen at the expense of passenger comfort.
- Maintainability and whole-life cost-effectiveness.
- Energy-efficiency.

162 It is clear that one size will not fit all, and it will be important to explore these factors in the distinct (but overlapping) contexts of the different markets rail needs to serve in and beyond our region.

Rail freight

163 Rail freight can be a highly energy-efficient and cost-effective means of transporting goods of a wide variety of types. When electrically powered, it can be effectively zero-carbon. In recent decades, rail has struggled to make progress against road competition in many markets other than certain bulk commodities and intermodal containers.

164 In a modern sustainable economy, the rail network needs to provide for both freight and passenger services, and it is often the case that capacity provision that would help rail freight to run would also be beneficial to passenger flows.

Challenges

165 Most freight traffic in our region is passing through. Traffic which does originate in or close to the region includes aggregates from the Yorkshire Dales; traffic with its destination in the region includes aggregates for construction in urban centres and biofuels to Drax power station; and flows which operate both into and out of the region include intermodal containers carrying a wide variety of commodities.

166 East-west traffic is hugely constrained by the severe lack of rail network capacity over the Pennines, and no routes at all which can be used by trains carrying larger shipping containers on standard wagons; addressing this is an industry priority.

167 In a highly competitive market, rail freight struggles against slow and indirect routing and also a range of significant limitations and restrictions across the network. Electrification is also so patchy as to make few flows suitable for electric haulage.

168 Performance is critical for freight. Some commodities are by their nature inherently time-sensitive, such as intermodal containers and mail. Profit margins for commercial rail freight are thin, so efficient operations are essential for rail to compete with other modes. Punctual arrival is in many cases a contractual imperative for rail freight.

Priorities

169 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of rail freight:

- **A growing role** – We will strongly advocate the growth of rail freight both as a means of transferring existing flows to more sustainable modes and also as a way of supporting the clean growth of new businesses.
- **Planning strategy** – We will keep a clear focus on critical operational factors which must be met to successfully develop and exploit the economic efficiency and environmental advantages of rail freight.
- **Major projects** – We will continue to influence the development of major projects to ensure that greater emphasis is placed on expanding the role of rail for freight – including the need for sufficient network capacity to accommodate future growth.

Our vision

Rail freight

170 The Rail Strategy will re-affirm the importance of rail freight as being vital to the sustainable development of the economy of our region whilst enhancing quality of life and transitioning to a post-carbon society.

171 Rail freight must be allowed to grow through modal shift, as well as from new and increased economic activity – providing an alternative to the road network for the transport of freight, helping to reduce congestion, improving air quality and urban amenity, and reducing carbon emissions.

172 Rail freight must be accommodated in rail industry planning activities – including:

- Assumed levels of traffic of the network – driving infrastructure planning.
- Electrification – including freight terminals and diversionary routes.
- Loading gauge – the height and width of structures to accommodate services.
- Train lengths and weights – provision for the maximum requirements.
- Speed profiles of rail lines – including addressing freight-specific limits.
- Provision for future freight terminals – to serve existing and future industry.
- Support through land-use planning – including road network interactions.

Opportunities for rail freight

173 The drive towards modal shift in light of the climate emergency is not the only factor opening up opportunities for rail freight:

- Road freight is under pressure not only for environmental reasons but also due to a shortage of HGV drivers and ongoing uncertainty around Brexit.
- Any future carbon taxation or similar measures designed to reflect the balance of environmental cost between rail and road freight would strongly benefit rail.
- There are increasing numbers of shorter-distance freight flows operating with success – and with further scope for new traffic to be won to rail, as well as traffic lost over the last 30 years to be regained.
- Rail freight will be critical to the construction phases of Trans-Pennine Route Upgrade (TRU), Northern Powerhouse Rail, and High Speed 2.
- Continued lobbying to change Government policy on TRU to provide for regular freight – with strong latent demand for cross-Pennine traffic.
- “Freeports” could offer the opportunity of shifting activity in a way helpful to rail freight if locations are well served (or capable of being served) by rail.
- Growing recognition that improved rail freight efficiency is more than just marginal in making the case for electrification. There are clear and strong links with our wider priorities for decarbonisation – this is picked up specifically in the following section.

Safety and security

174 Safety on Britain's railway has been a success story both in terms of international comparisons and comparisons with other modes of travel. Until the tragic incident of August 2020, there had not been a single passenger fatality in a railway accident since 2007. In contrast, in 2018 1,784 people lost their lives on Britain's roads. Fatalities and serious accidents have however taken place in other settings, such as involving on-track staff, passengers at stations, and at level crossings.

175 This safety record forms a strong argument in favour of rail in terms of encouraging modal shift away from car and of transitioning from road freight to rail. A strategy aimed at achieving modal shift can only succeed if the passenger (and society as a whole) have confidence in every aspect of its operation, and that must include confidence in safety, as well as perceptions of personal security.

Challenges

176 It is said on the railway that "safety is no accident". The world-leading safety record has been the product of decades of learning, training, progress, and a culture of safety. However, events inevitably underline that the system is not perfect, that improvements can still be made, and that the risk of complacency is ever-present.

177 Within the industry, strong mechanisms exist to continue to drive improvements to safety. The role of the Combined Authority is primarily a supporting one. However, as an independent body, we are able to consider wider issues, potential trade-offs, and conflicts that could arise, and there is therefore a case for policy in this area.

178 There is strong evidence that for many passengers, or prospective passengers, perceptions of personal safety – fear of crime and antisocial behaviour – can be a decisive factor in whether or not they choose to use rail. While particularly prevalent in urban areas and at off-peak times, the issue is not restricted to one particularly "vulnerable" section of society, nor to one area, nor to one time of day.

179 The changing world in which the railway operates can also give rise to increased or wholly new risks. A striking example, with potentially devastating consequences, is the impact of changes to weather patterns on the physical integrity of the railway's infrastructure, such as the increased risk of flash-floods and landslides.

Priorities

180 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the safety and security of rail in our region:

- **Industry best-practice** – We will continue to support the development and application of world-leading practice on safety throughout the rail industry.
- **Modal shift** – We will continue to promote strategies rooted in the benefits of associated with modal shift towards rail as an inherently safe mode of travel.
- **Industry challenge** – We will use our position as an independent body to raise challenges with regard to safety and security that reflect local conditions.

Our vision

Safe operation of the railway

181 Those travelling in our region should not consider safety or personal security to be significant concerns influencing the decision whether to use public transport. We will achieve this by building on the railway's world-leading record on operating safety, increasing rail's modal shares both of passenger travel and freight. This will be supported by effective and high-profile measures to ensure that the railway is designed, managed, and operated in such a way as to enhance perceptions of personal security from the start of their journey through to their final destination.

182 Building on the railway's excellent safety record, one of the greatest contributions the railway can make to the overall safety of the transport system is modal shift. It is clear that the more journeys that are made by rail as opposed to by road, the fewer accidents there will be in total. Therefore, the wider scope of this strategy, and its overall goal of creating an attractive rail system that leads to modal shift, is material to improved safety overall.

183 With its cross-modal reach and wider remit for the development of our city region, the Combined Authority is well placed to bring in this wider perspective to ensure the best safety outcomes for West Yorkshire.

184 We need to ensure that business cases for safety improvements take full account of the wider social, economic, and environmental benefits (including safety itself) of the service enhancements that they would enable – but it is also appropriate for the risk assessments to take a "holistic" view of risk across the transport system as a whole, in order to ensure that no perverse outcomes arise.

Passenger safety

185 While personal safety and the perception of personal safety generally correlate fairly closely, this is not necessarily always the case. The railway must therefore not only effectively protect the personal safety of its passengers but be seen to actively do so.

186 Measures to maximise the security and "visible safety" will extend across all areas where they physically interact with the network, at all stages of their journey – and will be directly addressed in the relevant sections of this Rail Strategy, including:

- Providing safe and secure access routes to and from stations at both the start and end of the journey – see 'rail station quality'.
- Ensuring our rail stations provide consistent and high standards of passenger experience for waiting and interchanging – see 'rail station quality'.
- Supporting integration with other modes through safe interchange with bus at stations as well as secure car and cycle parking – see 'connectivity concepts'.
- Ensuring that rolling stock is of a high and consistent standard – with a strong focus on perceptions of safety and security – see 'rolling stock quality'.

Fares and ticketing

187 However efficient, reliable, comfortable, and fast the rail system may be, it cannot be effective in achieving its objectives if the railway is perceived as offering poor value for money and / or having a complex ticketing system that deters travel. It is critical that the fares and ticketing system should support the objectives.

188 The rail fares system in Britain has changed relatively little since the 1990s and no longer reflects how we live and work. We need a system that can fit around how people live their lives and travel, and that ensures that they get the best fare for the journey they make.

Challenges

189 The wide range of rail products, fares, restrictions, and retail channels can present a complex and often opaque proposition for both existing and potential passengers to navigate. This can make it challenging for passengers to have confidence that the products they choose to purchase are providing them with best value for money for their travel requirements.

190 Travel patterns are changing – including part-time or flexible working, multiple work locations, and the rapid growth of the leisure economy. Changing working patterns have been strengthened by the COVID-19 crisis and may well form part of a longer-term trend. Traditional season tickets are not attractive for commuters who do not need to travel every day, and the industry has been slow to develop alternatives.

191 While the overall levels of fares and therefore the balance between fares income and subsidy are primarily a matter for national policy, it is clear that the way in which the fares system operates can also have real impacts – positive and negative – on the overall attractiveness of rail as a mode.

192 Growth in employment and population, alongside improved connectivity, will see the North of England increasingly function as a single economic area. In the same way as passengers can travel flexibly around larger urban areas today, there may be a requirement to cater for this type of travel market across a much broader geography.

Priorities

193 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for the development of rail fares and ticketing:

- **Simplicity** – We will call for improvements to reduce the complexity of fares and ticketing – aiming for a system which simple, clear, and easy to use for passengers.
- **Value for money** – We will support measures to ensure passengers achieve best value for money for their travel – whilst also tackling issues relating to affordability and increasing the attractiveness of rail.
- **Passenger needs** – We will endorse changes to the fares and ticketing system to better suit changing travel patterns and passenger needs – integrated across all modes of travel.

Our vision

Fares and ticketing

194 The fares and ticketing system should help to simplify end-to-end journeys and increase the attractiveness of integrated public transport to current and potential passengers. A successful system is likely to need to have the following features:

- Simplicity, consistency, and transparency – providing passengers with confidence that they will be charged the best value price for their travel.
- A single system – integrated within the railway itself (regardless of operator) and across public transport as a whole.
- Ease of purchase, reflecting needs of different potential users including those excluded by technology or elements of the financial system.
- Suitability for daily travellers, part-week commuters, and occasional travellers, as well as those making frequent journeys to a variety of different places.
- Being proportionate to the means of different sections of society – such as young people, older people, students or the unemployed or low-waged.
- Incentivising public transport use as the default choice for leisure and personal travel as well as for commuting and business journeys.
- Not disincentivising long-distance journeys where rail should, to meet sustainability objectives, capture modal share from aviation as well as car.
- Not penalising groups and families – competing with the “economies of scale” that the car offers for such travellers.

195 Addressing these challenges is likely to be impossible within the current fares structure. As the economy and transport network of the North evolve over time, there may be a case for a new structure which is better equipped to cater for the aims set out above.

196 The design of such a structure would need careful study to assess financial impacts alongside the contribution to economic, social, and environmental objectives, and to understand how transition could be managed. The system should also continue to provide a mechanism to manage the industry’s financial and commercial risks.

197 There are tensions and potential conflicts that would need to be carefully considered – notably in balancing simplicity, value for money, fairness, flexibility, and operating efficiency. Tensions also exist between the varying interests of the system as a whole, those of individual train operators, and those of passengers.

Ticketing mechanisms

198 The way tickets are delivered is already changing, with gradual migration away from paper tickets towards mobile or e-ticketing, smart cards, bank card payment, and other media – although this has been limited by the complex structure of the rail industry, including the fares and ticketing systems themselves. The medium by which the “ticket” is delivered should be secondary to the suitability of the product – provided delivery is cost-effective for the operator, is capable of standardisation and integration, and is socially inclusive.

Network gaps

199 There are increasingly vocal campaigns to expand access to the railway or to close gaps in the network. In many cases, these relate to historic route reinstatements – considered to have new relevance – in others, they may be about sections of railway that never existed but bridge a clear gap to make the network more effective.

200 In recent times, West Yorkshire has seen considerable success in the large number of stations opened or reopened on existing lines. Also, some lines that survived as freight-only routes have since had passenger services restored, most notably the route through Brighouse. However, West Yorkshire has yet to see any full reopenings of historic routes, nor any new-build alignments.

Challenges

201 While new rail connectivity has been shown to bring transformative improvements to economies, to social inclusion, to modal shift, and to quality of life, there are substantial barriers to delivering reinstatements and / or new-build rail schemes:

- **Capital cost** – Railway construction, as with much transport infrastructure, is expensive, particularly in light of cost increases since rail privatisation and adoption of new standards.
- **Operating cost** – Few rail services directly make money, particularly those providing shorter-distance connectivity, and in general a new service requires funding not only to cover capital but also ongoing operating costs.
- **Business case** – These cost challenges, combined with limitations in standard appraisal methodologies in terms of understating likely levels of demand and benefits can make it difficult to produce a case acceptable to central funders.
- **Network capacity** – New or reinstated railway schemes can offer the prospect of relieving congestion on the existing network. However, a new route that feeds into a bottleneck such as Leeds station may exacerbate existing issues.
- **Land use** – New or reinstated rail routes would likely be concentrated in more densely populated areas. Many historic alignments have been compromised since closure, in some cases with little land available for a new alignment.
- **Public acceptability** – While potentially less intrusive than major roads, new rail alignments have potential to prompt local opposition.

Priorities

202 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for considering rail network gaps in our region:

- **New opportunities** – We will assess the potential of network gaps identified across our region – both in terms of new passenger and freight connections.
- **Wider modes** – We will assess the potential of wider modes in assessing the case for network gaps as part of our wider Connectivity Strategy.

Our vision

Network gaps

203 Our vision is for the railway to play a pivotal role in a sustainable public transport and freight logistics network that coordinates all modes to allow them to function optimally in the service of a prosperous and socially inclusive region that achieves a high quality of life in a post-carbon world.

204 The almost unprecedented growth of demand to travel by rail in our region, combined with the recognition that rail will play a pivotal role in post-carbon mobility, is leading to a change in thinking in terms of the scope for rail to penetrate new markets. This is seen against the now almost universal recognition that historic closures, such as the “Beeching Axe”, went too far and did long-term damage.

205 Our region has a number of towns of significant size that are not on the rail network. This appears to cause significant disadvantage in terms of poor public transport connectivity, isolation from opportunity, and / or high levels of car-dependency. There are also towns that do have stations but are not linked by regular passenger services. Finally, there are also examples where a logical link between two rail corridors does not exist.

206 Opportunities in this context might be presented by:

- Lines that exist now but are not used by regular passenger services.
- Disused historic alignments, where these are still physically present.
- Other existing schemes such as Northern Powerhouse Rail or High Speed 2.

207 We will identify possible additions to the rail network – or other complementary additions to the transport system – that could significantly increase the railway’s ability to achieve our objectives, by spreading the benefits of passenger rail transport more widely, by allowing new and additional freight to be carried by rail, or by increasing the effectiveness of the existing network.

208 As a first step we will carry out a sifting exercise on network gaps – considering known stakeholder aspirations, political statements, plus rail and wider socio-economic evidence. Opportunities will be assessed against a number of criteria derived from the objectives, principles, purposes, and network outputs identified for our Rail Strategy as a whole.

209 The main focus will be on passenger routes, but lines with potential for freight traffic (such as alternative routes to ease capacity issues) will also be identified, as will any obvious destinations for, or sources of, new freight traffic. New or reinstated links of any length are in scope, from curves linking two existing lines, through to wholly new railway routes.

210 Our work will be linked to emerging work on rail connectivity concepts, wider work on regional connectivity as well as being informed by current thinking on HS2 and NPR.

211 Where a network gap shows strong potential, the optimal solution may or may not be a “heavy” rail scheme. In cases where there are significant engineering challenges, an alternative such as light rail (including tram-train) might have more potential, and consideration will be given to other modes of “mass transit” than rail in its current form.

New stations

212 West Yorkshire has a strong recent history in successfully developing and delivering new rail stations. In recent years, new stations have opened at Apperley Bridge, Kirkstall Forge, and Low Moor. A further four new station proposals – to serve Elland, Thorpe Park, Leeds Bradford Airport Parkway, and White Rose – are currently progressing in advanced stages of development.

213 In considering our vision for new rail stations in West Yorkshire, we need to reflect on the emergence of new strategic and spatial priorities, including the emergence of new growth areas, added focus on inclusive growth, and the declaration of a Climate Emergency across the region, along with wider changes to the transport landscape.

Challenges

214 A study to consider the viability of potential new rail stations across West Yorkshire was produced in 2014. This detailed study has been extensively used over the years since to establish priorities for the development of new stations and as an evidence base against which proposals can be tested. There has been a growing need for a renewed position on priorities for new rail stations – to build on the established study.

215 The Combined Authority have undertaken a comprehensive review of the previous findings for each proposed new station site to identify potential significant changes since the 2014 study that would have an impact on the overall findings and priorities. All aspects of the assessment framework have been considered at a high level.

216 Based on this review, a revised position on our priorities for the development of further new rail stations is emerging. It is clear that there are a wide range of challenges to be faced. In terms of general constraints, many of the challenges outlined within the previous section on ‘network gaps’ are also relevant here, notably those relating to capital cost, business case, and network capacity.

Priorities

217 To help achieve our objectives for the Rail Strategy, we have identified a set of specific priorities for considering new rail stations in our region:

- **Deliver commitments** – We will focus on successfully delivering our existing programme of new rail stations serving Elland, Thorpe Park, Leeds Bradford Airport Parkway, and White Rose.
- **New priorities** – We will identify further opportunities for the development of new stations where there is potential for a strong case to be made – including actively pursuing opportunities to shape major programmes, notably where major route upgrades and service enhancements are being planned.
- **Maximise potential** – We will continue to work to expand the reach of our existing rail network into wider communities across the region through enhancements aimed at improving network capacity, station facilities, and access to the network.

Our vision

New stations

218 The review of our new rail stations study has not identified any proposed locations which are sufficiently free of constraint to make them obvious candidates for delivery. However, for proposed locations that we believe demonstrate potential for a strong case, three broad categories have been identified which capture particular challenges we expect to face:

Recommended for further development
Subject to wider rail infrastructure upgrades

219 The need to accommodate a mix of fast and stopping services, plus critical capacity issues throughout the network, place considerable constraint on the potential to introduce new rail stations. In our region, this applies especially to the Trans-Pennine route linking Leeds, Manchester, Huddersfield, and York and the East Coast Mainline via Wakefield.

220 Any new station would most likely need substantial route upgrades in the form of four-tracking schemes, or other substantial corridor-wide upgrades, to provide sufficient capacity to accommodate additional station stops. There is a strong link to the case for electrification – which can reduce the difference between fast and stopping journey times.

Recommended for further development
Subject to developments in rail timetable solutions

221 Whilst this category captures potential new stations situated on wider routes across our region which are generally not constrained by the need to accommodate a mix of express and stopping services, these routes do still suffer from critical capacity issues which limit the ability to introduce new station calls and also present performance risks for services.

222 The introduction of new stations would likely require either: a) difficult choices around stopping patterns, with reductions at existing stations to allow for calls at new stations; or b) additional investment in infrastructure to deliver the capacity required.

Recommended for further development
Subject to developments in rail service provision

223 This category captures proposed locations which would sit on sections of the rail network which have a limited service, or no service at all, at present. Service enhancements would be required to facilitate the introduction of new stations. There are clear links with our priorities relating to development of rail services frequencies – see the ‘local service frequency’ section.

224 Making the case for new stations within this category will rely on the potential for growth – substantial planned housing growth would enhance the case for investment. The case for potential new stations should be considered as part of an integrated approach to land use and transport planning, including the role that enhanced rail services could play.

Implementation

Reform, devolution, and implementation

225 In our submissions to the Williams Rail Review in 2019 we supported the case for substantial reform of the rail industry. We made the case for reform to deliver an industry structure that is much simpler, integrates decision making across 'track and train', and is devolved so that decisions and budgets are held much closer to day-to-day operations.

226 Such reform would create an industry that we can much more readily do business with. Crucially, it would also help to drive financial efficiency by removing costs at the interfaces between different parts of the industry and ensure much greater accountability for costs through transparency and singular ownership. The cost of both railway operations and capital enhancements must become more affordable for rail to realise its full potential contribution to our transport mix.

227 In terms of what is required from a future model for the railway, the Combined Authority has set out the need for:

- Clarity of objectives for the railway: social, economic, and environmental and permeating the railway from top to bottom.
- Network outputs driven by these objectives (without conflicting incentives).
- Value for money in day-to-day operation and in delivery of new infrastructure.
- A coordinated and integrated rail system with a 'controlling mind' with clear lines for influence and accountability.
- A railway operationally independent of government (but accountable to it nationally and regionally), with a focus on investing in skills and research.
- Devolution to ensure that objectives reflect local priorities and conditions, with accountability to those most affected by the railway.

228 At the time of writing (Autumn 2020), there is a strong indication that government will deliver substantial industry reform to be set out in a Williams Review White Paper. Government has confirmed that remaining rail franchises will be terminated as rail operations move to a 'concession' based model for the long term. This should deliver a more rational and integrated approach to service planning and accountability.

229 Network Rail's new 'putting passengers first' structure is already providing stronger and more accountable relationships as decision-making and budgets are internally devolved to the region and 'route' levels.

230 Delivery of the Rail Vision will require us to develop a strong and collaborative relationship with 'the railway' in whatever shape it emerges from the reforms. On the strength of the reform already taking place and strong indications of what are to come, together with our own transition to a Mayoral Combined Authority, we will consolidate and develop our partnerships with the railway as follows:

- **Co-ordination of investment of planning activity** – The railway has significant enhancement and renewal budgets, and there is significant scope for leveraging this spend by incrementing projects with local funds as well as aligning expenditure. The greatest opportunities are likely to be in and around stations for improved access to the network, passenger facilities, and interchange.
- **Co-investing in rail facilities and services** – Where there are demonstrable passenger benefits we are likely to find a case to introduce local funds to help develop and deliver schemes in partnership with the railway. Devolution of funding and powers as part of our transition to a Mayoral Combined Authority may create opportunities for sharing risk and revenue on specific initiatives and schemes.
- **Integrated strategy-making** – A reformed railway will deliver more coherent strategies for the longer term. Close collaboration will ensure we add local value to ensure the railway develops strategies that respond to our priorities, and in turn ensure our own strategy and delivery plans are informed by the expertise from across the rail industry.
- **Holding the railway to account on behalf of passengers** – This is and will continue to remain a vital part of the role of the work of the Combined Authority and of our political leaders.

Partnership approach

231 Delivering this vision will require a strong partnership with the railway, with sufficient capital and revenue funding to support our ambitions. The Rail Review promises to restructure the railway to re-establish a railway which is much more in control of its own destiny, and which will much more naturally 'own' the need for a long-term investment strategy. The Combined Authority is ready to work enthusiastically in partnership with the railway to ensure the network and services it provides realise the growth and change necessary to realise West Yorkshire's regional ambitions.

232 The rail network and operations in West Yorkshire are heavily integrated into the wider regional and national network, which makes direct local operation at a West Yorkshire level unfeasible. However, a strong partnership approach with a reformed railway that we can do business with ensure that the rail network can fulfil its role an important and integrated part of an integrated public transport network for West Yorkshire.

233 We will continue to work in close partnership with our local authority partners throughout West Yorkshire, with neighbouring authorities, and with Transport for the North on those matters where co-operation at a wider geography is required, and for making the case for large strategic investments into the network.

234 Work is ongoing to develop processes and governance to secure the relationships we need from reform and devolution as the new structural landscape becomes clearer.

West Yorkshire Combined Authority

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