MAYOR DAN JARVIS
SHEFFIELD CITY REGION

SETTING TRANSPORT PRIORITIES FOR OUR CITY REGION

Sheffield City Region Transport Strategy

Sheffield City Region

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Foreword

Transport has an impact on everybody's life. A good transport system is essential to support a successful, healthy and inclusive society, and is vital if we are to achieve our ambitions for economic growth.

This is an important time for the Sheffield City Region. Our economy is changing, and new jobs are being created. We are developing our advanced manufacturing, engineering and health and wellbeing capabilities, and we have globally significant assets such as Doncaster Sheffield Airport and the Advanced Manufacturing Innovation District.

In some parts of the City Region our transport connectivity is excellent. We have superb motorway links, national rail hubs, a light rail system and an international airport. But overall, our transport system and its supporting infrastructure is not yet fit for the 21st century. The links between our neighbourhoods and urban centres are not good enough and residents can struggle to get to work. Accessing major employment sites and land available for development is constrained by congestion. These issues are a drag on our productivity, competitiveness and a waste of the talent and skills of our workforce. And they restrict access to services, retail and leisure opportunities.

This transport strategy sets out how we are going to transform the City Region's transport network.

It defines our vision for the future, our key transport challenges and my commitments to address them, along with the policies we will adopt to deliver upon those commitments. If we achieve this vision, by 2040 we will be a City Region with comprehensive, effective and integrated transport connections, which support economic growth and improve quality of life for all.

There is no reason that we should not have in place one of the best transport systems in the United Kingdom and Europe. That means having more frequent, reliable and comfortable journeys whether by car, bus, train, tram, bike or on foot.

It should be safe, reliable, tackle poor air quality and be affordable. It should connect our towns and city, enable us to grow our international airport and connect communities to other major aviation hubs around the country. And it should be fully integrated.

This Strategy comes at an important time for transport across the North of England. Plans are already in development to deliver HS2, Northern Powerhouse Rail and improvements in our major road network. These national investment programmes, along with local interventions, have the potential to transform connectivity both within our region and across the North.

To realise our ambitions, we must set out a united vision which makes clear our regional aspirations and our requirements, and how they will integrate with these major national developments. This Transport Strategy defines the goals we must achieve, the policies we will adopt to do this starting with active travel and the success criteria such as journey times, frequency and reliability by which we will target investment and measure performance.

Through its implementation, we will develop a transport system which improves the lives of local people and ensures that our region maximises its contribution to the success of our country.

Mayor Dan Jarvis, MBE MP.

Sheffield City Region

Executive Summary

This Sheffield City Region Transport Strategy sets out the transport priorities for our City Region up to 2040. It sets out on a strategic level how we intend to better connect our major urban and economic growth centres to enable the better flow of people, goods, businesses and ideas across the City Region, as well as promoting our rural and visitor economies. By doing so we will help create jobs, secure new investment and grow our economy.

Our vision for the future is that we will build a transport system that works for everyone, connecting people to the places they want to go within the City Region as well as nationally and internationally. Our transport system will be safe, reliable, clean, green and affordable. It will be one of the best in the United Kingdom and Europe.

Supporting this vision are three goals:

Residents and businesses connected to economic opportunity

A cleaner and greener Sheffield City Region

Safe, reliable and accessible transport network

There are however many transport challenges across the City Region that need addressing. For example, we anticipate there will be up to half a million extra journeys on our road and rail network by 2026 and without action to tackle congestion travel times will get worse. Added to that, poor air quality blights parts of the City Region with 28 designated Air Quality Management Areas and our communities are not as healthy as they could be.

Our motorway and major road network is under great strain and the poor connections with other regions, particularly Greater Manchester and Leeds City Region, limit opportunities for residents, businesses and freight operators. Residents and businesses are not well connected by all modes to Doncaster Sheffield Airport.

Our roads are getting safer, but young drivers, young motorcyclists and children are most at risk. We want to improve the links between our neighbourhoods and urban centres to provide quick and easy access to major centres of employment, services and leisure opportunities but we do not have the infrastructure to enable greater take up of cycling and walking at this time.

In the last ten years the number of people using buses has fallen by 18% and yet a quarter of all households do not have access to a car, nearly 1 in 5 residents live in a rural area and our population is ageing. A fifth of residents have a disability and some communities live in areas of high deprivation. We know getting around can be far from straightforward for these groups.

Finally, technology is changing the way people access travel information and how they use the public transport system.

To address these challenges, we have developed a series of specific policies to underpin our goals, which themselves are aligned to the Mayor's transport commitments. These will provide a framework to guide all decision-making processes related to our transport network up to 2040. The Mayor's commitments and our policies are shown adjacent.

Transport Strategy Goals	Mayoral Commitments	Transport Strategy Policies
 **Residents and businesses connected to economic opportunity**	**I will invest in tram, tram-train, bus rapid transit, bus networks, active travel and tackle our congestion hotspots.** I will develop a plan for road investment that takes a co-ordinated long-term perspective. **I will ensure that local, regional and national road and rail investment delivers for this region.** I will ensure that new technology improves the customer experience of travelling in and around the Sheffield City Region. **I will actively support improved public transport connections to Doncaster Sheffield Airport and ensure that regional rail investment delivers fast and efficient rail links to major airports.**	1. Improve the existing transport network to enhance access to jobs, markets, skills and supply chains adopting technology solutions to support this. 2. Enhance productivity by making our transport system faster, more reliable and more resilient, considering the role of new technologies to achieve this. 3. Invest in integrated packages of infrastructure to unlock future economic growth and support Local Plans, including new housing provision.
 **A cleaner and greener Sheffield City Region**	I will work with partners to deliver a zero-emissions public transport network and we will eliminate the need for AQMAs. **I will undertake a review of the bus network in South Yorkshire, to look at all options for improving local bus service.**	4. Improve air quality across our City Region to meet legal thresholds, supporting improved health and activity for all, especially in designated AQMAs and CAZs. 5. Lead the way towards a low carbon transport network, including a zero-carbon public transport network. 6. Work in tandem with the planning and development community to create attractive places.
 **Safe, reliable and accessible transport network**	I will invest in services to ensure that residents with disabilities, young people, the elderly and those who are isolated economically and geographically are able to travel easily, confidently and affordably. **I will put pedestrians and cyclists at the centre of our transport plans.** I will ensure that safety is planned into all future transport investment and that road safety education initiatives are prioritised.	7. Ensure people feel safe when they travel and invest in our streets to make them more attractive places. 8. Enhance our multi-modal transport system which encourages sustainable travel choices and is embedded in the assessment of transport requirements for new development, particularly for active travel. 9. Ensure our transport network offers sustainable and inclusive access for all to local services, employment opportunities and our green and recreational spaces.

Plans are already in development to deliver HS2, Northern Powerhouse Rail and improvements in our major road network. These national investment programmes, along with local interventions, have the potential to transform connectivity both within our region and across the North.

Our interventions need to build on these schemes to develop a transport network that can support growth as well as encouraging greater use of active travel modes and our public transport network.

We have identified 11 key regional economic centres that need reinforcing and 20 priority transport corridors to enable the sustainable movement of people to facilitate this. These corridors have been derived through an evidence-based vision for a Sheffield City Region Integrated Public Transport network, providing a case to deliver local and regional objectives through investment in bus, tram, bus rapid transit, heavy rail and tram-train.

The network is framed around spatial priority areas spread across the City Region, which represent principal origin and destination points. The network takes account of a number of factors, including social deprivation, growth areas, environmental considerations and transport constraints, such as congestion, lack of service provision and overcrowding.

The current development of our Local Cycling and Walking Infrastructure Plan is aimed at ensuring we are investing in the areas that will have the greatest impact on the number of people walking and cycling. Improving connectivity from local neighbourhoods through these regional transport corridors will provide quick and easy access to major centres of employment, services and leisure opportunities.

We have developed a series of success criteria by which we will target future investment and measure performance along with the Mayor's ambition for three sets of aspirational journey time targets to ensure that all parts of the City Region are well-connected:

Neighbourhood to Regional Hub — 15 MINS

Regional Hub to Regional Hub — 30 MINS

Regional Hub to Major Centres — 75 MINS

Detailed options for interventions that will move towards these targets, and options for the delivery and funding of individual projects will be brought forward and considered on a case-by-case basis.

Delivering this Transport Strategy will require joint working with stakeholders within the City Region and outside it, within the transport sector and across other sectors, and between both public and private organisations.

Beyond its adoption will lie a series of implementation plans, some of which Sheffield City Region will lead, some of which we will contribute to and some of which we will seek to influence.

It is therefore important that this Strategy is not seen as an end – it is much more of a starting point to develop the transport network that we need to support the economic aspirations of the City Region. Future work will identify more specific interventions developed in response to the vision, goals and policies described in this Strategy and will produce a pipeline of transport infrastructure investment that can shape our future funding discussions, providing confidence to residents and businesses across the City Region that there is a clear plan of action.

Regional Hubs

1. Advanced Manufacturing District
2. Barnsley Town Centre
3. Chesterfield Town Centre
4. Dearne Valley
5. Doncaster Town Centre
6. Doncaster Sheffield Airport
7. Markham Vale
8. Rotherham Town Centre
9. Sheffield City Centre
10. Unity Project (Development site at Junction 5 M18)
11. Worksop Town Centre

What do we mean by Neighbourhood, Regional Hub and Major Centre?

Neighbourhood

Neighbourhood describes the closest built up area to your home.

Major Centres

We want to ensure that our main town and city centres are well connected to London and cities across the Midlands and the North.

Regional Hub

There are 11 key economic centres that we believe people must be able to access quickly and easily, because they are home to thousands of jobs as well as health services, education providers, shops and leisure opportunities.

Sheffield City Region

In reality, this means that residents, workers and visitors in the Sheffield City Region will:

- Be able to travel for business or pleasure to destinations around the world from the region's international airport – and will be able to do so through seamless public transport connectivity;
- Be able to get to study at a local college, the University of Sheffield and Sheffield Hallam University, the National College for High Speed Rail or the University of Sheffield's Advanced Manufacturing Research Centre Training Centre without having to drive or rely on support from friends or relatives;
- Get to a hospital or doctor's appointment using public transport that gets people there and back safely, reliably and with good value for money;
- Be able to visit friends and family, or go shopping or visit a local attraction from across the City Region without having to take the car or change multiple times;
- Only have to make one change via a transport interchange when travelling between our major economic growth hubs;
- Be able to rely on the latest technology to make ticketing and travel as easy and as simple as possible;
- Benefit from new employment and housing sites being opened up through improving tram, road, rail and bus networks – better transport links will help create more jobs, increase the value of homes and encourage house-builders to build more homes to accommodate our growing population.

1.0 Introduction

Sheffield City Region

1.1 Purpose of our Transport Strategy

This Sheffield City Region Transport Strategy sets out the transport priorities for our City Region up to 2040.

Our previous Transport Strategy was published in 2011 and describes the transport priorities for our City Region for the 15-year period up to 2026. Since then, we have agreed a devolution deal with Government, developed our Strategic Economic Plan (SEP) for economic growth to 2025 – which is currently being refreshed – and preparations are being made for SCR's Industrial Strategy. In light of these developments in our regional policy, it is necessary to refresh the Transport Strategy so that it aligns with, and supports, our SEP, as well as the following wider policy and strategy drivers:

- Transport for the North has now been established to speak with one voice for the North on pan-Northern transport requirements and has a Strategic Transport Plan for the North.
- Highways England has changed its operational status and updated its Road Investment Strategy.
- The Government has published its Strategic Vision for Rail that introduces the Rail Network Enhancement
- Pipeline (RNEP) to replace the current system of five-year enhancement programmes as part of Network Rail's regulatory control periods.
- Local Plans have moved on in the last seven years and the Transport Strategy needs to catch up.

Furthermore, the rate of technological change over the last decade has been unprecedented, which means that our opportunities, challenges and possible solutions have changed. This refresh of the Transport Strategy will make us more prepared and better able to achieve our regional ambitions in a co-ordinated and coherent manner.

This Transport Strategy therefore updates and supersedes the policies and measures of our previous Strategy. It forms part of our Local Transport Plan (LTP), which will be supported by a series of implementation plans and is adopted by the SCR Combined Authority, as the Local Transport Body for South Yorkshire.

The Strategy has been developed in accordance with the process set out in Figure 1.1, in collaboration with Local Authority partners across the Sheffield City Region and South Yorkshire Passenger Transport Executive (SYPTE), as well as business groups, national infrastructure providers, the health sector, universities and transport operators. A twelve-week public consultation was undertaken between January and April 2018 on the draft Strategy which has also allowed us to incorporate feedback from wider stakeholders and the general public in this version.

This Transport Strategy is accompanied by an Integrated Sustainability Assessment and Habitats Regulations Assessment and a post-Adoption Statement.

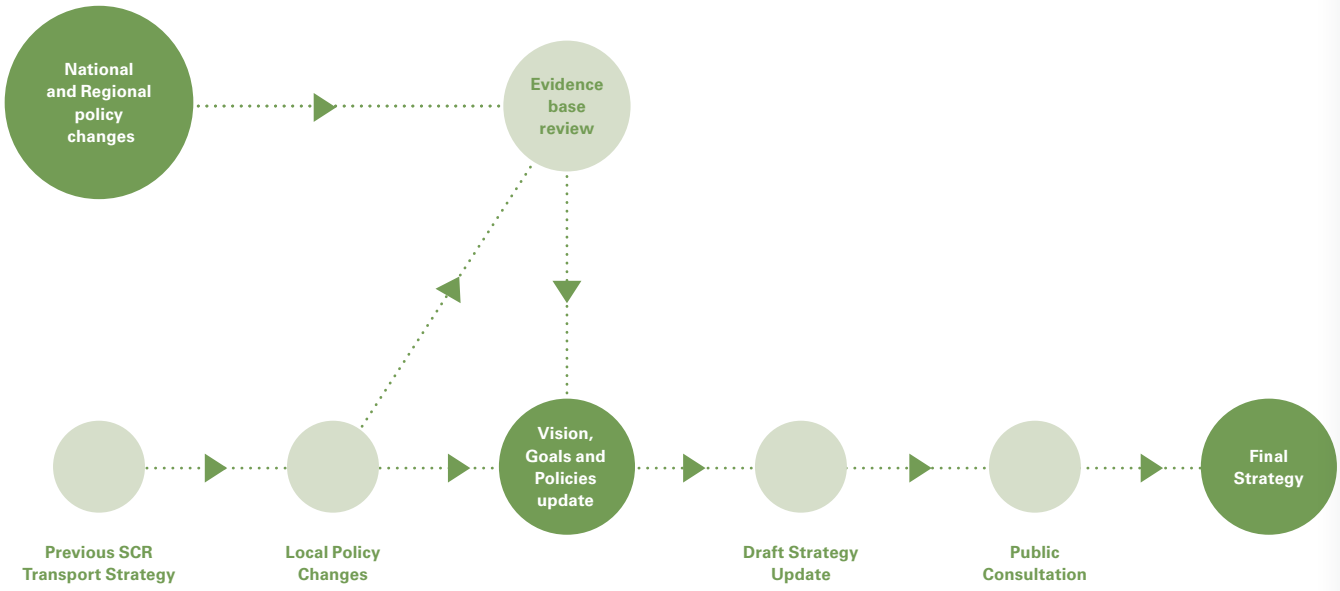
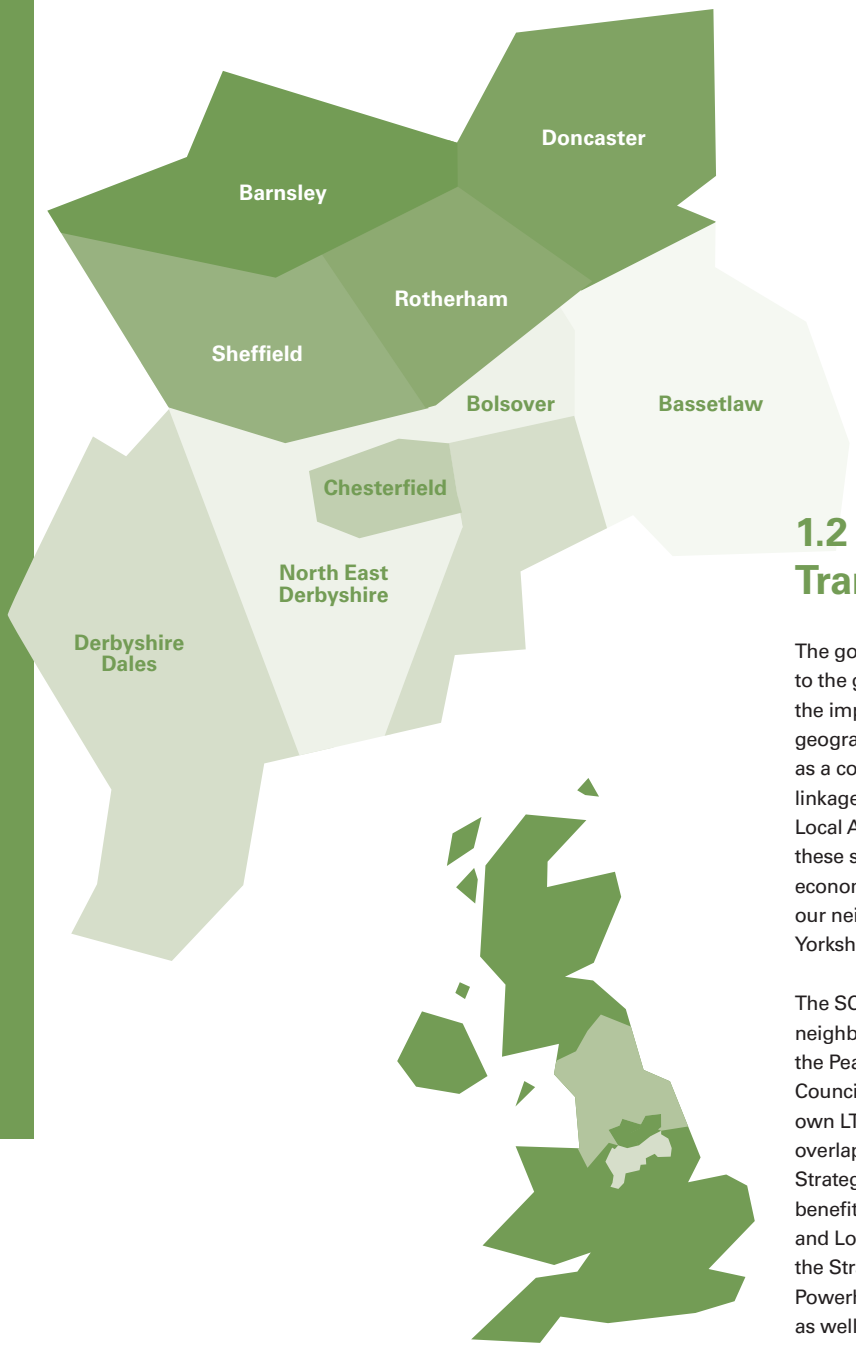


Figure 1.1 - Transport Strategy Refresh Process



1.2 The Scope of the Transport Strategy

The goals and policies of this Transport Strategy apply to the geography of South Yorkshire but recognise the importance of the wider SCR area. Our economic geography is wider than South Yorkshire and functions as a coherent economic area with strong economic linkages and travel to work patterns. Whilst we recognise Local Authority districts are distinguished by boundaries these should not present barriers to movement and economic growth, and we will continue to work with all our neighbouring authorities. Figure 1.2 shows the South Yorkshire and SCR boundaries.

The SCR area also shares strategic links with its neighbouring counties, and also encompasses part of the Peak District National Park. Nottinghamshire County Council and Derbyshire County Council also have their own LTPs, and therefore there is a degree of geographical overlap between all three regional LTPs. The Transport Strategy therefore includes interventions that will benefit the economies of our neighbouring Combined and Local Authority areas. The influence and benefits of the Strategy also extend further as part of the Northern Powerhouse and Midlands Connect sub-national areas, as well as the rest of the UK.

This Strategy will instigate a series of implementation plans, some of which SCR will lead, some of which SCR will contribute to, and some of which SCR will seek to influence. It is therefore important that this Strategy is not seen as an end point – it is much more of a starting point to develop the transport network that we need to support the economic aspirations of the City Region. We will work together with our local, regional and national partners in a co-ordinated way to seek opportunities to strengthen linkages and to invest jointly.

Figure 1.2 - Sheffield City Region and South Yorkshire Districts

1.3 What will this Transport Strategy mean?

This Transport Strategy sets out on a strategic level how we intend to better connect our major urban and economic growth centres to enable the better flow of people, goods, businesses and ideas across the City Region, as well as promoting our rural and visitor economies. By doing so we will help create jobs, secure new investment and grow our economy.

Through development of our transport network, we intend to improve residents' access to employment and training opportunities, services, leisure and retail centres, including connecting our new housing growth areas. This vision will support a shift to a cleaner, healthier and more environmentally sustainable transport network.

In reality, this means that our residents, workers and visitors will:

- Be able to travel for business or pleasure to destinations around the world from the region's international airport – and will be able to do so through seamless public transport connectivity;
- Be able to get to study at a local college, the University of Sheffield and Sheffield Hallam University, the National College for High Speed Rail or the University of Sheffield's Advanced Manufacturing Research Centre Training Centre without having to drive or rely on support from friends or relatives;
- Get to a hospital or doctor's appointment using public transport that gets people there and back safely, reliably and with good value for money;
- Be able to visit friends and family, or go shopping or visit a local attraction from across the City Region without having to take the car or change multiple times;
- Only have to make one change via a transport interchange when travelling between our major economic growth hubs;
- Be able to rely on the latest technology to make ticketing and travel as easy and as simple as possible;
- Benefit from new employment and housing sites being opened up through improving tram, road, rail and bus networks – better transport links will help create more jobs, increase the value of homes and encourage housebuilders to build more homes to accommodate our growing population.

2.0 Our Vision and Goals

Sheffield City Region

2.1 Our Transport Vision

We will build a transport system that works for everyone, connecting people to the places they want to go within the Sheffield City Region as well as nationally and internationally.

Out transport system will be safe, reliable, clean, green and affordable. It will be one of the best in the United Kingdom and Europe.

2.2 Our Transport Goals

Supporting this vision are three goals:

Residents and businesses connected to economic opportunity

A cleaner and greener Sheffield City Region

Safe, reliable and accessible transport network

Goal 1: Residents and businesses connected to economic opportunity

Supporting economic growth is our central objective and we want our transport network to play its part through increasing productivity, providing access to higher wage jobs, education and training, and ensuring our businesses can readily access their markets. This will apply to the residents and businesses of the City Region and wider areas where growth can deepen the role and pull of the City Region.

Our economy is characterised by a polycentric geography; improved integration is key to achieving our economic objectives. Increasingly consumer behaviour and evolving markets dictate the need for an integrated transport system that provides the connectivity, capacity, reliability and resilience needed to support wider regional objectives. Our evidence suggests that congestion is already restricting our growth, and without intervention could significantly curb future productivity. In addition, gaps in connectivity could further limit access to employment, labour, and higher value jobs. We need an accessible, multi-modal, integrated transport network that provides seamless travel throughout the region and to neighbouring centres, for the benefit of our residents and businesses.

We also want growth to be inclusive and sustainable, with investment and growth producing benefits for all. Evidence shows our skills profile varies significantly and employment rates and educational performance that are concentrated in a few places. The City Region must therefore work together to gain consensus and drive forward strategies and projects that improve connectivity internally within the region, to other centres within the North, to other city regions across England, and on an international scale.

Goal 2: A cleaner and greener Sheffield City Region

Our City Region prides itself on our outdoors, with the UK's outdoor city, Sheffield, at its heart. We already have an important rural economy - our green environment is an attractor to people to live and work in our City Region, and gives us a competitive advantage over other City Regions. Therefore, it is essential that we cherish, protect and improve our outdoors so that it remains an asset for our City Region in the future. As such, we need to ensure that people are able to access, use and enjoy the fantastic offer of green and recreational spaces throughout our City Region in a sustainable way that supports our public health initiatives.

Transport can play a major role in improving the quality of our outdoors. In particular, vehicle emissions affect our air quality, whilst carbon emissions contribute towards climate change– the consequences of which have been proven to affect our City Region through extreme weather events. We want to address these growing issues that threaten the future of our outdoors and our biodiversity. It is also vital that the transport network supports the SCR's visitor economy strengths, including the Peak District National Park and other local attractions and sporting venues, such as Cannon Hall and the Yorkshire Wildlife Park. Without transformed sustainable transport linkages to these areas, a sizable proportion of visitors will continue to travel by car, damaging the natural environment and habitats that they are visiting.

Goal 3: Safe, reliable and accessible transport network

Our daily lives are both supported and impacted by complex and interacting systems, from transport to land use planning, our environment, technology, healthcare, education and so on. Only by working collaboratively and understanding the interactions between these systems will we be able to deliver an integrated response that allows us to derive the greatest benefit from our investment for all our residents, workers and businesses.

Improving the quality of life for our people will be achieved by providing access to opportunities, promoting health by enabling sustainable and active travel choices, and ensuring safety and security, which is always of paramount importance is a key part of our transport vision.

To support economic growth in our City Region, our urban centres will need to grow and we want to make sure we create accessible and attractive places where people want to live, work and play. Streets play a pivotal role in our quality of life and are the primary places where people and transport come together. We want our streets to become healthy streets that actively improve the quality of life of our people and support local economies.

In a transport context safety is wider-reaching and a priority for all modes, all services and all locales. The perception of safety is particularly relevant with regards to healthy streets as it is a factor that can inhibit uptake of active travel and influence people's behaviour towards healthy and sustainable travel choices, particularly for vulnerable people such as children and young people and the elderly.

3.0 Our Evidence

Sheffield City Region

3.1 Introduction

This evidence base provides the foundation for the refreshed Transport Strategy. It informs us of the current challenges, opportunities, and weaknesses in our City Region, and how to build on our strengths to develop a transport network that serves all of our communities by connecting them to local services, our growing urban centres and major growth sites and is the safest, most environmentally friendly, most reliable and affordable transport system that it can be.

The SCR has many strengths including:

- Located at the heart of the UK with connectivity via the motorway and mainline rail to regional and national markets and international markets from the Doncaster Sheffield Airport.
- Two Universities with world class research capabilities and the country's largest engineering department and a state of the art High Speed Rail College.
- Home to the world renowned Advanced Manufacturing Park.
- A potential workforce of 950,000, and more than 120,000 jobs in the knowledge and data driven economy.
- A flexible and adaptable base of SME companies focused on business to business supply chain.
- A proposed HS2 station.
- A significant visitor economy including the Peak District National Park.
- Capacity for additional development of employment and housing land

The Transport Strategy is informed by the comprehensive evidence base gathered from various data sources including national and regional strategies produced by Highways England, Network Rail and Transport for the North; our Councils' Local Plans; the SEP refresh and SCR Integrated Infrastructure Plan (SCRIIP); existing Transport Strategy evidence base and open source datasets as illustrated in Figure 3.1 and identified in the subsequent sections.

We have therefore drawn this evidence base from these sources and have analysed global trends to identify those which are likely to be important to our City Region.

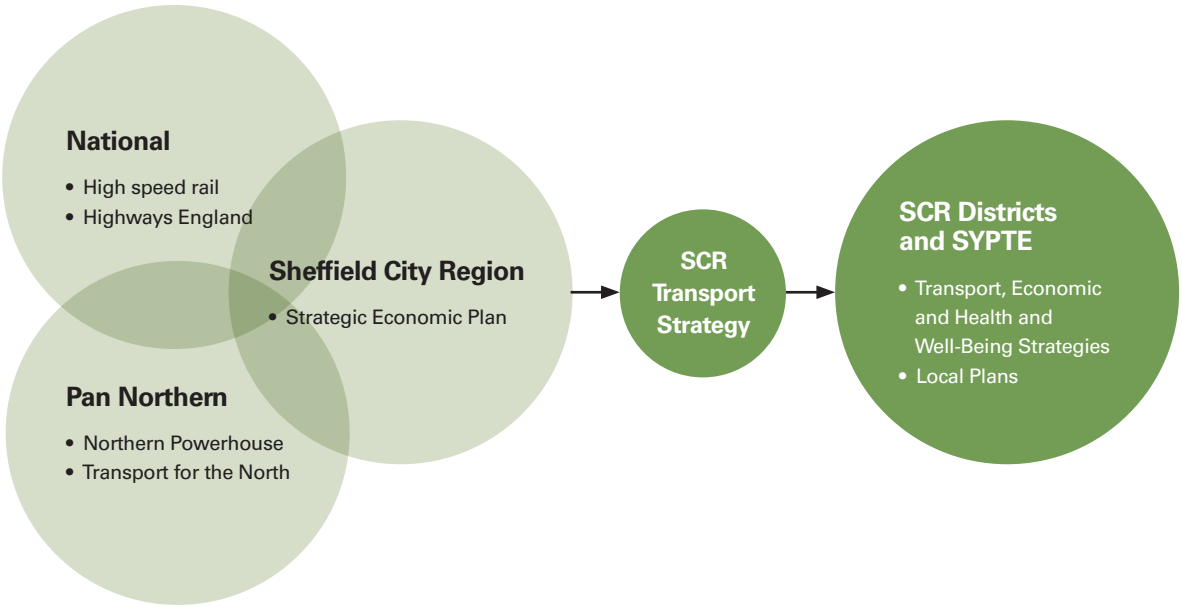


Figure 3.1 - Transport Strategy Evidence Base

3.2 Economy

3.2.1 People, Jobs and Productivity

The SCR has a diverse and super-connected economy comprising a dynamic core city, thriving towns and market towns, fabulous countryside and a significant rural economy. We have excellent national and international connectivity being served by the motorway network, East Coast and Midland Mainline rail routes and the Doncaster Sheffield Airport.

Our City Region is home to 1.8 million people, with 68,000 businesses, providing 847,000 jobs and an annual Gross Value Added (GVA) of over £33bn. With world-class specialisms in advanced manufacturing, the City Region is at the forefront of innovation and a major driver of economic growth. GVA is the measure of the value of goods and services produced in an area. Figure 3.2 shows that our City Region is performing well with the actual GVA growth ahead of the growth targets in our current Strategic Economic Plan.

Despite good recent performance in actual GVA growth, GVA per person remains low relative to our peers and the wider UK (see Figure 3.2), and our City Region is ranked 36th out of 39 LEP areas in England for GVA per person[1]. The GVA per head of population in SCR in 2015 was £18,029, compared to £21,383 per head for Leeds City Region and £21,626 per head for Greater Manchester, our two neighbouring City Regions.

As set out in the "Core Cities UK 2030 Global Success, Local Prosperity" vision, we need to grow our productivity to reduce our deprivation.

We can increase our productivity by investing in infrastructure, business and innovation. But these so-called 'in-work' productivity factors account for only about 60 per cent of low productivity across the Core Cities city regions.

Almost 40 per cent of low productivity exists because of deprivation. Too many of our citizens are distant from the labour market, not in employment or training, are experiencing poor physical or mental health, and have low or no skills to help them get better jobs.

Addressing productivity therefore means investing in high-quality, agile and innovative public services. Although local authority finances are not currently on a sustainable trajectory, as Core Cities have repeatedly set out, this is not just a 'more money' agenda. It is also about the freedom to align local and national efforts to get better results, preventing problems before they arise.

To further strengthen our Region's economy, we need to ensure that connectivity to the Doncaster Sheffield Airport from across the Region is as efficient and effective as possible. There is a strong evidence base on the role of international aviation in supporting economic development[2], as it is an essential part of what makes modern developed economies work. Economies are ultimately becoming more globalised. Flows of trade, investment, people and knowledge are growing as the world's economies become more entwined and reliant upon one another. This generates a need for travel and air services which offer by far the most efficient means of travelling long distances, particularly internationally, to meet these needs. This introduces the concept of connectivity as a measure of an airport or an area's ability to meet this need for travel.

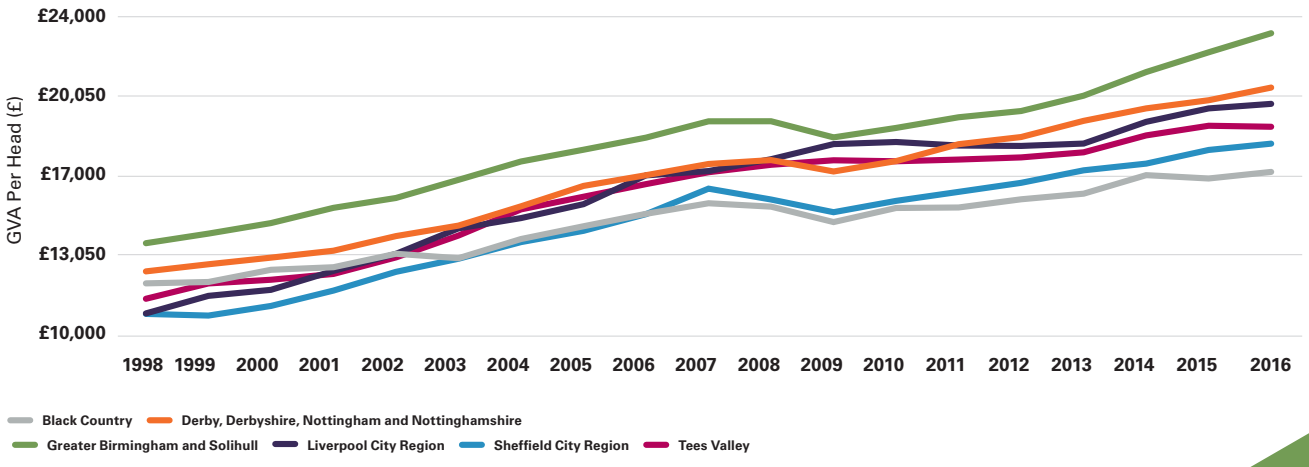


Figure 3.2 - GVA per head[3]

[1] Nominal Gross Value Added per Head by Local Enterprise Partnership, (Office for National Statistics,1998-2016)
[2] SCR Local Enterprise Partnership
[2] Transport for the North Study into International Connectivity July 2016

3.2.2 Housing

Our population is forecast to grow by 9.3%[4] between 2016 and 2041, however, Figure 3.3 shows that the growth in new housing is below the annual trend required to reach this level. At the same time predicted trends[5] suggest that the average household size will reduce as a result of the increase in single person, and in particular single elderly person, households, putting more pressure on our existing housing stock.

We need sufficient houses not only to support economic and population growth but also to meet the demands of an ageing population and increase in the number of modern households. We will ensure that our transport contributes to meeting our housing targets, by providing the transport infrastructure needed to unlock new development sites in addition to working with our Local Planning Authorities to ensure that housing sites are as sustainable as possible.

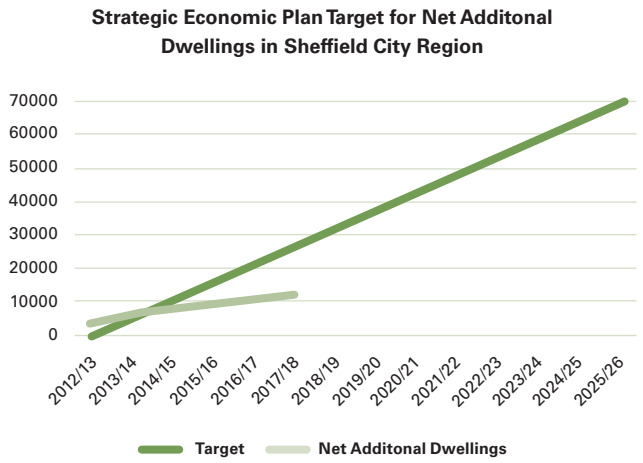


Figure 3.3 - Number of dwellings completed across SCR vs. SEP target trend[6]

3.2.3 Population

Whilst many take for granted the ability to travel easily from A to B, this is not the reality for everyone. For our ageing population, and the fifth of people who identify as having some sort of disability, access to transport can be far from straightforward. We will ensure that elderly and disabled people are able to travel easily, confidently and without extra cost. Issues include[7]:

Travel information is often inaccessible, hard to understand or not available at all.

- Transport in rural areas is often not flexible enough to truly enable independent living.
- There can be a lack of understanding of the needs of people with all disabilities from other passengers or bus drivers.
- Many people with can feel nervous or vulnerable using public transport and on our streets for fear of harassment, muggings or other mistreatment.

Along with an overall growth in population, our City Region is forecast to experience an ageing population and over the next 25 years the old age dependency ratio (people of pensionable age per thousand people of working age) will increase by 19%[8].

The numbers of people in the City Region remaining economically active over the age of 65 has increased from 5.3% to 7.2%[9].

Figure 3.4 shows that between 2016 and 2041 the number of young people aged 0-15 is forecast to grow slightly by around 2,600 (0.8%) in our City Region, but the population aged 65+ will increase by 146,860 (41.9%).

We know that driving rates decrease with age[10] and this can leave older people struggling to access services, particularly those who cannot afford to pay for taxis or do not have family members or neighbours who can provide transport. In areas of social deprivation (see Section 3.4.2) where we have a high proportion of households without access to a private car, public transport or walking and cycling is the only choice of transport, and even in areas where public transport provision is good, difficulties with mobility or accessing service information, can be a barrier for those without use of a car. In rural areas[11], such as the Peak District which have an older than average population and are less well served by public transport, the barrier is even greater.

We also know that older people are generally less digitally connected[12] and therefore can experience more difficulties in accessing travel information. All aspects of our transport systems need to be accessible and adaptable, thus enabling all our residents to remain as active as possible.

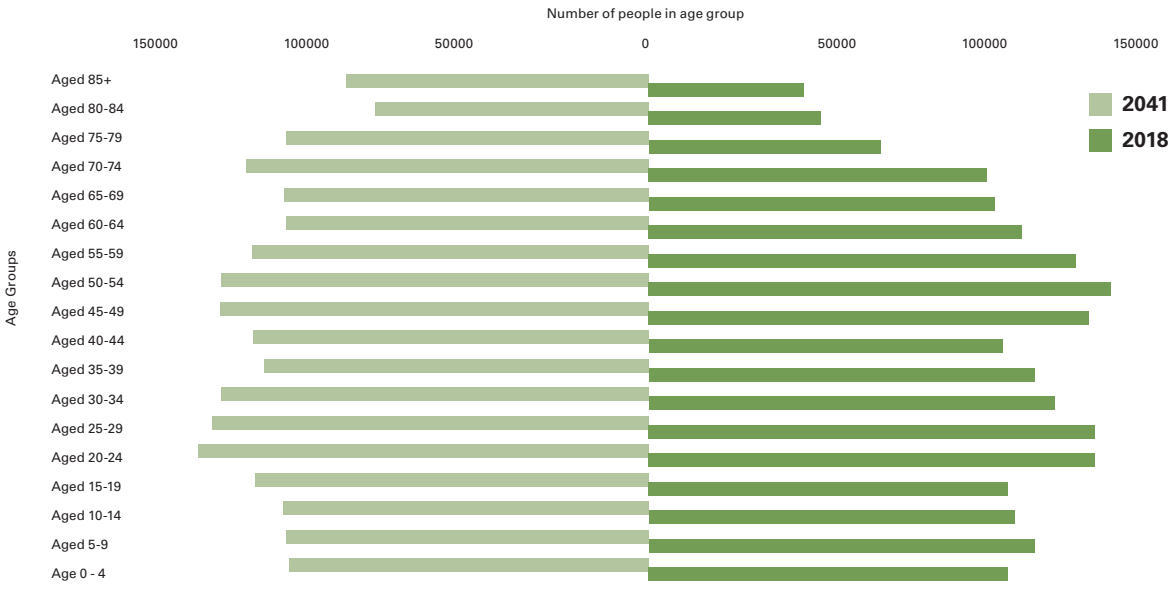


Figure 3.4 - Population Age

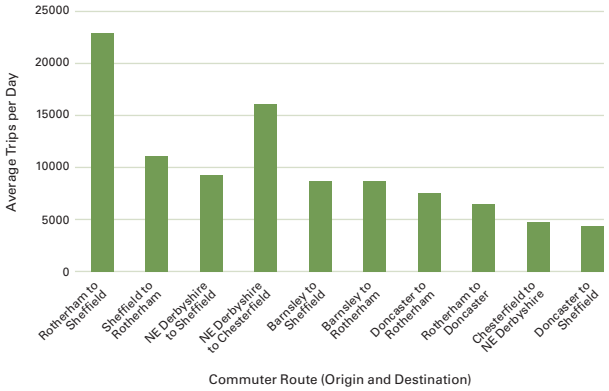
[4] 2016 based Subnational Population Projections for Local Authorities (ONS 2018) [4] Change in average household size (local authorities, districts and England 2016-2041) ONS 2018
[5] Ministry of Housing, Communities &Local Government 15 Nov 2018 [7] www.mencap.org.uk/advice-and-support/transport/problems-public-transport
[8] National Population Projections: 2016-based Statistical Bulletin (ONS, 2018)

3.2.4 Urbanisation

Three quarters of our residents live in the four main urban areas of Sheffield, Doncaster, Rotherham and Barnsley and this figure is steadily growing. Between 2007 and 2017 the population of the four main urban areas grew by almost 87,000 (6.67%)[13]. However, as Figure 3.5 shows, regardless of where they live, people travel throughout our City Region to access jobs, putting pressure on the existing transport system. The levels of commuting between Rotherham and Sheffield are particularly high, and coupled with additional trips generated by development at Advanced Manufacturing Innovation District in the Lower Don Valley, would indicate to this important area is a priority for transport investment.

Further analysis of the Census[14] Journey to Work data shows that the majority of SCR's residents (85.3%) commute within the City Region boundaries. Currently around double the number of commuters across all modes, travel out of, rather than into the City Region, as can be seen in the table opposite.

	To SCR	From SCR
Greater Manchester	27%	73%
West Yorkshire	36%	64%



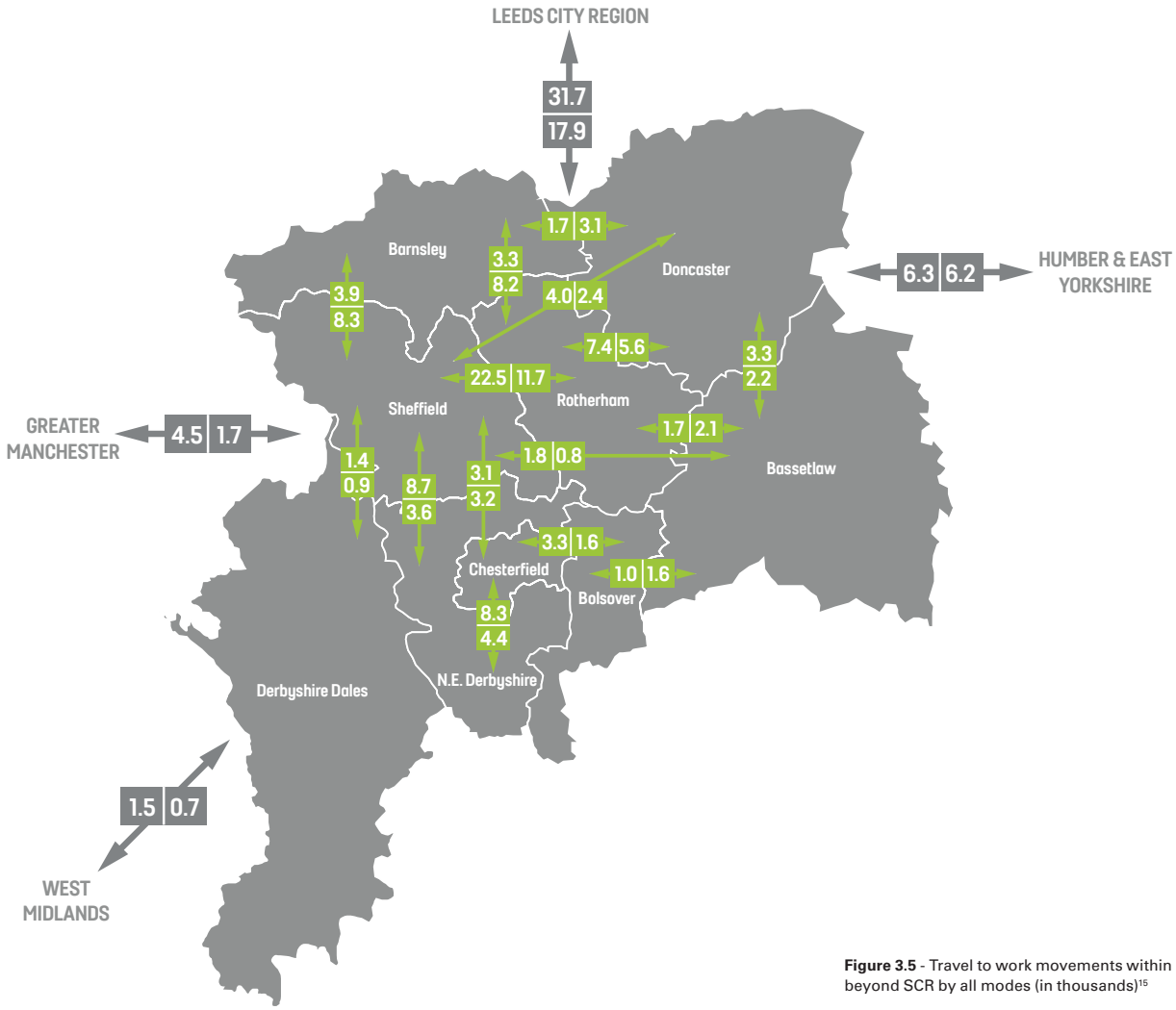


Figure 3.5 - Travel to work movements within and beyond SCR by all modes (in thousands)[15]

[9] Communications Market Report (Ofcom, 2016)
[10] Annual Population Survey Nomis 28 November 2018
[11] Defra – Rural Population 2014/15 updated 2018
[12] www.gov.uk/government/publications/inclusive-transport-strategy/the-inclusive-transport-strategy-achieving-equal-access-for-disabled-people
[13] ONS Population Estimates 2018 [14] Census 2011 [15] Census 2011

There is no singular factor leading to the net export of commuters, but analysis of the Centre for Cities data tool show that although it is one of the eight largest English cities outside of London, Sheffield comes close to the bottom of almost every measure of economic performance. However, there is an opportunity to redress this as Sheffield performs well educationally, with good numbers of pupils achieving 5 A*-C GCSEs including Maths and English and is approximately mid-ranking for the number of people with degree level qualifications. It also has two universities with world class research capabilities as previously mentioned.

Compared to the centres of Leeds and Manchester which have a strong core of business clusters in their centres, Sheffield's centre is more dispersed and jobs are not as easily accessed by short walking routes from the main railway station.

Of the eight largest cities, Sheffield has relatively good levels of employment (68.6% in Sheffield compared to 63.9% in Liverpool and 64.2% in Birmingham). However, Sheffield has the lowest number of jobs per person, which may indicate that many of the people living within the region travel to work in a different region which then benefits from their economic productivity rather than the SCR.

The financial and insurance sector makes up 7.2% of the UK's GVA but only 4% of all jobs are in very high value, finance and insurance, meaning that these jobs contribute a disproportionately large amount to GVA. Sheffield has a very low percentage of jobs in the financial and insurance sector (3.5%), for Liverpool it is 3.7%, for Leeds it is 5.3%, and for Bristol it is 6.2%. The educational attainment of the City's residents means that they would be qualified for these jobs but at present they do not exist in sufficient numbers. The same goes for so called "private knowledge intensive business services sector" jobs that pay well, attract graduates and drive economic performance. Sheffield once again falls at the bottom of the ranking, however, development of the Advanced Manufacturing Park may start to redress the balance and as such, it is essential that good connectivity is established.

As set out in the "Core Cities UK 2030 Global Success, Local Prosperity" vision, improving productivity also has an impact on deprivation reduction.

We can increase our productivity by investing in infrastructure, business and innovation. But these so-called 'in-work' productivity factors account for only about 60 per cent of low productivity across the Core Cities city regions.

Almost 40% of low productivity exists because of deprivation. Too many of our citizens are distant from the labour market, not in employment or training, are experiencing poor physical or mental health, and have low or no skills to help them get better jobs.

Addressing productivity therefore means investing in high-quality, agile and innovative public services. Although local authority finances are not currently on a sustainable trajectory, as Core Cities have repeatedly set out, this is not just a 'more money' agenda. It is also about the freedom to align local and national efforts to get better results, preventing problems before they arise.

To further strengthen our City Region's economy, we need to ensure that connectivity to the Doncaster Sheffield Airport from across the Region is as efficient and effective as possible. There is a strong evidence base on the role of international aviation in supporting economic development[17] as it is an essential part of what makes modern developed economies work. Economies are ultimately becoming more globalised. Flows of trade, investment, people and knowledge are growing as the world's economies become more entwined and reliant upon one another. This generates a need for travel and air services which offer by far the most efficient means of travelling long distances, particularly internationally, to meet these needs. This introduces the concept of connectivity as a measure of an airport or an area's ability to meet this need for travel.

[16] www.centreforcities.org

3.2.5 Impact of Growth On Transport

Improved transport network connectivity and greater capacity are vital in enabling economic growth. This is the case both within the City Region but also between other City Regions and across the North. Our economic growth is dependent on attracting and retaining high GVA businesses, and therefore jobs, into the region and ensuring people have the skills and education needed to fill them. We must make sure that transport is not a barrier to this.

The Sheffield City Region Integrated Infastructure Plan (SCRIIP) identified the top 20 highway corridors forecast to experience increased delay resulting from population and economic growth by 2025 (Figure 3.6). Without investment in these routes, congestion and delays will increase, and journey time reliability will further decrease, presenting further barriers to economic growth and potentially damaging the existing economy. Analysis shows that travel times at peak periods can be over 30% greater than off- peak[18], with the worst affected routes being, inner Sheffield Ring Road, the A61 south of Sheffield and Barnsley Ring Road. This demonstrates again the importance of wide reaching infrastructure and behaviour change interventions.

If the plans for significant economic growth within the City Region are to be realised then it is forecast that a further 495,000 highway trips per day will be made across the transport network by 2026[19]. Such growth requires both short term and long term intervention so as to avoid continuing and additional delays.

On the rail network, passenger numbers in excess of capacity is a relative measure of train crowding. It shows the proportion of standard class passengers that is above an accepted capacity level (allowing for both seated and standing passengers) on services at their busiest point. Trains arriving and departing from Sheffield station in the morning peak period were crowded over capacity by 1.2% in 2017, while in the afternoon peak the figure was 0.8%. As a consequence, Sheffield station is ranked seventh worst in terms of overcrowding in the morning peak and 11th in the evening peak, when compared to other 13 major cities in the country[20].

In addition to restricted passenger capacity, we also have capacity issues on our tracks and stations in particular at Doncaster Rail Station and on the East Coast Main Line amongst others.

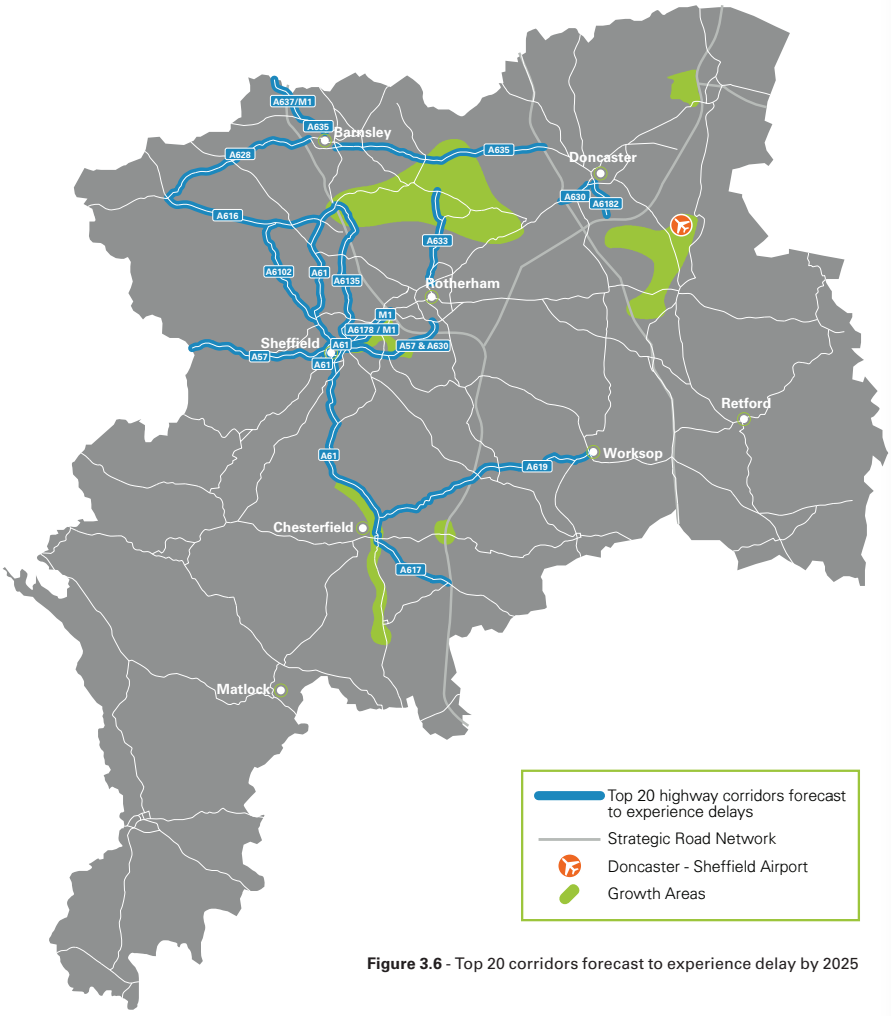


Figure 3.6 - Top 20 corridors forecast to experience delay by 2025

[17] Transport for the North Study into International Connectivity July 2016
[18] Trafficmaster Data (DfT / Aecom, 2015)
[19] SYSTM+ 2010 highway passenger trips, excludes public transport journeys. This represents a growth of around 13% on the number of trips in 2011.
[20] DfT Passengers in Excess of Capacity data, 2017

3.2.6 How People Travel To Work

Figure 3.7 shows how our residents travelled to work in our City Region in 2011. 71% of our residents travelled to work by car, and this trend has increased since 2001 which is contrary to the general UK trend of decreasing car use and has resulted in increased congestion, longer journey times and has impacted detrimentally on health and air quality. This rising private car use trend highlights the need for investment in sustainable transport to reverse this trend and encourage more sustainable and active travel shift from car.

Public transport has a 12% mode share in our City Region, which has reduced since 2001. Cycle mode share remained fairly constant between 2001-2011 at 1.5%, and is lower than other northern LEP areas.

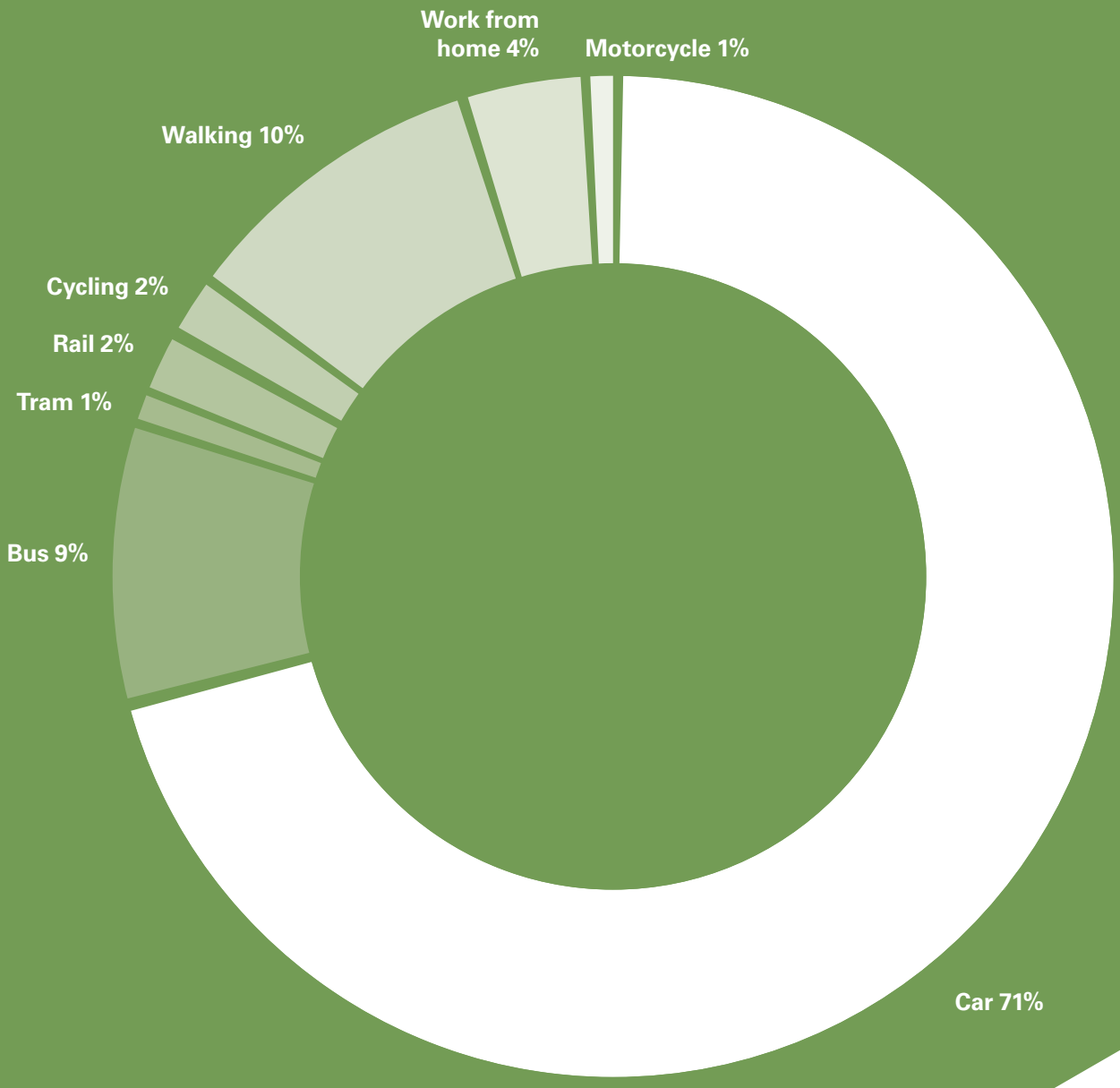
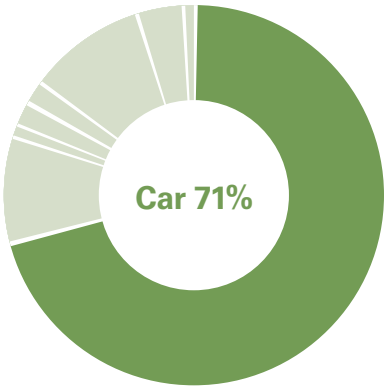


Figure 3.7 - Travel to work mode share for SCR [21]

[21] Census data 2011 (ONS)

Sheffield City Region



The comparison chart (Figure 3.8) shows that our City Region has a higher car mode share than other comparable LEP areas. This reliance on car travel has adverse implications on the economy and quality of life, through congestion cost, worsening air quality, increasing carbon emissions and rising obesity levels (due to lack of walking and cycling). In addition, the adverse impact on the environment will endanger our conservation areas including the Peak District if the trend is not reversed.

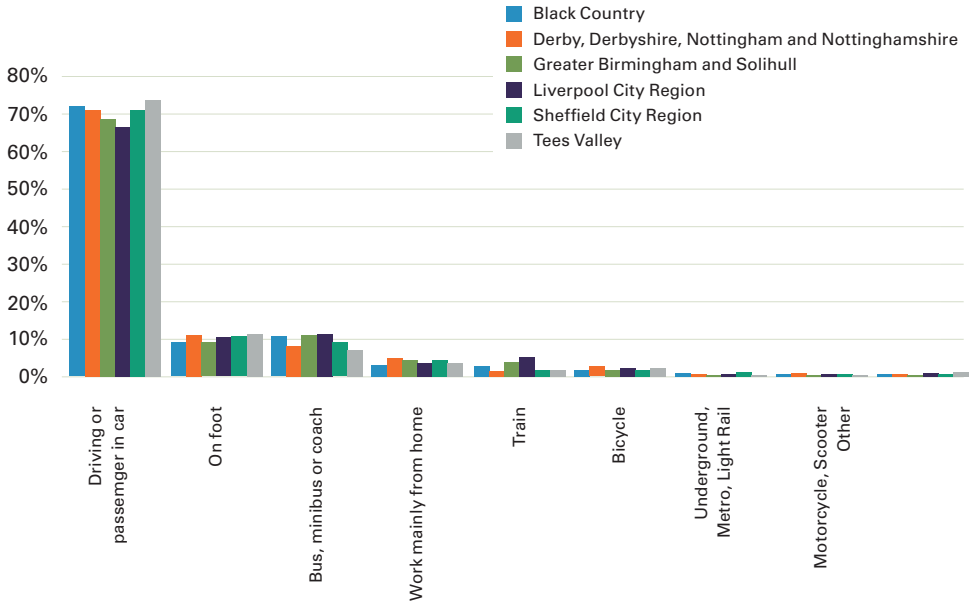
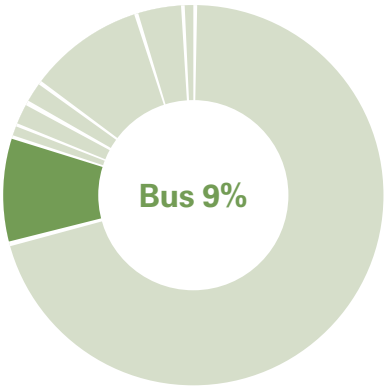


Figure 3.8 - Mode share comparison of SCR with other LEP areas[22]

[22] Census data 2011 (Office for National Statistics)
[23] Trends in Bus Patronage (KPMG September 2018)
[24] Bus Patronage data 2003/04 to 2016/17 (SYPTE, 2017)



Since 2008 bus patronage has fallen across South Yorkshire (see figure 3.9) despite all four constituent South Yorkshire authorities, SYPTE and the main bus operators signing up to local Bus Partnerships. The partners work collaboratively to improve the quality of the bus network, within the funding available, investing in infrastructure, ticketing and vehicles and promoting bus travel. There are a number of factors contributing to the fall in patronage. Government and local funding for bus services has reduced, which particularly impacts on areas where commercial services are not viable potentially isolating communities. Analysis has shown[23] that a little over half of the fall can be explained by changing customer needs such as home working, internet shopping, home entertainment, competitive taxi fares. The remainder can be explained by increases in bus fares and service quality as congestion reduces the attractiveness of buses.

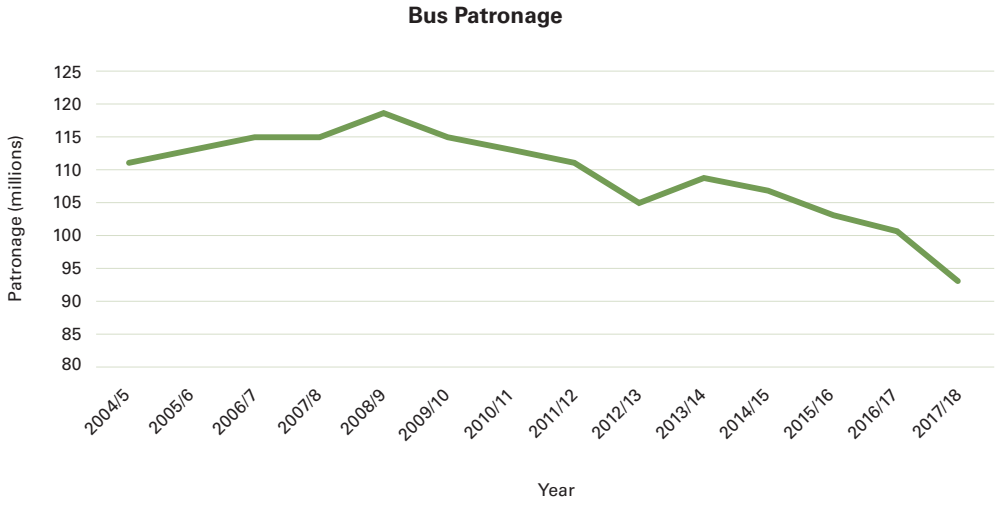
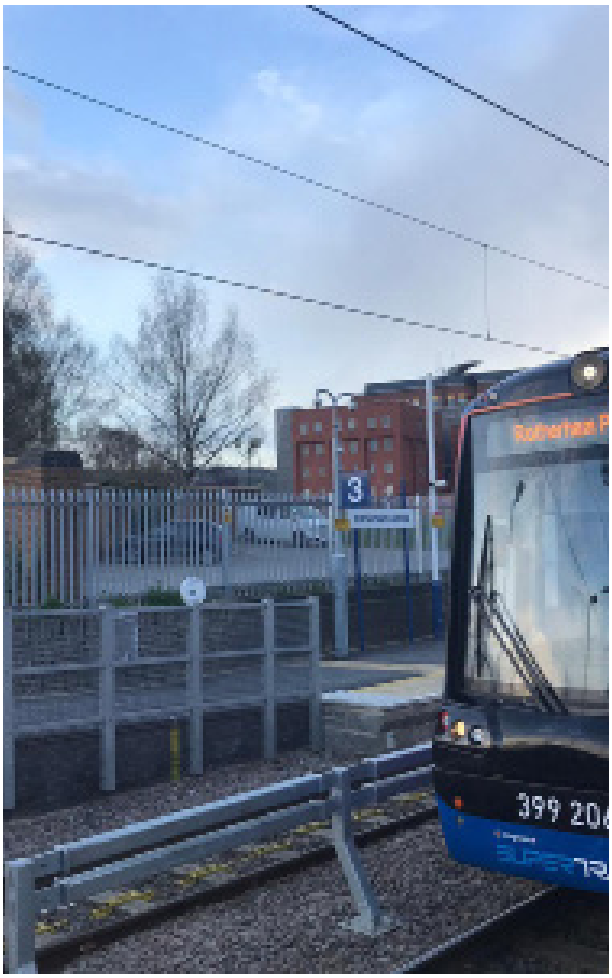
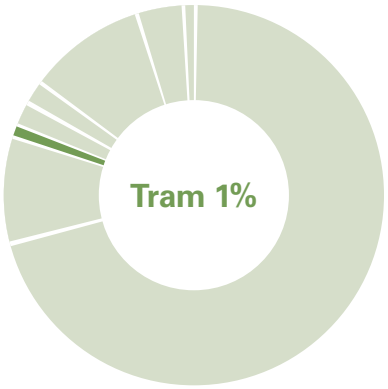


Figure 3.9 - Change in bus use (patronage) [24]

Sheffield City Region





The Supertram light rail system has been a vital part of the transport network in our City Region since it opened in 1994. Providing a high quality, frequency and capacity service, it is supported by a network of Park & Ride sites at key locations. The majority of these are very well used meaning that a large number of car drivers finish their journeys into Sheffield City Centre by tram instead of car thus reducing congestion. In 2018 the network was extended with a trial of Tram-Train between Sheffield and Rotherham Parkgate providing another commuting choice for the thousands of people travelling between the two centres on a daily basis. At the time of writing, early indications are that patronage levels are exceeding expectations. In recent years the number of passengers decreased (see Figure 3.10) as the services were suspended so rails could be replaced on parts of the network., although rail replacement bus services were provided on affected routes. Passenger numbers are now recovering and are expected to increase now tram train is operational. Presently work is ongoing to determine the future of the network as further investment is needed over the next ten years to bring the network up to standard and secure its ongoing operation[25]. A recent consultation exercise has indicated overwhelming public support to retain and develop the tram network.

Tram Patronage

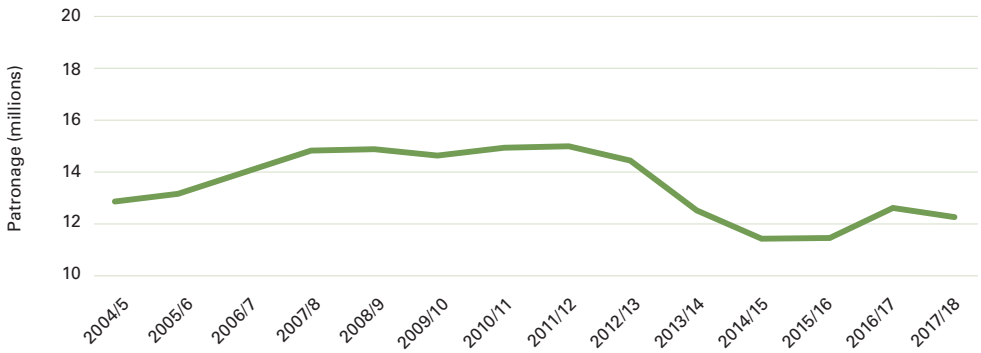
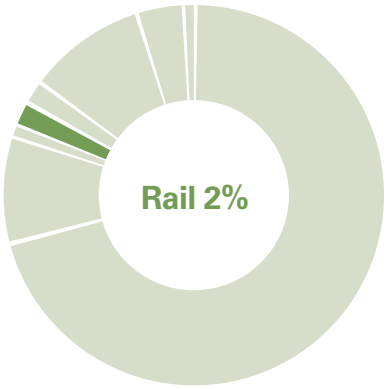


Figure 3.10 - Change in passenger numbers on the Supertram (SYPTE)



The numbers of people travelling in the City Region by rail has increased between 2005 and 2016 as we can see by the numbers of people using our rail stations (entries & exits). Seven out of the top ten stations in our City Region have recorded more than 50% growth (Figure 3.11). The majority of our main and local rail stations have park and ride facilities, many of which are full on weekdays.

The rail infrastructure network itself has a number of capacity issues in particular at Sheffield Midland and Doncaster Stations and on the Hope Valley line and the East Coast Mainline (ECML). With proposed service improvements being delivered through the current Northern, TransPennine Express and East Coast franchises, along with a number of rail infrastructure and connectivity improvement schemes in the pipeline, including High Speed 2 (HS2) and Northern Powerhouse Rail (NPR), rail use is expected to increase significantly in the future.

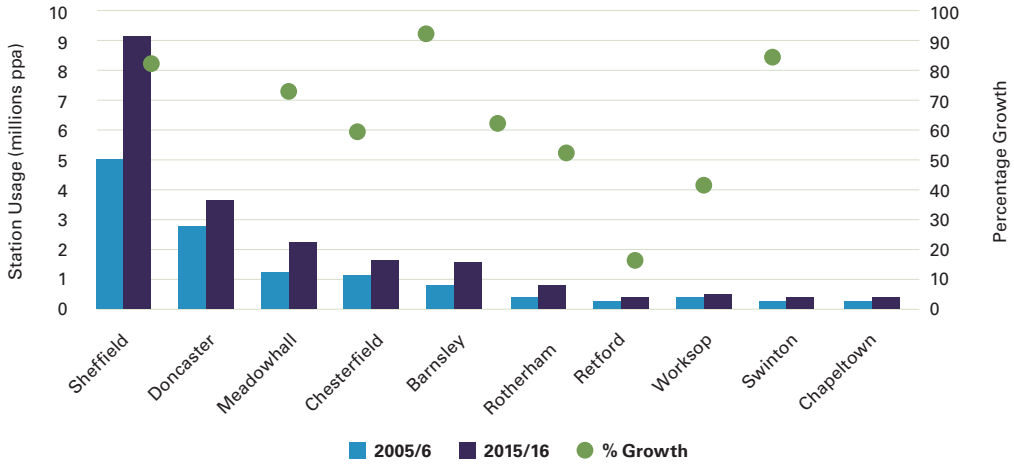
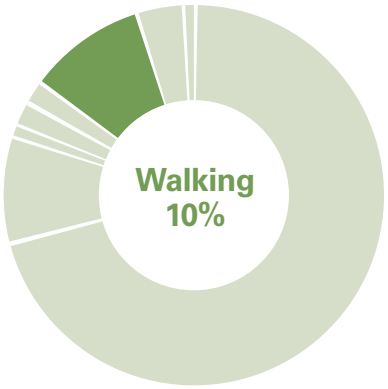


Figure 3.11 - Change in people using rail stations (entries and exits) for the top 10 stations in SCR[26]

[25] Large Local Majors Transport Schemes – Application for Scheme Development Costs – Main Round - SCR Mass Transit (SCRCA, July 2016)
[26] Estimates of station usage (Office for Rail and Road, 1997-98 to 2015-16)
[27] Table CW0103, Walking and Cycling Statistics (Department for Transport, 2016)



We consider walking, cycling and public transport to be active modes of transport as part of a bus, tram or train journey often includes an element of walking or cycling. Figure 3.12 presents analysis of the Census journey to work data for South Yorkshire (2011) by mode and trip length. The data shows that although walking is the predominant mode for trips less than 1 km in length, the reliance on car travel for short trips is still high, although it is not clear whether this is because of poor infrastructure or a personal choice. Furthermore, cycle mode share for trips less than 5 km (considered to be the average commuting trip length for cycle trips) is between 2-3%, with car use continuing to dominate. The dominance of car use over active modes for shorter trips demonstrates the high reliance of commuters on driving to work both within and beyond SCR. At the moment we do not have a good understanding of actual numbers of people cycling in the region because of the disparate nature and short lengths of journeys that make monitoring difficult.

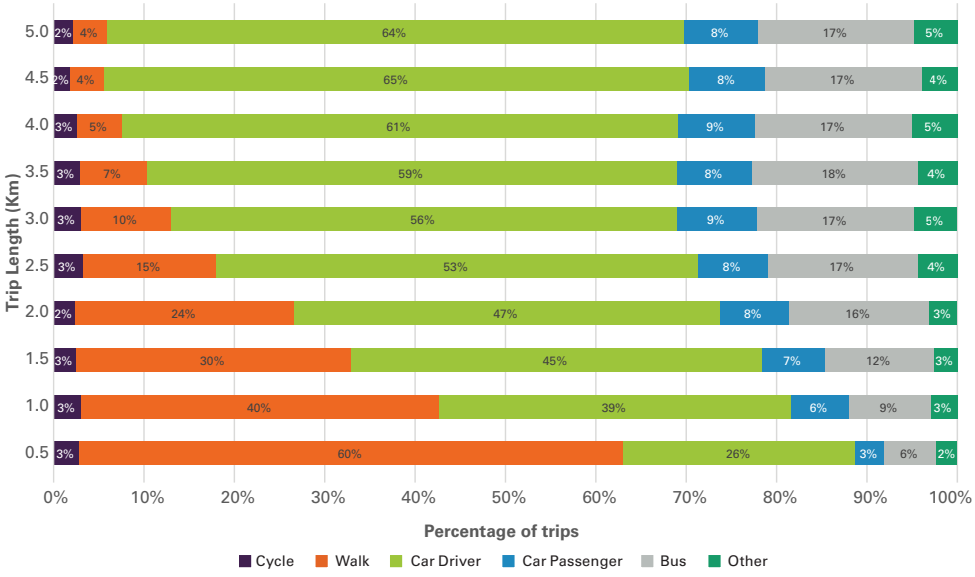
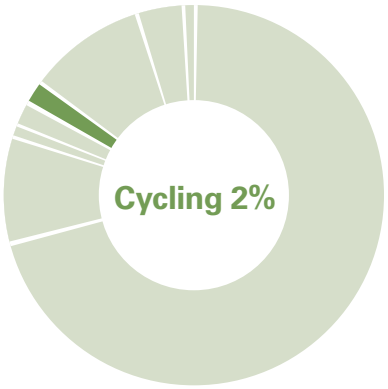


Figure 3.12 - Census journey to work data for South Yorkshire (2011)

[28] South Yorkshire LSTF Outcomes Monitoring Report (South Yorkshire LSTF Delivery Partners, March 2016)
[29] Annual cordon counts (SYPTE, 2005 to 2016) [30] Low Emission Zone (LEZ) Feasibility Study Phase 2-Final Report (Sheffield City Council, 2013)
[31] Charging point statistics (Zap Map, June 2017)



However, in addition to anecdotal evidence that cycling is increasing, we do have a series of counts taken around the four main South Yorkshire centres that indicate that there was an overall increase by 7% between 2016 and 2017 (see Figure 3.13). It should be noted that these counts are merely a snapshot taken once a year and depending on other factors on the day such as weather, road works etc are not necessarily an accurate representation of actual numbers. The DfT statistics for the proportion of residents who cycle for any purpose at least once per month by local authority area from 2010/11 to 2014/15 show similar trends at the local authority level. However, it is noteworthy that where targeted improvements are provided, there is significant growth in the number of cyclists. A particularly positive example is Blackburn Meadows towpath (Lower Don Valley) where the number of cyclists and pedestrians increased by 157% and 95% respectively, post intervention. Anecdotal evidence from various Local Sustainable Transport Fund schemes like Cycleboost cycle training suggests that the number of people benefitting from such schemes are increasing year on year and targeted interventions are necessary to sustain and encourage mode shift from sedentary modes.

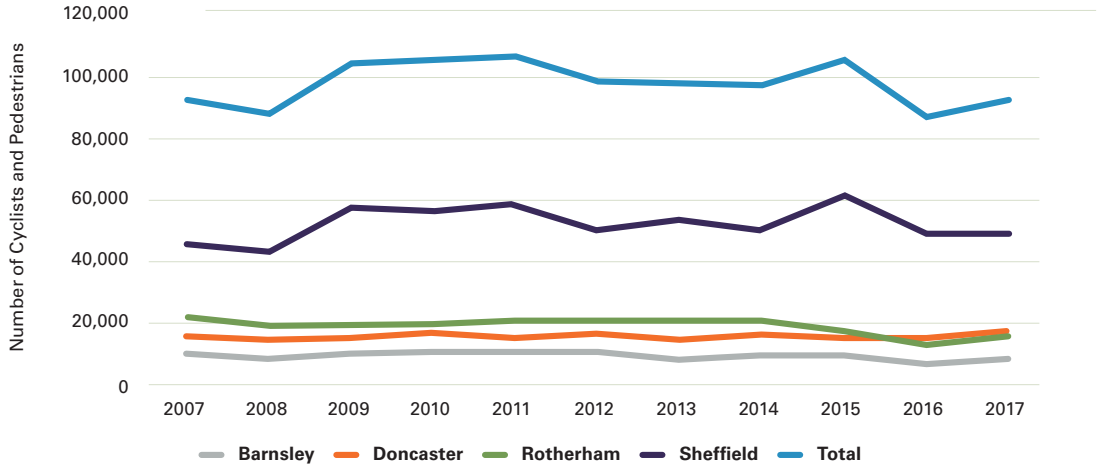


Figure 3.13 - Number of cyclists in South Yorkshire [29]

Sheffield City Region

3.3 Environment

3.3.1 Air Quality and De-Carbonisation

Our City Region faces significant air quality issues with 28 Air Quality Management Areas (AQMAs) across SCR, including 6 in Barnsley, 7 in Doncaster and 8 in Rotherham and high levels of carbon emissions around the centre of Sheffield, which has a city-wide action plan, including the motorways and A Roads (Figure 3.14). Poor air quality is linked to a variety of health concerns ranging from short term illness to serious diseases and premature death. In South Yorkshire an average of 4.7% of all adult deaths can be attributed to particulate air pollution PM2.5 (Barnsley 4.5%, Rotherham 4.8%, Doncaster 5.0%, Sheffield 4.6%). The impact on health and life expectancy is more significant for some groups of people than others and there is an identified link with deprivation. Poor air quality also has an adverse impact on the environment.

Across Sheffield alone there are 51 locations where the European Union's annual average limit value for NO2 (40 µg/m3) has been exceeded in one or more of the three year periods (2010-2012), and a 30% reduction in NO2 emissions would be needed in order to comply with the limit value. Analysis indicates that road transport is the single most significant contributor to Sheffield's NO2 emissions at these locations.

Sheffield City Council and Rotherham Metropolitan Borough Council are undertaking a Clean Air Zone Feasibility Study, to ensure compliance with legal thresholds in the shortest possible time. To address the particular challenges in Sheffield, similarly to other significant Cities across England, a Charging Clean Air Zone is proposed which would target the most polluting vehicles that do not meet required emissions standards. Current proposals that would see improvements to buses, coaches, taxis, HGVs and LGVs will be consulted upon in early 2019. This is an important challenge for Sheffield City Region and by meeting the requirements we will improve the health of people who live and work in our towns and city.

Mitigating the impact of the motorway network on air quality represents a significant challenge for the region and success will be dependent on collaboration with Highways England and national Government.

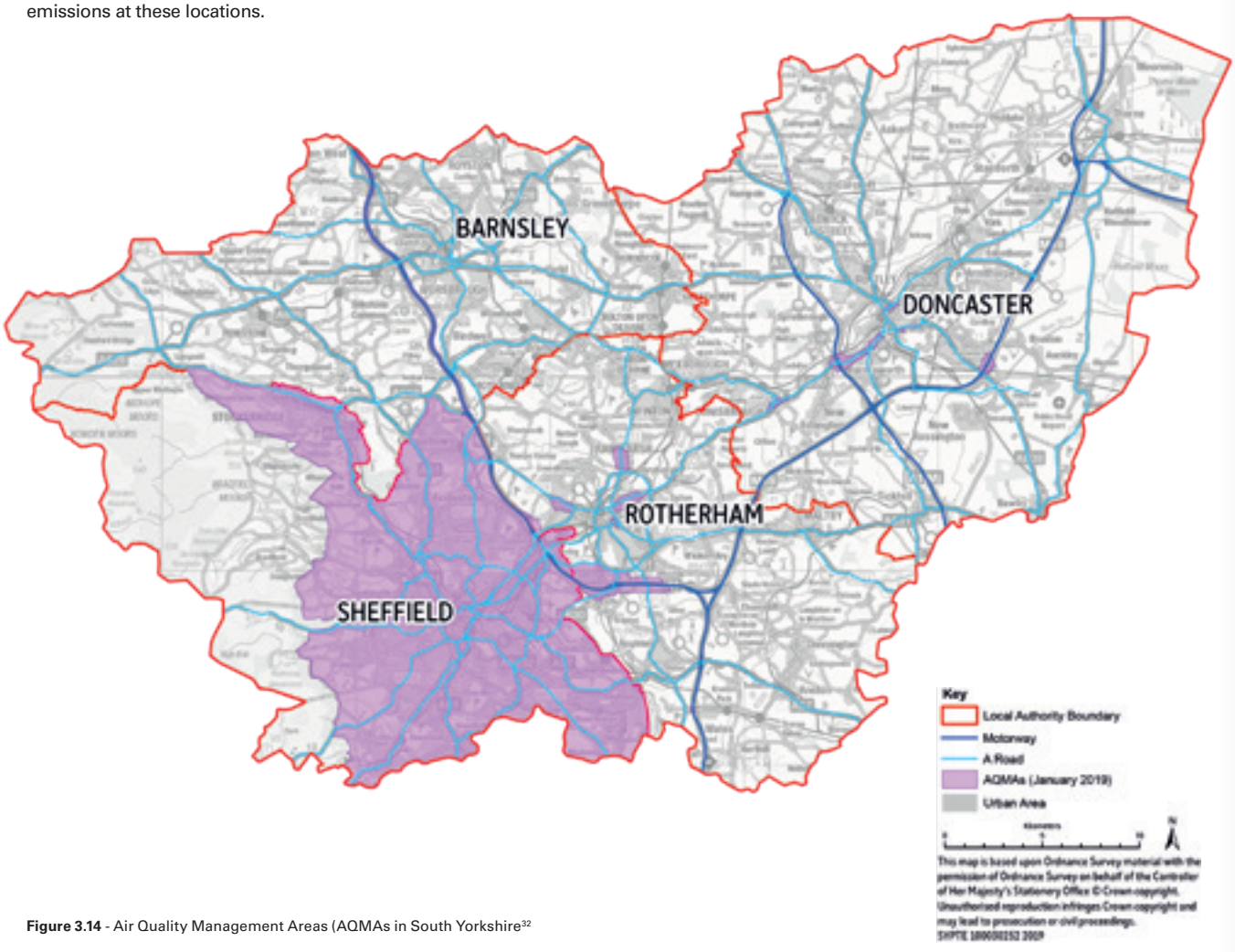


Figure 3.14 - Air Quality Management Areas (AQMAs in South Yorkshire[32]

SCR partners have also delivered a number of driver training initiatives, invested in clean vehicles and established the ground-breaking Bus Partnerships in South Yorkshire that have set and achieved progressive targets for vehicle investment. In addition, the ECO Stars Fleet Recognition Scheme, hosted by Barnsley Council encourages fleet operators to adopt sustainable best operational practices, and provides guidance for making improvements with the ultimate aim of reducing fuel consumption, leading to fewer vehicle emissions and reducing fleet operational costs, in return for being awarded a star rating.

SCR is also developing an Energy Strategy and Delivery Plan which will provide a clear plan informing how our economy can decarbonise and decouple the link between economic growth and the growth in energy demand, whilst increasing productivity and competitiveness. Whilst more work on this is needed to align it with Government's National Air Quality Plan, our approach is a significant step in progressing this agenda.

An emerging global transport trend is the increasing uptake of electric vehicles. Advances in battery and other storage technologies, further reductions in costs and improved efficiencies will mean that electrification is increasingly viable. Plans to make electric vehicle charge points more widely available and convenient for motorists were put forward by Government in October 2016 with all new diesel and petrol cars banned by 2040. In the UK the number of newly registered ultra-low emission vehicles rose by 250% in just two years, and there has been a steady increase in plug-in vehicles in South Yorkshire since 2012 (see Figure 3.15).

In June 2017 there were 12,821 charging points in the UK, increased from approximately 1,500 in 2011, but only 2.9% of the UK charging points are located in the Yorkshire & Humber region – the lowest of all UK regions. With our City Region being characterised by a high reliance on private cars for commuting, an increasing proportion of diesel vehicles, and the slow adoption of electric charging points, this suggests a need for both a step- change in charging point availability and tough policy decisions for our City Region to address growing pressure on deteriorating air quality and tailpipe carbon emissions.

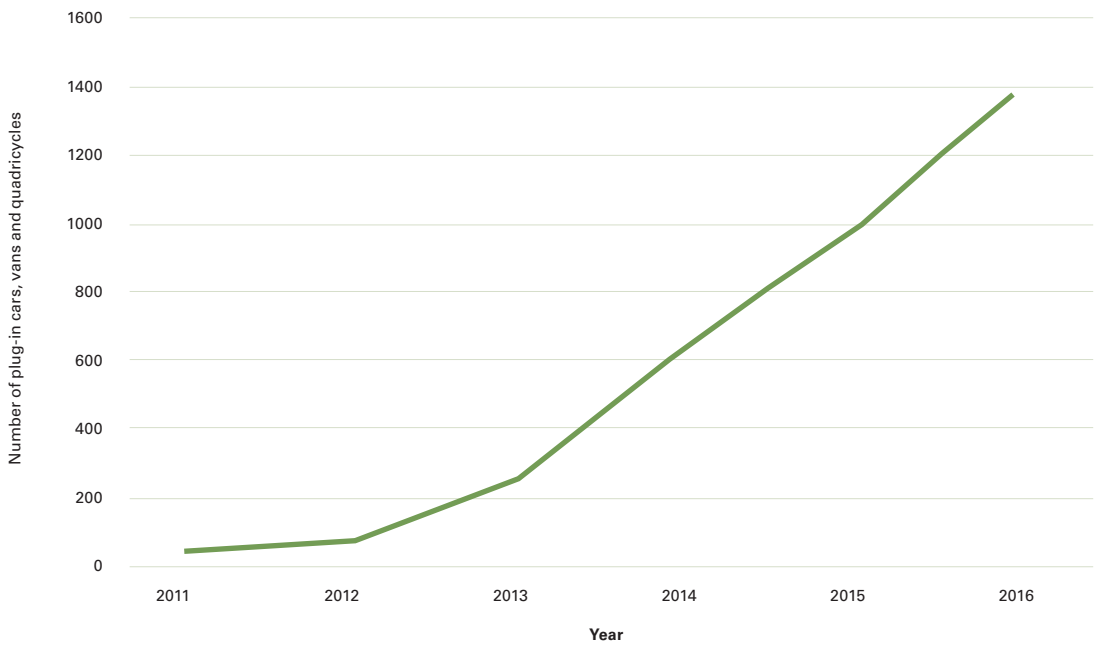


Figure 3.15 - Number of plug in cars, vans and quadricycles licenced in South Yorkshire[33]

[32] Low Emission Bus Scheme Application (SYPTE)
[33] www.gov.uk/government/statistical-data-sets/tsgb09-vehicles

3.3.2 Freight and Deliveries

The nature of freight and deliveries has evolved in recent years. Road is still by far the dominant carrier of freight in the UK (76% by tonnage in 2017) but there has been a gradual growth in rail freight since the mid-1990s, with rail increasing its market share to 9% in 2017.

Road freight contributes around £11bn to the UK economy and is particularly important in the SCR as, in percentage terms, the highest levels of forecast employment growth in the region are expected to occur in transport and logistics. This builds on the SCR's strong multi-modal freight distribution sector, based in Doncaster, the IPort, and the Dearne Valley. Operators indicate that network management/resilience as well as highway maintenance and driver facilities are priorities for them.

Freight to and from Humber Ports is a major source of rail traffic in the SCR. Other key rail freight movements include metals, container traffic and lime on the Rotherham to Chesterfield (via Eckington) route and limestone and cement on the Hope Valley Line. The compromise between serving bulk freight trains, express trains and local stopping services on the same lines is felt throughout the region, but particularly on the Hope Valley Line.

66% of road freight movements within Yorkshire and Humber impact SCR, with most of movements to and from the North West and East Midlands.

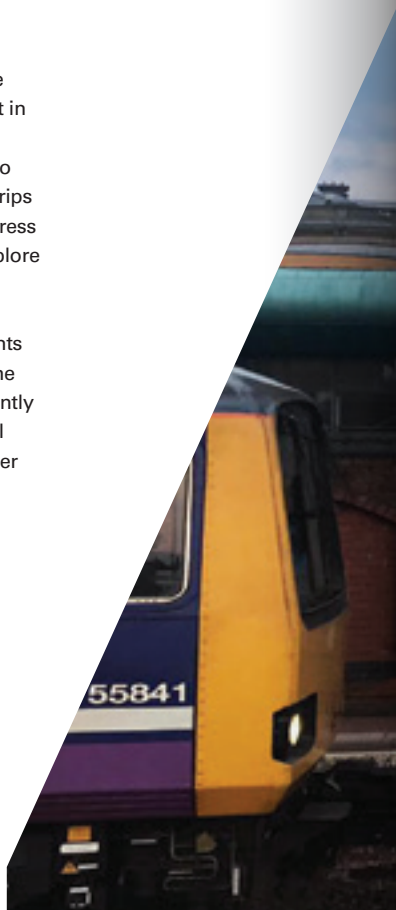
Road freight is essential, but results in issues in both rural and urban areas, including the suitability of routes for freight vehicles, community severance and pollution: both noise and air quality.

Careful planning is needed to ensure goods can still be delivered while minimizing the impact of freight traffic on local communities together with better driving standards that can help mitigate these adverse impacts.

We need to address the volume and standards of freight vehicles coming into our town and city centres, and one way of doing this is by freight consolidation. This approach allows retailers to consolidate deliveries from all suppliers in one location and has reduced vehicle movements to participating retailers by 80% between 2009 and 2014. There is an existing consolidation centre serving Meadowhall in Sheffield.

Online sales of non-food items have soared over the past five years, from 11.6 per cent of the total market in December 2012 to 24.1 per cent in December 2017[34]. As a result of this, the trip rate for vans is expected to grow by 79% by 2040 compared to a growth in car trips of just 9% and 22% for HGV's[35]. We also need to address the engine standards of all delivery vehicles and explore technologies for last mile journeys.

The proportion of total waterborne freight movements in SCR using inland waterways is small. However, the Sheffield and South Yorkshire Navigation Canal recently attracted new freight business consisting of oil, steel and bulk commodities. The section through Doncaster to Rotherham allows 650-700 tonne vessels and the southern section to Sheffield can accommodate 90 tonne barges.



[34] British Retail Consortium
[35] The Implications of Internet Shopping Growth on the Van Fleet and Traffic Activity – Braithwaite May 2017
[36] UK climate projections, medium emissions scenario (UKCP09 data licence)

3.3.3 Resilience

Improving the resilience of the transport network allows us to minimise the impact on people as they move about our City Region, where unforeseen events such as accidents and incidents may occur. It also allows us to manage the network to make sure that planned events such as road works cause as little disruption as possible.

Weather pays a huge part in resilience and whilst it is forecast that average temperatures will increase by 2.2°C in the Winter and 2.3°C[36] in the Summer in the Yorkshire and Humber region, it is also predicted that the mean winter rain and snowfall will increase by 11% by 2050.

Every district within our City Region is already at high risk of river flooding and many are also at high risk of surface water flooding in addition. Action to combat this threat includes investment in Sustainable Urban Drainage Systems (such as first phase of Grey to Green at West Bar in Sheffield) and flood alleviation schemes in the River Don catchment.

The efficient operation of buses and trams relies on a significant investment in maintenance and minimisation of disruption. SYPTE, the Local Highway Authorities and public transport operators work together to deal with incidents and effectively communicate disruptions to the travelling public. This includes bad weather such as flooding, ice and snow, which without adequate planning can severely limit operation of public transport networks. This is made worse by the hilly nature of some parts of our City Region.

Research undertaken as part of the National Highways & Transportation Survey 2014 revealed that around 55% of respondents across the SCR felt that the three top priorities for the road network were to improve the condition of roads, pavements and footpaths, and to tackle traffic congestion. More people (typically around 25%) thought that improving the condition of the roads was more important than tackling congestion. In addition, the road network has a large number of structures and bridges[37] that require weight restrictions limiting the movement and options for larger vehicles.

Network resilience limits our growth at present. In 2015 the DfT published the Trans- Pennine Routes Feasibility Study, which identified that the existing trans-Pennine road routes between our City Region and the Greater Manchester City Region experience a closure every 11 days on average, with two-thirds of these being longer than two hours. 77% of these closures are the result of either road traffic collisions or bad weather[37]. This limited road connectivity restricts existing business and also opportunities for increasing economic activity. Additionally, resilience issues affect rail as well as roads, with the TransPennine Rail route also experiencing higher levels of disruption and poor alternatives make the journey unattractive. This is in addition to existing low commuting rates between the two City Regions, as less than 1% of Sheffield's residents commute to Manchester despite this being a distance of less than 40 miles.

On our rail network electrification of rail services elsewhere is expected to deliver reliability and resilience benefits. Research undertaken for the SCR highlights that electrified services are generally more reliable than diesels[39], yet the majority of rail operations remain diesel.

3.4 Social

3.4.1 Safety

The historical trend in casualty data for South Yorkshire shows a decrease in people killed and seriously injured from collisions (Figure 3.16). However, as a result of the Police reclassifying serious injuries in 2016 there has been a reported increase in numbers over the last two years.

Whilst noting that the recent trend is levelling, safety for pedestrians, cyclists, passengers and drivers must remain of paramount importance. In financial terms, the average cost of a Road Traffic Accident is £90,424[40], with the cost of a fatal accident being £2,130,922 but this is insignificant compared to the distress and grief suffered by the victims and their families and friends, so there are gains to be made by reducing accidents both in terms of costs to society and minimising disruption on the road network.

In particular, the national trend in people killed and seriously injured from collisions shows that although car casualties have decreased, cycle casualties have increased, although at a lower rate than the increased proportion of people cycling. As many of our wider policy objectives (such as reducing congestion, improving air quality and tackling obesity) point towards increasing active mode share as a solution, the safety of cyclists and pedestrians will remain of upmost importance.

When designing interventions to tackle safety issues and promote safer travel the approach needs to reflect the needs of different groups and prioritise groups that are most at risk. High risk groups, for example young drivers, young motorcyclists and children will remain a priority group for investment. In parallel, changes to national policy, for example penalties for the use of mobile phones while driving, will require action at a local level to reinforce the risk and penalties to all drivers.

Perception of safety remains an important issue as many people, particularly the elderly[41] and vulnerable often chose not to travel in certain locations or time of the day as they feel unsafe. The design of streets, walking routes and public transport should therefore have consideration of personal safety with good lighting and clear sightlines.

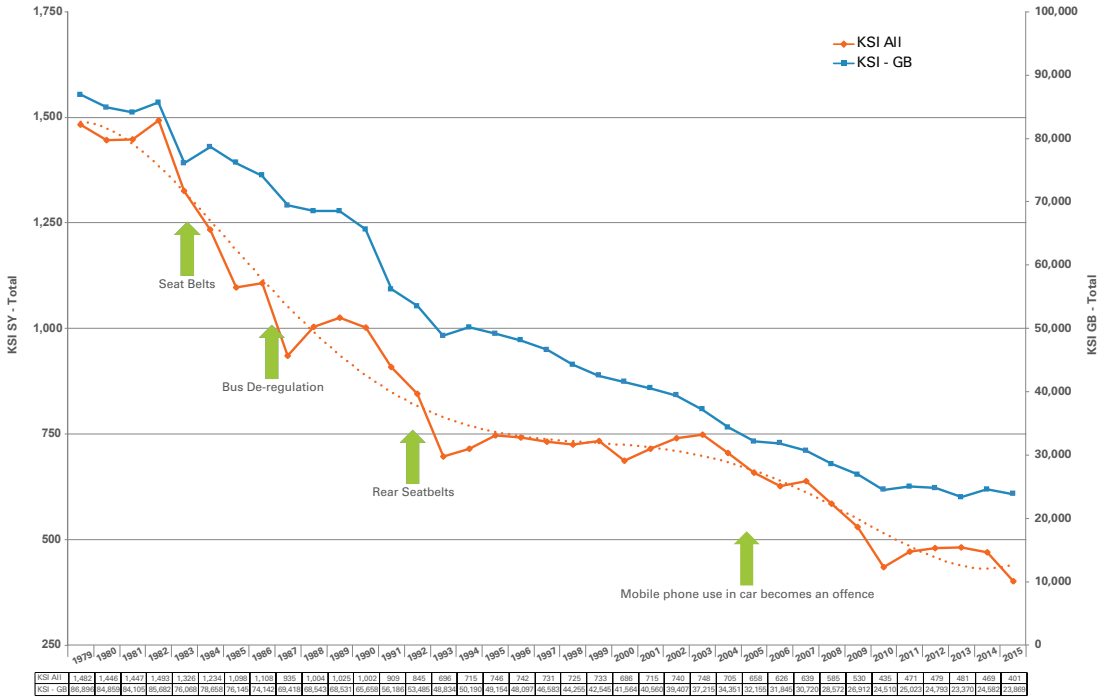


Figure 3.16 - SCR/GB KSI Comparison Trends

[37] Local Highway Authority Asset Managers
[38] Trans-Pennine Tunnel Study Stage 3 Report (DfT, February 2015)
[39] Midland Main Line Electrification: Reinforcing the Case for Investment (Aecom/SCR, 2015)
[40] STATS19, Transport Analysis Guidance – WebTAG (2017)
[41] Age UK Loneliness Evidence Review Susan Davidson and Phil Rossall updated July 2015

3.4.2 Social Inclusion

Ensuring that all our residents have access to services and employment opportunities is central to inclusive economic growth and will help to reduce social isolation by better connecting our neighbourhoods. Our City Region ranks as the 7th most deprived LEP area in England and as Figure 3.17 shows, we have some of the most deprived areas in the country. Around 18% of the City Region (and 10% of the South Yorkshire population) live in a rural area[42], where low population densities make it difficult to operate public transport provision without subsidy.

The latest census data (2011) identified that 27.35% of households in SCR do not have access to a car, meaning these residents are reliant on public transport and active travel modes to meet their transportation needs. However, inclusive economic growth and access to local facilities is being hindered by reductions in the extent and level of service provided by the bus network, and rising cost of travel (single and return tickets) by public transport, as shown in Figure 3.18 and often an unawareness of the value/discounted tickets on offer. We also know[44] that the number of people in the UK who do not have access to a bank account is around 1.52 million, further hindering the availability of value products to them, particularly relating to smart tickets and contactless payments. These modes (especially the bus) are the primary modes that connect our local centres and offer a vital link to local services for many of our residents.

Recent research by the Centre for Regional Economic and Social Research[45] highlights the most recent ONS figures for household expenditure where transport accounts for 14% of an average household budget. Except for mortgage and rental payments, this is now the most significant household cost. The report goes on to highlight that the ability to afford transport is compromised by essential needs including heating and food, with low income households having significantly lower expenditure on transport than higher income households.

There is a growing gap between the slow growth in wage levels compared to rises in public transport fares. In the 10 years from 2006, the cost of travelling by public transport has increased above inflation (Bus 32%, Train 39%, Tram 44%) as have other living costs, whereas wage growth has stagnated with an average total increase of 29.4%.

Public transport networks do not provide services for 24 hours a day, but modern shift patterns continue throughout the day and night. Whilst SYPTE and public transport operators will try and timetable buses to accommodate shift patterns at employment sites this is not always possible. This can hinder the ability for people to enter the labour market.

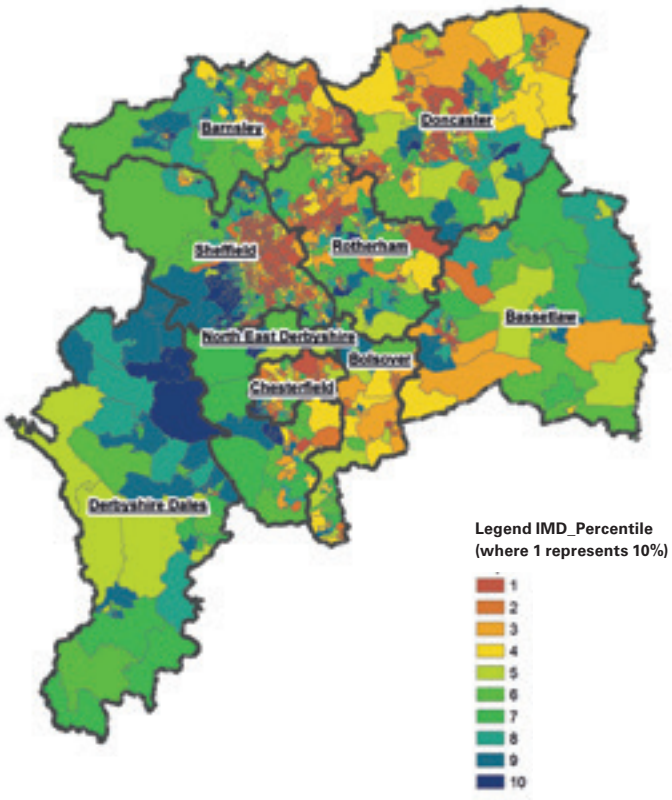


Figure 3.17 - Deprivation across SCR[43]

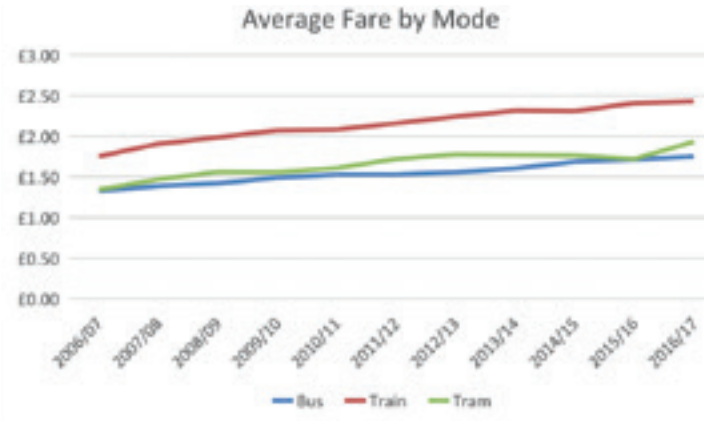


Figure 3.18 - Average fares in South Yorkshire[47]

[42] ONS 2011 rural/urban classification (accessed in 2018)
[43] English Indices of Deprivation (Department of Communities and Local Government, 2015)
[44] Rowlingson and McKay 2017
[45] Addressing transport barriers to work in low income neighbourhoods (CRESR, 2017)

3.4.3 Public Health

National research by Sport England shows that more than one in four people engage in less than 30 minutes of physical activity a week and it is estimated that one in six deaths is caused by inactivity. Within our City Region, Figure 3.19 shows that the majority of Districts have inactivity levels higher than the national average for the adult population (aged 16 and above)[48].

The national obesity survey shows that although the obesity levels in our City Region of children aged 10-11 years have decreased to meet the national average (19%)[49], there are a number of areas within our City Region that have higher than average, and growing, obesity levels.

Active transport modes such as walking and cycling offer significant potential to increase activity levels and reduce obesity, whilst also providing affordable, inclusive access to jobs and services. Public transport can also play an important role as it often involves walking or cycling to access it. A study commissioned by Greener Journeys[50] highlighted the health benefits of using public transport.

The evidence is clear that using public transport has clear tangible benefits to individual's physical and mental wellbeing and any scheme that contributes to improvements to public transport will in turn contribute to improvements to physical activity.

Poor air quality has recently been estimated to account for up to 500 premature deaths per year in Sheffield, with health costs of around £160 million per year[51]. Individuals who are particularly sensitive and exposed to the most elevated levels of pollution have an estimated reduction in life expectancy of as much as nine years.

In comparison, the Department of Health reports that the impact of reducing fine particles has a bigger impact on life expectancy than eliminating passive smoking or traffic accidents, as shown in the table below[52].

	Reduction in fine particles PM2.5	Elimination of road traffic accidents	Elimination of passive smoking
Expected gain in life expectancy	**7-8 months**	**1-3 months**	**2-3 months**

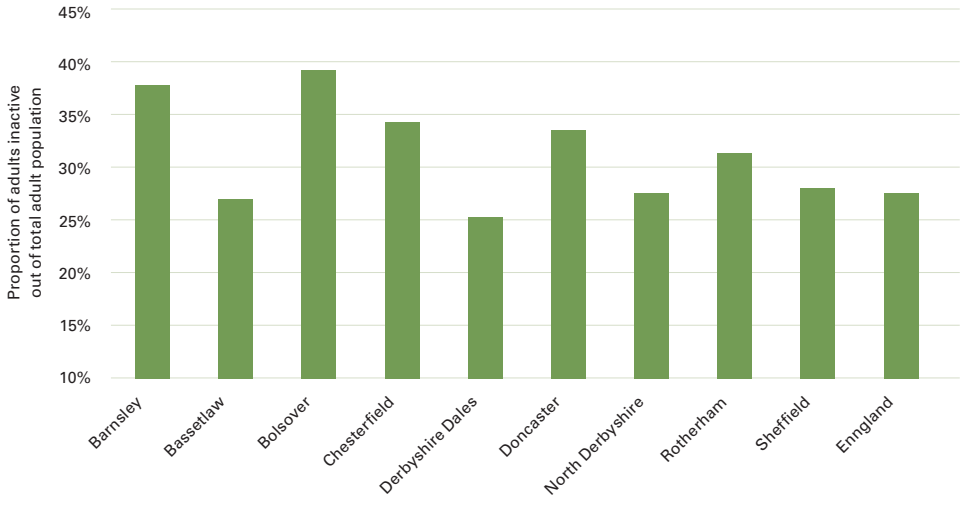


Figure 3.19 - Proportion of adults that were physically inactive in 2014/15

[46] www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/kgq2/qna
[47] SYPTE
[48] Active People Interactive (Sport England 2010/11 to 2012/13 and 2013/14 to 2015/16) (Sport England Active People Survey 2018)
[49] Child obesity and excess weight: small area level data (Public Health England, 2017)
[50] Why taking the bus is good for your health (Greener Journeys, 2011)
[51] Air Quality Action Plan (Sheffield City Council, 2015)
[52] Department of Health, EV 142

3.5 Technology

3.5.1 Digital Connectivity

Advances in technology are drastically changing the world in which we live from transport to education, business and the home. It is estimated that by 2020 the Internet of Things (a giant network of connected devices) will have over 26 billion connected devices. Mobile network technology is fast evolving to meet the demands for high speed connections, helping to extend coverage further into rural areas and provide the capacity needed to meet the needs of users in cities and towns.

The difference in smartphone ownership between young and older age groups is stark and the smartphone ownership of 16-34, 35-54 and over 55 age groups in 2016 was 90%, 83% and 42% respectively. Smartphone applications have a strong influence on the travel choices people make and are profoundly influencing the way people interact with the transport networks as well as travel behaviour. Where people do not have access to smartphones alternative sources of information is needed.

3.5.2 Mobility as a Service

Mobility-as-a-Service (MaaS) is a movement away from privately owned vehicles towards mobility or transport solutions that are bought as a service. This is made possible by combining transportation services from public and private providers through a single digital platform that plans, creates and manages the trip tailored to the specific needs of the individual.

This evolving way of accessing many mobility options without having to own a car means that car ownership rates may fall as travel patterns and behaviours change in response to a rapidly evolving market.

Driving a vehicle is becoming a less attractive mode of transport for younger generations; between 2012 and 2016 there were 6% fewer people with a full driving license in the 16-24 age group in UK[53]. Instead, there is a growing demand for car sharing and transport on demand through innovative taxi services such as Uber.

3.5.3 Technology and Innovation

The transport industry is already benefitting from advancements in technology and innovation. For example, national trends[54] suggest that the share of vehicles with satellite navigation technology is increasing rapidly; and smart motorway systems continue to be implemented on a national scale to improve efficiency, safety, air quality, and resilience.

Journey planning by public transport is increasingly carried out using digital applications with less reliance on paper timetables. Real time information from buses, trams and trains enable people to make alternative arrangements in a timely fashion if required.

In the future, robotics and automation will play an increasing role in the operation and delivery of transport services. Intelligent robots, aerial technology and drones are likely to provide a service that supports the inspection and maintenance of transport infrastructure assets and may support smaller and last mile deliveries.

Perhaps even more disruptive, the emergence of autonomous vehicles is fast evolving into a viable market. It is predicted that about 35% of vehicle sales will be fully autonomous by 2035. This could have major consequences for the existing transport system as the change to in-vehicle passenger use of time could see autonomous vehicles compete with modes such as rail.

Driverless cars and Heavy Goods Vehicles that are able to safely travel in decreased proximity[55] could also increase the capacity of existing infrastructure.

[53] GB Driving Licence Data, 2017
[54] Table NTS0907 (National Travel Survey, Department for Transport Statistics, 2016)
[55] Autonomous Vehicles and the Mobility of New (and Old) Consumers (C3 Report, 2014)

3.5.4 Integrated Ticketing and Information.

Transport connectivity is recognised as being vital to drive economic growth through agglomeration, expanding labour and employment catchments, and unlocking key locations. As such, we need to make public transport as easy and efficient as possible. Significant investment in smart ticketing has already been made by northern city regions including our City Region and also by the largest bus operators who have introduced contactless and mobile payment systems. Whilst good progress has been achieved, much of the evolution has been made independently, and resulted in the disparate ticketing schemes across the North and between different modes of transport.

We support the Integrated and Smart Travel programme being managed by Transport for the North (TfN) to introduce a common multi-modal pay-as-you-go public transport ticketing system for the North. We are working with TfN to ensure that this system is fully integrated with local TravelMaster tickets, and also spans the TfN boundary into the non-constituent areas of the SCR. This system needs to simplify the ticketing offer and be valid across all public transport modes and operators. Ease of purchase and transparency of charging is essential. The use of smart ticketing on buses will significantly reduce boarding times at bus stops and thus overall journey times as the number of people paying with cash reduces. At the same time, consumers' appetite for spending using contactless methods is increasing all the time. Figures from the UK Cards Association state monthly spending was up from £287 million per month in January 2015 to £567 million per month in June 2015. In just six months of 2015, UK consumers spent more using contactless than they did in the whole of 2014.

As well as integrated ticketing, there is also opportunity to improve information provision for public transport services to improve the quality of the journey (for example, providing high confidence on journey reliability) and therefore attractiveness of the service. In 2014, it is estimated that the average excess waiting time for frequent bus services in South Yorkshire was 100 seconds, and in Derbyshire was 60 seconds[56].

Excess waiting times can influence mode choice and the attractiveness of public transport can be enhanced by providing real time information at the bus stops and online. SYPTE has been working with local partners and public transport operators to enhance the provision of the Realtime service. With investment in the control systems, on-board technology and passenger information displays the ability to provide more accurate and dynamic travel information has moved forward significantly. Alongside Realtime, the use of social media platforms to communicate with the public and gather information has an increasing role.

[56] Table bus0903, Average excess waiting time for frequent services by local authority: England, annual from 2004/05 (DfT statistics, 2016)

3.6 Key Challenges

A review of the evidence base leads us to determine the following key challenges as set out in the Mayor's Vision;

1. **By 2026 there will be up to half a million extra journeys on our road and rail network every day. Without action to tackle congestion travel times will get worse.**
2. **18% of us live in a rural area and our population is ageing. A fifth of residents have a disability and some communities live in areas of high deprivation. We know getting around can be far from straightforward for these groups.**
3. **Our motorway and major road network is under great strain. There is no clear joined up local and national plan.**
4. **Poor connections with other regions, particularly Greater Manchester and Leeds City Region, limit opportunities for residents, businesses and freight operators.**
5. **Our communities are not as healthy as they could be, and we don't have the infrastructure to enable greater take up of cycling and walking.**
6. **Poor air quality blights parts of the region with 28 designated Air Quality Management Areas (AQMAs).**
7. **Our roads are getting safer. But young drivers, young motorcyclists and children are most at risk.**
8. **Technology is changing the way people access travel information and how they use the public transport system.**
9. **Residents and businesses are not well connected by all modes to Doncaster Sheffield Airport or other international airports.**
10. **In the last ten years the number of people using buses has fallen by 18% and yet a quarter of all households do not have access to a car.**

4.0 Our Policies

4.1 Introduction

Each of our transport goals is underpinned by three specific policies and each aligns to the Mayor's transport commitments, providing a framework to guide all decision-making processes and investment strategies related to our transport network up to 2040. The Mayor's commitments and associated policies have been developed through analysis of the evidence detailed in Section 3, and review and amendment based on stakeholder input.

As this is a refresh of the 2011 Transport Strategy, we have also reviewed the previous 26 policies to determine whether they are still relevant and identify any gaps, and distilled them down to nine new policies. There is a degree of overlap between our policies but having fewer policies will help us to focus on our most important priorities and enable us to monitor our progress more effectively. Our transport policies are summarised in Table 4.1 and then described in more detail in the remainder of this section.

Transport Strategy Goals	Mayoral Commitments	Transport Strategy Policies
Residents and businesses connected to economic opportunity	**I will invest in tram, tram-train, bus rapid transit, bus networks, active travel and tackle our congestion hotspots.** I will develop a plan for road investment that takes a co-ordinated long-term perspective. **I will ensure that local, regional and national road and rail investment delivers for this region.** I will ensure that new technology improves the customer experience of travelling in and around the Sheffield City Region. **I will actively support improved public transport connections to Doncaster Sheffield Airport and ensure that regional rail investment delivers fast and efficient rail links to major airports.**	1. Improve the existing transport network to enhance access to jobs, markets, skills and supply chains adopting technology solutions to support this. 2. Enhance productivity by making our transport system faster, more reliable and more resilient, considering the role of new technologies to achieve this. 3. Invest in integrated packages of infrastructure to unlock future economic growth and support Local Plans, including new housing provision.
A cleaner and greener Sheffield City Region	I will work with partners to deliver a zero-emissions public transport network and we will eliminate the need for AQMAs. **I will undertake a review of the bus network in South Yorkshire, to look at all options for improving local bus services.**	4. Improve air quality across our City Region to meet legal thresholds, supporting improved health and activity for all, especially in designated AQMAs and CAZs. 5. Lead the way towards a low carbon transport network, including a zero-carbon public transport network. 6. Work in tandem with the planning and development community to create attractive places.
Safe, reliable and accessible transport network	I will invest in services to ensure that residents with disabilities, young people, the elderly and those who are isolated economically and geographically are able to travel easily, confidently and affordably. **I will put pedestrians and cyclists at the centre of our transport plans.** I will ensure that safety is planned into all future transport investment and that road safety education initiatives are prioritised.	7. Ensure people feel safe when they travel and invest in our streets to make them more attractive places. 8. Enhance our multi-modal transport system which encourages sustainable travel choices and is embedded in the assessment of transport requirements for new development, particularly for active travel. 9. Ensure our transport network offers sustainable and inclusive access for all to local services, employment opportunities and our green and recreational spaces.

Figure 4.1 - Our goals, commitments and policies

4.2 Residents and Businesses Connected to Economic Opportunity

Policy 1 **Improve the existing transport network to enhance access to jobs, markets, skills and supply chains adopting technology solutions to support this.**

We want to increase the number of jobs, particularly high value jobs, in our City Region and the number of people in full time employment. GVA in SCR remains low in relation to our peers and the wider UK (see Section 3.2.1) and we know that to reach our potential, we need to develop integrated transport connections and improve access on four geographical scales (see Figure 4.1):

- within our City Region;
- to other centres in the North;
- to locations in the UK beyond the North, such as London; and to our international markets.

Figure 4.1 - Scales of connectivity required to support economic growth in our City Region

By increasing intra-regional connectivity we will provide access to jobs, skills and education opportunities for everyone in our City Region, while improving access to markets and supply chains for our businesses. Most SCR residents (85.3%) commute within the City Region boundaries, with the highest amount of intra-regional commuting taking place between Sheffield and Rotherham (see Section 3.2.4), highlighting the need for improved connectivity by sustainable modes. We will expand and better integrate our mass transit system to provide improved multi-modal and affordable connectivity, between both our urban centres and our spatial priority growth areas. This includes providing high quality cycling and walking infrastructure to provide affordable and sustainable access to sites of employment and our transport interchanges.

We will examine the options identified through the CRESR report[57] to address the transport barriers for low income neighbourhoods. This includes, for example, more tailored travel planning to overcome travel perceptions, and tackling the cost barrier, particularly by measures to reduce the cost of public transport to those on low incomes, and promote low cost modes such as cycling and walking.

We will also improve inter-regional connectivity, particularly east-west connections and connectivity across the North, which will widen our labour market so people can live and work in different city regions. We want to redress the balance between the number of commuters travelling out of the SCR to work which we know to be double that of those travelling into the region (see Section 3.2.4). Increased connectivity will also generate greater agglomeration benefits, as shown in Figure 4.2.

Access to national and international markets is essential in our ever-increasing global economy and we will seek to embrace both new and proven technologies that will improve this. We are in an excellent position to capitalise on our existing assets to achieve this, in particular, Doncaster, Sheffield Airport and the proposed Aerotropolis development surrounding it.

We will improve our multi-modal and integrated transport connections to the airport so that our businesses and people can access it faster, easier and more sustainably enabling people from all areas of SCR to take up employment there. We have recently opened the second phase of the Great Yorkshire Way to improve road access to the airport, and are working with Peel Airports and Doncaster Council to develop a proposal for a rail link and station to serve the Airport, in order to expand its rail catchment significantly. In addition, road and rail improvements to Manchester, East Midlands and Birmingham airports will further increase our international connectivity.

Effective partnerships will be essential in delivering access through connectivity both within our City Region, pan-Northern and further afield, and we are committed to making the strongest possible case to get the outcomes needed to capitalise on our growth opportunities.

[57] Addressing transport barriers to work in low income neighbourhoods (CRESR, 2017)

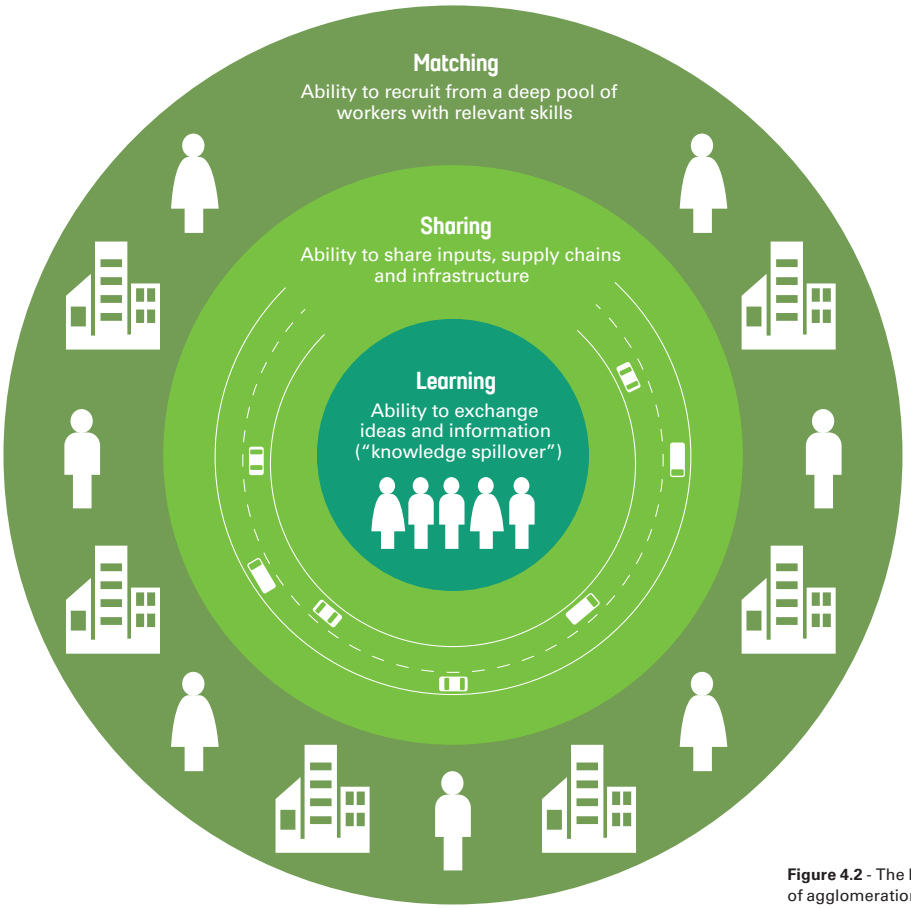


Figure 4.2 - The benefits of agglomeration (Source: Centre for Cities)

Policy 2 Enhance productivity by making our transport system faster, more reliable and more resilient, considering the role of new technologies to achieve this.

We want to increase the productivity of our City Region to reduce the gap between SCR and other City Regions. Transport improvements can enhance productivity by making travel to and from work, as well as travel for work, quick and efficient, so that more time can be spent being productive. We know that congestion in our City Region is already restricting our growth. Analysis shows that travel times can be over 30% greater at peak times than at off peak (see Section 3.2.5) and rail services arriving and departing from Sheffield Midland station suffer from overcrowding. It also is forecast that by 2026 we will have an additional 495,000 highway trips per day, across the transport network. Without intervention the congestion experienced will increase leading to more delays and a loss of productivity for the region (see Section 3.2.5).

Our transport system must be more reliable and resilient, have greater capacity, and be faster and more efficient. Such improvements will also make public transport and active travel options more attractive, which reduces congestion, improves our air quality and has a positive impact upon health.

As with connectivity, making our transport system faster, more reliable and more resilient are necessary both within our City Region, and outwards. Journey times to London, Leeds and the North East need to be reduced to improve north-south connectivity, and supporting the creation of the Major Road Network, which TfN is making the case for, is a key part of this to ensure there is a strategy to support the whole journey for longer distance trips.

We need to address the closures experienced between our City Region and Manchester City Region, as a result of road traffic collisions or due to bad weather (see Section 3.3.3). We see vital connectivity schemes such as Northern Powerhouse Rail, HS2 and trans-Pennine road improvements as a key means of improving resilience and increasing commuter flows between our City Region and other parts of the UK. As road remains the dominant carrier of freight in the UK (see Section 3.3.2), the reliability and resilience of our road network is particularly important for freight services and our strong and growing logistics sector.

We will support further growth of this sector by improving the reliability, resilience, integration and speed of our freight connections for road, rail and water-borne freight also improving access to the Humber Ports from SCR. Growing ownership of smartphones and mobile devices is contributing to increasing use of smart mobility via the internet (see Section 3.5.1). This increased access to online information enables people to make more informed decisions about how and when they travel, allowing them to reduce their travel time or use their travel time more productively. We will examine how smart mobility solutions can support greater social inclusion, address the affordability of public transport and reduce the use of private vehicles.

We will also ensure that modern digital technology is used to its full capability to maximise the efficient operation of roads and public transport. This includes using modern traffic management systems and traffic signals to optimise traffic flow and manage priorities for different modes; using the latest bus detection and information technology available to prioritise and provide information on bus movements; and ensuring the rail industry maximises the roll out and benefits of digital signalling and information systems to improve operation efficiencies and also information for passengers. The predicted increase in autonomous vehicle sales (see Section 3.5.3) will also increase the capacity of existing road infrastructure.

Policy 3 Invest in integrated packages of infrastructure to unlock future economic growth and support Local Plans, including new housing provision.

We know that our population is forecast to grow by 9.3% between 2016 and 2041, however housing completions, is behind target in our City Region (see Section 3.2.2). One likely cause is the lack of infrastructure identified as necessary to unlock specific sites. We have identified seven priority spatial growth areas, and it is important that such infrastructure is put in place to unlock these, as well as other development locations across our City Region.

Unlocking sites for housing and economic growth requires integrated packages of infrastructure that consider land use planning and the aims of our Local Industrial Strategy holistically. This holistic approach will enable the best use of our existing assets and capitalise on our current resources to unlock growth in a cost-effective and sustainable way. Transport requirements should be considered during the early stages of planning a new development to ensure sufficient provision is made. This also needs to align with and support Local Plans so that there is a coordinated and concerted effort to plan transport, development and regeneration in a coordinated manner.

[58] UK plan for tackling roadside nitrogen dioxide concentrations (DEFRA, 2017)

4.3 A Cleaner and Greener Sheffield City Region

Policy 4 Improve air quality across our City Region to meet legal thresholds, supporting improved health and activity for all, especially in designated AQMAs and CAZs.

Deteriorating air quality in our City Region is a growing issue that threatens the quality of our outdoors, as well as our residents' health and quality of life (see Section 3.4.3). We want to improve air quality for everyone across all areas of the region and we particularly need to address the air quality issues we have in our Clean Air Zone (CAZ) and designated Air Quality Management Areas (AQMAs), where pollutants currently exceed European Union regulations. The National Air Quality Plan[58] sets the wider Government context for this policy as part of a national response to the air quality challenge.

Analysis indicates that road transport is the single most significant contributor to harmful NO2 emissions, therefore reducing tail pipe pollutants has an important part to play (see Section 3.3.1). We have successfully worked with bus operators to reduce harmful emissions from a proportion of their fleets, prioritising utilisation of these vehicles and investment in areas of known poor air quality. However, we recognise that improving the standard of all bus fleets will require further work. A move to alternative fuels could significantly reduce emissions from buses, HGVs and private cars. Freight consolidation is another way to reduce the emissions associated with freight vehicle movements in areas of known, poor air quality. A step-change in how people travel around our City Region is required if we are to reduce harmful transport emissions that degrade the quality of our air. Further, we intend to further explore opportunities for Mobility as a Service that can better utilise vehicles through multiple occupancy and better efficiencies.

Policy 5 Lead the way towards a low carbon transport network, including a zero-carbon public transport network.

Plans were put forward by Government in October 2016 to ban all diesel and petrol cars by 2040. In SCR there has been a steady increase in the number of registered electric vehicles, which is something we would like to continue (see Section 3.3.1). Only 2.9% of the UK's charging points are located in Yorkshire and Humber which will need to increase if we are to encourage a large scale uptake of electric vehicles.

Climate change is an international issue, but the onus rests on all city regions to take a lead in making changes to carbon emissions and to help the UK reach its carbon reduction targets.

We will be bold with our approach to carbon emissions taking action now, to reduce reliance on travel options that do not align with our vision, and are fast becoming out-dated. The SCR Energy Strategy and Delivery Plan will identify how the SCR can achieve its stated ambition of becoming a leader in low carbon, resilient energy, and position itself to deliver the Government's Industrial Strategy ambitions for affordable energy and clean growth.

Recognising the parallel with our policy to improve our air quality, we see reduced dependency on the private car as a key part of the solution (particularly in relation to single occupancy vehicles), thereby changing the way people travel, and encouraging more sustainable technologies in place of high emission vehicles.

Policy 6 Work in tandem with the planning and development community to create attractive places.

Our built environment and urban centres are vital to the attractiveness and competitive advantage of our City Region. We want to be as proud of our towns and city as we are of our green spaces, and therefore will work in tandem with the planning and development community to create vibrant and attractive places that meet the needs of residents, attract new businesses and new workers, thereby supporting economic growth through the improvement of our urban outdoors. Through this approach, investment in our places can be sustainable and long term, by delivering mixed use development that is planned with public transport at its heart and integrates denser land use with transport service provision. In some cases, this may mean reducing the need to travel altogether, or limiting car parking to encourage sustainable travel and reducing the reliance on the private car to achieve mode shift. Ultimately, we intend to create attractive places that show joined up thinking between town and transport planning, will help to retain graduates, attract new investment, and improve our outdoors to the advantage of the whole of our City Region.

Our rural areas are also important to our attractiveness as a City Region, although need to be treated differently to our urban centres. We will work to improve our rural transport services, understanding their role in enhancing social inclusion and work with the planning and development community to find optimum, integrated solutions for development that takes place outside of urban locations.

Safe, Reliable and Accessible Transport Network

Policy 7 Ensure people feel safe when they travel and invest in our streets to make them more attractive places.

We will take measures to ensure that people feel safe when they travel, particularly when using sustainable modes of transport, so that we can make these modes more attractive to everyone. Walking is recognised as an intrinsic part of most public transport journeys so it is important people feel safe in accessing and using them, which can be enhanced through design of streets, good lighting and clear sightlines (see Section 3.4.1).

We have an ageing population and we know that driving rates decrease with age (see Section 3.2.3) therefore people become increasing dependent on public transport in later life. We also recognise that low perceptions of safety can be a particular barrier for older and vulnerable people accessing and using public transport. Additionally, perceptions of safety remain an important issue as some people choose not to travel in certain locations at certain times of the day (see Section 3.4.1).

The healthy streets framework is a set of principles that put human health at the heart of planning and consists of ten indicators, shown in Figure 4.3. We envisage streets with high activity levels where people feel safe, which support regeneration of our town and city centres, and make our neighbourhoods nicer places to live. Reviewing traffic speeds and creating space for active travel will be important if our streets are to become places, where people feel safe walking, cycling and using public transport. Safety remains a major consideration in relation to travel on our roads. Our vulnerable road users such as cyclists need to be protected and the high-risk groups of young drivers, young motor cyclists and children remain a priority (see Section 3.4.1). We will work closely with our Local Authority partners and local communities to apply the healthy streets principles, fulfilling every indicator of the healthy streets wheel.

Figure 4.3 - Ten indicators of Healthy Streets
(Taken from Healthy Streets for London, TfL, 2017)

Policy 8 Enhance our multi-modal transport system which encourages sustainable travel choices and is embedded in the assessment of transport requirements for new development, particularly for active travel.

We consider sustainable travel to be any mode of transport that is not private, specifically public transport, together with the active modes of walking and cycling, with walking considered an intrinsic part of most public transport journeys. As we have above average levels of inactivity within our City Region (see Section 3.4.3), it is important that active travel is considered a viable option in travel choices.

By encouraging sustainable travel, we will improve the health of our population, enhance our environment and support our economy by lowering congestion and create vibrant town centres. At present the majority of travel to work journeys are undertaken by car, with 71% choosing to drive to work (see Section 3.2.6). We know that a large proportion of shorter trips (under 5km) are undertaken by car, which is considered the average commuting trip length for cycling. Therefore, converting some of these short car trips to walking or cycling is a priority.

Provision of cycling and walking infrastructure and the promotion of its use will enable people to adopt active modes of travel, supporting the sustainable development of our towns and cities and improving the health of our residents. One way to support the uptake of cycling is the inclusion of appropriate facilities at new developments, as well as the provision of facilities at journey end-point and working with employers to promote travel planning and sustainable travel to work. It is important that development is brought forward in line with the National Planning Policy Framework and that sustainable transport, is properly considered in the early stages of planning. We also need to consider the potential role of demand management in supporting the growth of our economic centres. Historically car access to urban centres has been a priority to support growth.
As the roads become increasingly congested, it will become more important to examine alternative approaches, such as parking policy changes or some form of user charging, to encourage other forms of travel.

We want to make the user experience on our sustainable modes more attractive than less sustainable options, such as conventional private cars. Bus patronage has continued to fall, our tram network requires investment to secure its ongoing operation and Park & Ride facilities at many of our rail stations are at capacity on weekdays (see Section 3.2.6). To ensure our public transport network provides an attractive and competitive alternative to the private car, we need to review the extent of the network (geographically and temporally), the way our bus services are operated and the investment in public transport required to ensure a range of travel choices, together with ensuring affordability and value for money of public transport.

The use of smart ticketing can significantly reduce boarding times and therefore waiting times at bus stops (see Section 3.5.4). The tram-train trial has also provided an additional link along one of our high commuting corridors. Whilst currently a pilot scheme, if successful, the tram-train has the potential to provide new links within the City Region. Furthermore, looking at ways to improve journey planning, information provision and ticketing are important to ensure public transport services are accessible to everyone.

Policy 9 Ensure our transport network offers sustainable and inclusive access for all to local services, employment opportunities and our green and recreational spaces.

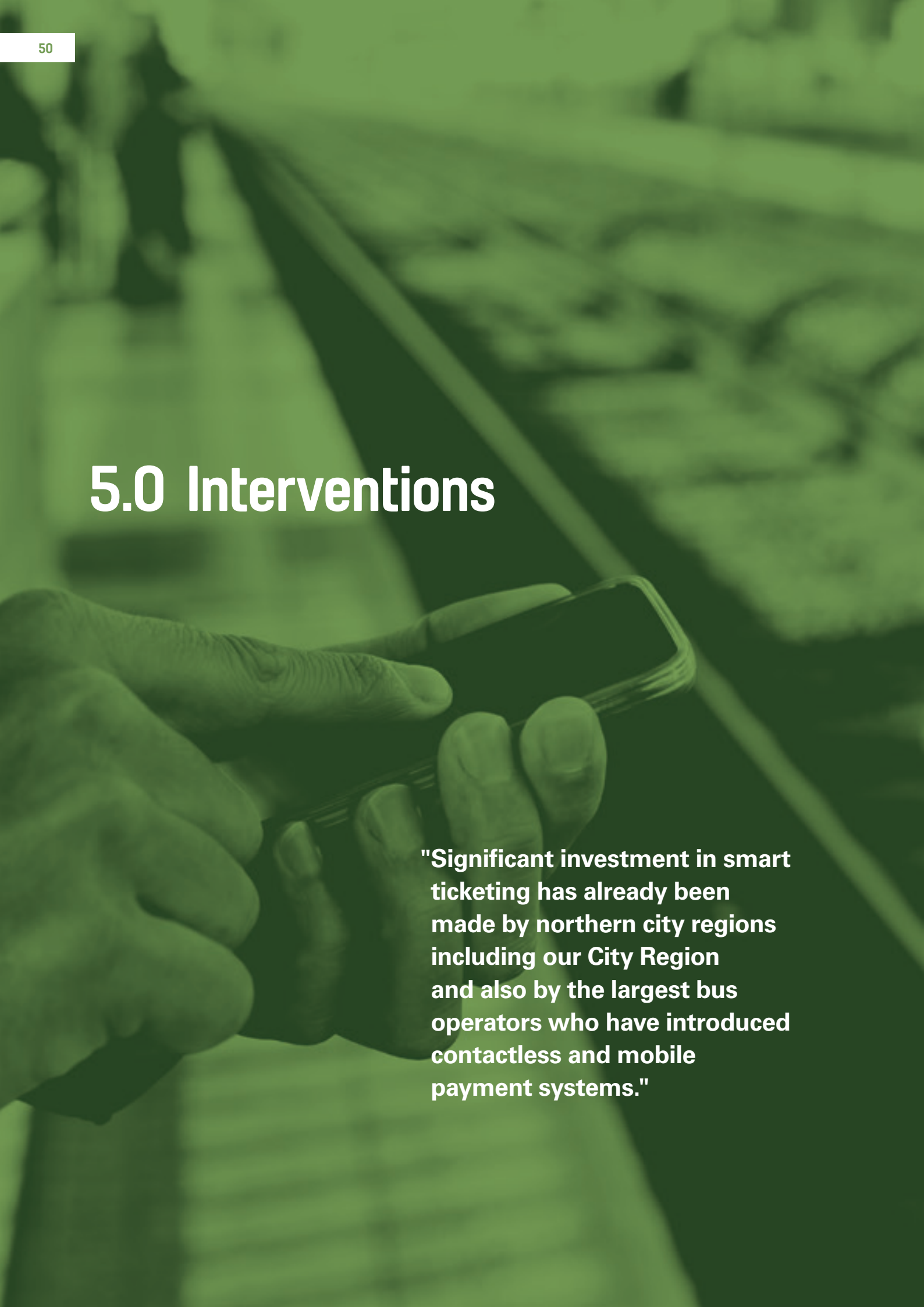
It is important that our transport network offers sustainable and inclusive access for all to local services that matter to people's everyday lives, including doctor's surgeries, local shops and recreational spaces, as well as employment and education. We recognise that these are often short journeys which lend themselves to active travel modes, reinforcing the need to improve these links.

Around 10% of the South Yorkshire population live in a rural area and we are aware that our rural areas have an older than average population (see Section 3.4.2). In these rural areas that are less well served by public transport, barriers to accessing local services can be even greater. The growth of MaaS (see Section 3.5.2), which also includes the role of demand responsive and community transport, may offer a flexible solution to improving access to services and reducing feelings of social isolation. We are incredibly proud of our green and recreational spaces, including the Peak District National Park, and we recognise the importance of our rural/visitor economy. We want all our residents to be able to enjoy these opportunities. Although most of our green spaces are accessible by car, we will improve access for all, particularly for those without access to private vehicles, which will improve the air quality at these spaces through sustainable travel options and overall reduction in vehicle emissions.

Furthermore, we want our green and recreational spaces to be healthy spaces, where people want to spend time to improve their health and wellbeing.

These nine policies will shape our decision making and how this Strategy is delivered. Section 5 sets out some of the interventions we will deliver to fulfil the aims of our policies and Section 6 highlights how we will deliver the Strategy and our future work programmes.

5.0 Interventions



"Significant investment in smart ticketing has already been made by northern city regions including our City Region and also by the largest bus operators who have introduced contactless and mobile payment systems."

5.1 Introduction

Beyond the adoption of this Strategy will lie a series of implementation plans, some of which SCR will lead, some of which SCR will contribute to and some of which SCR will seek to influence. It is therefore important that this Strategy is not seen as an end – it is much more of a starting point to develop the transport network that we need to support the economic aspirations of the City Region. That review be timed to fit with national political cycles and with a mind to industry planning processes, and so should be within the next five years.

Much of this section provides an indication of the key strategic interventions that SCR will lead on and how we will seek to achieve them, in order to deliver our Policies listed in Section 4. However, connectivity to other major UK and International cities is also vital to prosperity.

5.2 National and Pan-Northern Interventions

The following national and pan-Northern schemes are already being progressed by our partners or are included in Transport for the North's initial investment programme for a start by 2027, and so form a baseline for the City Region's interventions.

5.2.1 Major Rail Improvements

- HS2 – SCR supports the principles of high speed rail services across the North to the rest of the UK, radically reducing journey times and providing enhanced connectivity beyond the HS2 network. We need to maximise the benefit of HS2, exploring all options for a parkway in South Yorkshire and minimise the impact on local communities and the environment
- Hope Valley line capacity improvements – initial capacity improvements to allow a frequency of three fast trains in addition to one stopping train per hour and freight trains
- Sheffield to Hull – journey time improvements to achieve a frequency of two trains per hour and capacity enhancements at Doncaster station to accommodate Northern Powerhouse Rail services
- Sheffield to Leeds – improvements to the Northern Loop from Sheffield station to HS2, including new stations in South Yorkshire, along with journey time and reliability improvements via Barnsley
- Doncaster to Leeds – capacity, journey time and reliability enhancements
- South Transpennine Line – capacity and journey time improvements between Doncaster and Cleethorpes
- East Coast Main Line power upgrade
- Improvements to allow wider/higher freight trains on the Doncaster to Immingham route
- Electrification works in the Sheffield area to support other major rail investment programmes

5.2.2 Integrated and Smart Travel Programme

- Multi-modal, integrated, contactless ticketing across the North
- Enhanced real time customer information
- Smart ticketing on rail

5.2.3 Strategic Road Network Improvements

- Trans Pennine upgrade programme – a package of improvements including Mottram Moor link road and the A616/A61 Westwood roundabout improvements
- Trans Pennine Tunnel and wider connectivity package – a feasibility study into a new route to improve the resilience of Trans Pennine road links, including a new or upgraded route from the M1 to M18 and A1(M)
- M1 Junctions 35A to 39 – upgrade to smart motorway
- A1 Redhouse to Darrington – upgrade to motorway standard
- A1(M) Doncaster bypass – widening to a three-lane motorway
- Hollingworth to Tintwistle bypass – new road from Mottram Moor link to A628 east of Tintwistle
- M56 capacity improvements and a new road link between the M60 and the Manchester Airport Relief Road

5.3 Local Interventions

Our interventions need to build on these schemes to develop a transport network that can support growth as well as encouraging greater use of active travel modes and our public transport network.

We have identified 11 key regional economic centres that need reinforcing and 20 priority transport corridors to enable the sustainable movement of people to facilitate this. These corridors have been derived through an evidence-based vision for an SCR Integrated Public Transport (SCRIPT) network. These corridors are shown as lines in Figure 5.1.

Developed in close collaboration with Local Authority partners, this network provides a case to deliver local and regional objectives through investment in a strategic transport network – the components of which will include bus, tram, bus rapid transit, heavy rail and tram-train.

The network is framed around spatial priority areas spread across the City Region, which represent principal origin and destination points. The network takes account of a number of factors, including social deprivation, growth areas, environmental considerations and transport constraints, such as congestion, lack of service provision and over-crowding.

The current development of our Local Walking and Cycling Infrastructure Plan (LCWIP) is aimed at ensuring we are investing in the areas that will have the greatest impact on the number of people walking and cycling. The corridors that are emerging from the early development work complement the SCRIPT network shown above.

Improving connectivity from local neighbourhoods through these regional transport corridors will provide quick and easy access to major centres of employment, services and leisure opportunities.

The remainder of this section provides an indication of some of the local interventions that could be expected to be included within the series of SCR implementation plans. Each of the interventions are guided by our policies and support the commitments set out in the Mayor's Vision for Transport. Taken together, these interventions will move towards the Mayor's ambition for three sets of aspirational journey time targets to ensure that all parts of the City Region are well-connected which are:

- Neighbourhood to regional hub in 15 minutes
- Regional hub to regional hub in 30 minutes
- Regional hub to major centres in 75 minutes,

providing a framework to guide all decision-making processes related to our transport network up to 2040.

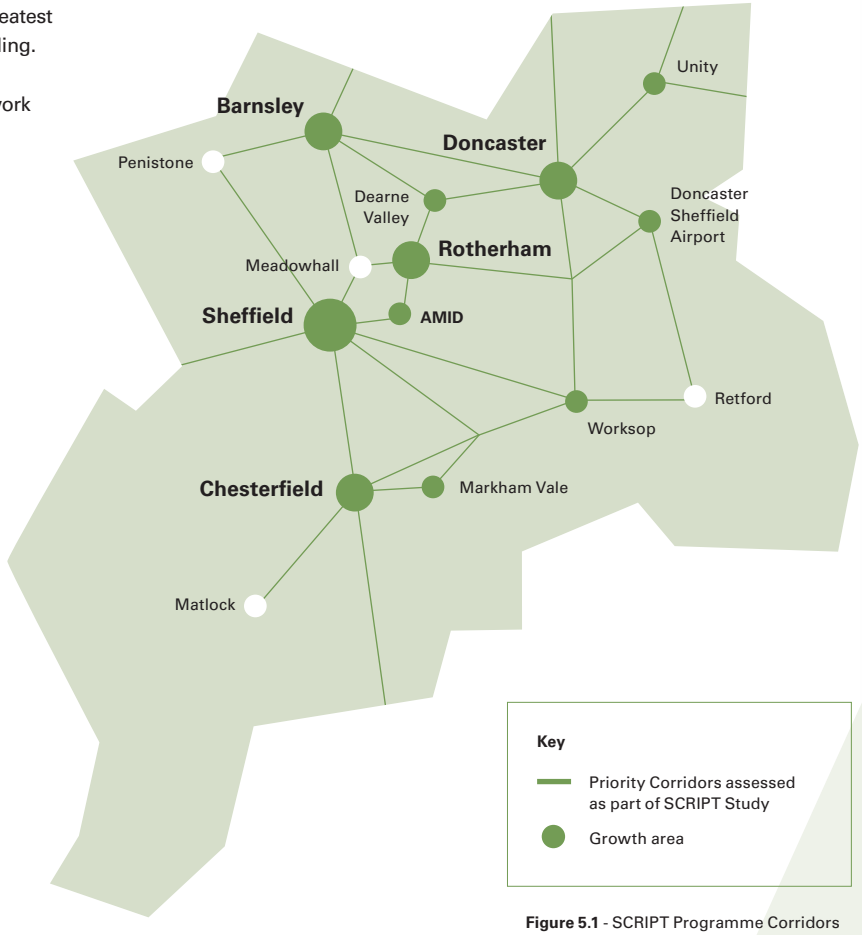


Figure 5.1 - SCRIPT Programme Corridors

To achieve Policy 1 (improve the existing transport network), we will:

- Enable people to access opportunities through choosing greener and healthier forms of transport by sustained investment in high quality cycling and walking infrastructure both for existing journeys and new journeys stemming from investment in the City Region;
- Continue to recognise the valuable role that our local bus services make to enabling access around the Region, but work to improve the accessibility, operation and reliability of our bus network. This will include exploring the role of demand responsive services;
- We will undertake a review to consider all of the options for the future operating models of the bus network in South Yorkshire, to identify ways of improving local bus services;
- Identify where upgrades to our intra-regional rail and tram / bus connections are required. We are taking this forward as part of our SCRIPT study;
- Develop proposals for expansion of our Strategic Transit Network, which could be bus, tram-train, tram or bus rapid transit in order to encourage a reduction in car use. We are taking this forward as part of our SCRIPT work;
- Complete the pilot of the innovative tram-train service, which exploits technology new to the UK to enhance intra-regional connectivity;
- Consider opportunities for tram-train extensions using existing and re-opened rail lines, as well as potential extensions of the conventional Supertram network;
- Investigate opportunities to re-open disused rail lines and stations, build new stations, improve existing stations and establish new services on existing non-passenger lines, including with Community Rail Partnerships;
- Work to improve transport links with the East Midlands as well as other Northern towns and cities, enabling people to commute between city regions quicker and easier. This should help enable the right people to access the right jobs;
- Support investment in information and communications technology by partners to help get the most out of the highway network for all modes, including smart parking technology and adapting traffic signal timings that help smooth vehicle flows and provide bus priority;
- Continue to support the growth of Doncaster Sheffield Airport through enhanced surface access from all areas of SCR, including working with partners to improve bus services and investigating the potential for a new rail connection and Airport station providing connectivity to the national rail network;
- Enable smaller scale interventions (such as junction improvements costing £5m-£10m) to the road network, providing improved journey times and resilience for people, businesses and freight.

To achieve Policy 2 (create a faster, more reliable and more resilient transport system) we will:

- Continue to invest in improvements in our City Region road network and links to neighbouring authorities to support housing and employment growth, developing a prioritised programme of interventions that will proactively seek to reduce delays and improve journey time reliability, particularly where future capacity challenges are forecast;
- Expand on the DfT's Major Road Network (MRN) and develop a Key Route Network (KRN) of Local Authority roads to be collaboratively managed to ensure that they are fit for purpose;
- Work jointly with Highways England to manage local and long-distance flows on the Strategic Road Network (SRN), including to the Humber ports and to Greater Manchester;
- Continue to develop the project specific business cases under the DfT's Local Large Major Transport scheme fund, or successor funding rounds. The two current projects are Sheffield Supertram renewals (which will support released capacity at Sheffield Midland station for new HS2 and NPR services) and the Innovation Corridor (which is a package of measures that will include an alternative to the busy M1 section between Junctions 33 and 34 for local traffic);
- Continue to support the proposed Parkway widening scheme, which includes improvements at M1 junction 33
- Work with our Local Authority partners to ensure that they manage and maintain the City Region's roads throughout the year to a satisfactory standard and in a co-ordinated way, particularly the major road network and key public transport corridors. This includes seeking additional Government funding for maintenance where necessary;
- Continue to fund appropriate projects that facilitate flood alleviation that improves the resilience of our highway network
- Work with partners and the DfT to plan for an anticipated increase in autonomous vehicles on our highway network;
- Support improvements to waterway infrastructure that will encourage new freight opportunities, especially where this will reduce the number of lorries on the roads;
- Work with TfN and other partners to make use of developments in technology to enable residents and visitors to access ticketing and information systems as easily and as simple as possible.

To achieve Policy 3 (invest in integrated packages of infrastructure to unlock future growth) we will:

- Develop spatial packages for each of our major growth areas (including Urban Centres), setting out the highway, public transport, cycling and walking infrastructure needed to unlock development in those areas, then develop the improvements to unlock them;
- Continue investing in the highway, public transport, cycling and walking infrastructure needed to enable access for all to our major growth areas as part of the current Sheffield City Region Infrastructure Fund (SCRIF) programme;
- Work with local planning authorities to ensure that transport and development plans are integrated, coordinated and effective. This will help to ensure we can promote sustainable transport choices as part of unlocking significant economic growth;
- Work with local planning authorities to encourage early engagement with transport colleagues, particularly on larger developments;
- Work with local planning authorities to encourage new developments to be in sustainable locations - such as on existing transport corridors. New developments that are proposed on existing corridors should still incorporate improvements to the transport network to ensure new demand can be accommodated
- Remain a Statutory Consultee for the development of Local Plans and help to ensure collaboration between local planning authorities.

To achieve Policy 4 (improve air quality across our City Region) we will:

- Support adoption of sustainable travel modes over private cars to reduce the number of vehicles that use our roads, particularly into our town and city centres, through both infrastructure and behavioural change measures to public and sustainable transport;
- Encourage the uptake of low and zero emission vehicles to improve our air quality, including investing in expanding the network of vehicle charging points across the City Region in a coordinated way, to ensure full coverage across the region;
- Support investment in communications technology to reduce the need the travel, enabling more people to access broadband speeds needed to work away from a main office base and encourage businesses to adopt more home working for employees;
- Support investment in information and communications technology to help get the most out of the highways network for all modes, including smart motorways and traffic signal timings where they can smooth vehicle flows and reduce pollutants from queueing vehicles;
- Work with partners in the taxi and private hire trade to reduce pollutants by encouraging them to switch off engines when stationary and increase the number of ULEV hire vehicles;
- Work with Highways England to tackle emissions from the SRN where there is an impact on our urban areas;
- Develop a plan to address the higher level of pollutants resulting from freight and deliveries, including encouraging low emission vehicles and reducing the number of delivery vehicles in our town and city centres and/or for the first/last mile connections;
- Work with partners to introduce and enforce low emission and CAZs, supporting them in delivering cuts in emissions though investing in encouraging sustainable modes and reducing the need to travel.

To achieve Policy 5 (lead the way towards a low carbon transport network) we will:

- Develop an SCR energy strategy to help reduce the impact of emissions from transport, then implement an associated delivery plan.
- Encourage private vehicles using our roads to be electric, hydrogen or hybrid, and to be used primarily for trips that cannot be made by sustainable alternatives, such as public transport, walking and cycling;
- Deliver a zero-carbon public transport network, which requires upgrading the bus and taxi fleet and supporting electrification programmes for our railways;
- Work with operators to plan a transition from the current (bus and taxi) fleet to make our public transport system a zero-emission service;
- Encourage freight vehicles using our roads to be electric, hydrogen or hybrid;
- Work to ensure appropriate re-fuelling infrastructure is available to support the move towards a new public transport (including taxis) and freight fleet.

To achieve Policy 6 (create attractive places) we will:

- Continue the effective working relationship with local planning authorities, including the Peak District National Park Authority, and SYPTE to help ensure that sustainable travel is an important consideration in the growth and development of our built and natural environment, including urban centres;
- Seek support from the development community to ensure that new public realm, green spaces and new places created promotes accessibility and the use of sustainable transport;
- Continue to invest in high quality provision for sustainable transport modes in designs for improvements to public realm (including urban centres), green spaces and places. This builds on recent investment to improve accessibility and public realm in our main urban centres, including improving the quality of the environment on linkages between rail and bus stations and urban centres;
- Work to protect and enhance green spaces (including parks) and public rights of way, such as riverside footpaths, especially where they provide alternative opportunities for active travel, whilst continuing to support our important rural/visitor economy.

To achieve Policy 7 (ensure people feel safe when they travel) we will:

- Continue to work with the Safer Roads Partnership to reduce the overall number of casualties on our roads. This will include a greater focus on high risk groups (such as young drivers and young motorcyclists and children), enhanced education and the locations with the greatest number of accidents;
- Improve the health of our residents and visitors through investing in our streets, stops and stations making them more attractive and accessible places for people to use and enjoy, thus enabling people to lead more independent and active lives;
- Seek to protect the safety of the most vulnerable highway users, prioritising pedestrians and cyclists to make our streets feel safer;
- Encourage greater natural surveillance on routes by investing in safe, direct and convenient walking and cycling routes that people will use in greater numbers to access our towns, cities and interchanges;
- Continue to invest in our public realm, and encourage developers to do the same;
- Improve the perception of safety and security on our streets and at public transport stops and stations, which may involve, for example, new pedestrian crossings, better lighting and seating.

To achieve Policy 8 (enhance our multi-modal transport system and encourage active travel) we will:

- Develop an investment plan from the LCWIP that removes barriers to walking and cycling and identifies the infrastructure required to encourage more trips by bike or on foot;
- Invest over a sustained period in high quality cycling and walking infrastructure that better connects homes, transport interchanges, education, employment and recreational opportunities using safer, direct and convenient routes;
- Work to reduce the reliance on private transport, encouraging people and working with businesses to choose greener and healthier forms of transport both for existing journeys and new journeys stemming from investment in the City Region;
- Continue to recognise the valuable role that our local bus services make to enabling access around the City Region, but work to improve the operation and reliability of our bus services network so that sustainable modes are more accessible and attractive. As part of this we will continue to invest in our main transport hubs and interchanges to provide an attractive and safe environment;
- Work with public transport operators and SYPTE to ensure adequate, good quality secure cycle parking is provided at stations, Park & Ride sites and interchanges;
- Enhance our transport system by investing in mass transit improvements, whether bus, tram, train, tram-train, bus rapid transit, or a brand-new mode altogether;
- Consider the significant opportunities to improve ticketing and journey planning for existing and new passengers that the Bus Services Act (2017) can provide, including making it easier for all passengers to move between different modes of transport and access timetables, fare and route information;
- Explore options for expansion of Park & Ride provision for bus as well as tram, train and tram-train to help reduce congestion in our urban areas;
- As well as improving the attractiveness of more sustainable modes, work with partners to develop demand management schemes (such as reviewing parking charges) to help encourage a greater take up of them;
- Build on the successful delivery of the Sustainable Travel Access Fund, and seek further funding opportunities to remove behavioural change barriers to walking and cycling;
- Encourage public transport operators to promote and refresh driver awareness training of the needs of more vulnerable passengers;
- Work with the private and voluntary sectors to examine the potential of new and innovative transport solutions that respond to the needs of the travelling public and businesses. This includes 'Mobility-as-a-Service (MaaS)' where there is a move away from private car ownership where mobility or transport solutions are a bought service. It also includes the role of demand responsive and community transport.

To achieve Policy 9 (ensure our transport network offers sustainable and inclusive access for all) we will:

- Work with partners (including public and community transport operators) to try to improve the sustainability of more rural service provision, to both help rural residents access employment and services, as well as supporting providing visitor access to rural areas. This will include exploring the role of demand responsive services, Wheels2Work and car share schemes;
- Ensure that access to green spaces, recreational spaces and local services are provided by sustainable means, including walking and cycling. This includes the provision of secure cycle parking;
- Work with partners to support access to the Peak District National Park by coach or bus, when local and environmental considerations deem this appropriate;
- Invest in clearer way finding, travel planning for residents and visitors, and the maintenance of walking and cycle paths;
- Work collaboratively with partners to develop an integrated approach to public rights of way, to deliver a coherent and accessible network of urban and rural paths, bridleways and other rights of way to support our rural and visitor economy.

6.0 Delivering the Strategy

6.1 Introduction

Delivering this Transport Strategy will require joint working with stakeholders within the City Region and outside it, within the transport sector and across other sectors, and between both public and private organisations.

The existing strong governance arrangements that exist across the SCR will be used in delivering the Transport Strategy. It is envisaged that the SCR Combined Authority will be responsible for defining and committing funding to the programme of interventions that will be developed from this Strategy. The SCR Combined Authority may elect to provide the Transport Executive Board with the authority to administer the programme on their behalf, within the SCR Assurance and Accountability Framework. The scheme commissioning, programme management and supporting administrative functions would be provided by the SCR Executive.

6.2 Developing Future Work Programmes

To take forward the interventions identified within this Transport Strategy, along with others that come forward, it will be necessary to develop programmes of core activity across the City Region in a series of implementation plans. This work will identify more specific interventions developed in response to the vision, goals and policies described in this Strategy and will produce a pipeline of transport investment that can shape our future funding discussions, providing confidence to residents and businesses across the City Region that there is a clear plan of action.

We envisage four future programmes of work at this time, as illustrated in Figure 6.1.

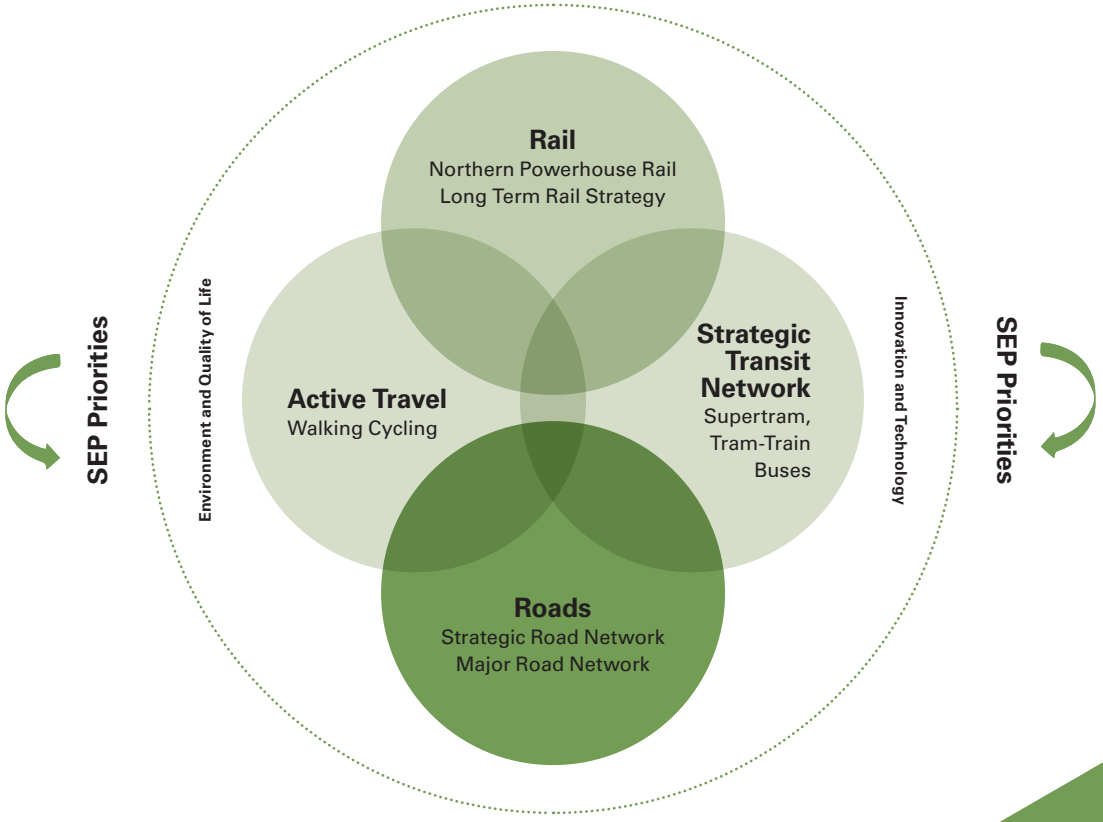


Figure 6.1 - Our future work programmes

Sheffield City Region

The four programmes of work need to be mindful of the role of transport in enhancing the environment and the quality of life across the City Region whilst harnessing the opportunities presented by innovation and new technologies.

Each of the four programmes has a different level of maturity at this time, for example, the SCR has developed evidence previously around the needs of the rail network across the City Region which has already fed into the work on HS2, Northern Powerhouse Rail and the development of the North's Long Term Rail Strategy. Whilst supporting the objectives of HS2, we need to ensure that the City Region makes the most of whichever route is finally chosen, whilst the SCR will work with TfN as more detailed work is done on each of the corridors for Northern Powerhouse Rail. The Long Term Rail Strategy defines a series of minimum standards across the North's rail network, but we need to understand where the critical gaps are within the SCR, and ensure these are addressed through future franchise specifications and/or schemes within the RNEP.

Similarly, important road interventions on the SRN and MRN have been identified in collaboration with TfN, and a number have been included in their Strategic Transport Plan. As more detail around the concept of the MRN becomes clear, developing a pipeline of enhancements to be funded through the National Roads Fund will be important. We also need to make sure that we can influence future Road Investment Strategy periods for the SRN.

The Transforming Cities programme is at an early stage of development, of which active travel is a major part, although a number of schemes have been identified for early implementation to help drive a cultural shift towards walking and cycling becoming the natural choice for short journeys.

The SCRIPT study identified where interventions are needed on the 20 priority corridors across the City Region, but not necessarily what is needed on each to develop the desired Strategic Transit Network. Identifying the right interventions on these corridors will be guided by the aspirational journey times set out in the Mayor's Vision for Transport. This work also needs to be mindful of business cases being developed for elements of the existing mass transit network and the proposals for Northern Powerhouse Rail.

As well as the existing funding routes for these work programmes, some of which are referenced above, we will continue to explore a range of funding opportunities as they arise. This will include the use of private funding and local contributions where viable.

We will bring forward programme-level business cases across each of these work programmes, either at a SCR level, or working with TfN. Interventions will be sequenced within each of the work programmes to ensure that those that offer greatest benefit are implemented first, subject to funding availability and scheme deliverability. Detailed options for the delivery and funding of individual projects will be brought forward and considered on a case-by-case basis. A suite of strategic testing tools, which is currently being developed and updated, will be used to assess the benefits that each intervention will bring. The pipeline of interventions will be defined and managed by the City Region in accordance with the SCR Assurance and Accountability Framework.

Recognising that the approach to implementation of the Strategy must be adaptable over time, it is envisaged that programme development will be an iterative process over the lifetime of the Strategy. However, a structured process for reviewing and updating the programmes will be established to provide a rolling programme of priority schemes (for example, over a five year period). This will ensure that funding can be committed to those schemes that will be delivered in the near term (such as 1 - 5 years), offering certainty to scheme promoters and giving investors the confidence that will lead to increased economic growth.

Progress reviews will also be undertaken to understand the balance of progress across all policy areas. This will help to establish if action is required to strengthen delivery under any policy area.

The procedures for data collection, monitoring and evaluation to assess the transport network baseline, and changes in the performance of the network over time, will be defined. The resources, responsibilities and operational structures needed to achieve this will also be established. This will allow progress against achieving the success criteria described below to be measured and reported on an annual basis, shaping the future programme of investment in the transport network.

In developing the work programmes, we will aim to promote a social value policy in future procurement activity, including ensuring that contracts should support local employment outcomes and achieve a sustainable transport, economic and social legacy. We will also encourage suppliers to pay the real living wage, ensure all procurement policies and procedures are undertaken in an ethical manner and, where appropriate, ensure that green procurement considerations target reduced waste, reduced carbon emissions and minimise the impact on the natural environment.

6.3 Measuring Success

In order to measure the success of this Transport Strategy, we have developed a series of success criteria, linked to one or more of our three goals. These sit alongside the Mayor's ambition for three sets of aspirational journey time targets to ensure that all parts of the City Region are well-connected:

Neighbourhood to Regional Hub 15 MINS

Regional Hub to Regional Hub 30 MINS

Regional Hub to Major Centres 75 MINS

and are summarised in Table 6.1 and then described in more detail in the remainder of this section.

Individual interventions will need to demonstrate their own particular outcomes, how they contribute to the success criteria and move towards the aspirational journey times above.

Goal	Success Criteria (by 2040)
Residents and businesses connected to economic opportunity	a. Contribute towards increasing GVA in SCR through increasing the number of economically active people living within 30 minutes of key employment locations and universities by public transport. b. Better frequency of rail service between Sheffield and Manchester/Leeds - at least four fast trains per hour, with a target 30 minute journey time to/from both and a local rail network that meets the agreed minimum standards. c. Increase productivity through reducing delays on our transport network. d. Increase trips by 18% bus, 100% rail , 47% tram, 21% walking and 350% cycling and manage the increase in private car/van/goods trips to 8%. e. 95% public opinion that our local transport choices feel safe. f. Reduction in reported casualties of 4% per year. g. Eliminate AQMAs in our City Region and comply with legal thresholds to achieve compliance in the shortest possible time. h. Reduce tailpipe carbon emissions in line with targets for the UK and have a zero-carbon public transport network by 2040.
A cleaner and greener Sheffield City Region	
Safe, reliable and accessible transport network	

Table 6.1 - Our goals and success criteria

Sheffield City Region

a). Contribute towards increasing GVA in SCR through increasing the number of economically active people living within 30 minutes of key employment locations and universities by public transport

Our SEP identified major growth areas, including the urban centres in our City Region, which are also our key employment and university locations. At the moment, 45% of our economically active population live within a 30 minute journey of these locations by public transport. The aim is to increase that to 64% through improved connectivity – this will help enable improved access to higher skilled employment opportunities, contributing to an increase in GVA in our economy.

b). Better frequency of rail service between Sheffield and Manchester/Leeds - at least four fast trains per hour, with a target 30 minute journey time to/from both and a local rail network that meets the agreed minimum standards

There are currently around 2,100 people commuting by train from SCR to West Yorkshire and Greater Manchester, and 1,000 people making those journeys in the other direction. With the Northern Powerhouse Rail and HS2 proposals alone, this could increase the number of inter-regional commuters. Furthermore, as our economy grows and we increase our employment opportunities, we could increase the proportion of inter-regional commuters incoming to SCR (rather than leaving to work in the Leeds and Greater Manchester City Regions). But our local rail network also plays a crucial role in getting people around the City Region and to the main rail hubs, so we need to make sure that the network meets the minimum standards of quality, accessibility, coverage and levels of service set out in the North's Long Term Rail Strategy.

c). Increase productivity through reducing delays on our transport network

Without intervention, road congestion and rail delays in the future will create a cost to our economy as people are unable to use the additional travel time productively. Through transport improvements such as improving alternative travel options, increasing road and rail capacity, demand management and improving efficiency, we will reduce the level of delay on our transport network.

d). Increase trips by 18% bus, 100% rail, 47% tram, 21% walking and 350% cycling and manage the increase in private car/ van/goods trips to 8%

Our current travel to work mode share is 71% private transport, 17% public transport, 9% walking and 2% cycling. By investing and encouraging the use of sustainable modes, we will deliver a reduction in the car mode share (0700-1900) to around 63%. Compared to the other cities, our mode share targets are achievable and ambitious.

e). 95% public opinion that our local transport choices feel safe

Public perception of safety can be a significant barrier to encouraging more people to use sustainable travel choices. Even if the official record of safety is good, if people do not feel safe, they will not want to use the service. In 2015, 94% of Supertram and 83% of South Yorkshire bus users said that they felt safe when they used the service – we aim to increase this to 95% across both networks.

f). Reduction of reported casualties of 4% per year

While the perception of safety concerns local transport users, reported collisions are still important in giving the wider picture of safety across our transport network, including our streets. We want to reduce the total number reported casualties by 4% per year.

The 4% reduction is based on the 2010-2014 five year average, which equates to a figure of no more than 2,936 casualties per annum in 2025. The intention would be to review the target in 2025 to incorporate any changes incurred by the elements (such as population growth or new legislation) that have an influence on meeting the outcome, but which SCR have no control over.

g). Eliminate AQMAs in our City Region

Our City Region currently has 28 AQMAs for high Particulate Matter (PM10) and Nitrogen dioxide (NO_2), which are locations where the national air quality objectives / European Directive Limits are not likely to be achieved. In addition, the Government's National Air Quality Plan 4 aims to improve air quality in those cities and towns which make the greatest contribution to the NO_2 problem. We are required to reduce NO_2 below the statutory annual average mean of 40µg/m^3 in the "shortest possible time" with significant improvement required by 2021. Over the early part of this Strategy we want to eliminate AQMAs in our City Region.

h). Reduce tailpipe carbon emissions in line with targets for the UK and have a zero carbon public transport network by 2040

The UK has legally binding carbon budgets, which place restrictions on the total amount of greenhouse gases that the UK can emit over a 5-year period. By reducing the use of conventional vehicles on our network we will play our part in contributing to the UK's carbon budgets, thereby reducing tailpipe carbon emissions in line with the UK targets, including a zero carbon public transport network by 2040.

6.4 Reviewing the Strategy

This refreshed Transport Strategy defines the goals we must achieve, the policies we will adopt to do this and the success criteria by which we will target investment and measure performance. However, we recognise that these are changing social, technological, economic, environmental and political times, and we are also in the process of refreshing our SEP. Therefore, the Transport Strategy itself needs to be reviewed at a future date with this in mind.

That review be timed to fit with national political cycles and with a mind to industry planning processes, and so should be within the next five years. This will ensure that the SCR is best positioned to influence policy and investment decisions with a robust, evidence base and up-to-date strategy and supporting implementation plan that make the case for continued investment.

This transport vision defines the goals we must achieve, the policies we will adopt to do this and the success criteria by which we will target investment and measure performance.

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