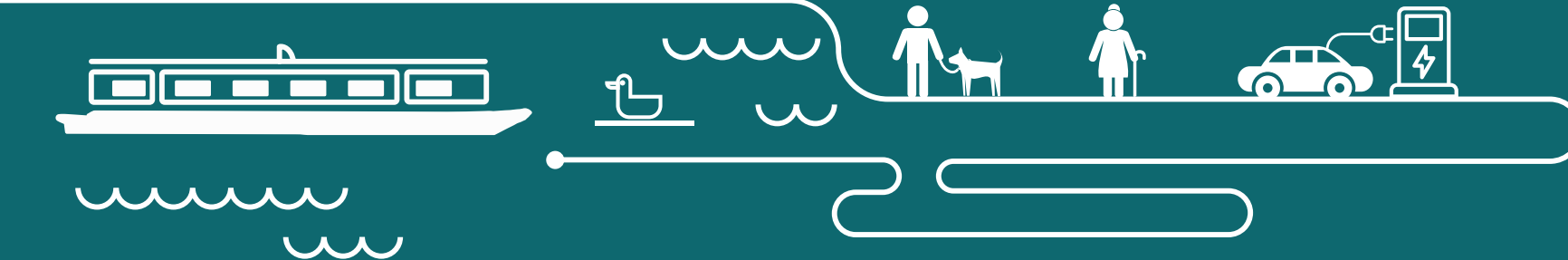
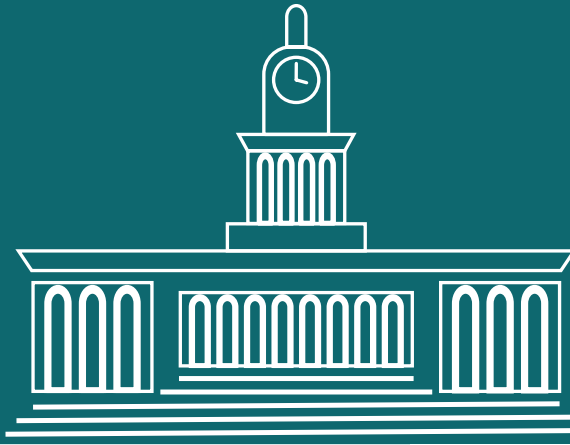
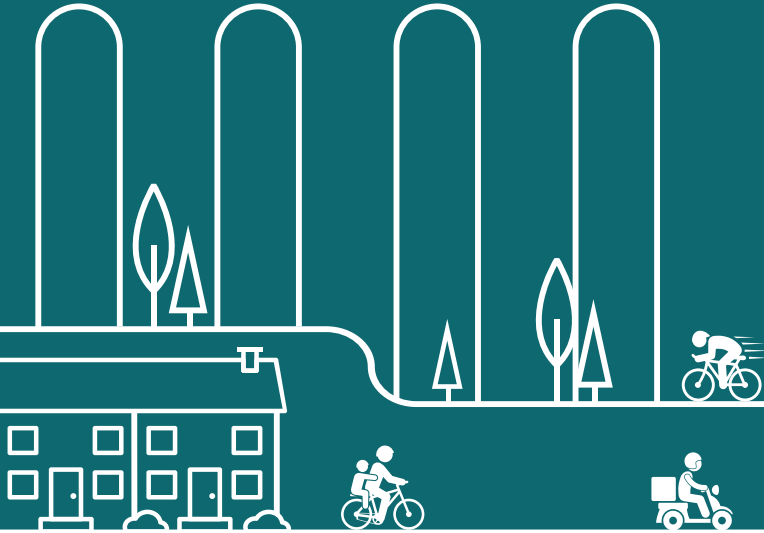




TRANSPORT STRATEGY 2040



Foreword

For the West Yorkshire and Leeds City Region economy to thrive and grow in a way that benefits everyone living and working here, we need the right transport system in place.

Our Vision, supported by our Strategic Economic Plan is for Leeds City Region “to be a globally recognised economy where good growth delivers high levels of prosperity, jobs and quality of life for everyone”.

To deliver that vision, we need a transport network that connects businesses to customers and suppliers, that links people to education, training and fulfilling employment opportunities, that supports the building of much-needed, affordable new homes and makes possible the regeneration and development of industrial land and that minimises emissions that are harmful to our environment.

In addition, having the right transport network is key to attracting and building on Leeds City Region’s growing levels of investment – 22% in the Department for International Trade’s latest annual report (2017) – and Yorkshire and Humber’s position as the Northern Powerhouse’s only region named as attracting increasing levels of inward investment in the influential EY 2017 Attractiveness Survey.

We aim to create the world-class, modern, integrated transport system that West Yorkshire and Leeds City Region need and deserve and this Strategy sets out how we intend to do it. It takes into account the enormous opportunities that HS2 and the planned Northern Powerhouse Rail represent and sets out how we can ensure their benefits are felt throughout the City Region. The strategy also recognises the need to upgrade our key local and regional roads and motorway system and identifies the huge potential for growth in active travel through cycling and walking, which is already underway.

Vitaly, this document has been produced through engagement and input from a range of public and private sector partners including West Yorkshire’s five local authorities and the Leeds City Region Enterprise Partnership. It identifies our current transport system’s many strengths as well as its weaknesses. And it sets out how the West Yorkshire Combined Authority, its public and private sector partners, neighbouring city regions and government can maximise the benefits of transport investment across all our communities on our local economy and for our nation’s prosperity.

This Transport Strategy is a long-term document which paints a picture of what a successful transport system might look like in 2040. It will be integrated with wider plans to support growth and we will be seeking further views from you, our partners and people across the City Region as we develop and implement it.



Cllr Keith Wakefield
Chair, West Yorkshire Combined Authority
Transport Committee

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This Transport Strategy was adopted by the West Yorkshire Combined Authority on 3 August 2017.

The Strategy has been produced by the West Yorkshire Combined Authority and the West Yorkshire district councils of Bradford, Calderdale, Kirklees, Leeds and Wakefield.

The West Yorkshire Combined Authority was established in 2014 to bring together economic development and transport functions across West Yorkshire in a more strategic way.

The West Yorkshire Combined Authority has a statutory duty to produce and keep under review a Local Transport Plan for West Yorkshire. This overarching transport strategy, accompanied by constituent documents providing detail for bus, rail and other forms of transport, replaces the West Yorkshire Local Transport Plan published in 2011. Consultation on the Transport Strategy with the public and organisational stakeholders was carried out in 2015 and 2016. The results of both consultations have informed the approach set out in this document. An electronic copy of this Transport Strategy document can be accessed at:
www.westyorks-ca.gov.uk/transport-strategy

1. Transport Strategy 2040 - Plan on a Page

STRATEGIC ECONOMIC PLAN



HIGH PRODUCTIVITY,
INNOVATION AND
OUTPUT



QUALITY PLACES,
ENVIRONMENT AND
CONNECTIONS



GOOD JOBS,
INCOMES AND LESS
INEQUALITY



GOOD GROWTH

OUR VISION FOR TRANSPORT

We will enhance business success and people's lives by providing modern, world-class, well-connected transport that makes travel around West Yorkshire easy and reliable.

OUR TRANSPORT OBJECTIVES



ECONOMY

Create a more reliable, less congested, better connected transport network



ENVIRONMENT

Have a positive impact on our built and natural environment



PEOPLE & PLACE

Put people first to create a strong sense of place

OUR CORE THEMES



ROAD
NETWORK



PLACES TO
LIVE & WORK



ONE SYSTEM
PUBLIC TRANSPORT



SMART
FUTURES



ASSET MANAGEMENT
& RESILIENCE

INCLUSIVE GROWTH,
ENVIRONMENT, HEALTH
AND WELLBEING



OUR MID-POINT TRANSPORT TARGETS



25%

MORE TRIPS MADE BY
BUS BY 2027



75%

MORE TRIPS MADE BY
RAIL BY 2027



300%

MORE TRIPS MADE BY
BICYCLE BY 2027

EXECUTIVE SUMMARY

Transport that drives inclusive growth

A world-class, integrated transport system is a vital requirement of the competitive, inclusive economy that the West Yorkshire Combined Authority and its partners are working to create. It connects people to jobs, brings businesses closer together, gets goods to local, national and global markets, provides opportunities for education, training and investment, and reduces social exclusion so that everyone benefits from economic growth.

This Transport Strategy 2040 sets out partners' ambitions for a transport system that serves the needs of businesses and residents as well as enhancing prosperity, health and wellbeing for people and places across West Yorkshire.

It also takes into account the necessity to provide 21st Century infrastructure that will support the City Region to grow and compete globally, so it is able to meet the ambitions of the Leeds City Region Strategic Economic Plan (SEP) and the Government's emerging Industrial Strategy.

Focused on West Yorkshire but recognising the importance and impact of links with the wider Leeds City Region, the Transport Strategy 2040 vision is:

To enhance business success and people's lives by providing modern, world-class, well-connected transport that makes travel around West Yorkshire easy and reliable.

The key objectives that we must address to realise this ambition are:

Economy: Create a more reliable, less congested, better connected transport network.

Environment: Have a positive impact on our built and natural environment.

People and place: Put people first to create a strong sense of place.

The opportunities we must seize

As the largest city region outside London and the biggest contributor to the Northern Powerhouse, Leeds City Region's economic growth is fundamental to rebalancing the country's economy. As such, this Transport Strategy 2040 supports work at national, pan-northern, regional and local levels to create a northern economic powerhouse that will deliver greater economic productivity, jobs and prosperity for a stronger, fairer country.

Major national and pan-northern rail investment including improvements to the TransPennine line and East Coast Main Line, HS2 and Northern Powerhouse Rail will reduce journey times between West Yorkshire and the UK's other major urban centres. The planned Yorkshire Hub station in Leeds will make our region the gateway to the whole North East of England and beyond, and the £1bn West Yorkshire plus Transport Fund we are investing as a result of our 2015 City Region Growth Deal with Government is already having a beneficial impact on our local transport network.

The challenges we face

There are real transport challenges we need to address however, if our region is to play its full part in a confident, competitive and connected North.

The size and diversity of West Yorkshire - with its many retail centres, business areas, former mining and textile communities, market towns and extensive rural areas - may in some instances be a strength but it also presents challenges in balancing transport priorities and funding.

Investment in road and rail has not kept pace with economic and population growth – resulting in congestion and delays on our roads, a lack of seats on public transport and a lack of resilience in these networks or alternative options when things go wrong.

Research shows that cars and vans still make up a significant proportion of our travel to work (70% in 2011) while there have been significant increases in commuting from places outside of West Yorkshire. This contributes to air quality issues, which are responsible for one in 20 deaths in our region.

Although rail use has seen a 96% increase from 2005/6 to 2014/15, the existing public transport network capacity cannot support future growth opportunities in the region.

The end result of all of this is a West Yorkshire transport network that is under increasing pressure.

Our policies

This strategy aims to put in place the right transport conditions - building on the City Region's strengths and tackling underlying issues - meeting increasing demand for travel in a sustainable way while also realising the ambitions for inclusive growth contained in our SEP and district local plans. It also aims to influence and make the most of investment decisions being made at the pan-northern and national levels, to maximise opportunities for our region.

Our **Transport Strategy 2040** ambitions and policies are framed within six core themes:

Inclusive Growth, Environment, Health and Wellbeing

- Our ambition is to connect people to better living standards and higher earning jobs, and to significantly improve the health, overall well-being and environment of the people living and working here.
- We aim to reduce traffic emissions to near zero, tackle the damaging impacts of climate change on our homes and businesses and reduce road accidents, aspiring to 'zero tolerance' of transport-related deaths. We want to become known as a great, safe place for cycling and walking.

Road network

- Our ambition is for an efficient, safe and reliable road network for all users, that creates new opportunities for jobs and housing.
- We aim to deliver a step-change in the reliability of journey times for people and goods, and to provide high quality infrastructure for all users.

Places to live and work

- Our ambition is for West Yorkshire to be known for the quality and liveability of its places.
- We will use our transport investment to help transform our cities, towns and neighbourhoods - to create clean, safe, healthy places for communities and businesses, which attracts greater inward investment.

One System Public Transport

- Our ambition is for a world class public transport system that connects different modes of transport seamlessly into one comprehensive, easy-to-use network.
- We aim to transform the performance, image and experience of public transport to make it an attractive choice for all.

Smart futures

- Our ambition is to make best use of advancements in technology across all of our transport networks
- We aim to better plan and manage all of our transport networks to transform the affordability, ease and experience of the people using it.

Asset management and resilience

- Our ambition is to ensure that we make best use of our existing and future transport assets.
- We aim to ensure our transport networks are fit for the future and properly managed in a safe, sustainable, environmentally-friendly and cost-effective way.

OUR OBJECTIVES:



ECONOMY



ENVIRONMENT



PEOPLE AND PLACE

WEST YORKSHIRE TRANSPORT STRATEGY 2040

2. Introduction

This strategy sets out a vision and a framework to deliver a world-class, modern, integrated transport system.

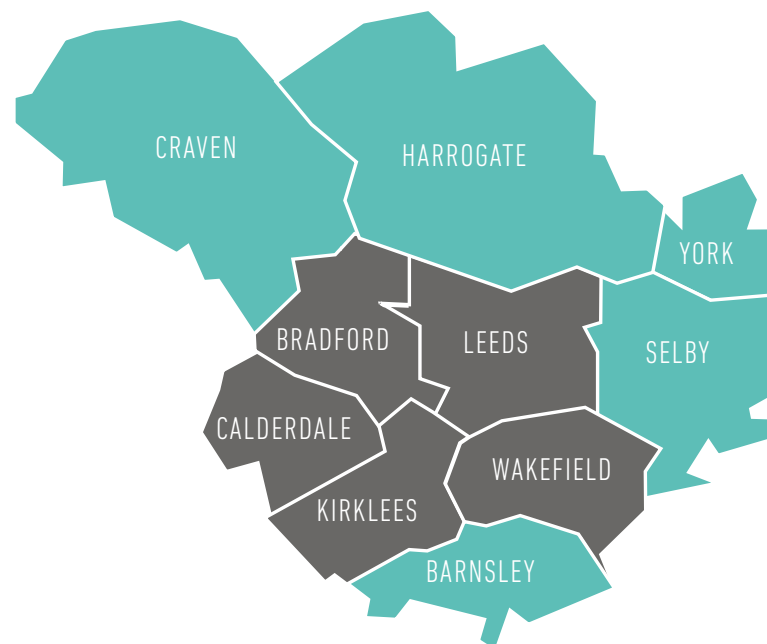
The strategy covers the geography of West Yorkshire but recognises the importance of the wider Leeds City Region.

Development of the Transport Strategy was led by the West Yorkshire Combined Authority, and has been produced through engagement with many partners and stakeholders. Where 'we' is used in the strategy it refers to the West Yorkshire Combined Authority, the five West Yorkshire local authorities of Bradford, Calderdale, Kirklees, Leeds and Wakefield and the Leeds City Region Enterprise Partnership (LEP) working with other organisations to bring transformational change to our transport system.

The strategy supports work at the national, pan-northern, regional and local levels to create a northern economic powerhouse that delivers greater economic productivity and jobs and prosperity for a stronger, fairer country.

The Leeds City Region is critical to the North's and the nation's success. As the largest city region outside London, Leeds City Region's economic growth will be fundamental in rebalancing the economy, but the productivity and the attractiveness to businesses of our places must improve to compete in a global market.

A good transport system, connecting people to jobs, bringing businesses closer together, getting goods to local, national and global markets, providing opportunities for education and training, and reducing social exclusion to provide more inclusive growth, is a vital requirement of a competitive economy. However, current levels of motor traffic on our roads and the impacts of this traffic are a concern for the health of our economy and our communities. Furthermore increasing demand for travel is likely to be characterised by longer distances and more dispersed commuting and business trips.



WEST YORKSHIRE



WIDER LEEDS CITY REGION

This strategy aims to put in place the right transport conditions - building on the City Region's strengths and tackling our underlying weaknesses - to grow the economy in an inclusive way, and to meet the demand for travel in a sustainable manner.

The size and diversity of West Yorkshire with its many retail centres, business areas, former mining and textile communities, market towns and extensive rural area is a strength, but it also presents challenges in balancing needs and funding transport improvements.

By aligning transport spending with the plans of our public and private sector partners, neighbouring city regions and government, we believe the impact of our investment for transport and the economy can be maximised for all our communities.

3. Delivering the Strategic Economic Plan 2016-36

The Strategic Economic Plan (SEP) for the Leeds City Region, now revised to cover the period 2016 – 2036 was adopted in 2016 by the Leeds City Region Enterprise Partnership (LEP) and West Yorkshire Combined Authority (WYCA).

Produced through engagement with key partners, including businesses, local authorities, universities and colleges and community organisations, the SEP sets out a transformative vision for the City Region **“to be a globally recognised economy where good growth delivers high levels of prosperity, jobs and quality of life for everyone”**.

In achieving this vision, the City Region will deliver an extra 36,000 jobs and £3.7 billion of economic output by 2036 that will help the region become a positive, above average contributor to the nation’s purse, and, make significant progress against headline indicators of growth and productivity, earnings, skills and environmental sustainability.

This ambition will be delivered through four interconnected priorities and a central principle of ‘good growth’: **Growing Businesses; Skilled People, Better Jobs; Clean Energy and Environmental Resilience; Infrastructure for Growth**.

The focus of the SEP is not just growth for growth’s sake but good growth. This means achieving both the right quantity and the right quality of growth; creating a strong, productive and resilient economy where a radical uplift in business competitiveness and productivity goes hand in hand with access to good jobs that pay higher wages, and where all residents have access to opportunity and enjoy improved quality of life.

Transforming transport connectivity and building 21st century infrastructure that will support the City Region to grow and compete globally is critical to meeting the ambitions of the SEP. This is where the SEP sets out the importance of delivering the 30+ schemes of the West Yorkshire plus Transport Fund and making significant progress towards a single ‘metro style’ public transport network, connected to major national/northern schemes so that the benefits and impact of HS2 and Northern Powerhouse Rail are maximised. You can find out about the SEP by visiting the LEP’s website at: the-lep.com

The Transport Strategy provides the transport policies and strategies to help deliver the SEP. Appendix A to this document describes how the Transport Strategy’s core themes, policies and key programmes fit with the SEP’s priorities.

We have already made some substantial progress in recent years delivering new transport projects to support inclusive, economic growth, including:

- opening **three new train stations** since December 2015 at Apperley Bridge (Bradford), Low Moor (Bradford) and Kirstall Forge (Leeds)
- opening a **new Southern Entrance** to Leeds Station
- opening **two new bus park and ride sites** at Elland Road and Temple Green (both Leeds)
- opening a **new bus station** at Castleford and a public transport hub at South Elmsall (Wakefield)
- commenced the **doubling of the number of car parking spaces** at rail park and ride sites across West Yorkshire, from 1,800 to 3,600
- created space for **parking for over 200 cycles** at rail stations including opening secure cycle hubs at Huddersfield and Dewsbury (Kirklees)
- opened **23km of new Cycle SuperHighway** between Bradford and Leeds, and 14km of towpath improvements to the Leeds Liverpool canal.
- opened **Wakefield Eastern Relief Road**
- developed **new Smart Card products** for public transport customers

We also invest **£19 million per year in community bus services** to help people get to work and travel across the region easily and affordably.

This Transport Strategy sets out how we plan to continue to increase and upgrade the transport system to further enhance the areas’ offer to businesses and people.



Our economic challenge

THE CHALLENGE

Leeds City Region makes up 20% of the 'Northern Powerhouse' economy. The successful transformation of the northern economy is not truly possible without a Leeds City Region that fulfils its potential.

The size of the West Yorkshire economy, its wide variety of economic and cultural assets and its many strengths, provide a great platform on which to build future prosperity of the City Region and northern economy. However, and in common with much of the north of England, West Yorkshire faces many key challenges: the productivity gap is increasing, incomes are lower than elsewhere in the country, living standards have stalled and stubborn deprivation persists.

A further critical challenge facing many areas across the City Region is to provide the right commercial and residential sites in the right locations supported by appropriate transport, digital and energy connections. Getting the required infrastructure in place to enable the creation of new jobs and homes and secure private sector investment by getting stalled projects moving again is a key priority for the City Region and an enabling driver of growth.

Decades of underinvestment has left a transport infrastructure that does not go far enough to easily, quickly and affordably connect business, people or communities within the region or beyond.

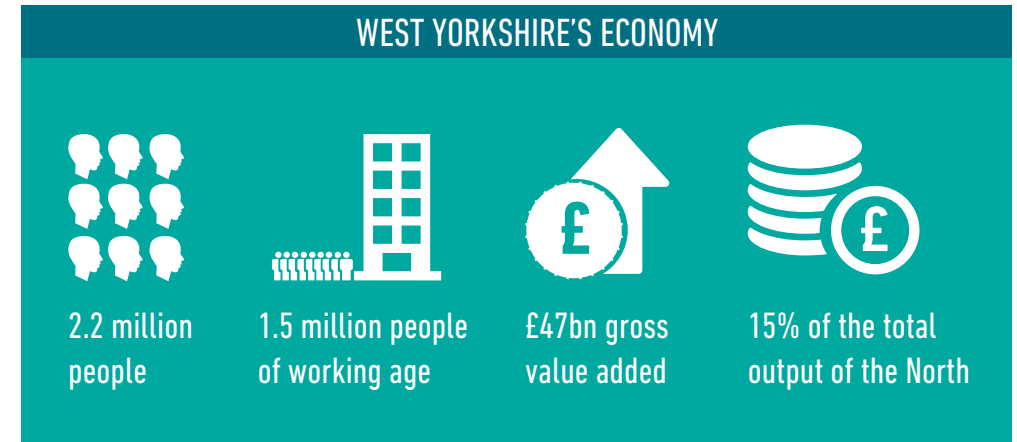
THE OPPORTUNITY

Investment in our transport system is vital to delivering the growth ambitions of the SEP, as it will unlock development, lower the cost of travel for our businesses and citizens and will improve connectivity, allowing our businesses to grow more quickly and giving greater choice and opportunity in the local jobs market to our citizens.

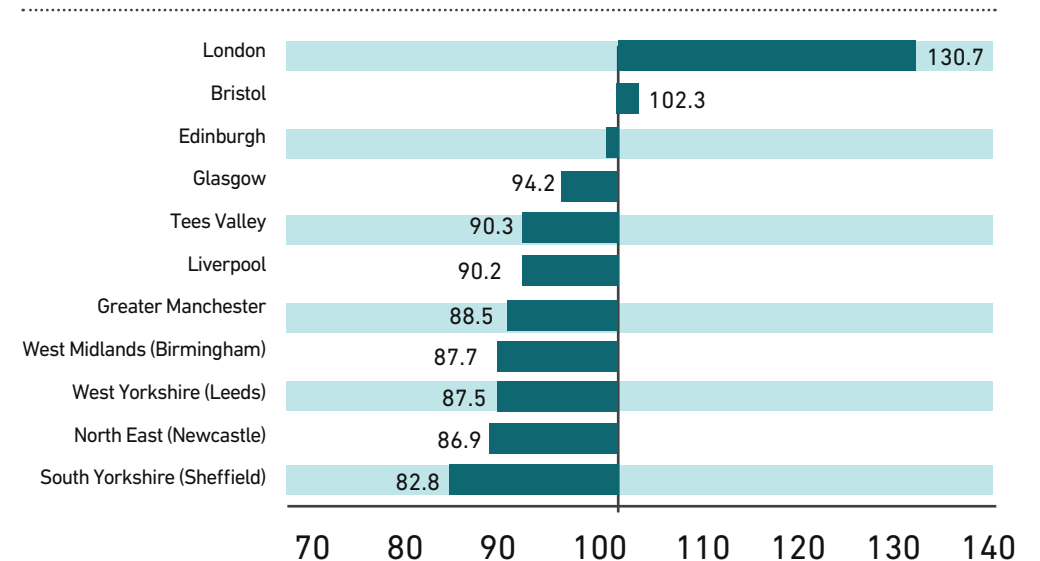
A key priority for the City Region is to develop an integrated approach to the development of our Spatial Priority Areas if we are to accelerate job creation, deliver new homes and secure more private sector investment.

The West Yorkshire plus Transport Fund is already delivering significant enhancements to the City Region's road, rail and bus networks over the next decade, alongside the major improvements that are already in the pipeline to invest in the motorway network and to increase rail capacity and speed through the electrification programme and new franchises. But more needs to be done.

As well as unlocking the potential of our places, significantly improved City Region connectivity will also ensure the benefits from HS2 are spread as far as possible across the region, benefitting local residents and enabling existing businesses to expand and providing opportunities for new businesses.



Productivity in UK City Region - Gross Value Added per hour worked (Office for National Statistics, 2016)



¹ The economic output achieved by the amount of hours worked

4. Our transport challenges

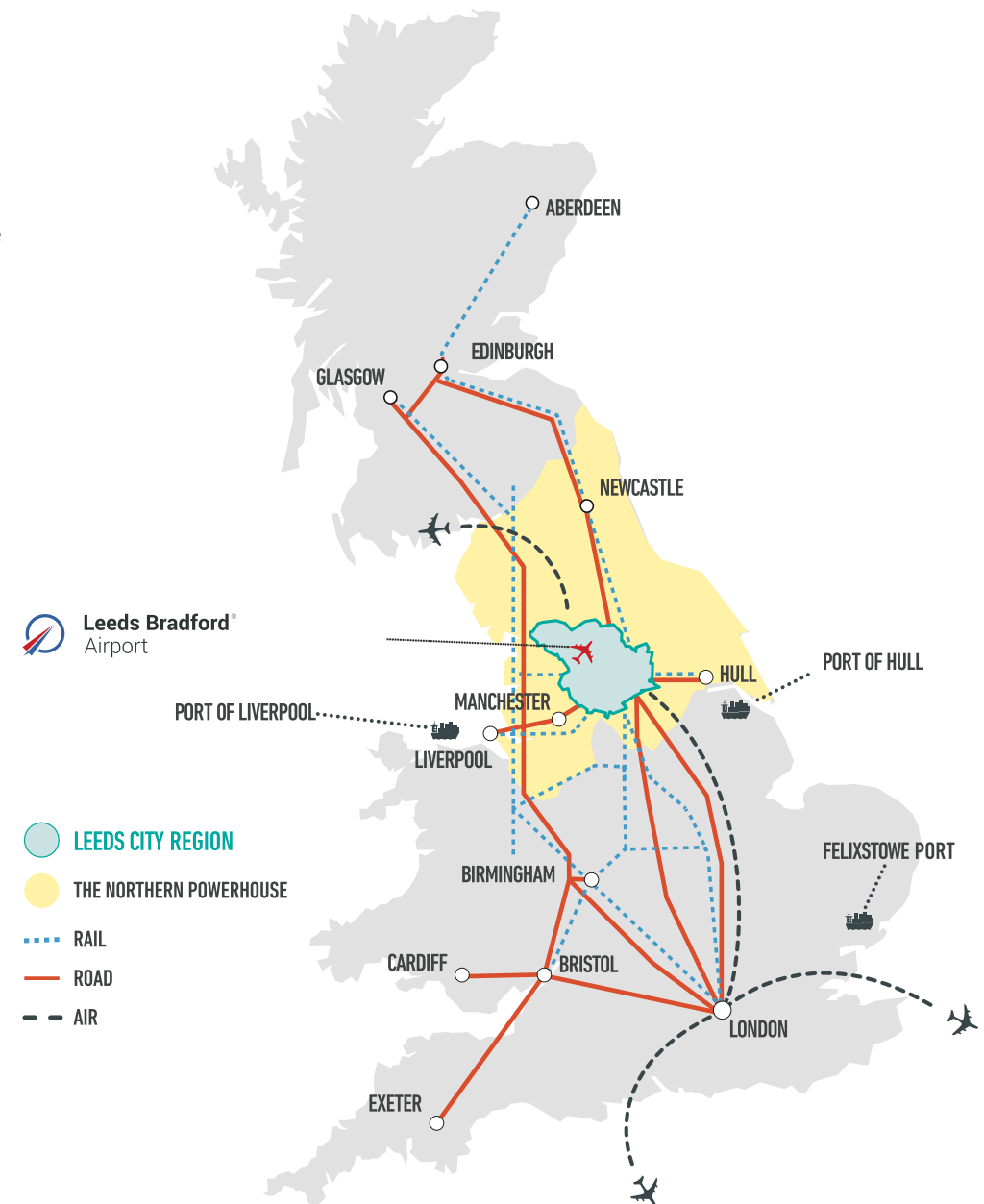
Our transport system already supports high volumes of passenger and freight movement – but the responses to our public consultation exercises and the analysis of evidence shows there are challenges facing transport, which we need to address. **Fundamentally, our transport system is under pressure.** Investment in road and rail has not kept pace with economic and population growth, resulting in congestion and delays on our roads, a lack of seats on public transport, and a lack of resilience in these networks/alternative options when things go wrong. These transport restrictions could limit the ambitions for growth contained in our SEP and our District Local Plans.

The future also presents challenges. An aging population, as well as higher levels of disability will create new and different demands for travel. Research by Leeds University Institute of Transport Studies¹ and the Urban Transport Group² has also identified some key social and technological trends that are likely to impact on the demand for travel by younger people in the future - among these trends are lower levels of car ownership, participation in the share-economy and greater use of smart technology.

These considerations, taken together with an energy revolution with a shift to the electrification of transport, mean we must not plan on yesterday's assumptions and should prepare for a more flexible and technology-assisted future.

¹ Leeds University Institute of Transport Studies, Flexi-Mobility, 2015

² Urban Transport Group, Horizon Scan, 2015)





Challenges

TRANSPORT CAPACITY AND PERFORMANCE

- **Strategic connections to the UK's major cities are aging** and face increasing demands for travel
- **Traffic congestion on motorway corridors, junctions and routes into our urban centres** is impacting on business costs and the accessibility of labour markets
- **Bus journeys are being made slow or unreliable** by road congestion and long dwell times from on-bus payments
- **There is severe crowding on trains** in the busiest periods, with services to and from Leeds having some of the worst crowding nationally
- **Car parking at rail stations** is insufficient and there are limited bus park and ride options to our centres
- **Poor access** to key development sites and gateways, including Leeds Bradford Airport, holding back job creation and house building

ENVIRONMENTAL

- **Climate change:** A slower rate of carbon reduction in the transport sector than in other sectors
- **Poor air quality:** The negative impacts of harmful pollutants produced by traffic is linked with a range of illnesses and premature deaths
- **Noise pollution:** Exposure to harmful noise levels from road, rail and air transport, that can cause mental health problems, poor performance at school and work and an increased risk of heart disease

PEOPLE AND PLACE

- **Over-reliance on car use** is contributing to a rise in obesity, diabetes and coronary heart disease
- **Safety on our roads**, with particular concerns for those walking, cycling and motorcycling,
- **Heavy traffic flows** creates barriers to communities and the movement of young, elderly, frail and disabled people
- **Some roads are in poor condition** with public dissatisfaction with defective roads and footpaths
- A limited choice of travel options is restricting people's opportunities
- **Car dominance** in town and city centres is impacting on the attractiveness of our places

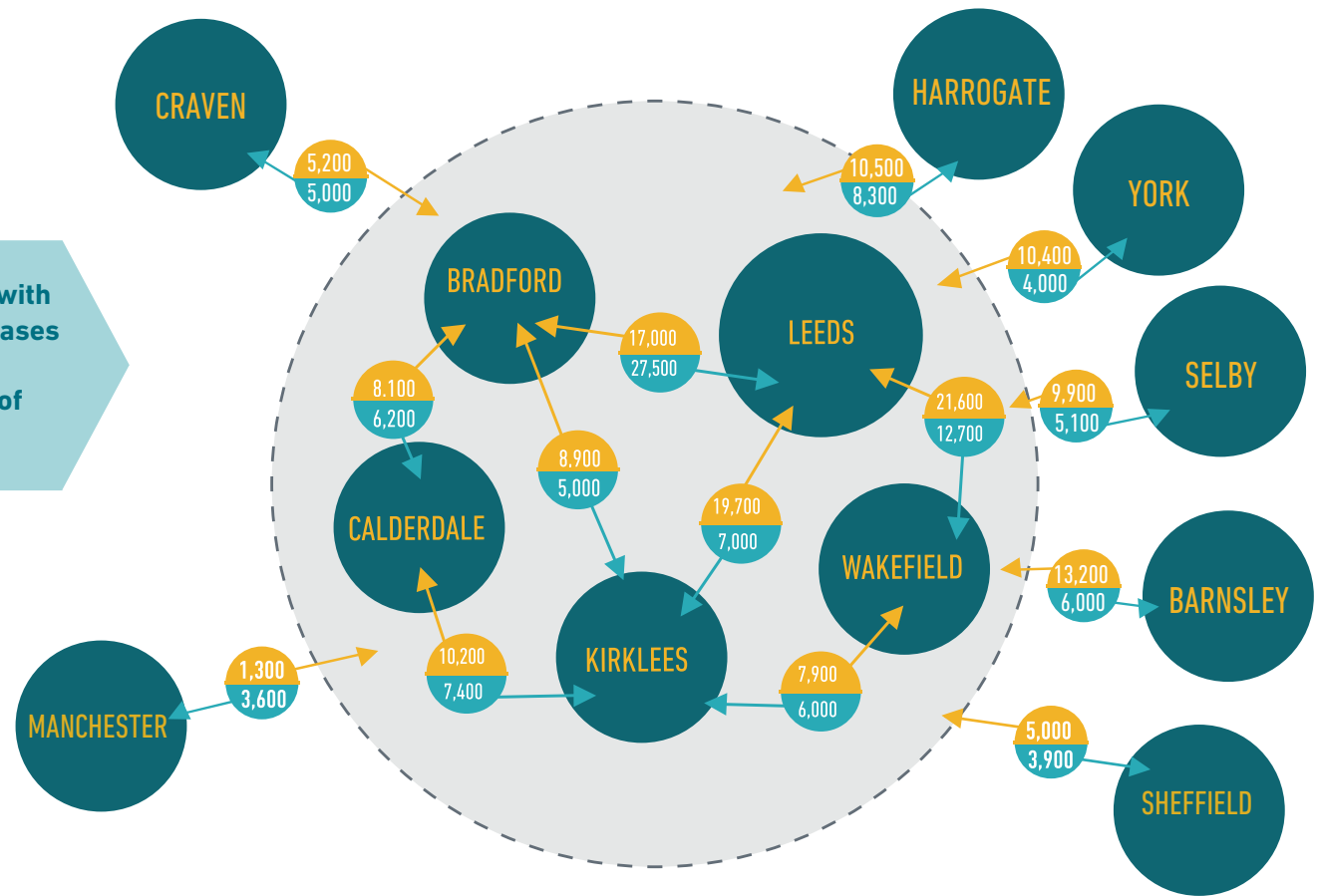
Our Transport Characteristics

Between 2001 and 2011, the average distance we travel to work rose by

14%

from 7 miles (11.3km) to 8 Miles (12.9km)

Our districts import and export workers with each other and there have been big increases in commuting from places outside West Yorkshire. Leeds is the largest importer of labour; Kirklees is a major exporter.



key



Number of people traveling to work in a different area each day



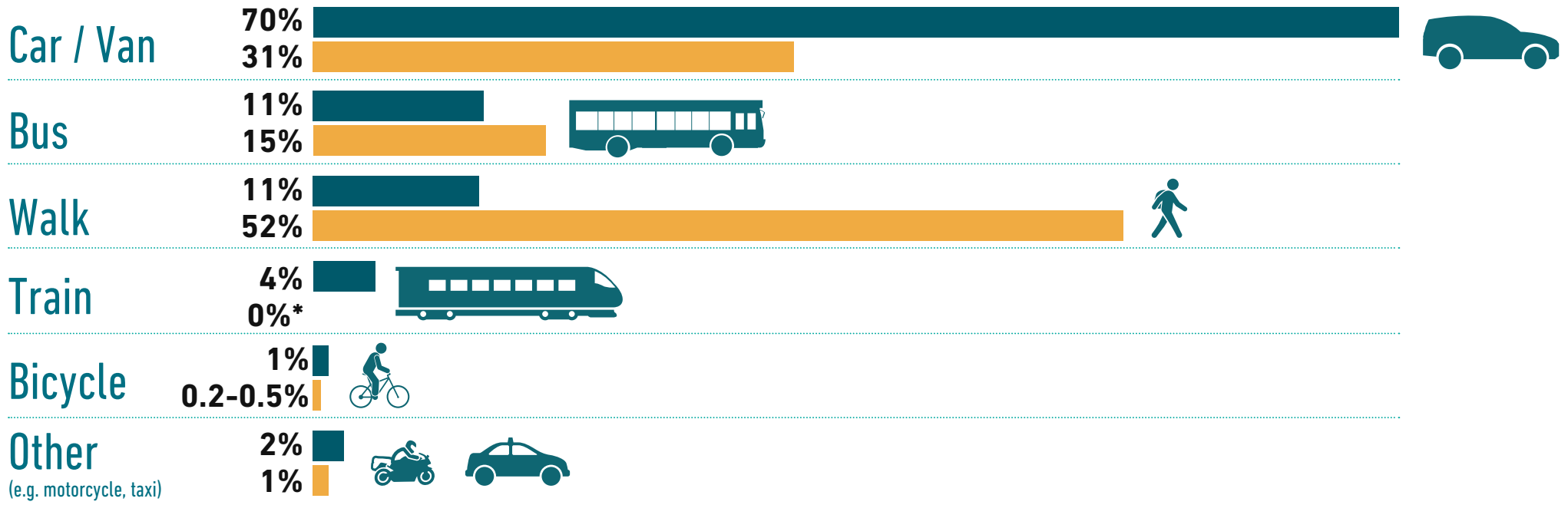
West Yorkshire

Our Transport Characteristics

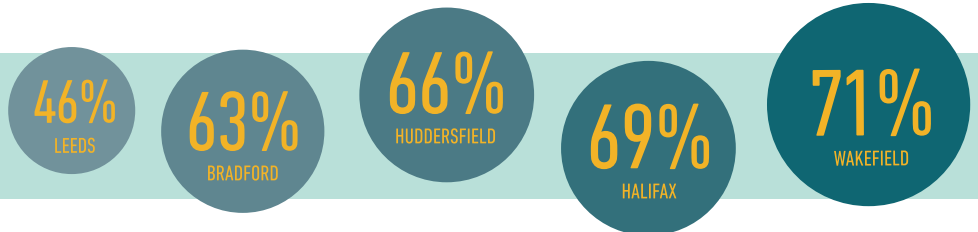
WEST YORKSHIRE TRAVEL TO WORK AND SCHOOL SHARE

WORK
SCHOOL

Cars and vans dominate commuting and make up **70%** of all travel to work (2011)



For commuting to our five main centres the proportion of car trips is generally lower (2011)



* Small numbers of people do travel to school by train, but numbers are so low that rounded down they become 0%

CYCLING

Cycling represents less than **1%** of commuting journeys in West Yorkshire in 2011, but numbers travelling to work by bike since 2001 are increasing, especially in larger urban areas.

Investment in new cycle routes helps to support the number of people cycling. The Leeds Liverpool Canal towpath, which has an increase in usage of more than **60%**, helps to support greater numbers of people cycling.

225,000 trips have been recorded by counters on the Leeds-Bradford Cycle Superhighway in its first year since opening in June 2016.



WALKING

More people walked to work in 2011 than in 2001 (105,000 vs. 96,000). The highest increases in walking trips to work were in Leeds (more than 18%) and Bradford (12%).

11% of all journeys to work in West Yorkshire are made on foot.

The numbers of people walking to work between 2001 and 2011 has grown by almost 10% with particular growth in larger urban areas such as Leeds and Bradford.



FREIGHT

Freight – 61m tonnes of freight arrive into West Yorkshire annually and we export 54 million tonnes (2010).

93% of goods are transported by road, **only 7% rail**

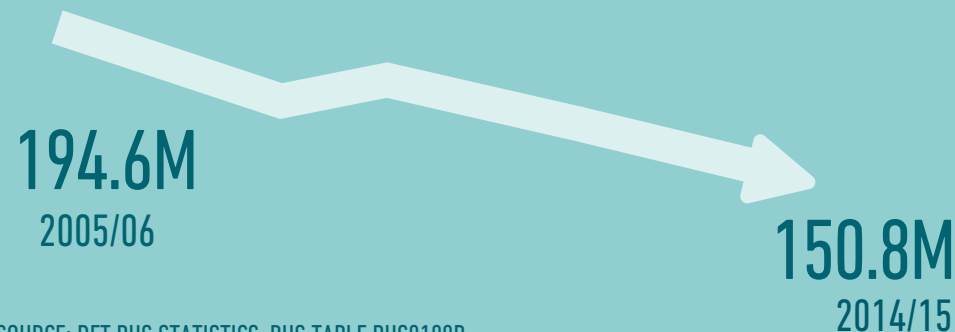
Heavy goods vehicles account for only 5% of vehicles on our roads, but **30-45%** of air pollution from road transport in UK urban areas.



WEST YORKSHIRE BUS USE



THERE HAS BEEN A REDUCTION IN BUS PATRONAGE OF 43.8M ANNUAL TRIPS OVER THE LAST DECADE



SOURCE: DFT BUS STATISTICS, BUS TABLE BUS0109B



WEST YORKSHIRE RAIL USE

34.85M
2014/15

17.8M
2005/06

96%

INCREASE IN TRAIN TRAVEL ACROSS WEST YORKSHIRE IN THE LAST 10 YEARS

5. Transport strategy vision and objectives

OUR VISION

We will enhance business success and people's lives by providing modern, world-class, well-connected transport that makes travel around West Yorkshire easy and reliable.

We want a transport system that supports inclusive growth, serving the needs of businesses and people, and enhancing prosperity, health and wellbeing for people and places across West Yorkshire.

This Transport Strategy provides the policy framework for the planning and delivery of improved transport infrastructure and services in West Yorkshire, to influence investment decisions to help deliver our vision and objectives.



Our transport objectives

The Transport Strategy's vision is accompanied by the following high level objectives:



ECONOMY

Create a more reliable, less congested, better connected transport network, increasing business productivity and access to wider labour markets



ENVIRONMENT

Have a positive impact on our built and natural environment and increase resilience against climate change



PEOPLE AND PLACE

Put people first to create a strong sense of place - increasing access in a safe, inclusive way and encouraging walking and cycling for health and other benefits

Our ambition is in the objectives we have and the outcomes we want to achieve.

The strategy has been informed by two rounds of consultation with stakeholders and the public, in 2015 and 2016. Feedback from consultation told us that our focus on the economy, and the approach described in a number of core themes, was well received. But there were also expectations for transport to make a positive contribution to the environment, to combat poor air quality and tackle climate change, and to address the economic and health inequalities in our more disadvantaged communities. In addition, transport for young and elderly people and in rural areas were identified as important issues. People wanted to see greater ambition with the better integration of all forms of transport as a vital early step in improving transport.

Our Targets

We have identified some mid-term targets for the first 10 years of the strategy, to grow the number of journeys made by using sustainable transport:

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

We are developing more targets for the whole period of the strategy, which will be tailored to suit the circumstances and options on offer in a particular place. The public consultation on the Transport Strategy provided public and stakeholders views on the types of indicators that should be used to measure our performance in delivering the strategy. The Transport Strategy will be updated once these indicators and targets for the full period of the strategy have been agreed.

Our growth proposals

INTEGRATING SPATIAL AND TRANSPORT PLANNING

West Yorkshire's population is forecast to grow by 12% from 2015 to 2035, an increase of nearly 300,000 people from 2.2 million to 2.5 million. The Leeds City Region population will grow in the same period from 3 million to 3.4 million.

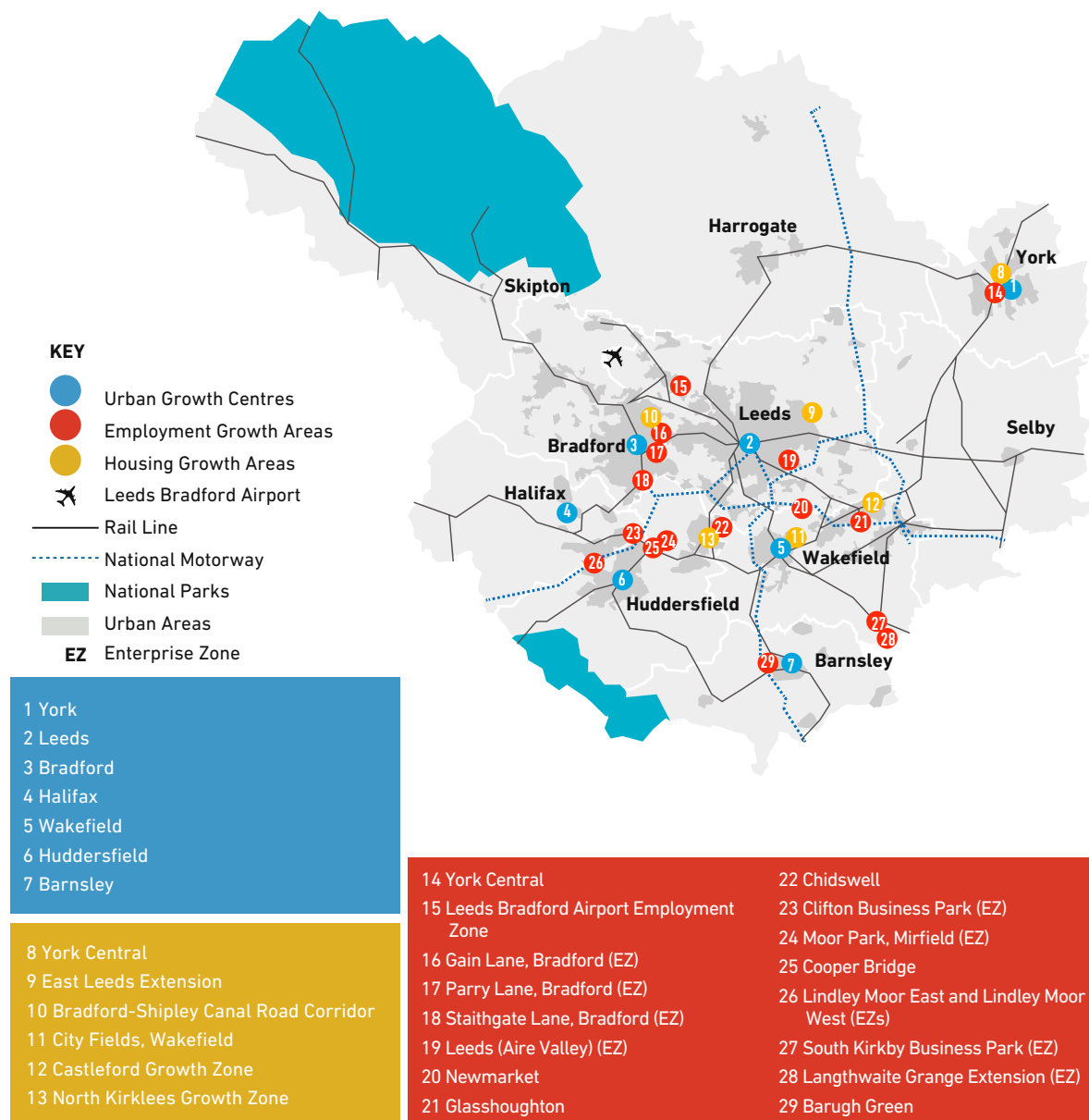
Through their Local Plans, the West Yorkshire district councils are developing land use proposals to accommodate this growth. The Local Plans identify the location of land allocations where employment and housing development can take place, and the scale of that development.

The SEP sets out a vision for developing the Leeds City Region economy over the next 20 years and identifies a number of headline initiatives that are crucial to achieving that vision. Among these headline initiatives is an ambition to deliver **10,000 to 13,000 new homes per year**. If delivered in full, the SEP is expected to create **36,000 additional jobs**, over and above those already forecast to be created. While it is recognised that development will be dispersed across the City Region, the SEP identifies a number of Spatial Priority Areas that offer substantial opportunities and will be central to delivery success.

The SEP Spatial Priority Areas are:

- **Seven urban growth centres** - in the West Yorkshire city and town centres of Bradford, Halifax, Huddersfield, Leeds (including the South Bank) and Wakefield, plus Barnsley and York in the wider City Region.
- **Six housing growth areas** - in the Bradford-Shipley Canal Road corridor, Castleford Growth Zone, East Leeds Extension, North Kirklees Growth Zone and Wakefield City Fields, plus York Central.
- **16 employment growth areas** - including employment and mixed use sites and the two Leeds City Region Enterprise Zones which comprise ten sites across the five West Yorkshire districts which are located along key arterial routes such as the M1, M62 and M606 corridors.

LEEDS CITY REGION SPATIAL PRIORITY AREAS



Locating new development in accessible locations is important and re-populating our urban centres will be one way of achieving growth without significantly increasing travel. In 2001, there were only 3,200 people living in Leeds city centre, but by the 2011 census this had grown to 13,000 people and a further 10,200 dwellings are now planned to be built in Leeds city centre by 2028.

More employment growth in our centres could be achieved with transport investments in high quality and high capacity public transport projects, linked with improved orbital highway routes.

Elsewhere, development located close to existing or new public transport hubs or corridors, and linked to them by improved cycle and pedestrian networks, will help create better, more sustainable places.



The growth in Leeds, in particular, in the city centre and Aire Valley, and also from other strategic and local growth priorities, will generate more commuting from across West Yorkshire and the City Region. The challenge will be to ensure this growth can happen in a sustainable way and to mitigate any negative impacts of the extra travel generated by this growth.

To predict future commuting and business-to-business travel patterns we have developed a transport, land use and economic forecasting model for the City Region. This model takes account of the land use allocations set out in current Local Plans and prioritised in the SEP. The approach of targeting transport investment where it could best support economic growth was used successfully to justify our Growth Deal proposal for the £1bn West Yorkshire plus Transport Fund in 2014. The projections have been used to identify where future problems in the transport network, such as road congestion or overcrowding on the rail network, are likely to constrain economic growth and business-to-business activity.

Further tests and analysis, including understanding the impacts of High Speed Rail, emerging Transport for the North projects and other transport projects and policies, will be carried out to help identify and develop further transport interventions.

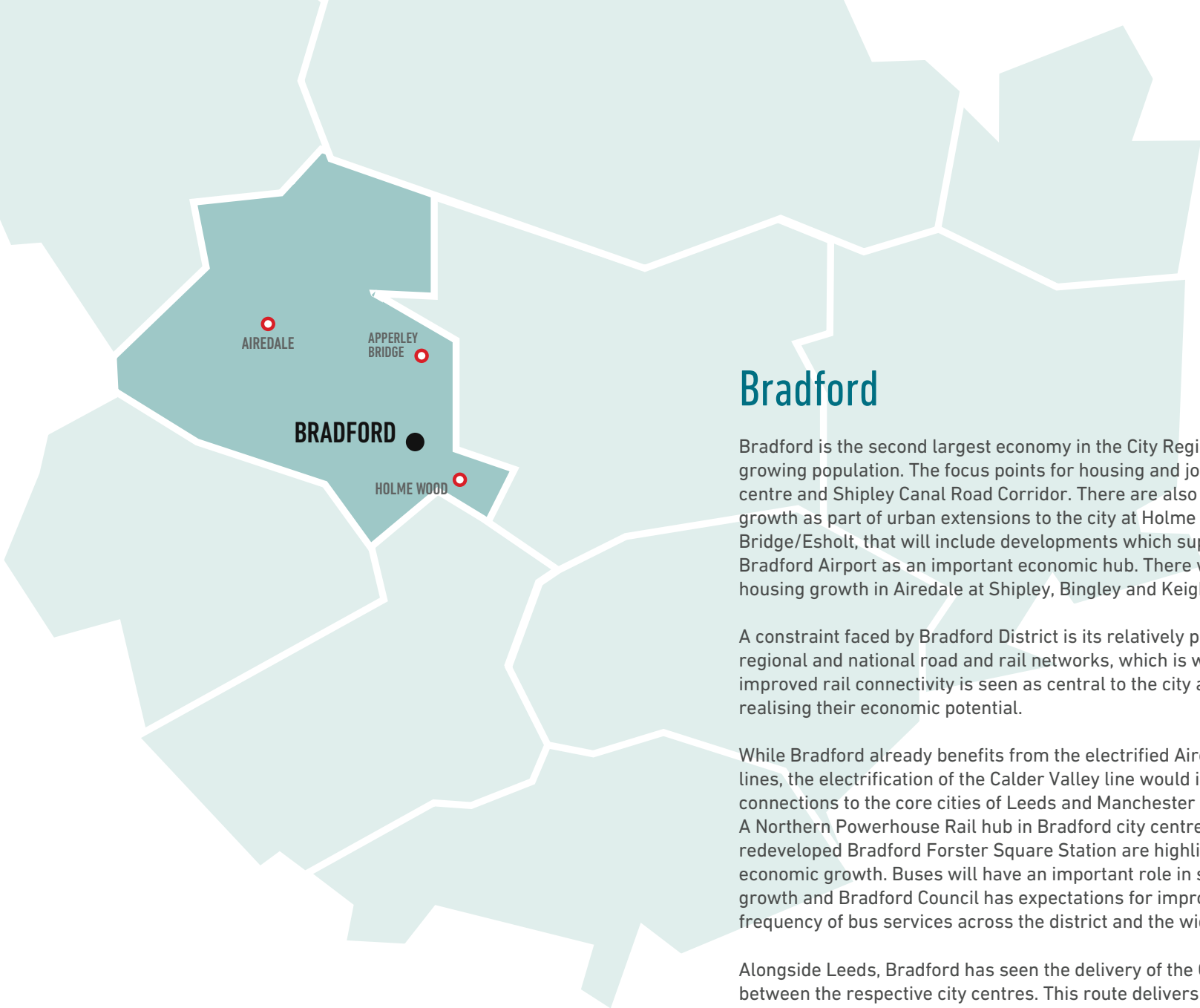
Some new road building will be necessary to relieve congestion hot spots, take traffic away from town and city centres, and to connect and bring forward development sites. For example, the Aire Valley, in Leeds, would benefit from enhanced highway access to support business activity, which is dependent on good, reliable road connections.

We believe, however, that many of the new trips associated with our economic growth can be made in full or in part by sustainable transport, i.e. public transport including rail, bus and new mass transit technologies, and cycling and walking, or combinations of these modes.

OUR PLACES

Each of our West Yorkshire districts has its own economic strengths, distinctive features and diversity of place and related travel patterns. This means that while there are common transport challenges and themes, there is unlikely to be a 'one-size fits all' transport solution.





Bradford

Bradford is the second largest economy in the City Region and has the fastest growing population. The focus points for housing and jobs growth are Bradford city centre and Shipley Canal Road Corridor. There are also opportunities for economic growth as part of urban extensions to the city at Holme Wood and Apperley Bridge/Esholt, that will include developments which support the growth of Leeds Bradford Airport as an important economic hub. There will also be jobs and housing growth in Airedale at Shipley, Bingley and Keighley.

A constraint faced by Bradford District is its relatively poor connectivity on to the regional and national road and rail networks, which is why significant investment in improved rail connectivity is seen as central to the city and the district areas in realising their economic potential.

While Bradford already benefits from the electrified Airedale and Wharfedale rail lines, the electrification of the Calder Valley line would improve the city's connections to the core cities of Leeds and Manchester and to Manchester Airport. A Northern Powerhouse Rail hub in Bradford city centre as well as a redeveloped Bradford Forster Square Station are highlighted as catalysts for economic growth. Buses will have an important role in supporting Bradford's growth and Bradford Council has expectations for improvements to the quality and frequency of bus services across the district and the wider City Region.

Alongside Leeds, Bradford has seen the delivery of the Cycle Superhighway (CS1) between the respective city centres. This route delivers a level of infrastructure quality not seen in the UK outside of London and in Bradford there is an expectation that this level of quality in design and implementation will be delivered for further new sustainable infrastructure transport routes.

Calderdale

Calderdale is a centre for financial services and the location of the Lloyds Banking Group headquarters. It has a higher than UK average of employment in advanced engineering and manufacturing (AEM), specialising in complex components. The concentration of AEM means there is a well-developed supply chain and dense logistics sector dependent on the strategic and key road networks. Calderdale's priorities for growth lie in developing employment sites in the north and east of the district, including Halifax and the Leeds City Region Enterprise Zones, as well as the delivery of Calderdale Local Plan requirements for 17,000 new homes by 2031.

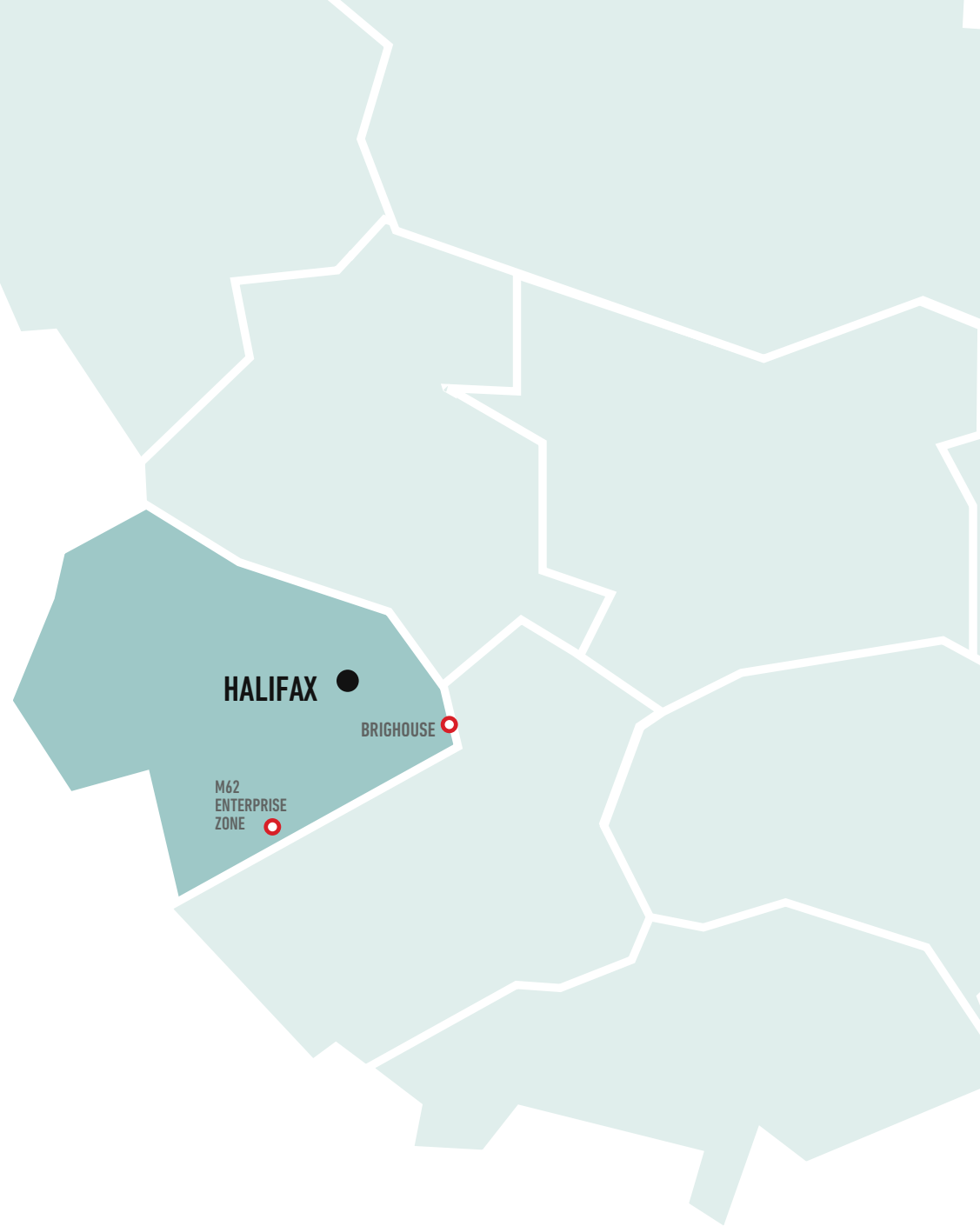
Improving transport connectivity within West Yorkshire and to Manchester is key to supporting Calderdale's existing economic activity and facilitating growth. Some important road corridors are operating at capacity and journeys can be unreliable. Major congestion hotspots include Junction 25 of the M62, A629 Brighouse, Hipperholme Crossroads through to Stump Cross junction, A6026 and Copley Lane and Brighouse, Sowerby Bridge and Hebden Bridge town centres.

Improvements in road capacity and operation will be delivered through the West Yorkshire plus Transport Fund, but road congestion is forecast to worsen significantly and major road building is made difficult by the district's geography, topography and heritage considerations. At the same time, the quality of rail and bus alternatives are perceived as 'lacking'.

The focus is on enhancing the quality of sustainable transport options to reduce car dependency and accommodate new trips. Rail is growing in importance for Calderdale residents, particularly for longer, cross-boundary journeys and a priority is to capitalise on planned HS2 and Northern Powerhouse Rail investment as well as upgrades to the strategic road network.

Electrification of the Calder Valley line, capitalising on committed road and rail improvements to the Bradford-Halifax-Huddersfield corridor are key strategic transport priorities. The buses will be important in serving communities not connected by rail and there is a desire to build on past investment in cycling.

Improved quality of life and environment with good air quality, public realm and local accessibility are viewed as key to selling the attractiveness of Calderdale's places for attracting and retaining skilled workers and high value businesses.



Kirklees

The population of Kirklees is well dispersed across the district and there are a number of areas of relatively high population density that require access to the main employment centres of Dewsbury and Huddersfield. Outside of the district, the polycentric nature of the wider regional economy, coupled with Kirklees' strong concentration of manufacturing means there is a need to ensure that people and goods can be moved around efficiently and flexibly now and in the future.

Given the district's strategic position on the national motorway and rail networks, its links with regional facilities such as airports/ports and surrounding Leeds, Sheffield and Manchester city regions are essential to Kirklees and a key factor in supporting the vitality of urban areas. The aim locally is to achieve a balanced and integrated transport network that makes the most efficient and effective use of road, rail and public transport.

By 2031 the Kirklees Local Plan expects to provide for approximately 23,000 new jobs and 31,200 new homes in the district, with Huddersfield and Dewsbury accommodating large parts of this growth.

The integrated approach to transport, climate change, environmental objectives and development across the district reflects future ambitions, while also acknowledging the current economic reliance on road-based transport; an approach that is also locally recognised in the Kirklees Economic Strategy (KES).

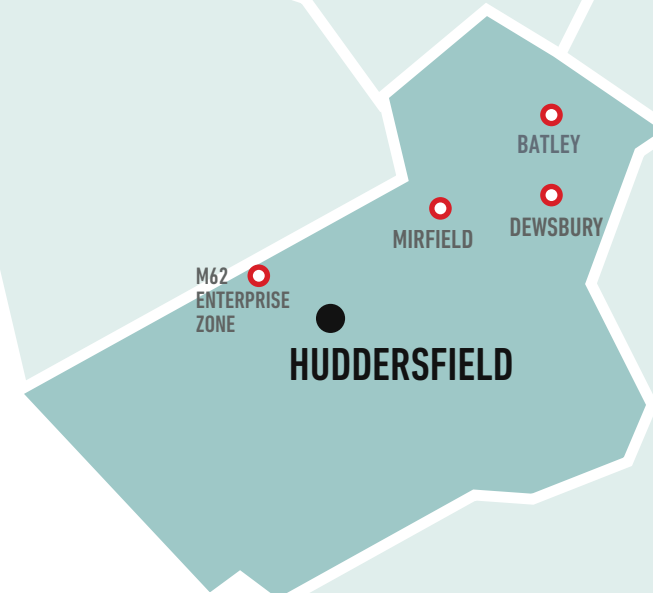
Schemes currently being developed in the West Yorkshire plus Transport Fund will address the main local congestion issues the Local Plan will produce, but there will remain other existing hotspots to address on the A616, A636 and A637 - all key routes within the district.

The designation of the North Kirklees Growth Zone means that future transport infrastructure needs are starting to emerge around Dewsbury and Batley town centres while also highlighting the importance of strategic transport links to the area.

Improved rail journey times and capacity improvements on the TransPennine rail corridor are key priorities for Kirklees. The other rail connectivity issues for Kirklees are the Penistone Line (Huddersfield to Sheffield) and north-south connections from Huddersfield to Halifax/Bradford. Rail station improvements and more rail user car parking are also priorities.

Having frequent, reliable and cost effective bus services is also a key local aim making the most of investment in ticketing improvements and hybrid/electric buses for air quality improvements.

Investment in other transport modes such as walking and cycling will be targeted on short local journeys, while improving public realm, place-making, reducing car domination and greening our commercial centres are also a local priority.



Leeds

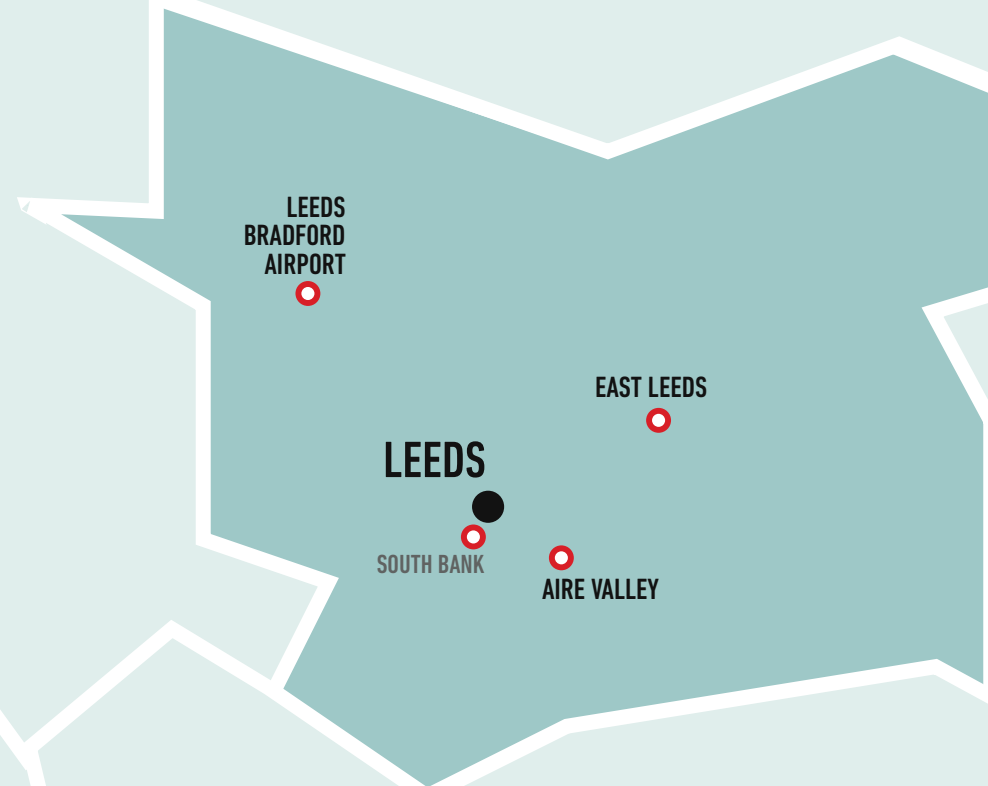
Leeds' growth is important both to the economy of the City Region and to the North's shared objective of rebalancing the economy. To improve productivity, investment in the city's transport infrastructure and assets, new and existing, is vital. Within Leeds itself, the focus is on creating connections to the key growth areas of an expanded city centre (South Bank area), an employment hub north of Leeds Bradford Airport, the Leeds City Region Enterprise Zone and East Leeds. Leeds has an ambitious target of 70,000 new homes spread across the district.

The highway network will continue to play a central role in mobility, particularly for orbital journeys, but there are number of big challenges. The road and rail networks are constrained with congestion and crowding in the peak periods, there are significant air pollution and carbon emissions, and the road casualty record is not improving. Embracing new technology will help solve some of these issues, but there is also need for a debate about how road space is allocated for pedestrians, cyclists and public transport uses. There is an opportunity to think differently about the traffic flow around the city. This is especially the case in the city centre where it will be important to begin the process of developing a long-term strategic approach and solution for the Inner Ring Road – this will be required during the 2020s ahead of decisions about the future of the tunnels.

Improved access to air travel and to the ports is needed to support global trading. Improved strategic road reliability, smart ticketing and a redeveloped Leeds station to incorporate HS2 and Northern Powerhouse Rail will play their part in supporting Leeds' position at the heart of the North. At the local level, while the new rail franchises mark a step change, the need for further investment will remain. There is a place for enhanced station provision, including new stations, within the Leeds district and there is a need for better choices for those communities on corridors not served by heavy rail. The role and quality of an integrated and reliable bus services is likely to be paramount alongside a growing role for park and ride.

There are choices to be made for the longer term where the ultimate transport mode may vary according to the local circumstances and demand, but integration – of ticketing and brand along with seamless interchange – needs to be a common theme. Targeted investment in district centres and neighbourhoods remains essential, where there is a focus on creating places that people can enjoy and to support mobility and sustainable transport for all ages and needs.

Leeds City Council ran a public engagement exercise in 2016 on transport in Leeds to test these priorities. The response from public and stakeholders has informed the allocation of funding within the Leeds Public Transport Investment Programme using the £173.5m provided by the Government.



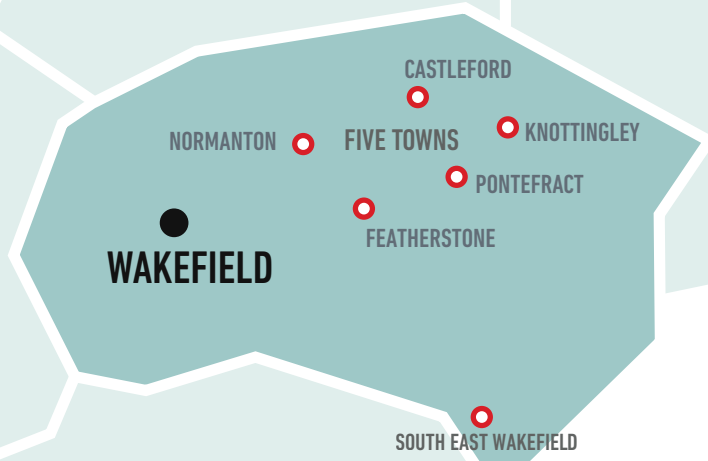
Wakefield

Wakefield district includes the main population centres of Wakefield city, Ossett and Horbury in the north west, the Five Towns of Normanton, Castleford, Pontefract, Featherstone and Knottingley in the north east; and Hemsworth, South Elmsall, South Kirkby and Upton in the south east. Wakefield's location close to key transport corridors and the availability of land to accommodate housing and employment has put it in a strong position to grow.

Wakefield's priorities for growth include the SEP employment and housing priorities in Wakefield and Castleford. Wakefield Council's Local Plan sets out spatial priorities for growth mainly in Wakefield city and the Five Towns up to 2026. Future growth will be focused in areas where there is an opportunity to benefit from improved connectivity provided by new investment in rail and road infrastructure, including the Five Towns and south east of the district. Transport investment and future spatial development strategy will be aligned with the Council's Local Plan and Good Growth Plan. There will be an increased focus on delivering sustainable development and communities, with an improvement in quality of place, air quality, active travel and lifestyles, and health.

Wakefield has a large, well maintained road network serving many communities in the district and linking to key towns and cities in West and South Yorkshire. It will be important to maintain the condition of the network. There has been significant investment in new highway infrastructure in recent years with the Pontefract Northern Link Road and the Wakefield Eastern Relief Road improving connectivity, relieving congestion and opening up land for new development.

There is a continued need and desire to invest in the road and rail network during the next 20 years. Further investment in road infrastructure will be needed to support growth in the Five Towns and south east of the district, but there is a need to maximise connectivity through Northern Powerhouse Rail, East Coast Main Line and High Speed Rail. Improving connectivity to Leeds and Sheffield and beyond to other key employment centres is essential, including delivering transformational mass transit schemes between Leeds and the Five Towns.

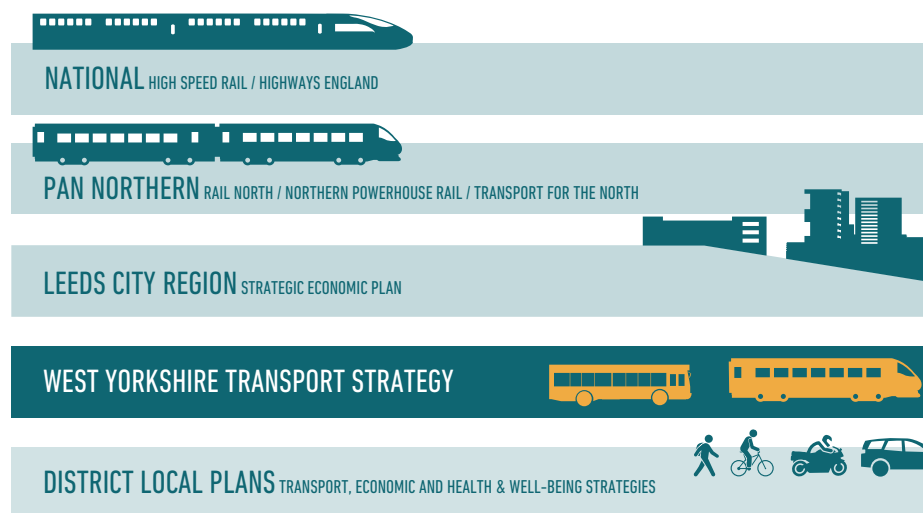


6. How our plans fit together

Over the next 20 years, West Yorkshire and the Leeds City Region are going to benefit from substantial investment while some significant changes in how transport planning is organised and improvements are delivered which will transform our connectivity to regional, national and global markets.

Efficient motorways, High Speed Rail, fast East-West rail connections through Northern Powerhouse Rail across the North of England and better access to international gateways will ensure our physical links to the rest of the UK and the world match or exceed other comparable city regions. But we also need transformational change in our transport system at a West Yorkshire and local level to realise our economic ambitions.

The Transport Strategy provides the policy framework for the planning and delivery of improved transport infrastructure and services in West Yorkshire. It will support the Strategic Economic Plan and West Yorkshire District Local Plans, and as well as influence and make the most of investment decisions being made at the pan-northern and national levels.



Transformed national and international connectivity

High Speed Rail provides the prospect of transformational change giving a major boost to our local economy. The Government plans to invest £55.7 billion to build a new high speed rail network, High Speed 2 (HS2), from London to Birmingham, Leeds and Manchester.

Direct high speed rail services will be operational by 2033, reducing journey times from London to Leeds by up to an hour, to only 83 minutes. This new line will provide a significant increase in capacity to meet the growing demand for rail travel.

As well as the direct improvements from HS2, the new high speed network will release constraints on the existing local and longer distance rail networks, creating opportunities for improving connections between the North's major cities and towns for commuters, business travel and, potentially, freight.

We are calling on the Government to accelerate delivery of HS2 and to future-proof a connection to the existing High Speed 1 in the South for improved crosschannel links, and connections with Northern Powerhouse Rail (previously called HS3) in the North.












A new HS2 station will be built alongside, and integrated with, the existing Leeds Station in the centre of Leeds. We are working with the government, HS2 Ltd, the rail industry, Transport for the North and local partners to develop our proposals for the Leeds Station now.

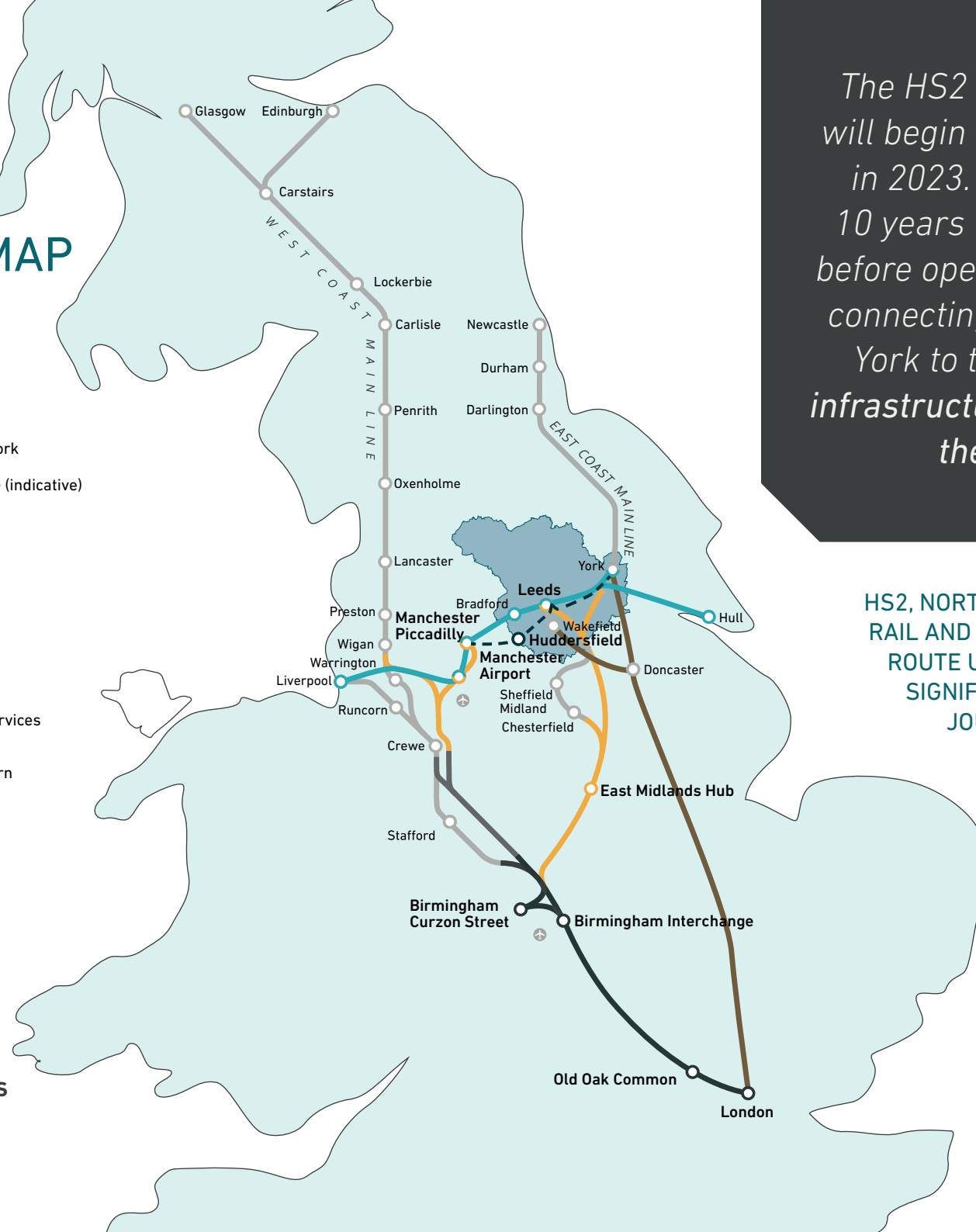
The upgrade of Leeds Station will be a project of regional and national significance, providing a centrepiece of the region's transport network and an excellent passenger experience. It will bring together on a single integrated site HS2, Northern Powerhouse Rail and other inter-city and urban rail services, alongside regional rail and other local public transport services as part of our proposals for a world-class public transport system.

Creating a new, integrated Leeds Station will not only strongly support the regeneration in the South Bank area of Leeds and the transformation of Leeds city centre, but it will be an asset that benefits the whole of the City Region. A HS2 Growth Strategy will set out ways to spread the benefits across the region.

The HS2 eastern leg will begin construction in 2023. It will take 10 years to complete before opening in 2033, connecting Leeds and York to the largest infrastructure project in the UK.

HS2 ROUTE MAP

-  HS2 line (Phase One)
 -  HS2 line (Phase 2a)
 -  HS2 line (Phase 2b)
 -  HS2 services on existing network
 -  Northern Powerhouse Rail line (indicative)
 -  TransPennine Route Upgrade
 -  Existing network
-
-  New station (Phase One)
 -  New station (Phase 2b)
 -  Destinations served by HS2 services on existing network
 -  Destinations served by Northern Powerhouse Rail line



LEEDS TO BIRMINGHAM
EXISTING 1 HOUR 58 MINUTES
PROPOSED 49 MINUTES

LEEDS TO LONDON
EXISTING 2 HOURS 11
PROPOSED 1 HOUR 21 MINUTES

HS2, NORTHERN POWERHOUSE RAIL AND THE TRANSPENNINE ROUTE UPGRADE WILL ALL SIGNIFICANTLY REDUCE JOURNEY TIMES

To allow the region to play a full role on the global stage, we need to ensure we have easy access to international connections.

Transport for the North (TfN) is considering ways to improve the movement of freight, enabling ports and airports to move goods and materials more efficiently. This would bring opportunities for more goods and materials to be processed in the North.

Enhanced surface access to Manchester Airport will be delivered through the Northern Powerhouse Rail (NPR) proposals. Leeds Bradford Airport has a vitally important role as a gateway to international markets and we have an aspiration to develop the role of the airport as a transport hub as well as to facilitate the development of the airport area as an employment growth zone. For this to happen, improved surface access needs to be delivered. A link road project is being taken forward by Leeds City Council and the long-term public transport goal is to have a fixed, rapid, mass-transit link joining the airport with the centres of both Bradford and Leeds. For the short-to-medium term we are developing a proposal for a parkway-type station on the existing rail network to provide enhanced connections to the airport.

Transformed connectivity across the North

The West Yorkshire Combined Authority is working with a range of partners on a number of opportunities to deliver much-needed capacity, performance and quality improvements to the transport network connecting the major towns and cities of the North in the coming years.

Rail North was created in 2015 to bring together the Department for Transport (DfT) and transport authorities across the North, including the West Yorkshire Combined Authority, in a body to set the strategic objectives for delivering a world class railway for the North.

Rail North has already overseen the award of the new Northern and TransPennine franchises, which came into effect from April 2016 and is currently overseeing (as of August 2017) a £1.2 billion investment in rail services across the North, including:

- 500 new-build carriages introduced across both franchises.
- All Pacer units withdrawn by the end of 2019 and all remaining rolling stock to be refurbished by 2020.
- 66% extra morning peak capacity on TransPennine Express into the main cities by 2019
- 37% extra morning peak capacity on Northern trains into the main cities by the end of 2019
- £30m invested in improving stations, including interactive ticket vending machines
- 45 currently unstaffed stations to be staffed for at least part of the day

Transport for the North (TfN) has been established by the Government as the new sub-national transport body for the North – comprising all the northern city regions, local enterprise partnerships, Highways England, Network Rail and HS2 Ltd.

In the March 2016 Budget, funding was confirmed for TfN to develop options for a Northern Powerhouse Rail (NPR) network to radically improve journey times between the North's main urban centres.

Leeds is already considered part of the NPR core network for fast connections and frequent services to Newcastle, Hull, Sheffield, Manchester, Manchester Airport and Liverpool. We are working with TfN to influence the delivery of additional NPR stops in Bradford and York as part of that core network, and to fully integrate the NPR network with HS2 within the new, central Leeds Station.

We are also working with the DfT, TfN and the rail industry to press and develop the case for continued investment in the existing rail network. This includes upgrades to the East Coast Mainline to improve reliability and connectivity and the Calder Valley Line, which will have pan-northern benefits as well as improving connectivity for key local population centres.

It is crucial the Government funds Network Rail in making upgrades to:

- **The existing north TransPennine rail line** - between Manchester, Leeds and York, via Huddersfield, to improve journey times by 2022
- **Calder Valley line** with speed, frequency improvements, new trains expected to be in place by the end of 2019 alongside a new range of destinations available including Chester, Liverpool, Manchester Airport, Sheffield, Nottingham and Hull.
- **Harrogate Line** with improvements including increased local service frequency and better connectivity to London expected by 2019.

On the roads, better performance and more capacity is needed to serve the growing economy.

Smart Motorway technology is already being introduced by Highways England to improve motorway journeys through maximising the use of the running lanes by adjusting speed limits and closing and opening lanes, including the hard shoulder. Technology has already been introduced on sections of the M1 and M62 and more sections are to follow by 2025.

Through their Road Investment Strategy, Highways England has committed schemes to deliver infrastructure improvements to relieve congestion and increase motorway performance on the M1, M62 and M621 and at junctions such as Chain Bar and Lofthouse, with more to follow. We are working with Highways England to assist delivery of the most needed short term improvements.

For the medium to longer term, TfN has identified the Central Pennines (including West and North Yorkshire and parts of the North East and North West) as one of its seven Strategic Development Corridors that it will take forward as part of its long-term Investment Programme up to 2050. It also will be used to inform Highways England's development of its upcoming Road Investment Strategy 2 (RIS 2) programme for the next five- year period (2020 to 2025).

The Central Pennines corridor has been prioritised by TfN for a detailed study starting in 2017. This will investigate TransPennine road, rail and inland waterways requirements, including freight and logistic needs in supporting the ports, airports and inland ports and servicing the businesses located across the corridor. The West Yorkshire Combined Authority is working with TfN and Highways England to progress the Central Pennines Strategic Development Corridor study.

Transformed connectivity in the City Region

We are already making significant progress to improve connectivity within the City Region. Funding secured by the LEP and West Yorkshire Combined Authority through the Leeds City Region Growth Deal in 2014 has enabled the establishment of a £1 billion West Yorkshire plus Transport Fund, covering West Yorkshire and York. The Transport Fund is targeted at enabling key development areas and will help to create about 20,000 new jobs over the next 10 years. A number of strategic transport projects will be delivered to facilitate growth identified in the SEP, which encompass:

- Improved motorway access
- Orbital road improvements
- Radial improvements on corridors for better public transport options into our urban centres
- Road and rail improvements between district hubs to provide capacity and better connectivity
- Enhanced rail station gateways with increased car parking capacity for park and ride.

More details of the West Yorkshire plus Transport Fund schemes that are programmed for early delivery are identified in the high level delivery programme in section 7 of this document, and further details can be accessed by visiting our website at westyorks-ca.gov.uk

These Transport Fund improvements will work towards addressing the underinvestment of the past and unlocking constraints on our networks – but gaps will remain and more investment will be needed. This strategy therefore sets out our ambitions to further improve transport in our City Region.











Apperley Bridge rail station

7. Our Policies

The Transport Strategy identifies six core themes containing 67 policies which describe the actions that will be taken by the West Yorkshire Combined Authority, the West Yorkshire District Councils, the LEP and our partners to deliver our vision for transport.

The themes and policies address the transport challenges and opportunities facing us and provide a framework for making investment decisions going forward. Each of the themes and policies are explained in this section.

Our vision: to enhance business success and people’s lives by providing modern, world-class, well-connected transport that makes travel around West Yorkshire easy and reliable. We have identified our policies and actions to deliver this vision within six core themes:

CROSS CUTTING THEME	CORE THEME	OUR AMBITION
  INCLUSIVE GROWTH, ENVIRONMENT, HEALTH AND WELLBEING <p>Our ambition is to connect people to better living standards and higher earning jobs, and to significantly improve the health, overall wellbeing and environment of the people living and working here</p> 	 ROAD NETWORK	<p>Our ambition is for an efficient, safe and reliable road network for all users, that creates new opportunities for jobs and housing</p>
	 PLACES TO LIVE AND WORK	<p>Our ambition is for West Yorkshire to be known for the quality and liveability of its places</p>
	 ONE SYSTEM PUBLIC TRANSPORT	<p>Our ambition is for a world-class public transport system that connects different modes of transport seamlessly into one comprehensive easy-to-use network</p>
	 SMART FUTURES	<p>Our ambition is to make best use of advancements in technology across all of our transport networks</p>
	 ASSET MANAGEMENT & RESILIENCE	<p>Our ambition is to ensure we make best use of our existing and future transport assets</p>



Inclusive Growth, Environment, Health and Wellbeing

Our ambition is to connect people to better living standards and higher earning jobs, and to significantly improve the health, overall wellbeing and environment of the people living and working here.

We aim to reduce traffic emissions to near zero, to tackle the damaging impacts of climate change on our homes and businesses and to reduce road accidents aspiring to 'zero tolerance' of transport-related deaths. We aim to become known as a great, safe place for cycling and walking.

We believe that promoting economic growth is compatible with improving the environment and enhancing people's quality of life. Transport has a vital role in supporting economic growth, not only through investment to improve the performance of our transport system to improve business productivity, but also by helping more people to contribute to and benefit from economic opportunity.

We want to make the transport system more accessible and better connect people to opportunity. Our travel for work and other purposes has been characterised in recent decades by increased car use. The car will continue to be a vital part of our transport system, but the environmental, health and social issues created by car dependency are a concern. We also need to provide practical transport options for the 28% of households in West Yorkshire, and 64% of job seekers, with no access to a car.

To deliver a vision of good growth, we need to address the negative impacts and build on the positives of our transport system to provide more and better options for healthy, sustainable and inclusive transport.

Our Policies

Enable the widest range of people and places to both contribute to and benefit from economic success.

We will work with City Region authorities, business, voluntary and community groups and transport providers to target our transport procurement and investment. This will help provide access to opportunity for more secure, better paid, more rewarding employment. By focusing on people through an inclusive growth programme we believe that we can have a positive impact in improving living standards for all, with very tangible benefits for people in our more disadvantaged and excluded communities.

1

We will engage with those not currently connected to economic growth because of their transport needs, to create connections that ensure good jobs are accessible to everyone with the potential to work, including the most disadvantaged groups and those with disabilities.

2

We will improve connections between communities to help increase business start-ups and improve business survival in deprived neighbourhoods.

3

Through procurement and local spend, we will encourage those involved in transport operations and delivery to develop a workforce that is well managed, supported and reasonably compensated.

4

We will develop an inclusive 'total transport' approach to connecting rural or disadvantaged communities to jobs and other opportunities, seeking to coordinate and better target the resources of other agencies and transport services.

5

We will use ticketing and payment technology to develop concessionary travel offers for targeted groups.

6

We will work with operators and other partners to make our transport facilities more attractive places for young, old, vulnerable and disabled people, by improving safety and personal security and eliminating anti-social behaviour and crime on the transport network.

Reduce air pollution, carbon emissions and noise levels associated with road transport

Road transport is the biggest contributor to roadside air pollution. Cars are the largest source of emissions, but buses, trains, taxis and goods vehicles also contribute. Air pollution - especially nitrogen dioxide and particulate matter - increases the risk of lung cancer, asthma and heart disease. New evidence also suggests links with other cancers, strokes, low-birth weight babies and children's development.

West Yorkshire's urban areas have some of the highest levels transport emissions in the UK. Public Health England estimate that 1 in 20 deaths in West Yorkshire are attributable to particulate air pollution and Leeds is required to reduce its Nitrogen Dioxide levels in central areas by 2020 to within legal limits.

Road traffic also accounts for 21% of carbon emissions in West Yorkshire. Moving to a lower-carbon transport system is vital if we are to play our part in combating the effects of climate change and the disruptive impact of extreme weather on our infrastructure, homes and communities, as well as wider objectives towards global carbon reduction.

Exposure to noise pollution can cause mental health problems, poor performance at school and work, and an increased risk of heart disease. The World Health Organisation recommends that average noise levels at night should not exceed 40 dB(A), but in West Yorkshire nearly 1 in 10 people are exposed to road, rail or air transport noise above this level.

A West Yorkshire Low Emission Strategy (WYLES) was adopted in 2016 by all of the West Yorkshire Local Authorities following public consultation in 2015, and we will deliver the recommendations of WYLES to reduce local transport emissions, especially nitrogen dioxide and particulate matter.

In 2017, the Government published its Plan for Reducing Nitrogen Dioxide, which announced an end to the sale of conventional and petrol cars and vans by 2040 as well as measures to bring nitrogen dioxide emissions to within legal limits. It is also due to publish its broader Clean Air Strategy in 2018.

7

We will work with partners to deliver the West Yorkshire Low Emission Strategy to reduce as far as possible to zero, emissions of CO₂, NO₂, particulates and noise from transport.

8

We will support the implementation of Clean Air Zones (CAZ) where needed, setting strong emission standards for types of vehicles permitted to enter the zone.

9

We will provide a comprehensive electric vehicle charging network to support the shift to more environmentally-friendly cars, provide facilities to charge power assisted bicycles and work with bus operators to move to a near-to-zero emissions bus fleet.

Protect and enhance green infrastructure and the built environment

We need to protect and enhance the great diversity of landscapes, water bodies and internationally recognised and protected habitats that together form West Yorkshire's 'Green Infrastructure'. These natural environments support a significant array of biodiversity including protected flora and fauna. West Yorkshire's heritage, cultural assets and built environment are equally important, with a variety of nationally and internationally recognised historic buildings and public spaces, including parks and gardens that create enjoyable spaces in which to live and work, supporting wellbeing and physical activity.

Consideration must be given to the potential impact, protection and mitigation of the following environmental issues at all stages of delivering transport projects: air quality, noise, biodiversity, carbon, flood risk, use of natural resources, water quality, soil resources and contaminated land, heritage and landscape and townscape. We recognise that certain transport schemes may be subject to the requirements of an Environmental Impact Assessment (EIA) and Habitats Regulation Assessment (HRA).

10

We will protect and, where possible, enhance our Green Infrastructure and townscapes. We will minimise the impact of transport schemes by requiring that all large transport improvement schemes are subject to an Environmental Assessment and action to mitigate adverse impacts, and that the construction of transport schemes makes efficient use of natural resources, minimises waste and re-uses and recycles materials.



Encourage healthy, active travel with improved cycling and walking facilities supported by training and promotional campaigns

Health evidence links physical inactivity to premature deaths and more than 20 chronic conditions, including heart disease, stroke, diabetes, cancer, obesity, mental health problems and musculoskeletal conditions. In West Yorkshire, 38% of people are considered inactive, causing almost 5,500 premature deaths each year. Getting more people to cycle and walk as part of their daily routine could play a key role in reducing health inequalities and reducing premature deaths. We must ensure, however, that the health benefits of increased active travel are not compromised by increased risk of injury on the roads.

Evidence shows that access to green space can improve mental health and wellbeing, reduce the risk of obesity and increase life expectancy; however levels of access to green space are worst for people in deprived communities. Although we have an extensive network of footpaths, bridleways and canal towpaths in West Yorkshire, only 18% of the population say they access green space for health and exercise.

11

We will provide infrastructure on and off-road of the highest possible quality to provide safer and better journeys for cyclists, building on the step-change achieved by our CityConnect programme including the Cycle Superhighway and canal towpath improvements.

12

We will improve access to green space in rural and urban areas, with particular emphasis on improving access for people with limited mobility.

13

We will provide behaviour change programmes, including training, access to cycles through grant and sharing schemes, and promotional campaigns, that encourage walking, cycling and public transport use for healthier travel and lifestyles.

Improve safety on our transport networks particularly for vulnerable road users

The annual cost to society of road accidents in West Yorkshire is estimated to be £365m. In 2016, the number of road fatalities on our roads was the lowest ever recorded, with 37 people killed (down from 48 fatalities in 2015), with another 849 people seriously injured - but this is still too many.

Currently 13% of collisions involve cyclists, and 11% involve motorcycles. With our focus on encouraging a shift to more sustainable modes of travel, we need to ensure we provide a safer road environment that gives people the confidence to make this shift.

14

We will work through our Safer Roads Partnership to deliver evidence-led highway design and road safety interventions to improve safety on the highway network, and to fund education, training and publicity programmes to improve road user behaviour and reduce casualty numbers, aspiring to 'zero tolerance' of transport-related deaths.

15

We will continue our support of Safety Cameras and use of Automatic Number Plate Recognition (ANPR) cameras to tackle car accidents.

16

We will seek to reduce isolation through improving road safety and encouraging pedestrian-friendly environments, paying particular attention to the safety and accessibility needs of older and frailer people and those with disabilities.

Our ambition is for an efficient, safe and reliable road network for all users, that creates new opportunities for jobs and housing.

We aim to deliver a step-change in the reliability of journey times for people and goods, and to provide high quality infrastructure for all users.

The road network, comprising highways and footways, is an essential part of our transport system. Across West Yorkshire, there are 100 miles of motorway managed by Highways England and 6,000 miles of local roads managed by the five West Yorkshire local authorities. These roads have a range of users including drivers and passengers in cars, vans, lorries, coaches, buses, taxis and motorcycles and, more locally, cycling and walking.

Our road network is congested at busy times of the day, slowing journeys and making them unreliable. Congestion is costly for businesses and freight operators and inconvenient and frustrating for individuals.

The Strategic Road Network of motorways and significant 'A' roads, managed by Highways England is essential to the functioning of our economy, but our local authorities also have a responsibility under the Road Traffic Reduction Act 1997 to investigate and introduce strategies and measures to address the growth in traffic on local roads.

Our Policies

Increase capacity on the Strategic Road Network and Major Roads Network to improve journey times, reliability and resilience.

Investment is required in improvements to the Strategic Road Network (SRN) including the M1, M62 and the A1, and our most important local roads to maintain an acceptable level of operation.

Highways England commenced work in 2015 on a West Yorkshire Infrastructure Study to identify locations where improvements would be needed to support future planned growth. The initial study findings suggests that if all the SEP Spatial Priority Areas and Local Plan aspirations for growth in West Yorkshire are fully realised, by 2030 the West Yorkshire sections of the SRN will become exceptionally congested. This traffic growth will not be accommodated by schemes that are currently planned and the performance of the SRN, and our most important local roads that connect with it, will be significantly worse in the future.

We have been working with Transport for the North to identify a Major Road Network (MRN) for the North. The MRN will be a specific network of economically important roads, additional to the SRN, that link the most important economic places across the North, both current urban centers and planned areas for job creation. The intention is to use this network and a better understanding of performance in respect of journey reliability, network efficiency, resilience and quality, to identify, prioritise and seek funding for improvements.

17

We will work with Highways England and Transport for the North to identify, prioritise and seek funding for key infrastructure projects to reduce congestion and disruption on the Strategic Road Network and Major Road Network to improve journey times, reliability, resilience and quality.

Manage a West Yorkshire Key Route Network to improve journey times and reliability

We propose to focus our attention on improving journey times and reliability on the busiest and most important local roads that are the most susceptible to congestion and delay, regardless of district boundaries. The West Yorkshire local authorities and Combined Authority will manage this network through collaborative working with neighbouring local highway authorities and with Highways England’s motorways.

We will seek to draw down appropriate devolved powers from Government to better coordinate and fund our actions. Our investment in the road network will be underpinned by our commitments set out in the Inclusive Growth, Environment, Health and Wellbeing theme to safeguard and improve quality of life.

18

We will jointly manage a 400-mile West Yorkshire Key Route Network of the most important, most congested West Yorkshire roads through targeted improvements, the use of smart technology and provision of quality information to improve journey times and reliability.

19

We will deliver local pinch point schemes to relieve traffic congestion and, where needed, add new roads to open up development sites.

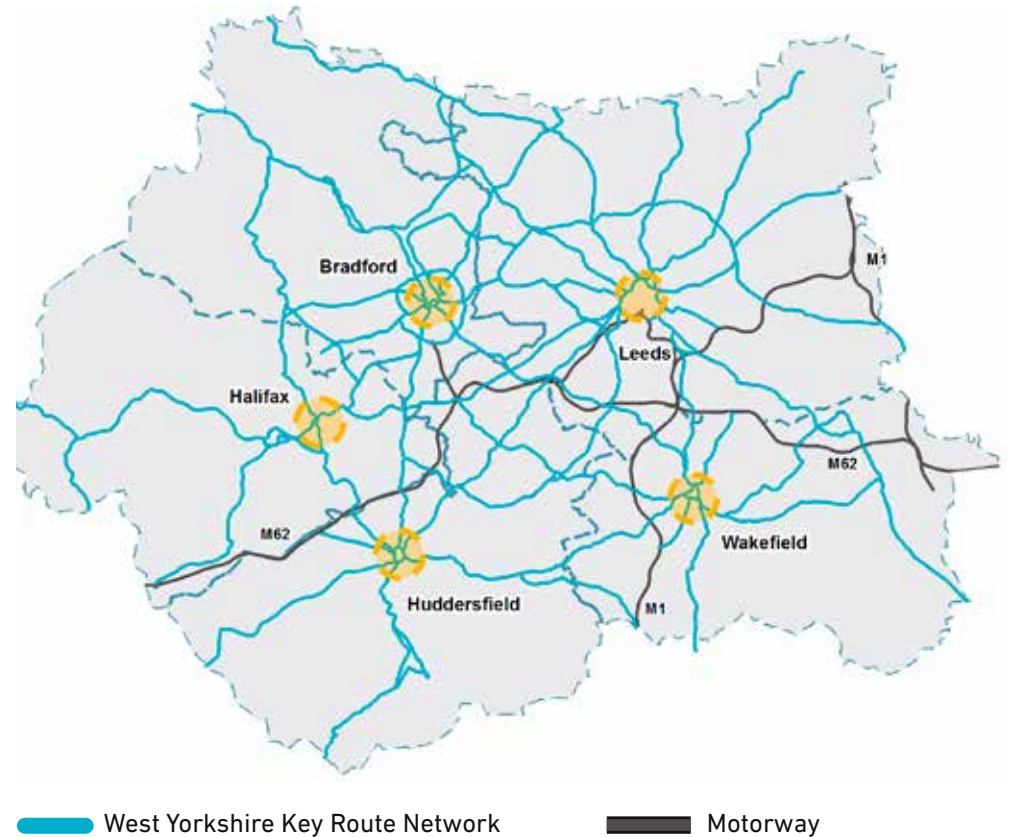
20

We will deliver targeted campaigns to improve driver behaviour to reduce safety problems and unnecessary delay and inconvenience on the road network.

21

We will balance the needs of cars with other motorised traffic (including buses, goods vehicles and motorcycles) and with cyclists and pedestrians, to reflect the function of the road and the needs of different places.

West Yorkshire Key Route Network



Provide wider options for car travel and improve environmental performance

The car has a vitally important role to play in our future economic activity and our transport system, and it will remain necessary for many trips, especially outside of our major centres. However, we need to manage the growth in car use, as well as anticipate future technologies and changing attitudes to car ownership.

22

We will substantially increase the number of car parking spaces at key transport hubs and new park and ride facilities on the edge of town and city locations.

23

We will expand our Car Club networks to provide more choice for car travel, and provide more, low emission vehicles in the car club fleet

Work with the freight industry and other partners to improve freight movements and environmental performance

Road transport will continue to be the main mode by which we connect supplies to and from manufacturing and other sectors of the economy, and with communities. With the M1, M62 and A1 and with intermodal centres at Stourton, Leeds and Normanton/Wakefield Europort, West Yorkshire has potentially good freight connections, but disruptions on the key road corridors adds costs to freight operations. The introduction of smart motorway operation to the M62 is starting to deliver some of the reliability that the freight industry needs, but we will need to do more to deliver greater reliability.

We also want to reduce emissions from freight vehicles and to move more freight on to other modes. Good progress has been made by the freight industry in reducing emissions from heavy goods vehicles through the Euro Standards, but we can do more to encourage the take-up of electric vehicles and alternative fuels.

There is potential to increase the transport of goods by rail and also by inland waterway from both Stourton and Wakefield Europort. The Aire and Calder Navigation is a designated commercial waterway with the potential to cater for Euro Class II barges. Research identifying the increasing role marine aggregates from the North Sea could play in meeting the region's aggregate requirements for development activity has led to the conclusion that there needs to be effective action to exploit the use of inland waterways to transport them. We will work with the Canal and River Trust and other stakeholders to secure appropriate improvements to the infrastructure and facilities of the inland waterway necessary to facilitate such use, and to safeguard and enhance local wharves.

24

We will work with the freight industry, businesses and other partners to improve journey times and reliability for deliveries, and to reduce the environmental impact of logistics through the promotion of electric and alternative-fuelled vehicles in town and city centres, and support mode shift from road freight to rail and inland waterway.

25

We will work with the freight industry and Local Planning Authorities to support the provision of freight and logistics infrastructure such as consolidation centres, lorry parking, rail infrastructure and waterway facilities.





Work with the taxi trade to improve taxi facilities and environmental performance

Taxis, including hackney carriages and private hire vehicles are a valuable part of our transport system, providing more choice for whole journeys or part journeys. Taxis also provide a valuable service for those people with a disability or mobility impairment. We want to enhance this offer.

26

We will provide better taxi access, parking and drop-off/pick up at transport hubs, and work with Taxi Licensing Authorities and the taxi trades to promote the take up of low emission electric taxis by accelerating the provision of recharging facilities for taxis.

27

We will work with Taxi Licensing Authorities and the taxi trades to develop consistent standards for policy, regulation and operation, including strengthened standards for the protection for vulnerable users.

Provide safer, more convenient networks for walking and cycling

Two-thirds of the journeys made by West Yorkshire residents are under five miles. Walking and cycling are ideal ways of making these shorter journeys, offering convenient, affordable and healthy travel, which makes good use of limited road space.

Olympic cycling successes and the hosting of the Tour de France Grand Depart 2014 and Tour of Yorkshire cycle events appear to have had an impact in changing attitudes towards cycling and introducing new people to the fitness and financial benefits of cycling in our region. We are starting to see real growth in use. We believe we can build on this trend to meet and exceed the Government's target set out in its Cycling and Walking Investment Strategy (2016) to double cycling levels by 2016. Identifying and making improvements to cycling and walking networks is key to ensuring we achieve our targets and we will use best practice and guidance in the development of our cycling and walking routes and networks. Increased cycling has however contributed to an increase in the number of cyclists involved in road collisions, and we must invest in more cycle facilities and safety schemes to remove the fear and possibility of collisions if we are to match the cycling levels of leading UK and European cities.

We have made a start with our £60m CityConnect programme to deliver a step change in the quality of cycle infrastructure on some key routes across West Yorkshire, including a 23km segregated, Cycle SuperHighway connecting Bradford to east Leeds via Leeds city centre, the first stage of which opened in July 2016. The delivery of CityConnect has been supported by traffic calming and engagement work with the communities along the routes to identify barriers to cycling and build confidence and skills through training.

The increases in walking that we are seeing can be attributed in part to the growth in city centre living and changes in the design of our town and city centres to become more pedestrian-friendly. We believe we can get more people to walk for shorter journeys as we invest in the quality of our public realm and pedestrian routes and facilities and improve access to our public transport hubs.

28

We will provide strategic and local networks of high quality walking and cycling routes that are safe and convenient to use and provide access to town centres, local services and the wider public transport network, with enhanced cycle parking provision for joined up 'door to door' journeys

Motorcycles are another convenient, affordable and efficient form of transport in their use of fuel and of road space. We believe that levels of motorcycle usage could increase due to the lower costs associated with motorcycles and the limited alternative transport options in some areas. However it is recognised that users are vulnerable to road traffic collisions.

29

We will improve road conditions and facilities for motorcyclists, designing our infrastructure to remove issues that could affect motorcycle safety, introducing, where possible, a phased programme of allowing motorcycles to use bus lanes; providing more and secure motorcycle parking provision; and adopting a standardised approach to local authority controlled motorcycle parking.



Places to live and work

Our ambition is for West Yorkshire to be known for the quality and liveability of its places.

We will use our transport investment to help transform our cities, towns and neighbourhoods - to create clean, safe, healthy places for communities and businesses, which attracts greater inward investment.

The 'good growth' economy we are proposing will require us to attract and retain high-quality businesses and skilled, talented people in a highly competitive and mobile global market place. West Yorkshire offers outstanding heritage, culture and quality of life and it is vital that we build on and enhance our assets to ensure that our cities, towns and smaller settlements continue to offer attractive places to live, work and visit.

The quality of our public realm, including civic buildings, open spaces, parks and publicly owned streets and pathways, has a fundamental bearing on the attractiveness of our places. Bradford City Park shows the impact that can be achieved in increasing city centre attractiveness, footfall, business activity and confidence by investing in high quality public realm and green infrastructure. High quality green infrastructure, water and drainage features will be central to the way in which we plan and shape places and new developments, and the corridors that connect them, to increase the attractiveness and sustainability of our places.

We will also seek to improve our neighbourhoods through the creation of healthy and safer streets. This will make them great places to live with the added benefits of clean air, local trips easily made on foot or by bike, more social interaction between neighbours, and greater opportunities for outdoor activity and play, all well connected to public transport.

In our central areas and neighbourhoods, getting the mix right will be important, balancing movement and access for goods and people alongside the quality of people-friendly places. To ensure we get that right mix, our delivery will be underpinned by consideration of our inclusive growth, environment, health and wellbeing theme.

Our Policies

Create more accessible, people-friendly city and town centres

We want to enhance our urban centres to create environments that will foster greater business and social interaction and collaboration. We want them to attract more inward investment and new businesses to the region, attract more city living to increase the vitality of town and city centres and to boost businesses already located there. To do this we will improve the public realm and streetscape of our centres, providing more space for people than vehicles, making this space both useful and attractive, using high quality materials, more greenery and providing facilities that will allow people to use and enjoy the spaces we create.

30

We will improve our gateway rail and bus stations to improve access and create attractive public places to ensure that travel to and from our towns and cities offers the best possible experience for local people, businesses and visitors.

31

We will free up space in our town and city centres to develop a more people friendly environment for walking and cycling, and to attract new commercial occupiers.

Create more accessible people-friendly local centres and neighbourhoods

We want to improve our local centres, high streets and neighbourhoods. We will balance the needs for traffic access with creating spaces that people can live in and enjoy. Better residential and high streets will provide important elements of local walking and cycling networks, linked to a wider network of cycle and walking routes into and between urban centres.

32

We will improve our residential areas with transport and streetscape improvements, using best practice in street design. We will work with local communities to make residential areas safer, healthier and greener, with attractive environments for play, walking and cycling.

33

We will wherever possible seek to mitigate the impacts that major transport corridors have on communities. We will reduce the severance, noise and poor air quality that can affect people's quality of life.

Create more accessible, people-friendly new developments

As well as the places in which we currently live and work, our ambitions for growth will see the development of new places, as we create new communities and commercial developments. We want these new developments to be designed to the highest possible standards to ensure they also provide great places to live and work.

34

We will work with planning authorities and developers to ensure new developments are accessible and that they positively promote walking, cycling and public transport use.

Artists impression: Kirkstall Forge, a new, thriving mixed-use community, comprising homes, offices and retail, leisure and community space. Credit: CEG



M One System Public Transport

Our ambition is for a world class public transport system that connects different modes of transport seamlessly into one comprehensive, easy to use network.

We aim to transform the performance, image and experience of public transport to make it an attractive choice for all.

We want to create a public transport network that offers passengers a seamless, high quality experience. Rail is currently the backbone of our mass transit network. Where the service is frequent and with newer trains, the number of commuters using rail is high. We want to replicate this high quality service across the City Region. Buses are currently the most used form of public transport and we need to ensure there is better integration between these two modes including physical interchange, timetabling, ticketing and payment.

We have an ambition to build on our current public transport networks and we will set out a plan for how different modes, including rail, mass transit and bus rapid transit, can unlock economic growth constraints. We recognise the benefits of segregating public transport from other road vehicles and will look at key corridors for where this could be developed further. More people are now travelling between districts to access work opportunities. The diagram on page 43 shows the linkages between our major hubs and illustrates the need to consider improved connectivity across the different parts of the region to create easier journeys for people living, working and accessing services.

We need our public transport system to be High Speed ready. We will link to and build on national investment in High Speed Rail and Northern Powerhouse Rail proposals and we will align our public transport investment with improvements to the motorways and our local roads for a truly integrated transport system. Only through improving our public transport offer, be that bus, rail, park and ride, mass transit or other modes, will we be able to achieve our economic objectives at the same time as ensuring that our towns and city centres are places that promote health, wellbeing and attract inward investment.

Our ideas for public transport have been developed with the involvement of Chambers of Commerce. We will continue to work with business leaders to develop and deliver short and long-term improvements to provide the necessary connectivity and capacity to support a vibrant City Region.

Our Policies

Integrate and enhance the public transport network

Integrating different modes run by different private sector operators is not easy. However, passengers rightly expect a public transport network that provides them with fast, frequent, reliable journeys with easy to use ticketing and useful and timely information – regardless of who runs, or owns, it.

Therefore we will work with the Government and transport operators to provide a more seamless journey for passengers. We will also work to ensure we make the most of the investments in national, regional and local projects to enhance our network.

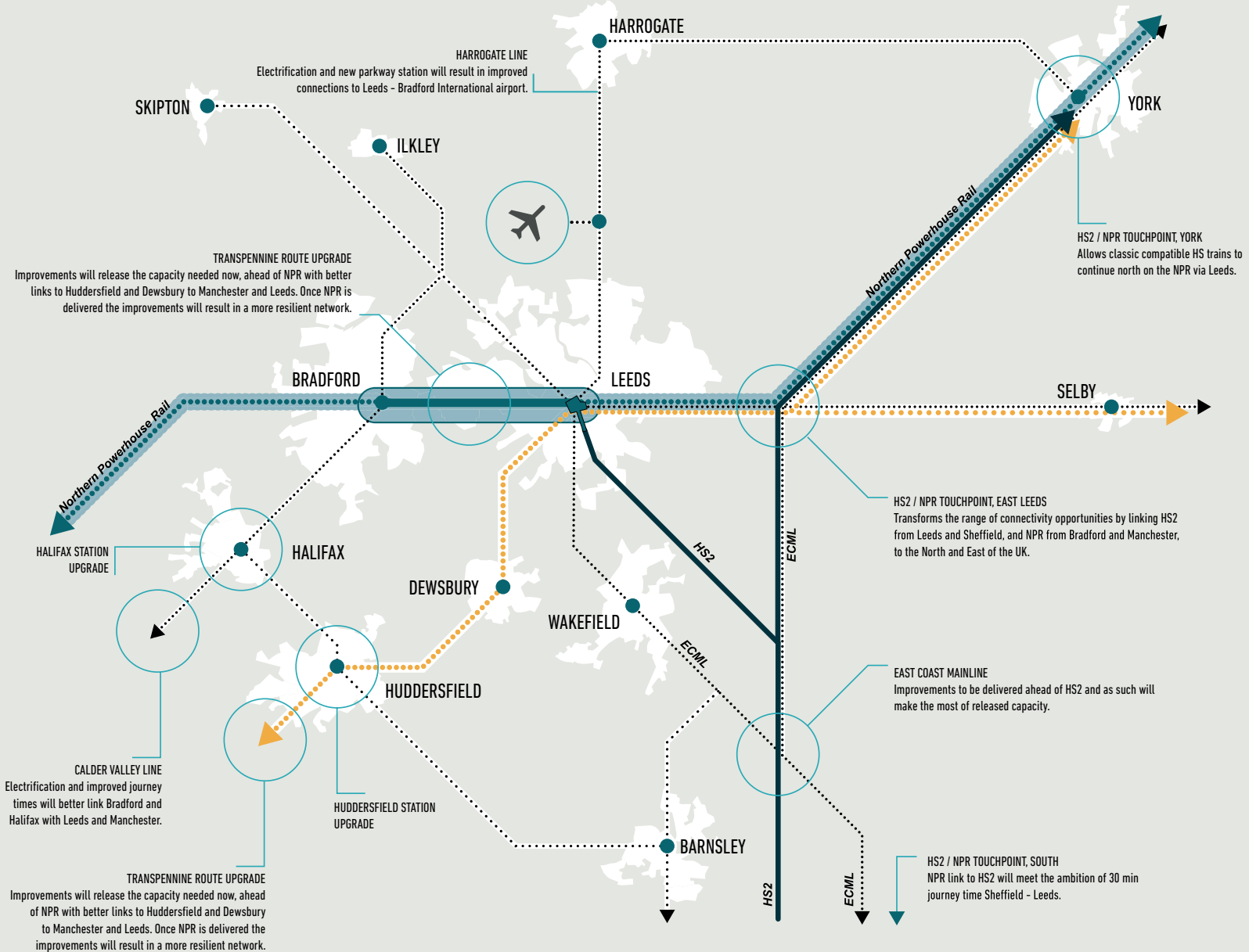
35 We will improve the public transport offer by investing in bus corridors and accelerating the delivery of new and expanded Park and Ride facilities. We will deliver a mass transit strategy for the City Region, which caters for the future growth planned in our city centres.

36 We will better integrate all tiers and modes of transport, including physical interchange, timetabling, ticketing and payment.

37 We will ensure the local public transport system across the City Region is 'High Speed' and 'Northern Powerhouse Rail' ready. We will align our public transport investment with improvements to the motorways and our local roads, for a truly integrated transport system.

Our regional public transport priorities

This diagram outlines our plans for the public transport network



Enhance the rail network as the core of an integrated, public transport system

Rail services provide many of our regional connections, linking towns and cities across West Yorkshire and beyond. They also provide local connections in some areas, but there can be a conflict between the need for fast journey times while also trying to meet the need for local access.

Removing some constraints on the rail network will be important to delivering greater capacity and operating more trains. Heavy rail will remain a key part of transformed public transport system, providing the main solution on the following corridors:

38

We will implement the recommendations of the Yorkshire Rail Network Study (YRNS)- working with Transport for the North, Rail North and the rail industry to replicate across the City Region the best quality of rail travel (capacity, frequency, journey times, quality).

39

We will focus on corridors that do not currently meet the standards of the YRNS (or do not have schemes that are committed or in development) such as the Calder Valley, Hallam, Pontefract and Penistone Lines. We will focus on providing capacity across all corridors to meet rising rail demand.

40

We will press the case for the rail industry to commit itself to a rolling programme of electrification and upgrades of the rail system serving the region, building on the Trans-Pennine scheme, with the Calder Valley and Harrogate lines being prioritised.

41

We will work with HS2, Department for Transport and Transport for the North and the rail industry to develop plans that make best use of HS2 and Northern Powerhouse Rail for this region, including the use of released capacity. We will work to develop and deliver a Northern Powerhouse Rail with stops in Bradford, Leeds and York and to ensure HS2 and NPR are properly integrated.

42

We will work with Government, HS2, TfN, the rail industry and partners to develop and implement a phased plan for Leeds Station. We will look to increase the efficiency and long-term capacity of Leeds Station by running more local, cross-city rail services through the station rather than terminating.

43

We will work with Transport for the North, Rail North and the rail industry to develop proposals to run more attractive services that provide better connectivity in and throughout the City Region to make the best use of our existing infrastructure.

44

We will bring forward solutions to improve connectivity for strategic growth areas such as Leeds Bradford Airport, the East Leeds Extension Housing developments, Millshaw/White Rose, Elland and the Five Towns area of Wakefield and others.

45

We will work with East Coast Main Line authorities, the rail industry, Transport for the North and the Government to make the case for investment in capacity and resilience of the East Coast Main Line.

Deliver a bus system that reflects travel patterns and puts the customer first

Bus is a fundamental and significant component in the delivery of a modern, integrated, inclusive transport network. Each week, people in West Yorkshire make almost three million journeys on local bus services, making the bus the most highly used form of public transport. People use the bus for traveling to work, education and training, hospitals, shops and a range of social and leisure activities.

In addition to the economic benefits, the bus is an effective tool of social policy for delivering inclusive growth. Vulnerable and socially disadvantaged groups in society are often the most reliant on bus networks. Bus services are fundamental to providing unemployed people with access to work; young people to education and training; and providing a way out of social isolation for older and disabled people.

Our goal is to create the best bus system in Europe, where catching the bus in West Yorkshire is an attractive and natural choice for everyone. Delivering this step change is fundamental to delivering the economic growth targets for West Yorkshire and the City Region. To realise this, the vision for the West Yorkshire Bus Strategy is:

To create a modern, integrated and innovative bus system which puts customer first and contributes to the delivery of West Yorkshire's economic, environmental and quality of life ambitions as set out in the Strategic Economic Plan and the West Yorkshire Transport Strategy

The ambition is to increase bus users by 25% growth from 2017 levels, over the next 10 years, but given the level of housing and employment growth forecast, it may be possible to target even higher levels of bus patronage in certain areas.

To achieve our vision for bus travel we will deliver a blend of seven coordinated policies:

46

We will provide consistent, excellent customer services across the bus system
We will provide modern, coherent and integrated bus services
We will provide integrated, simple and affordable bus fares for all
We will provide easily accessible and reliable travel information
We present the bus system as a single network
We will provide a modern bus system which improves air quality
We provide an inclusive and accessible bus system

Deliver high quality Transport Hubs for improved interchange between all modes

Achieving excellent connectivity through high quality and efficient interchange is pivotal to delivering this strategy. Our Transport Hubs are where journeys link up, and where a range of services are available.

47

We will deliver improved transport hubs at our national and international gateways and regional and district centres to better link our local networks.
We will provide more integrated payment options and travel information.

48

We will work with Leeds Bradford Airport as it grows, to create a better connected airport with improved public transport to help unlock the economic potential and inward investment opportunities it presents.

A West Yorkshire Bus Strategy has also been adopted by the Combined Authority and can be accessed at:

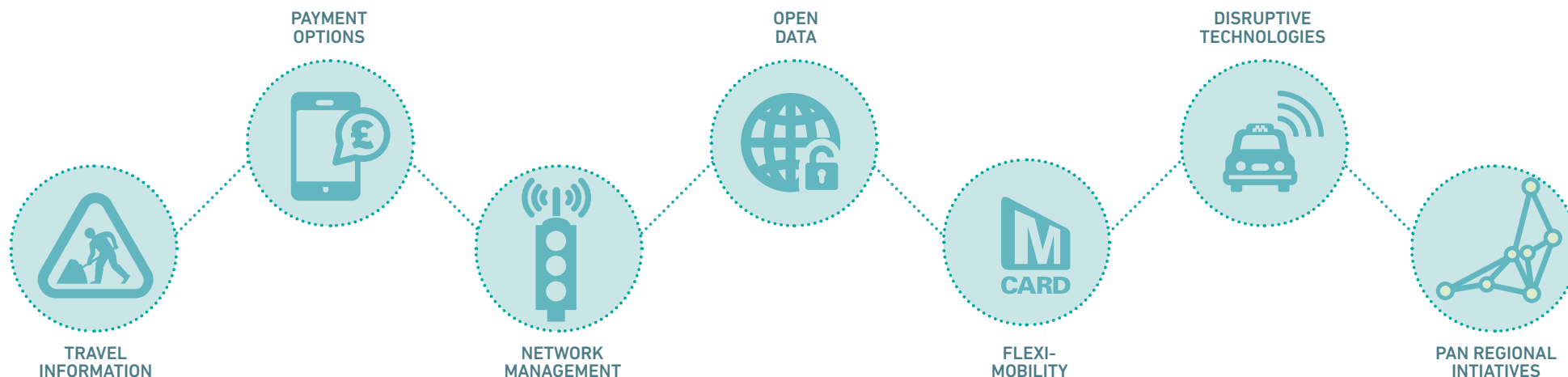
www.westyorks-ca.gov.uk/transport/bus_strategy

Smart futures

Our ambition is to make best use of advancements in technology across all of our transport networks

We aim to better plan and manage all of our transport networks to transform the affordability, ease and experience of the people using it.

Technology is already transforming transport. We will harness advancement in smart and disruptive technologies, connected transport and open data to further transform our transport system by delivery through national, pan-northern and local initiatives, reflecting the need for wider integration and economies of scale.



Our Policies

Improve and coordinate traffic management systems to improve journey times and reliability

Our road network policies highlights the importance of improved journey times and reliability. We propose to fully harness the potential of smart technology to improve how we manage our road networks to extract maximum efficiency and performance and to provide a consistency of service across the region.

49

We will use intelligent traffic management systems to reduce traffic delay and disruptions, such as failed traffic lights, and introduce an integrated network management and driver communications centre. We will work closely with Highways England for comprehensive coverage of the road network.

50

We will improve our management of the transport networks by using ticketing, payment and real-time traffic data, and rail and car park occupancy information to provide a comprehensive view of how the transport system is performing.

51

We will improve our understanding and decision making on transport investment through enhanced use of new, better quality sources of travel data in our transport modelling and appraisal, such as (anonymised) smart ticketing and mobile phone data.

Deliver mobility as a service for an enhanced customer experience

We want to be at the forefront of developing 'mobility as a service' where customers have a mobility account that enables them to use buses, trains, taxis and shared cars (car clubs) and bikes. We have a strong foundation for mobility as a service through our existing MCard travel smart ticketing card system for West Yorkshire's bus and train networks. MCard is the biggest smart system outside London with more than a million transactions per week. The system already encompasses concessionary and period products, with further enhancements such as pay as you go launched in 2016. MCard holders are already able to link their cards with the West Yorkshire car club scheme, currently operated by Enterprise, with preferential pricing offers.

We believe that this approach will help meet the needs of our future transport users supporting and facilitating a trend away from car ownership to a more flexible model of transport combining public transport, car club membership or bike sharing.

52

We will work with Transport for the North and other partners to develop the infrastructure and back office systems to offer options for customers to pay before travel (the current model) and also to be invoiced after travel through a mobility account (with registered customers able to travel by different modes and be invoiced for travel each month).

Improve passenger information for greater availability and ease of use

Real-time passenger information is already available on nearly all buses and trains and can be accessed via web and SMS, as well as on information screens.

53

We will work with partners to develop new easy-to-access customer information, allowing greater choice between travel modes, and the replanning of journeys if disruption occurs.

54

We will ensure travel information is available in a number of non-digital and accessible formats.



Support Open Data initiatives to improve network performance and customer experience

55

We will collaborate on open data initiatives to continuously improve our transport network's performance and the customer experience.

56

We will engage with and support innovators that develop smart technologies that will enhance our transport network and improve accessibility for all.

We will explore the potential for other smart initiatives, which are being developed by the market to act as 'disruptive' technologies. Current examples include the private hire vehicle system Uber and the adoption of driverless vehicles.

Connected and autonomous/driverless vehicles have the potential to transform transport provision and usage, with the ability to make better use of highway capacity as well as encouraging new models of car sharing. We will develop our approach to the deployment of autonomous vehicles on our roads, as the technology is tested through pilot projects in the UK ensuring that this new form of travel becomes well integrated with other modes.

We will also explore the opportunities for applying innovations, user interface, smart communications, and journey planning to develop our Mobility as a Service offer.



Asset management and resilience

Our ambition is to ensure that we make best use of our existing and future transport assets.

We aim to ensure our transport networks are fit for the future and properly managed in a safe, sustainable, environmentally friendly and cost effective way.

Transport asset management is about more than just maintaining our roads. There are bridges, traffic control systems, street lighting and public transport infrastructure that requires investment to deal with current and future demands. While our customer satisfaction surveys tells us that the travelling public rate roads and our other assets as being 'very important', these people also express dissatisfaction with their condition. Potholes, defective roads and poor quality cycle tracks and footways can create inconvenience, affect the quality of journeys and incur costs on users but also present potential hazards to our more vulnerable road users such as motorcyclists, cyclists and pedestrians.

Although research shows that poorly maintained roads fall into a deeper state of disrepair contributing to traffic delays and disruption, the under investment in highway maintenance by successive governments means managing our transport assets presents a major challenge. We have a backlog of repairs and there is a growing gap between the costs of the repairs and the funding that is available. We must make our approach to, and funding for asset management work better.

We have already adopted the Government's Highways Maintenance Efficiency Programme (HMEP) and, since 2011, have achieved significant efficiencies and been awarded the maximum incentive funding from Government for our good work. The key features of the Highways Maintenance Efficiency Programme are:



HMEP LIFECYCLE PLANNING

To review funding, support investment decisions and substantiate the need for sustainable long-term investment at the right time



HMEP PRIORITISED FORWARD WORKS PROGRAMME

Delivery of a five year rolling programme of interventions



HMEP PERFORMANCE REVIEW

Regular performance reviews to measure progress and adjust programmes to keep on track

Our Policies

Deliver efficiencies and maximise funding and environmental performance in asset management

We want to build on the good start made with HMEP and continue to develop our practice, deliver further efficiencies and maximise the funding that we can put back into our road network

57

We will adopt better longer-term asset management planning, with common standards across district boundaries. This will make better use of limited budgets, enable joint working and sharing of best practice

58

We will reduce carbon emissions from the renewal and maintenance of our transport assets by maximising the re-use and recycling of materials

59

We will adopt shared procurement for our asset renewal and maintenance programme to improve efficiency and reduce costs whilst maintaining quality. We will work with planners, architects and utility providers to ensure we achieve efficient management of assets through the planning and design process.

Improve the resilience of our road network to function reliably

Network resilience for road is related to the network's ability to function reliably during periods of high demand such as the daily morning commute and entertainment and sporting fixtures, varied conditions such as heavy rain and snowfall, and more serious disruption caused by vehicle collisions, breakdowns or extreme weather events such as flooding. Maintenance and renewal of our roads will also help ensure reliable services such as water, gas and electricity are connected to our businesses and homes which are subject to their own maintenance regimes. Planning of highways and utilities maintenance will be done in a coordinated way to minimise disruption to users and ensure that the condition of assets is maintained.

60

We will take a proactive approach to network resilience by tackling problems associated with disruption to the road network through active maintenance in clearing drains regularly and carrying out tree or retaining wall inspections.

61

We will invest in the timely renewal of assets such as traffic signals and lights to minimise the possibility of failures, with new equipment that is more reliable and cheaper to operate.

62

We will carry out regular inspections of roads and roadworks to safeguard these assets, and provide customer information through signage and social media to minimise delays and disruption.

'Invest to save' to improve performance and value for money in our transport networks

New equipment has the advantage of providing more performance data about the network, helping us to manage it actively and deal with changing circumstances.

63

We will 'invest to save', and seek new and alternative funding sources to support asset maintenance and renewal, including from private sector developments to invest back into the network.

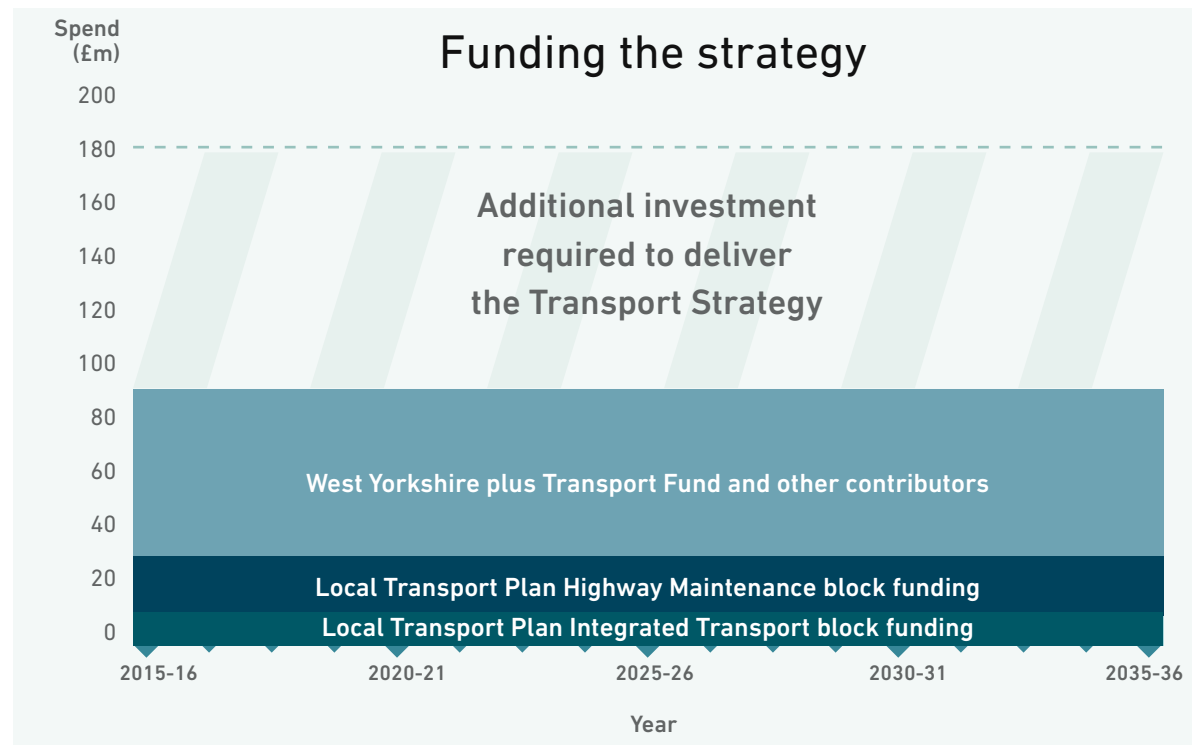
7. Funding the strategy

We have ambitious plans for the transport system – but the affordability of our plans is a challenge.

In 2014 we secured one of the country’s largest Growth Deal settlements in the country, This will provide £1bn to establish a 10-year Transport Fund for West Yorkshire and York that will fund the delivery of a number of large, strategic transport projects to help to create 20,000 new jobs and add £2.4bn a year to the economy by the mid-2030s. But this is only a starting point after decades of under investment. Achieving our economic, environmental and social objectives will require a long-term programme of sustained, substantial capital investment together with a revenue base programme to support it.

Our funding proposals are not all about strategically important major transport schemes. Smaller interventions offer great outcomes and great value, and are less complex and easier to deliver in a shorter time period.

In consultation with our partners, stakeholders and customers we will develop phased programmes that provide a balance of small and large schemes and a mix of capital and revenue funding. This will ensure we can make good progress delivering early wins on the ground and ensuring that progress is accelerated on delivering the strategic, transformational infrastructure.



Our Policies

New capital funding

Capital funding is spent on new additions or improvements to the transport network, for example improving a highway junction, repairing a bridge, building a new bus or rail station or cycle route. In the past, capital funding has generally been provided by central government through direct grant, major scheme funding or through one-off bidding competitions.

The way in which transport is funded is changing. Each year the direct capital grant received from Government gets smaller, with more bidding competitions taking its place. Major transport schemes have, in recent years, been largely funded from Local Growth Deals.

We want to build on the solid foundation provided by the West Yorkshire plus Transport Fund and we will develop new ways to fund the ambitions set out in this strategy. Maintaining these current levels of capital funding over the full life of this strategy will require about £80m - £90m per year of funding. To deliver all of the Strategic Economic Plan and all of the ambition in the West Yorkshire district council's Local Plans could require double this current level of capital funding.

64

We will aim to take full advantage of devolution deal powers and local deal funding streams to secure devolved and consolidated transport budgets set within multi-year settlements.

65

We will develop new funding arrangements to deliver the transformational step-change required in transport. We will align and link up our investments with funding provided by other agencies such as HS2, Northern Powerhouse Rail, Transport for the North and Highways England to make all available funding stretch further.

New revenue funding

Revenue funding is spent on activities that support the operation of the transport system such as repairs and maintenance of assets; electricity for street lights; evening, Sunday and rural bus services; providing customer travel information and promotional activities. Generally revenue is provided locally from Council Tax, but the government also provides significant revenue resources for supporting local rail franchises and towards the cost of the national concessionary travel scheme. However, revenue funding continues to be under pressure from the government's austerity programme.

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We will explore options for raising new funding locally, including through fiscal demand management measures such as road-user charging and workplace parking levies, to reinvest into sustainable transport options - but only when our local economic conditions are right.

Development funding

The private sector can also help fund infrastructure projects. When market conditions are right - and the development market is buoyant - the private sector invests significant funding into our local areas through retail, commercial and housing projects; for example, where quality of place and connectivity are essential ingredients.

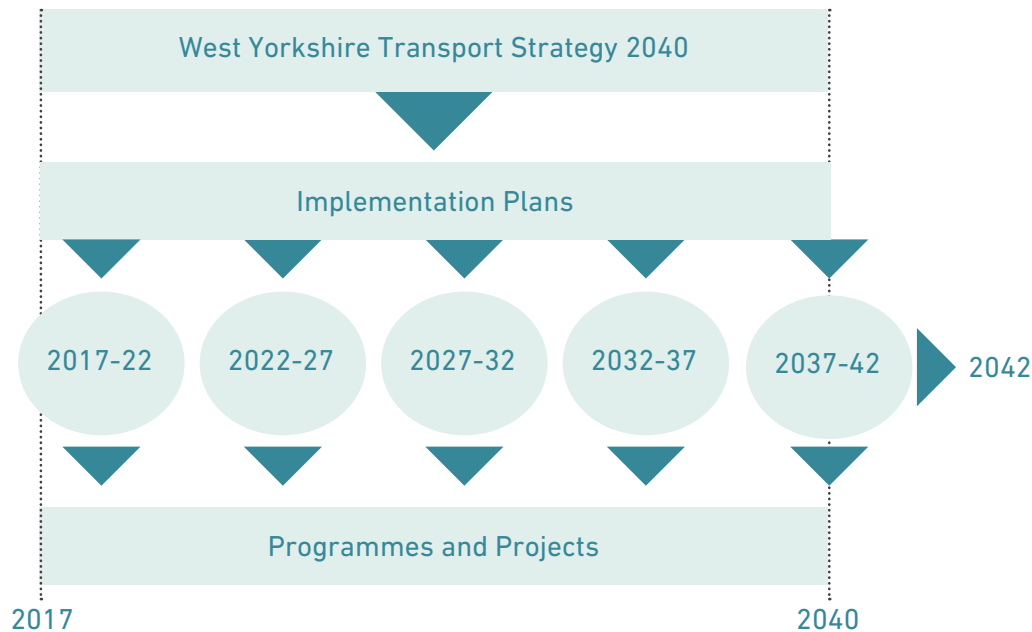
67

We will continue to seek site-specific mitigation of the impact of development through planning obligations under Section 106 of the Town and Country Planning Act 1990 and through the Community Infrastructure Levy where the Local Planning Authority has a scheme in place for strategic infrastructure.

8. Implementing the strategy

This Transport Strategy sets the vision, objectives and policies to steer investment in our transport infrastructure and services.

The strategy will be supported by a series of five-year Implementation Plans, containing the specific programmes and projects. The implementation of the strategy will be managed by the West Yorkshire Combined Authority with the five West Yorkshire local authorities, with the delivery carried out by various partners and agencies. Appropriate programmes and projects will be aligned to ensure delivery costs are minimised. Regular reviews of progress will be carried out to ensure the strategy is on track.



High-level programme and early delivery

An indication of the high-level programme that will be required to deliver the Strategy is shown on page 54. In it we show some of the key programmes and projects that will form part of the first two, five-year Implementation Plans. Development work is underway to develop the detail and to progress the delivery of the programmes and projects in the first five-year period.







Our approach to assurance

Recognising the growing levels of investment and funding under local control or influence, it is essential that there are robust, transparent and accountable processes in place to ensure value for money for the public purse. The Combined Authority and LEP have agreed an Assurance Framework that sets out the safeguards and processes we have put in place to ensure the proper use of public funds and that value for money is secured from all the funding under our remit. We view the Assurance Framework as an essential part of good practice and as an asset that further builds government trust in our capability to take our own investment decisions.

Our approach to performance management

The delivery of the Transport Strategy will be supported by a performance management framework of indicators and targets for the monitoring and evaluation of our investments and interventions. Questions were asked in our 2016 public consultation about how we should measure performance, and the consultation responses will form an important part in identifying appropriate indicators and targets. The Combined Authority is currently working with partners to develop the full indicator and targets set, with the work to be completed in early 2018. The Transport Strategy will be updated once these indicators and targets for the full period of the strategy have been agreed.

INDICATIVE TRANSPORT STRATEGY IMPLEMENTATION PLANS - First 10 years of the strategy

	First five-year Implementation Plan period	Second five-year Implementation Plan period
 <p>INCLUSIVE GROWTH, ENVIRONMENT, HEALTH AND WELLBEING</p>	<ul style="list-style-type: none"> Electric vehicle and bike charging infrastructure Bus Emission Strategy implementation Safer Roads highways improvements, education, training CityConnect 1 and 2 cycling and walking programmes, with engagement on cycling and walking to work and education Greener fleet initiatives Transport and Health programmes 	<ul style="list-style-type: none"> CityConnect 3 - cycling and walking programmes Low carbon/alternative fuels Transport, Health and Environmental programmes
 <p>ROAD NETWORK</p>	<p>West Yorkshire plus Transport Fund:</p> <ul style="list-style-type: none"> Castleford Northern Gateway East Leeds Orbital Road Glasshoughton Southern Link Road Leeds Bradford Airport Link Road York Central Access A650, A62, A641 Corridor Improvements West Yorkshire Key Route Network improvements Local motorcycle, cycling and walking improvements Local Network Traffic management improvements 	<ul style="list-style-type: none"> Highways England RIS2 Road Investment Strategy Highway capacity improvement programmes Journey time reliability programmes Projects to unlock strategic growth areas Strategic cycle networks and walking improvements Strategic freight improvements Highways, Bridges, structures, lighting and drainage renewal
 <p>PLACES TO LIVE AND WORK</p>	<p>West Yorkshire plus Transport Fund:</p> <ul style="list-style-type: none"> Leeds City Centre Package Wakefield City Centre Package Rail Gateway Improvements; Bradford Interchange, Bradford Forster Square, Castleford, Huddersfield, Leeds Station Bus station enhancements Local centre and neighbourhood improvements 	<ul style="list-style-type: none"> Urban realm programmes to enhance urban centres Neighbourhood investment programmes to create liveable streets Rural transport investment programmes
 <p>ONE SYSTEM PUBLIC TRANSPORT</p>	<ul style="list-style-type: none"> TransPennine Route Upgrade and Electrification Leeds Bradford Airport Public Transport Access HS2 and Northern Powerhouse Rail design and consultation phase 'Park and Rail' programme Leeds Public Transport Improvement Programme incl. new park and ride, city centre and district hubs, new rail stations, bus priority Elland Rail station development and delivery Bus journey time improvements 	<ul style="list-style-type: none"> TfN programmes Transport hubs and interchanges Mass transit and public transport corridor enhancements HS2 design and construction phase Northern Powerhouse Rail design phase Harrogate Line and Calder Valley Line electrification
 <p>SMART FUTURES</p>	<ul style="list-style-type: none"> Smart Motorways for improved motorway capacity Transport for the North Integrated and Smart Programme West Yorkshire MCard smartcard enhancements 	<ul style="list-style-type: none"> Smart North programme Travel information / journey planning programme Motorway and junction programmes
 <p>ASSET MANAGEMENT & RESILIENCE</p>	<ul style="list-style-type: none"> Highways, bridges, structures, lighting and drainage renewal Pothole repairs Flood resilience improvements Bus shelter and station maintenance 	<ul style="list-style-type: none"> Highways, bridges, structures, lighting and drainage renewal Pothole repairs Flood resilience improvements Bus shelter and station maintenance

Gearing up to deliver the Transport Strategy

We will need to gear up to deliver an expanding capital programme of transport infrastructure schemes including HS2, Northern Powerhouse Rail, the West Yorkshire plus Transport Fund and a range of transformational active travel and low carbon/low emission projects.

Our transport investment represents a challenge and at the same time an opportunity for the region. There will be demand for a highly skilled construction workforce which will exceed current numbers and where skills shortages in certain occupations have already been highlighted including civil engineers, labourers, plant operatives and logistics - but this delivery of capital schemes and physical developments will also provide significant opportunities for creating jobs, skills, apprenticeships and addressing social inclusion.

The West Yorkshire Combined Authority and the LEP published an Employment and Skills Plan in 2016, which sets out how we will help the construction industry to meet its long-term skills and labour needs, and maximise the jobs, skills and poverty reduction opportunities that these schemes present. In 2017, the Combined Authority launched a major careers campaign targeting young people and parents to raise awareness of career opportunities available in the region, including construction and transport. There will be a particular emphasis on targeting our more disadvantaged communities and improving the diversity of the workforce by engaging girls and pupils from ethnic minority backgrounds. The West Yorkshire Combined Authority has already worked with the Joseph Rowntree Foundation to implement a Good Growth approach to its procurement of major capital and infrastructure schemes, in order to improve jobs and skills outcomes, and will shortly launch a scheme to maximise employment and apprenticeship opportunities linked to our major infrastructure schemes.

Full details of the Employment and Skills Plan can be found at:
www.the-lep.com/skills







9. Integrated sustainability appraisal (ISA)

Creating and sustaining transformational economic growth requires an environment where people want to work and live, businesses of the future want to invest and all individuals and communities have access to job opportunities and services (such as education, training and healthcare), and are able to contribute to and benefit from economic growth.







The Transport Strategy, in setting a high level framework for future transport investments is subject to the requirements of the EU Directive (2001/42/EC) which requires the undertaking of a Strategic Environmental Assessment (SEA). We decided to incorporate this Strategic Environmental Assessment requirement within a broader Integrated Sustainability Appraisal (ISA), that also included other assessments such as Habitats, Equalities and Health Impact Assessments. The aim of an ISA is to promote sustainable development through the better integration of social, environmental and economic considerations into the preparation and adoption of plans. An ISA shows how sustainable the effects of a policy, project or site are likely to be and where there may be harmful impacts from development and how far these can be mitigated.

Undertaking the ISA provided independent review and challenge to our proposed objectives, policies and interventions throughout the development of the Transport Strategy, to help us arrive at the right balance of appropriate policies. The recommendations of the ISA have been incorporated into this Transport Strategy.

APPENDIX A.
How the Transport Strategy fits with the Strategic Economic Plan

SEP PRIORITIES			
	PRIORITY 1 Growing Business	PRIORITY 2 Skilled people & better jobs	
TRANSPORT STRATEGY CORE THEMES	 INCLUSIVE GROWTH, ENVIRONMENT, HEALTH AND WELLBEING	<ul style="list-style-type: none"> A transport system that serves disadvantaged and rural communities and encourages a healthy and active workforce. 	<ul style="list-style-type: none"> Support for young and unemployed people to access work and apprenticeships - addressing costs and travel barriers Increased active travel benefiting health - with cycling established as a significant transport mode
	 ROAD NETWORK	<ul style="list-style-type: none"> Provide access to the widest possible labour pool and bring new markets in reach for firms Supply chain development linked to major roads projects 	<ul style="list-style-type: none"> Ensuring people have an efficient road network that supports safe access to training and employment for all road users. A network that unlocks new employment sites and opportunities
	 PLACES TO LIVE AND WORK	<ul style="list-style-type: none"> Creating quality environments that attract investment and support businesses to thrive 	<ul style="list-style-type: none"> Creation of liveable centres and neighbourhoods
	 ONE SYSTEM PUBLIC TRANSPORT	<ul style="list-style-type: none"> Provide access to the widest possible labour pool Supply chain development linked to major transport infrastructure projects e.g. HS2 	<ul style="list-style-type: none"> Creating an integrated public transport network that increases access to training and employment opportunities for all
	 SMART FUTURES	<ul style="list-style-type: none"> Open data access for innovation in digital travel information 	<ul style="list-style-type: none"> 'Smart' ticketing that improves the cost of travel
	 ASSET MANAGEMENT & RESILIENCE	<ul style="list-style-type: none"> Providing a resilient and dependable transport network that supports the movement of goods and people 	

SEP PRIORITIES

<p>PRIORITY 3</p> <p>Clean Energy & Environmental Resilience</p>	<p>PRIORITY 4</p> <p>Infrastructure for Growth</p>	
<ul style="list-style-type: none"> • Low Emission Strategy - to reduce carbon emissions and air pollution from transport • Achievement of clean air standards • Modal shift to sustainable transport 	<ul style="list-style-type: none"> • Electrified transport infrastructure and options • A test-bed for non-conventional fuel technologies • Reduced accidents 	 <p>INCLUSIVE GROWTH, ENVIRONMENT, HEALTH AND WELLBEING</p>
<ul style="list-style-type: none"> • High quality Green Infrastructure • Infrastructure to support low carbon travel on the road network - e.g. electric vehicle charging points 	<ul style="list-style-type: none"> • Enhanced strategic road network with increased capacity • Efficient local highway network with optimised traffic management • New or improved access to spatial priority areas and to unlock development • Improved access to Leeds Bradford International airport • Infrastructure and capacity to support manufacturing and business supply chains 	 <p>ROAD NETWORK</p>
<ul style="list-style-type: none"> • High quality Green Infrastructure • Achievement of clean air standards 	<ul style="list-style-type: none"> • High quality public realm • Enhance Station gateways and transport hubs as catalysts for regeneration • Orbital road improvements to route traffic away from centres • More cycling and walking • Improved air quality 	 <p>PLACES TO LIVE AND WORK</p>
<ul style="list-style-type: none"> • High quality Green Infrastructure • Improved transport energy / fuel efficiency to reduce costs to business and public transport operators 	<ul style="list-style-type: none"> • Connections to major national and northern schemes such as HS2 and Northern Powerhouse Rail • A single, integrated, Metro-style public transport system - supporting high densities of jobs in the centres • Extended Park and Ride facilities • Enhanced bus and rapid transit systems for faster, more reliable journeys 	 <p>ONE SYSTEM PUBLIC TRANSPORT</p>
<ul style="list-style-type: none"> • Low carbon connected and autonomous vehicles 	<ul style="list-style-type: none"> • New and 'smart' technologies - for travel information, integrated ticketing and payment systems and better traffic management 	 <p>SMART FUTURES</p>
<ul style="list-style-type: none"> • High quality Green Infrastructure • Transport Infrastructure that is 'future proofed' for Climate Change 	<ul style="list-style-type: none"> • An efficient, well maintained, resilient highways network • High quality Green infrastructure • Climate Adaption • Flood risk reduction 	 <p>ASSET MANAGEMENT & RESILIENCE</p>

TRANSPORT STRATEGY 2040

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