



Contents

	EXECUTIVE SUMMARY		1
Chapter 1	INTRODUCTION	Purpose of route strategies Route strategy reports Purpose of the report The development cycle for the third Road investment strategy (RIS Engagement with customers and neighbours DfT's strategic objectives for the strategic road network	10 11 11 5) 12 13 16
Chapter 2	THE ROUTE		26
Chapter 3	ENGAGEMENT WITH CUSTOMERS AND NEIGHBOURS	Engagement with customers and neighbours in the South Pennine (West) area Key themes from engagement Route satisfaction	es 32 33 36
Chapter 4	NETWORK COLLABORATION	An integrated transport network Interaction with the major road network and local roads Freight and logistics Diversionary routes Network Rail and other network operators Strategic connectivity International connectivity	38 40 41 45 45 46 46
Chapter 5	CHALLENGES AND ISSUES	 Improving safety for all Network performance Improved environmental outcomes Growing the economy Managing and planning the SRN for the future A technology-enabled network 	48 55 63 66 69 72
Chapter 6	INITIAL ROUTE OBJECTIVES	Route objectives and DfT's strategic objectives A. Improve safety for all road users whilst reducing severance between communities B. Support effective local integration with sustainable transport modes C. Be a better neighbour by safeguarding the environment D. Promote sustainable economic growth, the visitor economy and levelling up in the North E. Support safe and reliable trans-Pennine journeys F. Support reliable strategic connectivity G. Support the efficient movement of goods	77 81 85 87 91 93 97 99
Chapter 7	LOCATIONAL AREAS FOR CONSIDERATION AND POTENTIAL COLLABORATION	Alignment with government objectives Programmatic approach to investment Types of investment and funding sources Strategic studies, trunking and de-trunking Locations identified through route strategies for future investigation Route strategies and regional traffic models Identified locations for future investigation and collaboration	109 110 111 114 on 114 115
Chapter 8	NEXT STEPS	Alignment Informing the next stage of planning Provide your feedback	122 122 122
	GLOSSARY OF TERMS		127

The routes

Routes

- London to Scotland West (North)
- London to Scotland East (North)
- South Pennines (East)
- South Pennines (West)
- North Pennines
- London to Leeds
- Midlands and Gloucestershire to Wales
- North and East Midlands
- South Midlands
- London to Scotland West (South)
- London to Scotland East (South)
- East of England
- Felixstowe to Midlands
- Kent Corridors to M25
- Solent to Midlands
- London Orbital and M23
- South Coast Central
- South West Peninsula
- Birmingham to Exeter
- London to Wales

Sub-national Transport Bodies

- England's Economic Heartland
- Midlands Connect
- South West Peninsula
- Transport East
- Transport for the North
- Transport for the South East
- Western Gateway

There are 17 routes relating to route strategies across our strategic road network (SRN). To take better account of our customers' end-to-end journeys, we have split some of the longer routes into sub-strategies across 20 reports.





Executive summary

Introduction

Our strategic road network (SRN) is the backbone of the country. Our more than 4,500 miles of motorways and major A-roads connect people, build communities, create opportunities and help the nation thrive. To plan for the future, we take a long-term view of our network and the trends that could impact transport, road travel, and personal and commercial mobility. Route strategies are at the centre of this dynamic future planning of our network, informing how we operate, maintain and renew our network. This report is the Initial overview report for the South Pennines (West) route and summarises the outcomes of the route strategy. The report builds on the first two rounds of route strategies in 2015 and 2017. It aims to be more forward looking, integrated and collaborative, while being dynamic enough to respond to the future needs of our customers and neighbours.

In this report, we detail the route context, current constraints on the route, and opportunities for improved connections with local roads and rail links. We set out intelligence-led route objectives aligned with the six Department for Transport (DfT) strategic objectives. These objectives aim to ensure the route can serve its function, while mitigating the identified constraints and challenges. They conclude with locations for further consideration to achieve the route objectives. The route objectives and locations for further consideration will be presented to the DfT to inform future decision-making about investment planning through the Road investment strategy (RIS). It should be recognised that not all aspirations outlined in this report can be funded or delivered.



For clarity, this document does not:

- Identify committed schemes for delivery as part of future RIS periods. This will be part of the wider RIS setting process
- Commit to the delivery of local plans or economic growth developments mentioned
- Guarantee funding for any locations identified for further studying to understand the challenges and issues in more detail
- Preclude the inclusion of other locations for consideration in the light of other evidence or imperatives

Customers and neighbours

Engagement with our customers and neighbours has been central to developing our route strategies. We have already gathered a wealth of evidence from the previous rounds of route strategies and through our ongoing monitoring of road condition and performance.

Our performance is monitored through the National Highways' Performance Framework. This Performance Framework was established at the start of the second road period (2020 – 2025) and sets out National Highways' commitments to 2025. It is outlined in the RIS2 *Delivery plan (2020 - 2025)*. We will continue this monitoring approach into the third road period (2025 – 2030).

To add to this existing evidence, we carried out a detailed engagement programme for this round of route strategies to understand the current and future needs of those using and living alongside the SRN.

The route

The South Pennines (West) route is in the North of England, extending west-east from the Welsh border and west coast to the M1 and West Yorkshire, and from Lancaster at its northern extent to Cheshire at its southern extent. The route comprises the M56, M53 and A55 in the Wirral and south of the Mersey; the M58, the M57 and the A5036 around Merseyside; the M55, M65, A56 and A585 in Lancashire; the M60, M61, M66, M602, A627(M) and A5103 around Greater Manchester; and the M62, A61, A616 and A628 across the Pennines. In total, the route comprises approximately 346 miles of the SRN.

The route directly intersects with the M6 (London to Scotland West route) at several key junctions. The M6 provides onward connectivity to the West Midlands to the south, and Cumbria and Scotland to the north. It also links with the South Pennines (East) route, which provides onward connectivity to the east coast and Humber ports. The route also provides key onward connections to the Major Road Network (MRN).

¹ Highways England (2020) Delivery Plan 2020-2025. https://nationalhighways.co.uk/media/vh0byhfl/5-year-delivery-plan-2020-2025-final.pdf

Challenges and issues

We have identified challenges and issues of those using the route and living alongside it. These correspond to the DfT's six strategic objectives, which are the strategic objectives for RIS3. They were agreed by National Highways and DfT, and are set out in the RIS3 *Planning ahead*² document in December 2021.

Improving safety for all

- Some of the route is rated 1 or 2 stars in terms of its iRAP rating
- The proportion of collisions which involved someone being killed or seriously injured is higher where the route passes through, or is adjacent to, an urban area. This includes the A5036 through Sefton, the M62 near Irlam and the M67 through Denton and Hyde
- Collisions where someone was killed or seriously injured have also occurred on trans-Pennine routes of the M62 and A628 and A616, on the M55 and M60
- Collisions involving walkers, cyclists and horse riders have occurred, most notably on sections of the A623 near Oldham, the A55 near Chester, the A628 through Hollingworth and the A5036 in Sefton.

Network performance

- Network performance across the route varies significantly. Reliability is an issue along many roads with particular issues on the M62.
- Delay is an existing issue on many sections of the route including the M60 and western sections of the A628. Delay is also expected to increase on radial routes into Greater Manchester and near the urban areas of Leeds, Bradford and Huddersfield
- Demand is expected to increase in the future as a result of HS2, Manchester Airport Expansion, and significant housing and employment developments across the region

Improved environmental outcomes

- The environment provides significant challenges to the operation of the SRN along the South Pennines (West) route. This includes challenges with flooding from surface water, air quality, noise pollution and severance
- Flooding from surface water creates significant reliability issues on certain sections of the route particularly where there is a shortage of diversion routes of comparable standard
- The route passes through densely populated urban areas where there are a number of receptors in close proximity to the SRN which may be more likely to experience adverse air quality and noise impacts
- The SRN can also create severance between communities particularly for active travel. This can restrict people's access to key services, facilities and employment opportunities
- Maintaining and protecting Areas of Outstanding Natural Beauty (AONBs), areas with environmental designations and cultural heritage
- · Minimising greenhouse gas emissions
- Building resilience to future climate change

² Department for Transport (December 2021) Planning ahead for the Strategic Road Network: Developing the third Road Investment Strategy. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/ file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf

Growing the economy

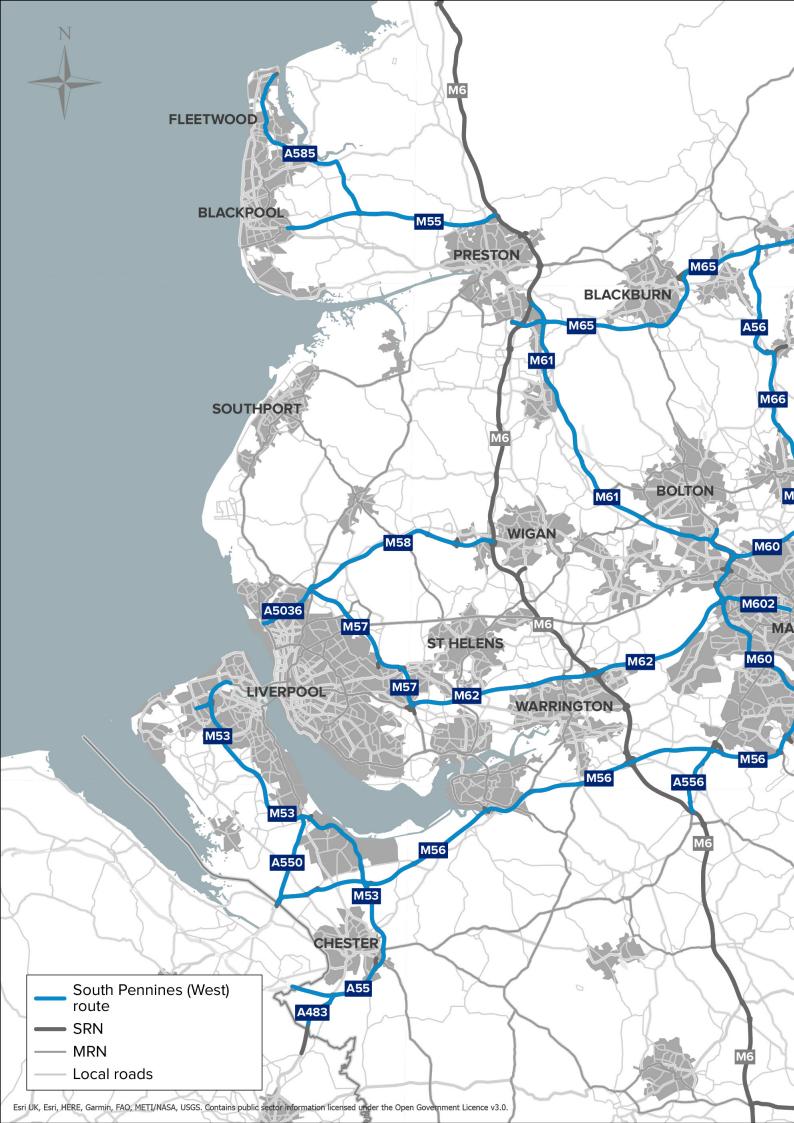
- The South Pennines (West) route is vital to the continued growth of the area it serves and beyond. There are significant plans for expansion to major distribution and logistics hubs across the route. Similarly, there are a mix of housing and employment sites planned across the route from Liverpool in the west, to Wakefield in the east. These developments will put further pressure on locations which already suffer from congestion across the route including the M62, M56 and M60
- The route also provides key connections to Wales and across the Pennines to Yorkshire and beyond. To support the regional economy, the route needs to provide a reliable service to its users now and into the future

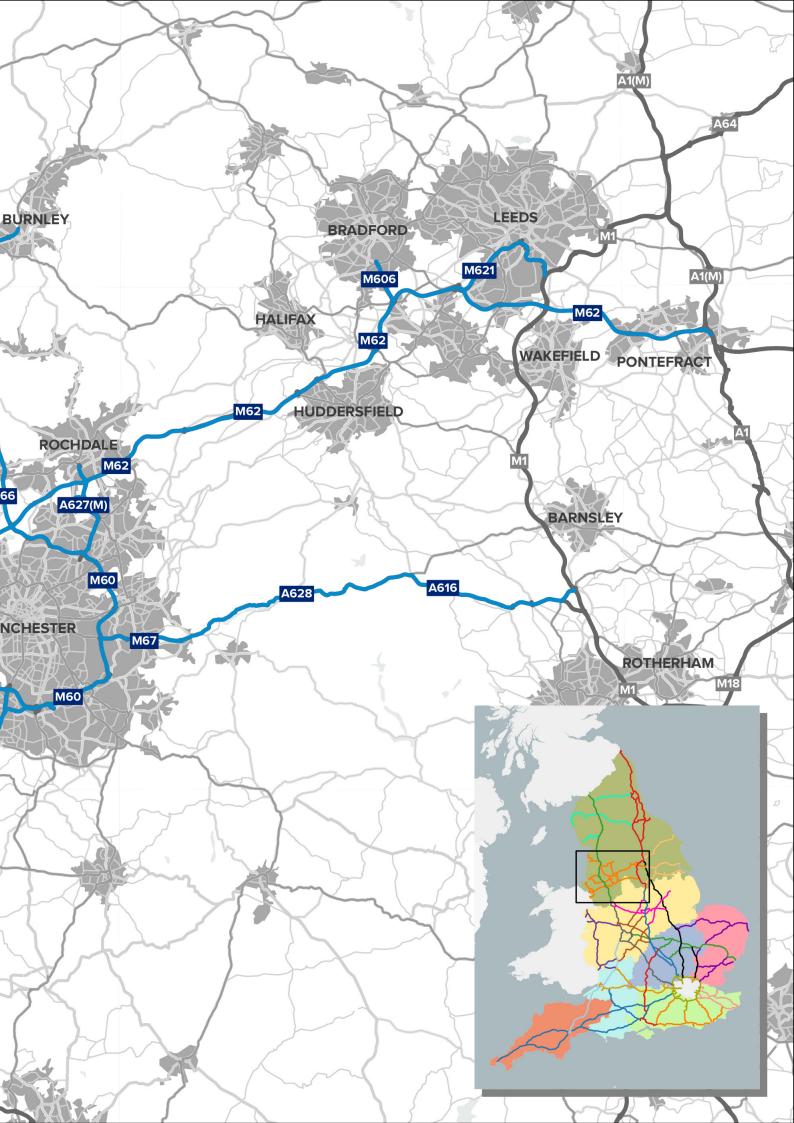
Managing and planning the SRN for the future

- Contributing toward the national target of 96.2% or more of carriageway being in good condition
- Maintaining the good condition of the SRN's geotechnical assets
- Ensuring that drainage assets are maintained so that their good structural and service conditions can be upheld

A technology-enabled network

- Our interested parties highlighted a desire for greater information to improve road users' experience. The availability of information is improving through smart motorways on some sections of the route but is lacking in other locations
- As there is an increase in the uptake of electric vehicles, demand for charging points across the network is also likely to increase.
 At present, there are greater distances between charging points in rural areas





Initial route objectives

We want to provide safer and more reliable journeys for all those who use or live alongside our network, and support the route in achieving the economic and housing growth ambitions of surrounding areas. Based on our engagement and data analysis, we have defined a set of objectives for the route. The table below shows the route objectives and how they contribute to the DfT's six strategic objectives for the SRN as a whole.

		DfT's strategic objectives for our network					
Ref.	Route objective	Improving safety for all	Network performance	Improved environmental outcomes	Growing the economy	Managing and planning the SRN for the future	A technology- enabled network
	Improve safety for all road users whilst reducing severance between communities						
Α	Benefit road users and local communities by providing safe journeys on the route, particularly focusing on vulnerable road users where they interact with the SRN in urban areas	✓					
	Support effective local integration with sustainable transport modes						
В	Support effective local integration with sustainable transport modes in urbanised areas such as Greater Manchester, Merseyside, Lancashire and West Yorkshire, to minimise the impact of short distance journeys and benefit the environment		✓	✓			
	Be a better neighbour by safeguarding the environment						
С	Be a better neighbour by safeguarding the environment and reducing the impact on air quality and noise, where possible, where the SRN passes through urban areas such as Greater Manchester, West Yorkshire, and Merseyside			√			
	Promote sustainable economic growth, the visitor economy and levelling up in the North						
D	Promote sustainable economic growth, the visitor economy and levelling up in the North through efficient connectivity to both existing and future housing and employment sites in Preston, the Fylde Coast, East Lancashire, Greater Manchester, the M57 corridor in Liverpool, St Helens, and the Wakefield District including the towns of Pontefract, Normanton, and Castleford		✓		√		
	Support safe and reliable trans-Pennine journeys						
E	Support safe and reliable trans-Pennine journeys on the M62, A628 and A616 to ensure that economic activity can grow across the Pennines	√	√		✓	V	

			_	
DfT's	strategic	objectives	for our	network

Ref.	Route objective	Improving safety for all	Network performance	Improved environmental outcomes	Growing the economy	Managing and planning the SRN for the future	A technology- enabled network
	Support reliable strategic connectivity						
F	Support cross-border connectivity for people and goods between Wales and the North of England with a focus on reliability and safety on the M56, M53, A55 and connecting SRN routes to Wales, promoting the UK and regional economies	✓	✓		✓		
	Support the efficient movement of goods						
G	Support the needs of the freight industry including major businesses and logistics hubs such as the Ports of Liverpool and Salford, Mersey Freeport, Trafford Park and Manchester Airport, to support the regional and national economy though the efficient movements of goods		✓		✓		

Next steps

The 20 route strategy Initial overview reports will combine with other related evidence to inform the broader *SRN* initial report³ as part of the RIS process for the third road period. The *SRN* initial report includes an assessment of the current state of the network and user needs from it, potential maintenance and enhancement priorities, and future developmental needs and prospects. DfT will consult on this *SRN* Initial report, which will serve to inform the RIS and *Strategic business plan*.

We will finalise the Route strategy reports following feedback on the publication of these Initial overview reports. They will be used as a forward planning tool by National Highways to help identify investment opportunities for enhancements, as well as to support decisions around operating and maintaining our network. Providing an understanding of the strategies for each route will also help inform the decisions taken by our interested parties. These finalised Route strategy reports will also serve to inform the RIS and *Strategic business plan*.



01 Introduction

Our strategic road network (SRN) is the backbone of the country. Our more than 4,500 miles of motorways and major A-roads connect people, build communities, create opportunities and help the nation thrive.

Our network provides safe, high-speed connections that:

- enable businesses to transport products and services
- · provide access to jobs and suppliers
- · facilitate trade and investment
- support commercial and housing development that is integrated with local roads and other modes of transport

The SRN also supports leisure journeys, connecting people and places, and will play a central role in delivering the social, economic and environmental needs of the nation, especially as we seek to reduce the carbon footprint of our network.

To plan for the future, we are taking a long-term view of our network and the trends that could impact transport, road travel and personal and commercial mobility. We consider factors ranging from climate change and low-carbon transport to increasing automation, digital technologies and changing travel preferences. Route strategies are at the centre of this dynamic future planning of our network. They build on our *Connecting the country: Our long-term strategic plan to* 2050⁴ that sets out our vision and plan for the SRN until 2050, aligning with the government's *Ten point plan for a green industrial revolution*⁵.

Purpose of route strategies

Our route strategies are based on 17 routes across England, with some split into two sub-strategies where this better reflects our customers' end-to-end journeys. There are 20 reports in total. We outline the objectives of each route along with the constraints faced and the current and predicted future performance based on analysis and widespread engagement with our customers and neighbours. Our customers and neighbours include:

- local authorities, devolved administrations and sub-national transport bodies
- other transport network operators (including local highway authorities, Network Rail, port and airport operators)
- operational partners (including, but not limited to, the emergency services)
- road users
- · local communities
- other relevant interested parties with a significant stake in the long-term development of the network
- Members of Parliament

We also provide a list of locations for further consideration to inform investment planning across National Highways and for the Road investment strategy (RIS). We develop and publish these route strategies to:

- help us develop an understanding of the future state of the routes
- identify the locations for further consideration to inform our investment programmes and guide our vision

⁴ National Highways (2023) Connecting the country: Our long-term strategic plan to 2050 https://nationalhighways.co.uk/connectingthecountry

⁵ HM Government (November 2020) The Ten Point Plan for a Green Industrial Revolution: Building back better, supporting green jobs, and accelerating our path to net zero. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf

- give a practical tool to National Highways as a whole, while supporting external interested parties who anchor their infrastructure planning and investment around our network
- help ensure that all investment delivers safer and more reliable journeys for our customers and neighbours

For clarity, this document does not:

- identify committed schemes for delivery as part of future RIS periods. This will be part of the wider RIS setting process
- commit to the delivery of local plans or economic growth developments mentioned
- guarantee funding for any locations identified for further studying to understand the challenges and issues in more detail
- preclude the inclusion of other locations for consideration in the light of other evidence or imperatives

Route strategy reports

These Route strategy initial overview reports have informed the *SRN initial report*⁶ that sets out our vision and proposed priorities for the third road period (2025-2030) and beyond.

The final Route strategy overview reports will be published by the end of the RIS period, which covers 2020-2025. The three delivery phases of route strategies are shown in Figure 1.

Purpose of the report

This report is for the South Pennines (West) route. In this report, we detail the route context, current constraints on the route, and opportunities for improved connections with local roads and rail links. We set out intelligence-led route objectives aligned with the DfT's six strategic objectives. These objectives aim to ensure the route can serve its function, while mitigating the identified constraints and challenges. They conclude with locations for further consideration to achieve the route objectives.

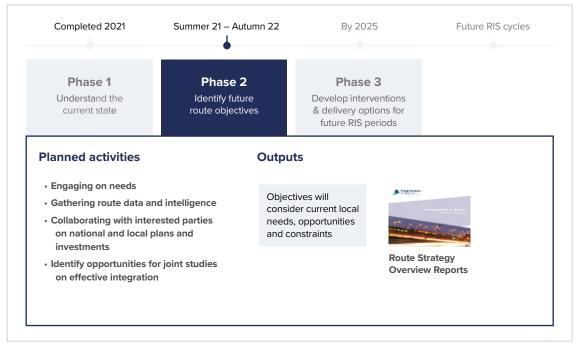


Figure 1: The route strategies delivery phases

The route objectives and locations for further consideration will be presented to DfT to inform future decision-making about investment planning through the RIS. It should be recognised that not all aspirations outlined in this report can be funded or delivered.

The development cycle for the third Road Investment Strategy (RIS3)

Preparing route strategies is a requirement under the Infrastructure Act as well as a National Highways Licence requirement. The Licence sets out the Secretary of State for Transport's statutory directions and guidance to National Highways. It states that we must periodically prepare and publish route strategies covering the whole of the network to maintain an understanding of how the network is performing, while identifying any potential challenges. Each set of route strategies informs each RIS outlined by government, as well as supporting decision-making for the ongoing management and development of the network.

Route strategies are one of the key steps of research required by DfT to inform the setting of a RIS. Following the setting of RIS1 and RIS2, which covered the first road period (2015-2020) and second road period (2020-2025), we are now in our third round of route strategy planning informing RIS3 for the third road period (2025-2030) and beyond.

Looking across the whole of the SRN, our route strategies form one of the most important parts of the 'research' phase of the RIS3 development cycle. These strategies explore the current performance and future pressures on every stretch of the SRN, covering matters such as safety, reliability, congestion, environmental impacts, and local ambitions for economic and housing growth. Through the extensive engagement we have undertaken to inform the strategies, we provide insight to DfT and government into local, regional and national priorities for the SRN to support investment decisions for RIS3 and beyond. Grounded in evidence, the strategies identify the immediate needs of the network as well as highlighting longer-term issues or potential opportunities as shown in Figure 2.



- · Strategic Studies
- Route strategies
- National Highways
 Strategic Road Network
 (SRN) initial report
- Public consultation on SRN initial report
- Department for Transport produces Road investment strategy
- National Highways produces Strategic business plan
- Office of Rail and Road advises government on efficiency and deliverability of both
- · Scheme development
- National Highways publishes Delivery plan
- Maintenance and renewals plans

We have developed a revised approach to route strategies, building on past versions, to ensure they respond to the current and future needs of our customers and neighbours. The approach for route strategies is outlined in our approach document *Vision for route strategies: Planning for the future of our roads*⁷.

Our ambitions for route strategies, summarised in Figure 3, are to be forward-looking, widely supported, and integrated with other networks and modes of travel. They will consider the implications of local development plans and government ambitions and be dynamic to respond to the changing needs of our customers and neighbours in how they use and interact with our network. Such needs may evolve as a result of how people use our network due to COVID-19, environment considerations, or the need to support strategic connections and integrated solutions that connect locations, all of which will have an influence on the scale and type of future investments.

Engagement with customers and neighbours

Engagement with customers and neighbours has been central to developing our route strategies. We have already gathered a wealth of evidence from the previous rounds of route strategies and through our ongoing monitoring of road condition and performance.

Building on engagement to date, we have worked with sub-national transport bodies, Office of Rail and Road, Department for Transport, and Transport Focus to ensure a diverse range of people and their views are represented. This has allowed us to further improve our understanding of our customers and neighbours' requirements, helping us identify locations for further consideration to improve the SRN.

We will continue to evolve this engagement process for future cycles of route strategies. We used a range of methods to gather information from customers and neighbours throughout the route strategies' evidence collection period, which ran from August to December 2021 (Figure 7). These included round tables, workshops, and an online feedback form and we designed the approach to be more inclusive by engaging with and learning from a wide range of interested parties.

Thinking about how the SRN integrates with the surrounding rail and road network, including parts of the Major Road Network (MRN) and local roads, we designed our engagement around the following objectives:

- to understand the current role of the SRN and how it could better support the aspirations of customers and neighbours of the future
- to gather views and seek evidence on current and future issues, challenges and opportunities – both local and strategic

We have also gained an in-depth understanding of what our road users want nationally from Transport Focus' *Strategic roads user survey 2021/22*8 into road users' priorities for improvements to journeys on the SRN. This research was based on focus groups and interviews with all types of road users across the country, alongside a survey of more than 5,000 drivers. It asked for users' views on key issues, such as sustainability and electric vehicles, and the stress of driving on the SRN.

From this research, Transport Focus identified that the majority of road users want the focus of investment to be on keeping National Highways' existing roads in good order before building new ones. Their top priority for improvement to journeys on the SRN is road surface quality, followed by the safer design and upkeep of roads.

⁷ Highways England 2021, Vision for route strategies Planning for the future of our roads, https://nationalhighways.co.uk/media/w0vhd3un/vision-for-route-strategies.pdf

⁸ Transport Focus 2022, Strategic Roads User Survey - 2021/22 Summary Report, https://www.transportfocus.org.uk/publication/strategic-roads-user-survey-2021-22-summary-report/



opportunities in each RIS cycle informing operational and investment priorities.

Figure 3: Our ambition for route strategies

Users also want to see better management of roadworks and of unplanned delays, such as incidents or breakdowns, and better information about unplanned disruptions to journeys. Walkers, cyclists and horse riders using the SRN highlighted concerns about the speed of traffic and want action on lighting and litter. This research will be used by Transport Focus to make recommendations about what National Highways should be required to deliver during the third road period.

The findings from the Transport Focus survey align with findings from our route strategies engagement with customers and neighbours across the SRN.

Engagement during workshops with interested parties (shown in Figure 6) identified the following national priorities:

- Better driver education aimed at teaching road users about new technology
- Deeper consideration of environmental constraints at the earliest stage of planning, and consideration for key environmental issues such as biodiversity, air quality and sustainable transport
- A resilient and reliable SRN to support economic growth
- Better integration between the SRN and local road network to improve journey times
- Greater support for the freight industry in terms of:
 - The future of low emission vehicles and commercial fleet
 - The impact of congestion on productivity, fuel cost, driver breaks, lorry park locations and delivery times
- Greater collaboration and early engagement with interested parties, and greater alignment between network operators, including consideration for joint funding opportunities
- In addition, feedback on the SRN provided by communities and neighbours via the online tool, showed similar national priorities. The breakdown of the 1,700 responses we received via the online feedback tool are shown in Figure 4 and Figure 5.

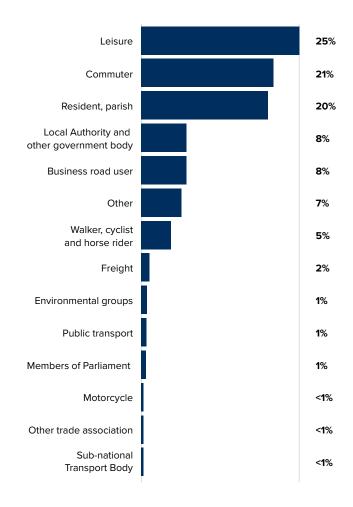


Figure 4: All responses to online tool by participant type

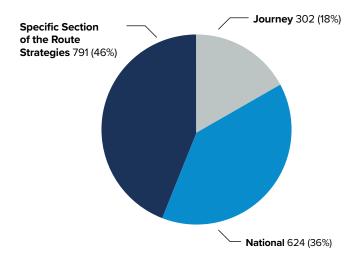


Figure 5: All response to online tool by type

A breakdown of the national issues and general feedback raised is shown in Figure 8, which highlights that, in terms of the issues identified:

- 26% were related to safety
- 23% were related to congestion
- 28% were related to the environment or carbon

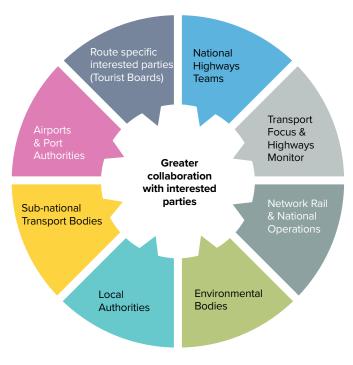


Figure 6: Interested parties involved in the route strategy engagement



Figure 7: Timeline of engagement with interested parties

DfT's strategic objectives for the strategic road network

DfT have published six objectives for the SRN. These are the strategic objectives for RIS3 that have been agreed between National Highways and DfT and were set out in the *RIS3 Planning ahead*⁹ document in December 2021. They cover safety, network performance, environment, economy, management and planning for the future and technology.

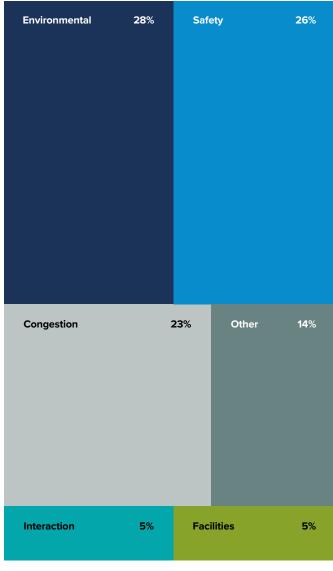


Figure 8: National themes from feedback through the online tool

⁹ Department for Transport, December 2021, Planning ahead for the Strategic Road Network: Developing the third Road Investment Strategy, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/ file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf

National Highways has a statutory obligation to have regard to the effect of its functions on the environment, and the safety of users of highways.

At a national level, National Highways has existing commitments and ambitions to contribute to the DfT strategic objectives, as outlined below. The strategies for each route are aligned with these. They include:

i) Improving safety for all

· Our safety approach

ii) Network performance

- Expectations over COVID-19 and travel demand
- · Our ambition for supporting freight, logistics and the coach industry
- Our ambition for supporting end-to-end journeys for a variety of modes
- Our approach to trunking and de-trunking for SRN

iii) Improved environmental outcomes

- · Net zero highways: Our 2030/2040/2050 plan10
- · Our plan for net zero carbon travel on our roads covering emissions from the vehicles using the SRN
- Our approach to improved environmental outcomes

DFT'S SIX STRATEGIC OBJECTIVES FOR THE STRATEGIC ROAD NETWORK



A Improving safety for all



Network performance



Improved environmental outcomes



Growing the economy



Managing and planning the SRN for the future



A technology-enabled network

iv) Growing the economy

- · Our contribution to growing the economy and levelling up
- · Our approach to spatial planning

v) Managing and planning the SRN of the future

· Our approach to asset management

vi) A technology-enabled network

· Our ambition for digital roads

IMPROVING SAFETY FOR ALL

OUR SAFETY APPROACH: We are committed to reducing the number of road users killed or seriously injured on the strategic road network, by 50% (from the 2005-2009 baseline) by the end of 2025, with a long-term vision to eliminate harm arising from use of the SRN. We recognise:

- safety is National Highways' top priority.
 We believe that everyone who travels or works on our roads should get home safe and well
- billions of miles are travelled on the SRN each year, with the vast majority of these safe and reliable journeys
- our roads are some of the safest in the world, but we know there is more we can do. Every death or serious injury on our roads is a tragedy and we are committed to creating the safest roads in the world

NETWORK PERFORMANCE

EXPECTATIONS OVER COVID-19

AND TRAVEL DEMAND: COVID-19
has had the biggest single-year impact on road traffic since records began in 1949.
But car traffic on the SRN is now back to approximately 95% of pre-pandemic levels.

At the time of writing, while the onset of COVID-19 and the rapid rise in homeworking initially decreased demand for both public and private transport, the greatest impact has been on public transport, with private vehicle travel the first mode to rebound. Homeworking has not noticeably reduced demand for the SRN. An estimated 43% of UK jobs can be done entirely from home, but nearly two-fifths of businesses expect 75% of their workforce to eventually return to their normal place of work.

It is unclear if the scale of homeworking will continue or how it will affect long-term travel demand. For the short-term, transport flow data has generally shown that traffic peaks have become flatter but broader, with traffic more evenly spread across the day, suggesting some behaviour change.

Continued hybrid working could see a redistribution of demand, flattening the daily morning and afternoon peaks, and instead creating a mid-week peak.

The pandemic has also brought wider uncertainties, such as whether these loosened physical ties to employment locations could see increases in suburban living, as workers that are more 'knowledge-based' than 'location based' take advantage of greater geographic mobility across the country.

Changes in leisure trends caused by the pandemic could also have implications for the SRN, such as the changing demand for high street retail or choices around domestic versus overseas holiday-making. Such needs may evolve, all of which will have an influence on the scale and type of future investments.

SUPPORTING FREIGHT, LOGISTICS AND THE COACH INDUSTRY: We continue to collaborate with our freight and logistics customers to better understand how the SRN can support their operations, and work with wider government in the delivery of their Future of freight plan¹¹. We recognise that lorry parking and facilities are key to enabling freight and logistics businesses to operate safely and efficiently. A lack of parking and good quality facilities impacts the recruitment and retention of drivers into a sector that is crucial to the country's economy. We are keen to play our part in ensuring good quality facilities are in the right places and that we support the sector in recruiting and retaining a diverse pool of drivers.

Our ambition is to improve lorry parking by:

- intervening where the market is not meeting the demand for lorry parking (areas of high demand with insufficient facilities)
- working with operators to improve the quality of existing facilities
- ensuring our major projects consider the needs of lorry drivers

In addition to supporting lorry parking, we remain focused on:

- reducing congestion on the SRN, which affects the speed, reliability and cost of logistics, as well as driver safety when journeys exceed regulated driving time
- improving the suitability of alternative routes and diversions off the SRN
- supporting the industry in achieving net zero carbon emissions by facilitating the adoption of alternative fuels linked to parking facilities
- ensuring resilience on key freight routes, such as between ports, airports, wharves and rail freight interchanges
- increased data sharing on incidents, roadworks and diversions
- understanding changes in how our freight and logistics customers use the SRN so we can continue to provide the best possible service

IMPROVING END-TO-END JOURNEYS FOR A VARIETY OF MODES: The SRN plays an important role in supporting a wide range of customer journeys by different modes of transport. We are exploring how to support customers' end-to-end journeys by creating travel choices that deliver our target of net zero carbon customer journeys by 2050. We recognise our role in supporting an integrated transport network that allows our current and future customers to re-route, re-time, re-mode and reduce their journeys, especially at peak times and during major disruption.

Through understanding National Highways' role in influencing and improving travel, we will identify how to support customers utilise the right mode for the right journey. By working closely with operators, we will ensure our network supports bus and coach services.

And through the development of active travel networks we can help deliver health and wider social benefits.

Our focus is on delivering net-zero customer journeys by 2050 through behaviour change towards sustainable travel by:

- understanding travel behaviours to identify customer needs for end-to-end journeys, supporting the development of a travel demand management strategy
- ensuring our customers have the information they need to make the travel choices that are right for them
- improving integration of different modes of travel by working with key interested parties to deliver a range of active travel and public transport interventions
- using behaviour change and techniques to manage future travel demand and minimise disruption from major works
- continuously improving our offer for walkers, cyclists and horse riders

SRN TRUNKING/DETRUNKING: For RIS2 (2020-2025), we were asked to explore changes to the SRN to ensure the network aligns with RIS2 strategic priorities, reflected in the *Strategic* business plan. This plan relates to improving connections between main urban centres, to international gateways, to peripheral regions (for levelling up) and strategic cross-border routes (to strengthen union connectivity). It included a commitment to explore potential asset ownership changes between ourselves and local highway authorities that could be implemented no earlier than the start of RIS. DfT have produced a shortlist of 18 trunking and two de-trunking candidates, identified following the draft RIS2 public consultation in 2018, for us to assess desirability and viability of asset transfer.

De-trunking is the process of returning a National Highways road to the local highway authority control and visa versa for trunking. These candidates were put forward by a range of external interested parties, including local authorities, Local Enterprise Partnerships and Chambers of Commerce, then shortlisted by DfT. These candidates were put forward by a range of external interested parties, including local authorities, Local Enterprise Partnerships and Chambers of Commerce, then shortlisted by DfT. There is ongoing work to review the assessment evidence and recommendations, after which government ministers are expected to announce the candidates that will progress to the detailed development stage, which will be led by National Highways and incorporated in the forward study programme and wider RIS3 process.

IMPROVED ENVIRONMENTAL OUTCOMES



NET ZERO HIGHWAYS:

NATIONAL HIGHWAYS' 2030/2040/2050 PLAN¹². We are committed to being a Net Zero Carbon Company by 2050 (2040 for Maintenance and Construction emissions).

We published our ambitious net zero carbon plan in July 2021. It details how we will achieve net zero emissions for: our corporate space by 2030, our maintenance and construction emissions by 2040, and road user emissions by 2050. We're keen to support a sustainable future and know that road travel is vital to enabling a thriving net zero economy. Our plan strengthens the decarbonisation of the transport sector, which remains the biggest emitting sector of greenhouse gases in the country.

We also need to consider how the SRN will be resilient to climate change. Our route strategies will need to recognise that the schemes we construct are likely to be subjected to changes to the climate, such as flooding.

Our route strategies demonstrate how we will continue to connect the country and ensure that the SRN is environmentally sustainable and resilient to climate change. This includes understanding the right schemes and options that support integration across different modes, improve the SRN's capacity through digital roads, and deliver broader environmental enhancements.

This will change the way we work both internally and with our supply chain and wider interested parties.

As part of our net zero commitment, we need to consider the contribution our schemes make to sustainable development. We are adopting the PAS2080 Carbon Management in Infrastructure Standard that will help us invest only where we can achieve our zero carbon goals. Guided by the PAS2080 Standard, we will use an investment hierarchy where we favour opportunities to deliver whole life value without undertaking construction. We will demonstrate that we have considered all interventions during our planning stages and that every effort is made to avoid negative impacts and maximise environmental benefits throughout the lifecycles of schemes. We will also work with government and the private sector to set out a clear proposition by 2023 for electric vehicle charging on our network. This will cover both customer need and the infrastructure required to deliver this.

More than ever we need to support the Government's wider plans for decarbonising transport. The SRN plays a pivotal role in supporting the transition to zero carbon cars, vans and heavy goods vehicles (HGVs), but we also recognise that we need to better integrate with other modes of transport too, including public transport and active travel.

NET ZERO CARBON TRAVEL ON OUR ROADS COVERING EMISSIONS FROM THE VEHICLES USING THE STRATEGIC ROAD NETWORK: We have set an ambition for all of our customers to be travelling using net zero transport by 2050, in line with the UK Climate Change Act. Many of the actions that will deliver this ambition are out of our direct control, but that does not mean we cannot play our part. Our priorities are to help roll-out solutions to decarbonise HGVs and support the uptake of electric cars and vans. We will also continue our work on integrating the SRN with other transport modes, while working to improve the efficiency of the network.

Our actions relating to reducing emissions from road users of our network include:

- publishing our proposed approach to zero carbon HGV trials by the end of 2022
- publishing a blueprint for electric vehicle charging services on our roads by 2023
- integrating a strong modal shift programme in the third road period, building on our work to date

IMPROVED ENVIRONMENTAL OUTCOMES: We know there's a requirement to balance people's need to travel on our roads with doing all we can to protect and improve the environment. That means we will continue to consider a wider range of environmental factors in our future planning, such as improving biodiversity, protecting ancient woodlands, reducing pollution in Air Quality Management Areas, and protecting Sites of Special Scientific Interest. These will form part of our considerations during our early planning. In response to these emerging issues, our latest route strategies differ from previous strategies by taking a more balanced view on expanding the future capacity of the SRN. We now seek to develop strategies that produce balanced investment plans with schemes of different magnitudes, delivering across multiple objectives: safety, journey time improvements, network resilience, maintenance and renewals, technology, environmental enhancement, and integration with more sustainable transport modes. The outcome will be an SRN that supports the economy but also delivers on the wider environmental challenges.

GROWING THE ECONOMY

GROWING THE ECONOMY AND LEVELLING UP: The SRN is a vital part of England's – and the UK's - transport infrastructure. It facilitates the movement of people and goods nationally, regionally and locally through connections to the major road network and other transport infrastructure. The Government's levelling up agenda places emphasis on ensuring no community is left behind, particularly as we recover from the COVID-19 pandemic. With such a vital role in supporting the economy and facilitating connectivity - enabling access to jobs and homes, international gateways and supporting road-reliant sectors – National Highways and the SRN have a role to play in supporting the levelling up agenda and

the wider aim of economic prosperity.

The Government is committed to strengthening transport connections across the UK. Sir Peter Hendy's *Union connectivity review*¹³ was published in late 2021. The Review recommends the creation of UKNET, a strategic transport network spanning the entire United Kingdom based on a series of principal transport corridors between key urban and economic centres, including international gateways. The findings of this report have been considered in the context of our route strategies and will be a key objective for our cross-border routes and the roads connecting to important ports.

Additionally, the SRN plays a critical role in enabling international connectivity and trade by providing reliable and resilient access routes to global markets via the country's network of international ports, airports and the Channel Tunnel. Enhancing these links and supporting these gateway locations to thrive, including maximising the opportunities of Freeports, is a key part of National Highways' role in supporting the national economy.

SPATIAL PLANNING: We recognise that businesses operate from the location that best suits their business requirements in terms of access to customers, the supply chain and employees. Location is equally critical to decision-making in the residential market, both for the house builder and the potential purchaser or occupier. In enabling new employment spaces and homes to be developed, at National Highways we engage appropriately and positively as a statutory consultee in the planning system.

This is in line with our statutory responsibilities as set out in our Licence, and in support of wider government policy and regulation. Our focus is on securing sustainable development, managing cumulative impacts of strategic growth, and minimising the potential for any negative impacts on the SRN.

MANAGING AND PLANNING THE SRN FOR THE FUTURE



We recognise that asset management is our core business. It is the service we provide to maintain, operate, and enhance the SRN safely, reliably and effectively for all our customers. We manage more than 4,500 miles of road, over 20,000 structures and 12 road tunnels, as well as drainage, earthworks, and technology equipment. We recognise that our customers rely on our roads to travel approximately 95 billion miles every year, and our work helps unlock housing and employment sites across the country. One of our main priorities is managing these assets effectively and efficiently, to deliver the outcomes our customers and interested parties want.

We have adopted an asset management approach in order to align our strategy and planning activities to create, maintain, operate, and renew all of the assets that make up our network. Asset management links all our activities and supports our three imperatives: safety, customer service and delivery.

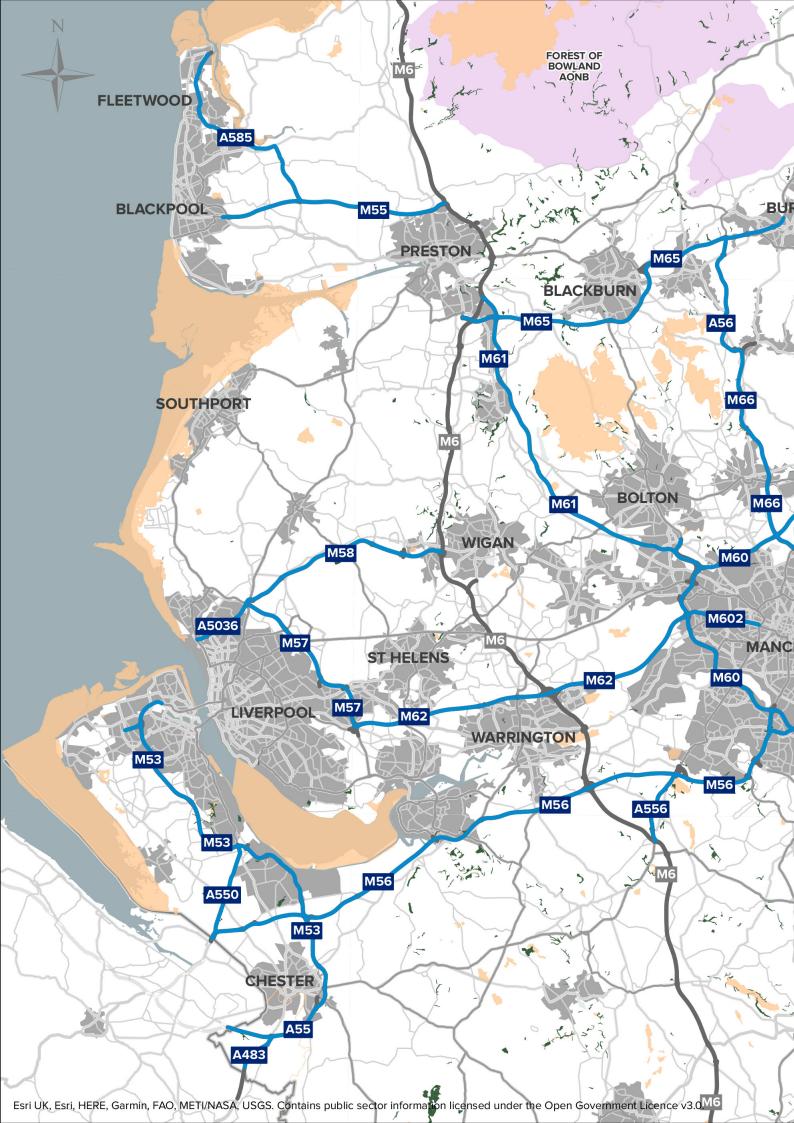
We know that good asset management is about understanding our customers and interested parties, identifying what they need and then using our assets effectively to deliver the right level of service. We are working to understand what satisfies our customers, and what we can do to influence this.

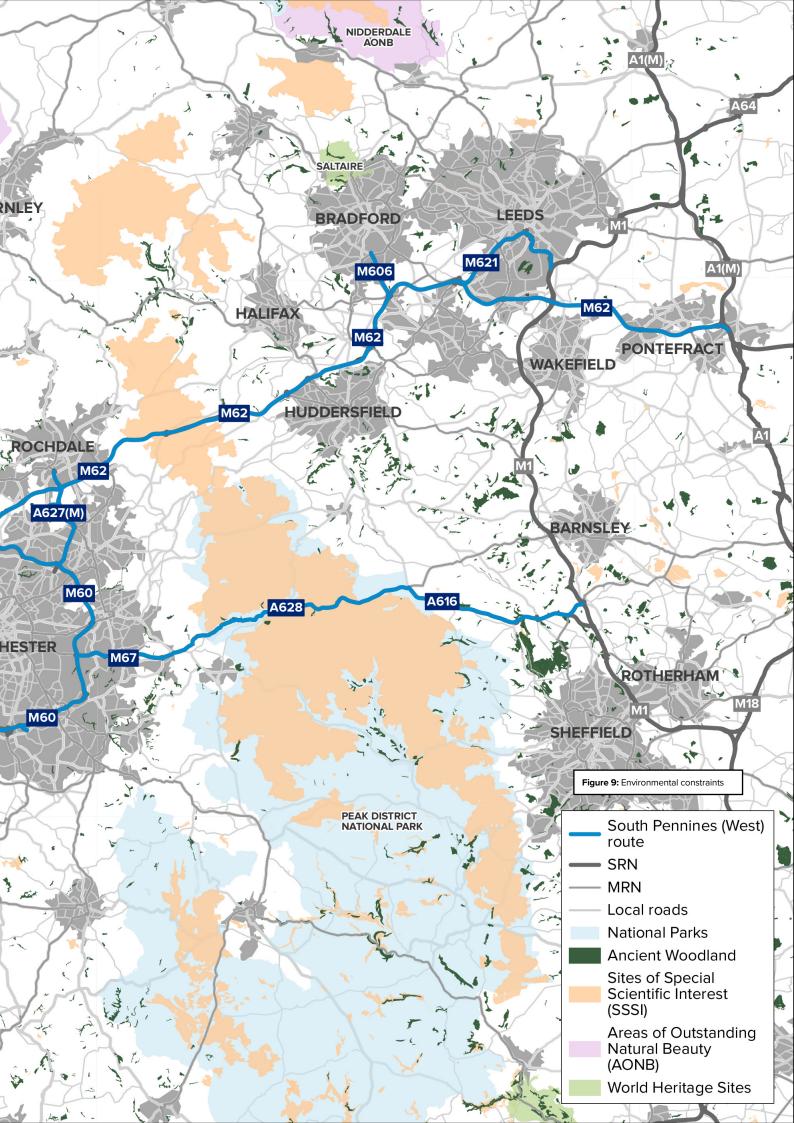
Our vision is to create an approach and establish ways of working that make sure all our asset management activity is aligned by following the key principles set out in our asset management policy. We work across the whole asset lifecycle, understanding that asset decisions we make may affect future service provision. This means that we are planning and accounting for emerging and evolving challenges around customer expectation, climate change and new technology. Since the beginning of the second road period we have continued on our journey to increase our asset management maturity, and our organisational objectives have developed significantly in light of COVID-19 and the Government's carbon plans.

A TECHNOLOGY-ENABLED NETWORK



DIGITAL ROADS: Our ambition for digital roads is to continue to harness data, technology and connectivity of people to places and communities and networks to improve the way the SRN is designed, built, operated and used. Our recently published Digital roads strategy (September 2021)14 sets out how we will harness data, technology and connectivity to improve the way the SRN is designed, built, operated and used. This will also support our ambitions to achieve net zero carbon on the SRN. We have established three themes: Digital design and construction, digital operations and digital for customer. These themes will continue to frame our vision towards 2030 and beyond, increasing connectivity, automation and data.







02 The route

The South Pennines (West) route is in the North of England, extending west-east from the Welsh border and west coast to the M1 and West Yorkshire, and from Lancaster at its northern extent to Cheshire at its southern extent. The route comprises the M56, M53 and A55 in the Wirral and south of the Mersey; the M58, the M57 and the A5036 around Merseyside; the M55, M65, A56 and A585 in Lancashire; the M60, M61, M66, M602, A627(M) and A5103 around Greater Manchester; and the M62, A61, A616 and A628 across the Pennines. In total, the route comprises approximately 346 miles of the SRN.

The route directly intersects with the M6 (London to Scotland West route) at several key junctions. The M6 provides onward connectivity to the West Midlands to the south, and Cumbria and Scotland to the north. The route also links with the South Pennines (East) route, which provides onward connectivity to the east coast and Humber ports. The route also provides key onward connections to the Major Road Network (MRN).

The route provides access to the city regions of Liverpool and Greater Manchester, and other cities and towns in Lancashire and Cheshire. It also provides trans-Pennine connectivity to West Yorkshire, serving Huddersfield, Bradford, and Leeds.

The SRN on the route comprises both A-roads and motorways. Significant sections of the route are located close to urban centres which, in addition to long distance strategic journeys, also cater for local short distance journeys, such as the M60 in Greater Manchester, the M53 and M57 in the Liverpool City Region and the M621 in Leeds.

The route has strategic functions, which include the M62 and A628 for trans-Pennine connectivity and the M56 through Cheshire connecting England to Wales. Connections to the wider SRN are also provided to cities and towns in Lancashire by the M61 to Bolton, Chorley, and Preston, the M65 to Burnley and Blackburn, and the M55 to Blackpool. This function is also evident in West Yorkshire, with the M62 serving Huddersfield and Dewsbury, and connecting to the M1.

The route provides connectivity to a range of key destinations including the international gateways of Manchester and Liverpool Airports, and important freight shipping and destination points, such as the Port of Liverpool, Trafford Park and the inland Port of Salford. The route also provides connectivity to key tourist destinations in the North of England including several coastal destinations on the west coast, the Yorkshire Dales National Park and visitor destinations such as Chester Zoo.

The economies of the North West and Yorkshire are diverse, employing approximately 5.9 million people¹⁵ across 900,000 active businesses and enterprises¹⁶. Key employment sectors include aviation, freight, manufacturing, and higher education. Principal employment locations include the city regions of Leeds, Liverpool, and Manchester which each provide significant office floorspace, serving as the headquarters for a range of UK and international businesses along with multiple higher education institutions in each city. Warrington is also a significant employment zone, which includes the Omega Business Park and the Daresbury Sci-Tech Park close to the M56. Employment sites can also be found at Ellesmere Port (Vauxhall) and Warton (BAE systems).

Despite some of these economic strengths, much of the South Pennines (West) route falls within some of the Government's priority areas for levelling up; including Leeds, Wakefield, most of Greater Manchester, St. Helens, Knowsley and Liverpool¹⁷.

In addition to the motorways, the A-roads on the route connect communities within the region, providing access to jobs and services, and supporting the visitor economy with access to the Peak District National Park and attractions in the Liverpool, Leeds and Manchester city regions.

This route strategy is based on the road network as of the start of the second road period (2020–2025). During the first road period (2015-2020), the M60 Junction 8 to M62 Junction 20 scheme was opened to traffic, along with the M62 Junction 10 to 12 scheme and the A556 Knutsford to Bowdon scheme. During the second road period, the M6 Junction 19 scheme has been completed and is open to traffic.

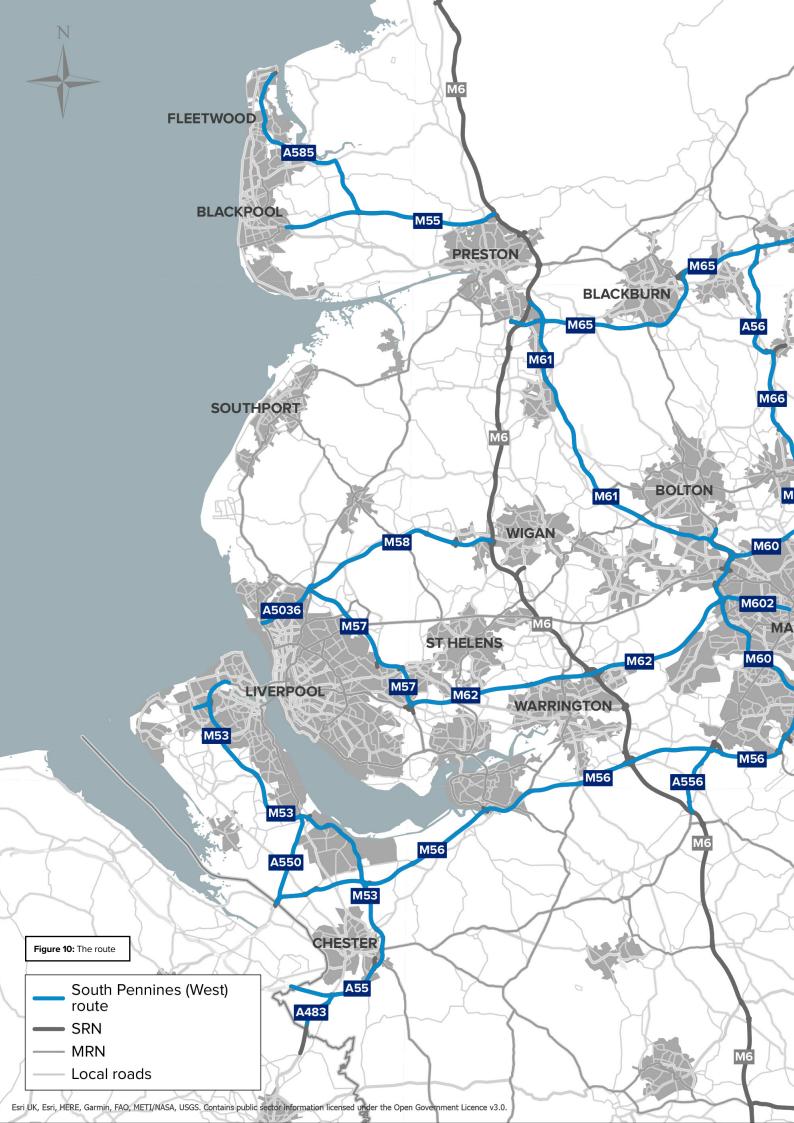
We recognise that some of the journeys on this route are part of longer trips and therefore need to be considered alongside strategies on other routes.

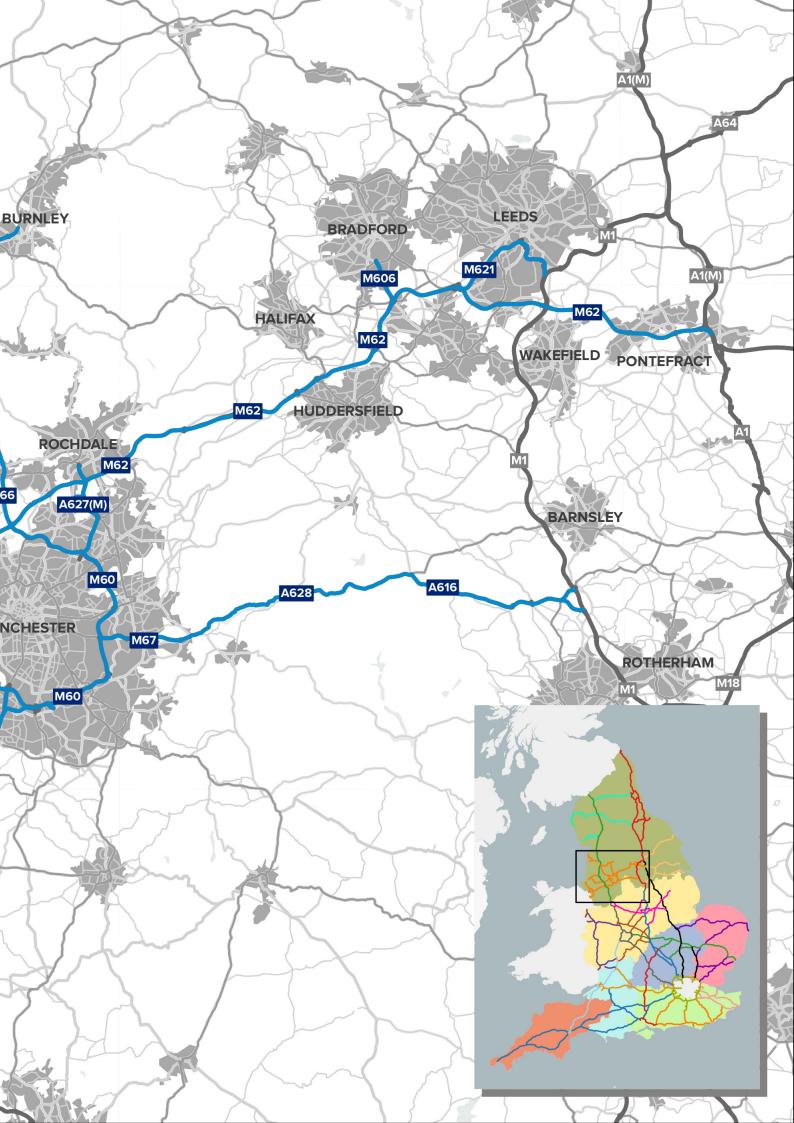
¹⁵ Office for National Statistics (2021) UK business population estimates. https://www.gov.uk/government/collections/business-population-estimates

¹⁶ Office for National Statistics (2022) UK regional labour market summary. https://www.ons.gov.uk/
<a href="market/peopleinwork/employmentandemployeetypes/bulletins/regionallabourmarket/september2022#:~:text=Between%20March%20and%20June%202022,East%20Midlands%20had%20the%20highest

¹⁷ Department for Levelling up, Housing and Communities (2022) Levelling up the United Kingdom. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052708/Levelling_up_the_UK_white_paper.pdf









03 Engagement with customers and neighbours

Engagement with customers and neighbours has been central to developing our route strategies. The development of the route strategies is one of the key steps of initial research in the development of the Road investment strategy (RIS). This engagement, together with data analysis, will inform RIS3 (2025 to 2030) and beyond. It builds on a wealth of evidence from previous route strategies and our ongoing monitoring of road condition and performance.

Engagement with customers and neighbours in the South Pennines (West) area

Early engagement with the Department for Transport (DfT), Office of Rail and Road, Transport Focus, Transport for the North (sub-national transport body) and Network Rail shaped our engagement with customers and neighbours in the South Pennines (West) area. We gathered evidence from a cross-section of Members of Parliament (MPs), interested parties, road users and communities at a route level to understand their needs for the future. This built on engagement that had taken place with national interested parties, such as environmental groups, organisations representing road users, business organisations and transport campaigning groups. This engagement has informed the development of the route objectives.

Engagement took place through:

MP roundtables: MPs were invited to a regional roundtable with the Roads Minister to share their views on priorities for our customers and neighbours within their constituencies.

Regional workshops: As part of a programme of workshops with interested parties at a national and regional level, we invited interested parties to workshops on route strategies for the South Pennines (West) route in late 2021. Attendees included local authorities, airports and port authorities, transport operators, and other key route-based interested parties, such as major businesses.

We designed the workshops to seek views on both current and future challenges and opportunities for the SRN, in relation to the DfT's six strategic objectives. Views were sought on how the routes interacted with the Major Road Network (MRN), local roads, public transport, walking and cycling, and links to the wider strategic road network (SRN). Interested parties also provided insight into key growth proposals and locations along the route, including committed and emerging economic and housing growth and infrastructure proposals. Interested parties shared their own data, studies and observations of the route area.

Route strategies online feedback form: Local interested parties, road users and communities were invited to give their feedback on specific locations on motorways and A-roads and routes, and general comments on the road network, through the route strategies online feedback form. For the South Pennines (West) route, regional interested parties were invited to workshops or to use the online form to share their views and feedback.

NATIONAL HIGHWAYS

The information gathered was a mix of evidence, studies and personal experience. All the evidence gathered through these engagement methods was considered alongside route analysis and data to inform the development of the route objectives. The evidence was supplemented by route-based information from *Transport Focus'* Strategic Road User Survey'8 to gain an understanding of the breadth of feedback.

Key themes from engagement

We have drawn out the common themes that emerged from our engagement with our customers and neighbours on the South Pennines (West) route to inform our route objectives. The themes have been aligned with the DfT's six strategic objectives:

i) Improving safety for all

- Issues of severance and road safety were raised where the SRN passes through urban areas such as the A5036 in Sefton, M62 in West Yorkshire, M621 in Leeds, M60 and M67 in Greater Manchester, where walkers and cyclists experience severance when making local journeys
- Issues of safety on the SRN and concerns over network resilience to collisions were raised, particularly on the M56

ii) Network performance

- Issues raised included a lack of SRN network resilience in urban areas, where vehicles divert through built-up areas adjacent to the SRN during periods of disruption such as near the M60 in Greater Manchester. This impacts on local road users and communities adjacent to the SRN through additional traffic and delays on the local road network
- There are impacts on public transport performance where bus routes cross the SRN in urban areas such as the M60 in Stockport, A663 in Oldham, and M62 in West Yorkshire, which can cause delays to passenger journeys both in peak hour periods and during periods of disruption on the SRN
- Trans-Pennine connectivity via the M62, A628 and A616 is important for both leisure and business connectivity but the topography of the routes mean they are susceptible to inclement weather, flooding and periods of disruption. There is a lack of feasible diversion routes for the A628 and A616. Disruption on the M62 can lead to traffic using local roads which are less suitable and impact on local communities

iii) Improved environmental outcomes

- Issues raised included poor air quality levels where the SRN passes through urban areas including Liverpool, Manchester and Leeds, impacting on the quality of life of communities living adjacent to the SRN
- Slower road speeds were discussed as a way to meet air quality objectives in sensitive locations and communities

iv) Growing the economy

- The importance of the SRN for freight distribution to key freight hubs and distribution centres via the M62 and M56 was highlighted. A key issue raised was the ability of the SRN to accommodate future freight demand generated from developments such as the inland Port of Salford, and Freeport sites linked to the Port of Liverpool, clustered around the River Mersey. There are limited driver facilities and HGV parking on the route, with future demand for these facilities likely to increase
- The impact of rail freight and how this influences the SRN was raised. It was raised that enhancements to the Trans-Pennine Rail service between Manchester and Leeds may impact the M62

v) Managing and planning the SRN for the future

- There is a need to understand and consider the carbon emission impacts of SRN activity and implications for the zero-carbon agenda
- There is a need to better join up the arrangements for maintenance, inspection, and operations for Traffic Officers across the border of England and Wales

vi) Technology-enabled network

- There is limited provision of electric vehicle charging points on the route
- There is a need to ensure the SRN can accommodate new vehicle technologies, including connected vehicles and autonomous vehicles
- Technology could be used to provide more information to improve road users' experience, for example advising on when to travel and when to avoid travelling, to better link to local authority technology, and to better inform drivers when they are diverted onto the local road network

Engagement quotes from customers and neighbours

M62

- "Reliance on the M62 as the only motorway standard east-west route." (Route strategies engagement)
- "Impact of diversion routes with local roads unable to cope with motorway traffic." (Route strategies engagement)
- "Smart motorways felt like things were moving and accidents were being made clear to drivers." (Transport Focus, SRUS)
- "Junction queuing on exits and access points creates delays on local roads." (Route strategies engagement)

M60:

- "M60 air quality on local roads resulting from traffic on the strategic road network where they interface." (Route strategies engagement)
- "Air quality issues around the strategic road network currently a problem for communities and natural environment and impacts on all communities along the M60." (Route strategies engagement)
- "Lack of crossing points over M60 for cyclists and pedestrians." (Route strategies engagement)

M621:

- "Severance for communities either side of M621." (Route strategies engagement)
- "Use of M621 as part of local network.
 M621 around Leeds more a local distributer
 with M62 as strategic through-route."
 (Route strategies engagement)
- "Congestion on the approach to Leeds in the peak periods." (Route strategies engagement)

A556:

- "The opening of this road (A556) a few years ago has speeded up my journey from/to Junction 19 of the M6 considerably and it is well maintained." (Transport Focus, SRUS)
- "Traffic light; road surface good; heavy rain did not cause a problem; lighting of road good." (Transport Focus, SRUS)

M56:

- "I was able to maintain my maximum HGV lorry speed for the whole return journey. There were no stoppages or slowing down for any issues. The motorway was in good condition." (Transport Focus, SRUS)
- "Air Quality Management Area within 50m of the motorway on the M62/M6/M56 box around Warrington affects existing and planned residential areas." (Route strategies engagement)

M61:

• "Traffic flowing normally and no hold-ups or reduced speed limits." (Transport Focus, SRUS)

M66:

• "The roads are in very good condition and well maintained." (Transport Focus, SRUS)

A5036:

- "A5036 through South Sefton has persistent issues with congestion, accessibility for pedestrians and safety." (Route strategies engagement)
- "Proposed Freeport sites in Liverpool will affect several significant sites across the Liverpool City Region, including Port of Liverpool, Parkside and Liverpool Airport." (Route strategies engagement)

A585:

 "Likely to be continuing challenges and bottleneck issues on the A585, potential economic impact and constraining regeneration." (Route strategies engagement)

A628 and A616:

 "East-west links across Pennines are limited and any closures result in major diversions. Resilience of these routes is key to economies." (Route strategies engagement)

Route satisfaction

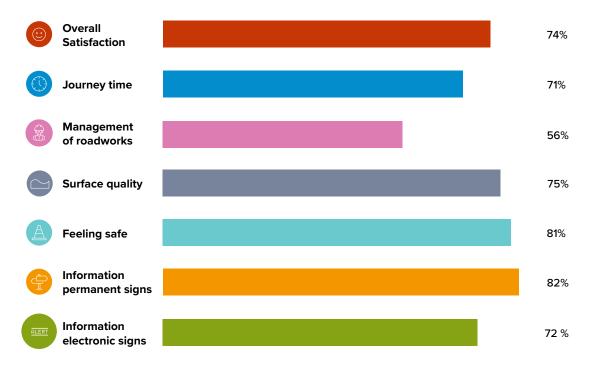
Satisfaction scores have been obtained from Transport Focus through their Strategic Roads User Satisfaction Survey from the last 12 months to May 2022. It covers the roads in this route but it should be noted that the satisfaction scores may not fully align with the extent of the roads in the route. Figure 12 below shows how satisfied drivers were with aspects of their journey and how they felt during their journey.

Additional comments and data from the Transport Focus survey of drivers on the SRN can be found on the Transport Focus website data hub¹⁹.

The engagement themes and feedback from MPs, interested parties, road users and communities has been considered as part of the wider analysis in Section 5.

Strategic roads user survey satisfaction scores

The survey was not run between April 2020 and March 2021 due to Covid-19. It restarted in April 2021 with a new methodology, so results prior to March 2020 and from April 2021 are not directly comparable.

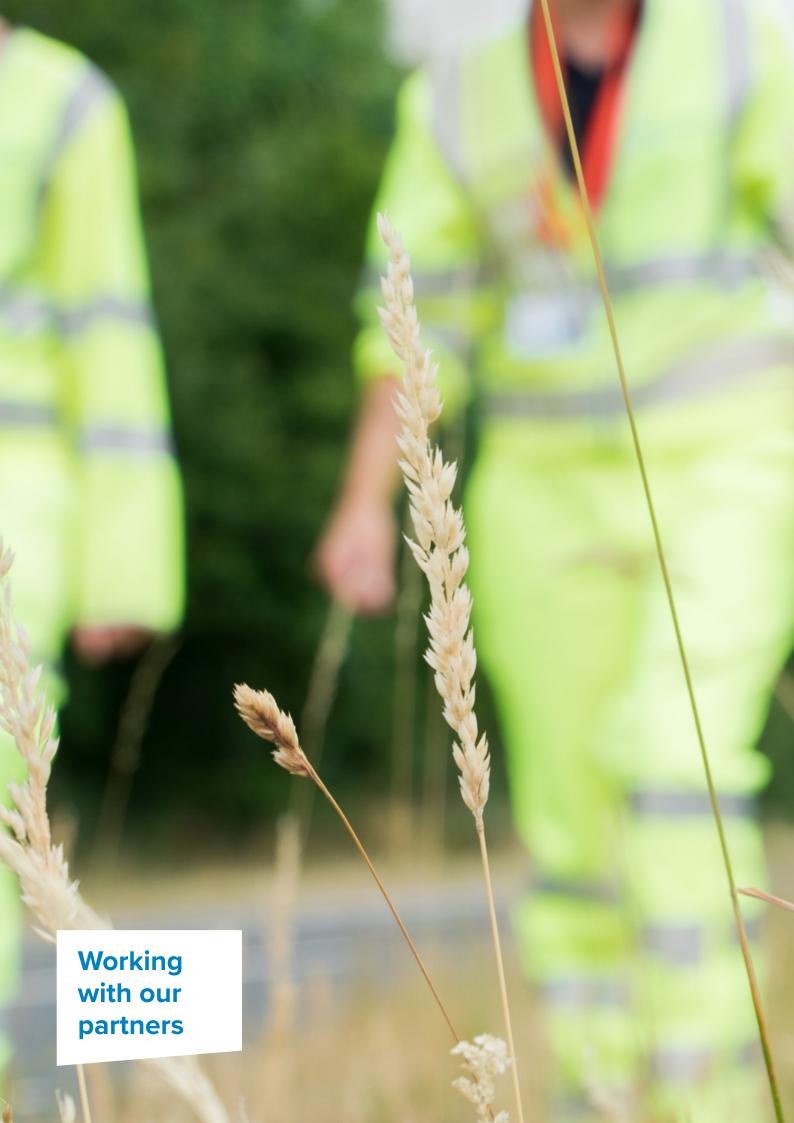


Individual road M53, M54, M56, M57, M58, M60, M61, M62, M65, M66, M67, M602, A627(M), A55, A56, A483, A550, A556, A663, A5036

Last 12 months*** May 2022 (last 12 months)

*** Before March 2019 and from April 2021 to February 2022 this is year-to-date, not past 12 months

 $[\]textbf{Figure 12:} \ \textbf{Satisfaction scores from headline results}$



04

Network collaboration

The strategic road network (SRN) does not exist in isolation. Most journeys on the SRN are part of a longer journey, involving other road networks or different transport modes.

To deliver safe and efficient journeys for our customers and to support economic and housing growth, at National Highways we have built relationships with other organisations to ensure the SRN maximises its contribution to the overall transport system, which includes local roads, rail networks, links with the devolved nations and international connectivity. We work with other network operators (such as Network Rail), airports and ports, sub-national transport bodies, Transport for Wales and Transport Scotland, as well as combined authorities and local highway authorities. This is in line with National Highways' Licence requirements to consider opportunities for collaborative solutions. We recognise that joint early planning of interventions outside our network will ultimately improve the SRN and deliver greater benefit to the customer than could be achieved alone, where this delivers value for money.

An integrated transport network

Route strategies recognise the role that the SRN plays within the wider transport network. In planning for the future of the SRN, we recognise the importance of working closely with other network planners and operators to ensure our transport networks work well together, and that our investment priorities are aligned where possible.

Sub-national transport bodies have a key role in their regions in creating transport strategy and identifying key areas for investment, including for highways. There are seven such bodies in England, who are tasked with developing transport strategies and studies for their particular area.

Through the collection of evidence with their local authorities and Local Enterprise Partnerships, their work highlights multimodal issues, needs and opportunities. A list of potential interventions for transport are then provided to the Secretary of State for Transport, including where to prioritise investment in the Major Road Network. We work closely with the sub-national transport bodies on interdependencies and align our approaches where possible. The sub-national transport body which covers the route is:

· Transport for the North (TfN)

National Highways and sub-national transport bodies have worked together to develop an engagement framework. The need for closer working was highlighted as a priority in DfT's Road investment strategy 2²⁰, and within our Strategic business plan²¹ and Delivery plan²². It enables National Highways and sub-national transport bodies to work together to achieve mutually beneficial outcomes for transport users, regional economies and the environment. Our approach to engagement is contained in Our vision for route strategies²³, which sets out a shared commitment for a continued open, constructive and collaborative relationship. This is supported by engagement and action plans for each sub-national transport body, which are proving instrumental in ensuring consistency and transparency in the information we share. The plans are monitored and reviewed regularly, with annual reviews occurring ahead of each new financial year.

²⁰ Department for Transport (2020) Investment Strategy 2: 2020 – 2025. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951100/road-investment-strategy-2-2020-2025.pdf

²¹ National Highways (2020) Strategic business plan: 2020 – 2025. https://nationalhighways.co.uk/strategic-business-plan/

²² National Highways (2020) Delivery plan: 2020 – 2025. https://nationalhighways.co.uk/delivery-plan/

²³ National Highways (2021) Vision for route strategies. https://nationalhighways.co.uk/media/w0vhd3un/vision-for-route-strategies.pdf

At a more local level we also work with local authorities, who are the highway authorities for local roads, including those on the MRN. This collaboration ranges from operational matters to more strategic issues to ensure that the overall highway network operates safely, efficiently and effectively, providing high quality and seamless customer journeys. The local authority planning teams work closely with our spatial planning teams. In enabling new employment spaces and homes to be developed, we engage fully as a statutory consultee in the planning system and the evidence collected through the route strategies will support this decision making.

Transport for the North

TfN published its *Strategic Transport Plan (STP)*²⁴ in 2019. It is due to be updated by 2024. The Strategic Transport Plan was informed by the 2017 initial *Major Roads Report*²⁵ (published as final in 2021), which maps the MRN in the region, identifying the locally strategic roads vital for economic growth. The objectives of the Plan are:

- · transforming economic performance
- increasing efficiency, reliability, integration, and resilience in the transport system
- improving inclusivity, health, and access to opportunities for all
- promoting and enhancing the built, historic, and natural environment

It aims to:

- connect people by improving access to leisure and tourism assets and work opportunities, whilst widening the labour market for businesses
- connect business by improving connections to collaborators, clients and competitors, including those within the prime and enabling capabilities

 move goods by supporting businesses to move freight and goods efficiently and across modes

The STP identifies seven Strategic Development Corridors based around economic links across the North. They are not traditional transport corridors but represent where the largest gaps between demand and performance currently exist, and where there is most potential for growing the economy. The Strategic Development Corridors that are pertinent to the South Pennines (West) route are summarised below:

Central Pennines, driving strategic eastwest connectivity for some of the North's important economic centres and assets in North Yorkshire, West Yorkshire, East Riding, and Hull through to Greater Manchester, Lancashire and the Liverpool City Region

Southern Pennines, linking the economic centres, industries and ports within Liverpool City Region, Greater Manchester, Cheshire, Sheffield City Region, Hull, and northern Lincolnshire, as well as considering connections with the Midlands

West and Wales, moving people and goods, to, from, and through the important economic centres and assets of Cheshire West and Chester, Cheshire East, the Liverpool City Region and Greater Manchester with strategic connectivity into North Wales and the Midlands

The STP is accompanied by TfN's *Investment programme*²⁶. The Investment Programme comprises advice to the Government on what the long term transport priorities are across all modes. The initial Investment Programme identifies the interventions that TfN believe will address the current challenges on the transport network, future-proofing for where transport demand is envisaged, and where the interventions will stimulate inclusive, sustainable and transformational economic growth.

²⁴ Transport for the North (2019) Strategic Transport Plan. https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

²⁵ Transport for the North (December 2021) Major Roads Report. https://transportforthenorth.com/reports/major-roads-report-dec-2021/

²⁶ Transport for the North (2019) *Investment Programme*, 2020-2050. https://transportforthenorth.com/wp-content/uploads/TfN-final-investment-programme-19-20.pdf

In 2019, TfN submitted a bid for £700 million investment in the region's roads over the next five years as part of the National Roads Fund, in order to unlock economic growth, deliver new homes, increase active travel, and improve public transport. The Major Road Network (MRN) and Large Local Major (LLM) schemes were developed collaboratively with TfN's 20 Local Transport Authorities and 50 Highway Authorities. There are six schemes located within the South Pennines (West) area: the **Dawsons Corner Junction and Stanningley** Bypass, Leeds; the A650 Tong Street, Bradford; the A34 Cheadle, Stockport; the Rocket Junction, Liverpool; the Wigan East-West scheme, Greater Manchester; and the A582 upgrade, Preston. The schemes are ready to be taken forward into construction before 2025.

TfN also acknowledges the wider context of the climate emergency, with evidence suggesting that the majority of journeys now and in the future will continue to be on the road network, whether by zero emission vehicles, walking, cycling, bus or tram. Reducing greenhouse gas emissions from the transport network is a key priority and the TfN board has recently adopted its *Decarbonisation strategy*²⁷ which sets out a decarbonisation trajectory and outlines. TfN aims to achieve a near-zero date of 2045 for carbon emissions from surface transport in the North. The Decarbonisation strategy highlights the opportunity to support the clean energy industry through possible transport improvements within the region.

The TfN board also recently endorsed the updated *Major Roads Report*²⁸. Drawing upon evidence and policy within TfN's *Strategic Transport Plan*²⁹, work on Future Travel Scenarios, the Transport decarbonisation strategy and Freight and logistics strategy, the Major Roads Report represents a position statement in support of TfN's statutory functions.

Interaction with the major road network and local roads

The Major Road Network (MRN) is the middle tier of England's road network, comprising the busiest and most economically important local authority A-roads. It is key to supporting the economic vitality of England, particularly with its role, along with the SRN, of delivering 'first and last mile' connections and onward journeys. It acts as a connecting spine for the SRN, with one of the objectives in establishing the MRN being to support the SRN through improving journeys across both networks. The MRN represents the roads that our partners in local authorities and sub-national transport bodies see as being strategically most important, along with the SRN.

The relationship between the SRN and MRN is complex. The two networks connect people with economically important locations across England, as well as providing resilience for each other. Interventions on one network can also significantly influence travel behaviours on the other. Most SRN journeys involve elements of both networks.

It is therefore important that decisions about the SRN, MRN and other local roads are made in a joined-up way to ensure that the networks are consistent, coherent and complementary. We recognise that the key to the success of the RIS is ensuring the impacts of any interventions are appropriately considered across all networks as well as at their junctions. Both networks play a key role in customers' journeys, and they expect a seamless transition between the two. We are continually seeking to identify collaborative solutions that meet our obligations under the National Highways Licence to improve network performance and provide integration benefits. In developing the route strategies, we aim to ensure the planning for the SRN, MRN and other local roads is complementary.

²⁷ Transport for the North (2021) Transport Decarbonisation Strategy.

https://transportforthenorth.com/wp-content/uploads/TfN-Transport-Decarbonisation-Strategy-FINAL-TfNDEC2021_V2.pdf

²⁸ Transport for the North (2021) Major Roads Report. https://transportfortheNorth.com/reports/major-roads-report-dec-2021/

²⁹ Transport for the North (2019) Strategic Transport Plan. https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

In Greater Manchester, the MRN routes are an important part of Transport for Greater Manchester's (TfGM's) Key Route Network. This network provides several important connections to the M60, including the A5103 which runs south from the city centre towards Manchester Airport through M60 Junction 5. The A57(M) Mancunian Way and A57 form a continuation of the M602 into and around the southern edge of Manchester city centre and onwards to M60/M67 Junction 24. The A57(M) is also part of Manchester's inner ring road. The A666 provides northern connectivity to Blackburn and, to the south, the A6 connects from Manchester city centre through Stockport to the Peak District. The A5063, A576 and A6010 form an intermediate ring road around Manchester.

NATIONAL HIGHWAYS

Within Merseyside, the A5058 Queens Drive serves as an intermediate ring road for Liverpool. To the north, the A565 provides connectivity to towns on the Sefton Coast including Formby and Southport. To the southeast of Liverpool, the A561 provides access to Liverpool Airport and employment areas.

The A580 East Lancashire Road dual carriageway provides connectivity between Merseyside and Greater Manchester via St Helens. The A59 runs from the centre of Liverpool, north-west to Preston, connecting to the A5036, M58 and M57 at the Switch Island junction. This junction has notable congestion issues and has been the location of a number of collisions.

The A5230, A583 and A587 provide onward connections into Blackpool from the M55.

Trans-Pennine connectivity is provided by the MRN via the A646 through Calderdale and the A59 via Skipton. The A628 is part of the MRN from the A628/A616 Flouch roundabout and provides connectivity to South Yorkshire.

In West Yorkshire, communities are connected to the MRN via the A629 which provides north-south connectivity between Keighley, Halifax, and Huddersfield. The A638 provides east-west connectivity between Dewsbury, Wakefield, and Doncaster, with the A647 serving as the main highway link between Bradford and Leeds. Most of the A6177 Bradford Ring Road is also designated as MRN. This route connects to the M606 at Staithgate Roundabout, which experiences significant congestion.

Within this area there are four established Mayoral Combined Authorities (MCA) in South Yorkshire, West Yorkshire, Greater Manchester and the Liverpool City Region. As part of the Government's City Region Sustainable Transport Settlements (CRSTS) fund, all of these MCAs have been allocated a share of the £5.7 billion for local transport improvements. Some of these schemes may interact with the SRN and we will work with the relevant MCAs to ensure these will have optimal interaction with the SRN for road users.

Freight and logistics

The future of freight: A long-term plan (DfT June 2022)³⁰ sets out priorities for the UK's freight industry. It recognises that in 2019 the sector contributed 10% of the UK non-financial business economy and £127 billion gross value added (GVA) through more than 200,000 enterprises, noting that, with imports and exports comprising 63% of GDP in 2019, we are reliant on the freight and logistics sector for our economic wellbeing.

The North of England's transport network is extensive and encompasses rail, road, inland waterways, sea and air infrastructure. In addition, there is a significant volume of warehousing, particularly around Liverpool, Manchester, Newcastle and Leeds.

The transport infrastructure supports a Northern population of over 15.5 million people across a 38,000 square kilometre area³¹. Prior to the impact of Covid-19 there were 7.4 million jobs in the region³². The North of England contributes over £364 billion GVA towards the UK economy³³.

Freight accounts for 9% of the country's gross domestic product (GDP) and supports all industries by providing access to goods and services. In the UK a total of approximately 1.65 billion tonnes of freight are lifted by all modes per annum. Over a third of freight tonnes lifted comes from the Northern Ports, covering both international and domestic traffic.

The North boasts a wealth of freight assets that give the region a strong multimodal freight capability. Relevant to this route, these include:

- major ports, including the Port of Liverpool (some locations with provisional Freeport status) connected from the A5036, the Port of Salford via the M602 (which has connections to rail and the Manchester Ship Canal), and other ports located on the Mersey
- international airports including Liverpool John Lennon and Leeds-Bradford, in addition to the major international airport at Manchester, accessed via the M56
- a Strategic Rail Freight Interchange (SRFI) at Wakefield, with more emerging
- four further freight terminals at Trafford Park, Leeds, Garston, and Widnes
- key distribution hubs near to the M62, M57, M61, M56 and M621
- a strategic rail network principally comprising of the West Coast Main Line and the Midland Main Lines that connect the North of England to the south and the trans-Pennine routes

Despite these assets being available, some are not being fully utilised due to a lack of joined up infrastructure and alternative logistics solutions being more attractive. In addition, interested parties have highlighted low levels of coach and lorry parking provision along much of the route. The published National survey of lorry parking³⁴ undertaken by the Department of Transport in 2017 showed that Yorkshire and the Humber has a high level of utilisation of on-site lorry parking facilities which is continuing to grow and likely to reach "critical" by 2024. Providing drivers with suitable facilities is important for improving driver morale, and road safety. It is estimated that Yorkshire and the Humber and the North West currently require an additional 142 (20%) and 61 (15%) practical spaces respectively. In the North West, 36% of facilities are ranked level 4 or 5 (the highest quality provision) compared to the national average of 21%. However, in Yorkshire and the Humber, 88% are ranked level 1 or 2 (the lowest provision) compared to the national average of 72%.

Currently, 80% of road freight in the North is domestic traffic, most of which is short haul, which places a heavy burden on the SRN and makes it difficult to justify the use of rail on commercial or efficiency grounds. Understanding the gaps in connectivity will help freight operation across the SRN.

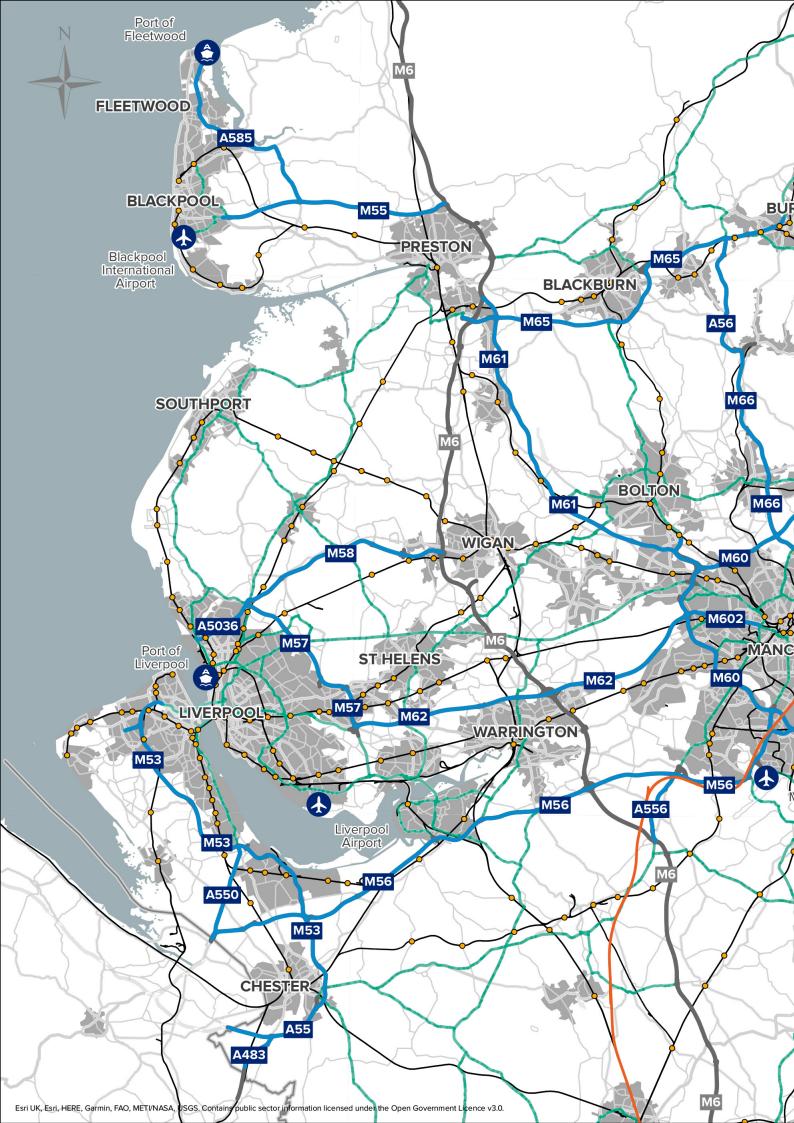
³¹ Office for National Statistics (2021) Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland:

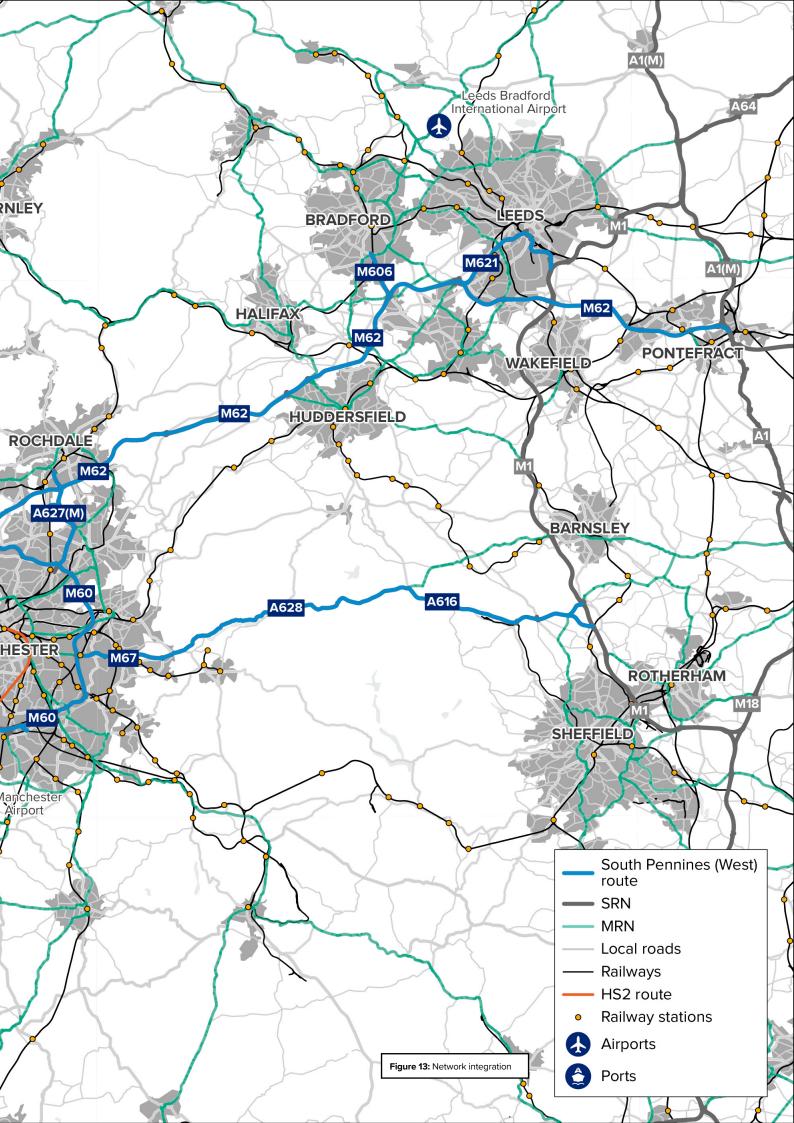
Mid-2020: 2021 local authority boundaries. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/
populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

³² Office for National Statistics (May 2021) Labour Force Survey (Jan-Mar 2020). https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/headlinelabourforcesurveyindicatorsforallregionshi00

³³ Office for National Statistics (2021) Regional Gross Value Added (balanced) by industry: all ITL regions. https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry

³⁴ Department for Transport, Aecom (2017) National Survey of Lorry Parking. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/723349/national-survey-of-lorry-parking-report.pdf





Diversionary routes

To operate a resilient road network, we need to be able to effectively divert traffic off the SRN in the event of unplanned incidents (such as collisions or emergency roadworks), or as part of planned closures (such as planned improvement schemes). The MRN, along with the rest of the local road network, supports the SRN as diversion routes during these events.

We have agreed diversion routes for emergency events with local authorities. Diversion routes for planned events are discussed and agreed with local authorities on a case-by-case basis. These routes are dependent upon the nature of the incident, and the suitability and availability of the surrounding network. In some cases, the diversion route may not be suitable for certain types of traffic, such as heavy goods vehicles (HGVs), or non-motorway traffic, such as cycles and tractors. In other cases, diversionary routes may not be available due to events on the local road network. We work closely with local authorities to ensure that suitable diversion routes are availabl.

Network Rail and other network operators

The SRN plays an important role in the movement of passengers and freight across England, and it needs to be considered alongside the wider transport network. The rail network is also important in moving freight and people over longer distances and helping commuters travel into congested cities. Better integration between road and rail can help to transfer more journeys onto rail. This can help to relieve congestion on the SRN, as well as improve the environment by increasing the use of more sustainable transport modes.

We work closely with Network Rail and train operators to find opportunities to better integrate the two networks to benefit the movement of freight and people. This involves seeking opportunities to place rail stations in strategically important locations with easy access to the SRN.

Network Rail's *Delivery plan for 2019-2024*³⁵ presents a vision of "putting passengers and freight users first", recognising that Network Rail can improve the daily lives of people across the country by striving to constantly improve the quality of service across the whole railway system. Network Rail delivers its vision through a regional structure committed to responding to the needs of its local customers and stakeholders, more quickly than if such decisions were to be made at a national level.

In the South Pennines (West) area, the rail network provides key trans-Pennine connectivity linking Leeds, Huddersfield, and Manchester. Other important stations on the rail network include Liverpool Lime Street, Chester, and Preston.

The Integrated rail plan for the North and Midlands³⁶ provides assurances that major projects will be delivered for the rail network along the South Pennines (West) route. This includes HS2 from Crewe to Manchester, a new high-speed line (NPR) between Warrington, Manchester and Yorkshire and the full electrification and upgrade to the Trans-Pennine Main Line between Manchester, Leeds and York. These improvements amongst others will provide significant benefits to the region whilst also increasing demand on certain sections of the route.

We also work with the operators and promoters of urban rapid transit systems where there are opportunities for better integration. For example, through the creation of park and ride sites to remove traffic from the road network.

³⁵ Network Rail (2022) *Our delivery plan for 2019 – 2024*. https://www.networkrail.co.uk/whowe-are/publications-and-resources/our-delivery-plan-for-2019-2024/

³⁶ Department for Transport (2021) Integrated Rail Plan for the North and Midlands. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1062157/integrated-rail-plan-for-the-north-and-midlands-web-version.pdf

Some parts of our network are operated on our behalf by a third party under design-build-finance-operate (DBFO) arrangements. We work closely with these operators to deliver a seamless experience for our road users. On the South Pennines (West) route this includes the M62 (Junctions 28 to 29) and the M1 (Junctions 42 to 48), operated by Connect A1-M1 Ltd.

Strategic connectivity

The SRN plays a key social and economic role in connecting England with the devolved authorities of the UK, particularly Wales and Scotland, but also, via ports, Northern Ireland. We work closely with Transport for Wales and Transport Scotland to ensure our key crossborder routes are joined up effectively with those in Wales and Scotland to ensure easy journeys for our customers. This strategic connectivity is reflected in the Government's commitment to strengthening transport connections across the UK, guided by Sir Peter Hendy's Union connectivity review³⁷ published in late 2021. The report recommends the creation of UKNET, a strategic transport network spanning the entire United Kingdom. UKNET would be based on a series of principal transport corridors between key urban and economic centres, including international gateways. The findings of this report have been considered in our route strategies, particularly for our cross-border routes and roads connecting to important ports.

For the South Pennines (West) route, the M56 and M53 provide onward connectivity to cross-border routes into North Wales including the A494, A55 and A483. These provide access to key economic hubs such as Ellesmere Port, Deeside and Hawarden, which all sit within the North Wales and Mersey Dee commuter area. It is estimated that 20,000 people cross the border into Wales each day for work purposes³⁸. A significant number of residents in North Wales also commute into England.

Via the M56 the port of Holyhead is located at the terminus of the A55 in North Wales for regular passenger and freight ferry services to Dublin. Within Merseyside, ferry services are provided from the Port of Liverpool to Belfast and the Isle of Man, and from Birkenhead to Belfast.

In the *Union connectivity review*, recommended measures include a multi-modal review of the North Wales corridor and developing a package of improvements for the A55, M53 and M56.

International connectivity

One of the objectives of the SRN is to support the important economic activity involved in international passenger and freight movement via good connections to ports and airports. A key aspect of route strategies is ensuring that future investment continues to support these essential movements.

In the South Pennines (West) area, this means the M56 is integral to passenger and freight access to Manchester Airport, the UK's fourth largest airport. The A5036 plays a vital role, providing connectivity to the Port of Liverpool for freight and regular ferry services to Dublin, with the A561 of the MRN also providing access to Liverpool Airport. These international gateways contribute to the North of England economy through the direct flow of goods and people to support trade and economic investment.

³⁷ Sir Peter Hendy CBE (2021) Union Connectivity Review Final Report. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036027/union-connectivity-review-final-report.pdf

³⁸ Welsh Government (2017) Moving North Wales Forward Our Vision for North Wales and the North East Wales Metro. https://govwales/sites/default/files/publications/2017-09/north-east-wales-metro-moving-north-wales-forward.pdf



05 Challenges and issues

We recognise that there are existing challenges and issues on the network and these are outlined against the DfT's six strategic objectives as part of the route strategy evidence base.



1. Improving safety for all

The International Road Assessment Programme (iRAP) Star Ratings are based on road inspection data and provide a simple and objective measure of the level of safety which is 'built-in' to the road. The higher the star rating, the safer the road. iRAP star ratings are produced for each 100-metre section of road, based on detailed inspections of roadside features as well as traffic flow, speed, pedestrian and cyclist use, and crash data.

iRAP data helps us to predict future riskwithin a wider Safe System approach. Safe System thinking accepts that humans will make mistakes but considers what is within the scope of our influence tolimit the injuries sustained. The iRAP approach to managing future risk complements the more traditional approach of analysing historical incident data provided by STATS19 as a means of predicting future collisions and casualties.

STATS19 data are the statistical data published by the Office for National Statistics about personalinjury road traffic collisions reported to the police. STATS19 remains the most detailed, complete, and reliable single source of information on road casualties covering the whole of Great Britain, in particular for monitoring trends over time.

For the purposes of National Highways Route Strategies, the total fatal and serious injuries are aggregated by the section of road on which they occurred, based on the NTIS (National Traffic Information Service) network. The NTIS network used for displaying traffic data is the full extent of the roads for which National Highways are the highway authority. The NTIS network is modelled for each side of the carriageway, such that NTIS links are one-directional and split at junctions. The data used only includes main carriageways; slip roads, roundabouts and other types of road are not modelled in this dataset. The length of an NTIS link can vary greatly depending on what part of the network it represents. Use of the NTIS network provides a common geometry which can be used to compare the STATS19 data with network performance and other metric data.

A combination of star ratings and historic data can help us to prioritise route treatments. Where the density of incidents resulting in death or serious injury is high, and the star rating is low (poor), it indicates something can be done to prevent future collisions where people are killed or seriously injured.

Road Safety Foundation (RSF) produce maps that show the statistical risk of fatal or serious injury crash occurring. The risk is calculated by comparing the frequency of road crashes that result in death and serious injury with how much traffic each road is carrying. For example, the risk on a road carrying 10,000 vehicles a day with 20 crashes is ten times the risk on a road that has the same number of crashes but which carries 100,000 vehicles.

As shown in Figure 14, the latest iRAP data shows the route to have the following ratings:

- the A550 and the A494 connecting Merseyside and Wales has a star rating of 2, as do sections of the M58 and A5036 around the Aintree junction
- the A585 between the M55 and Fleetwood has a range of 1, 2 and 3-star ratings
- the M57, A61, A616 and the A628 trans-Pennine route has a mix of 1, 2 and 3-star ratings
- the A627(M) north of the M60 has a mix of 1, 2 and 3-star ratings
- Junctions 14 and 15 of the M60, with the A580 and M61 respectively have a mix of 1 and 2-star ratings

No section of the route has a 5-star rating, but M62 has long sections rated 4-stars.

The latest available STATS19 data shows that at least 29% of the killed or seriously injured collisions that occurred on the route involved vulnerable road users. The proportion of collisions which involved someone being killed or seriously injured is higher when the route passes through, or is adjacent to, an urban area.

This includes:

- the A5036 through Sefton
- the M62 near Irlam
- the M67 through Denton and Hyde

As shown in Figure 15, there are locations and sections of the route with greater concentrations of collisions where someone was killed or seriously injured. These include the trans-Pennine routes of the M62 between Junctions 22 and 23 and the rural section of the A628 between Tintwistle and the A616. On the A616 section, approximately a quarter of all collisions where someone was killed or seriously injured involved motorcyclists. Other routes with notable levels of collisions where someone was killed or seriously injured include the M62 in West Yorkshire between Junctions 26 and 27 near Leeds and Bradford, Junctions 29 and 30 north of Wakefield, and the M55 between Junctions 1 and 3 west of Preston.

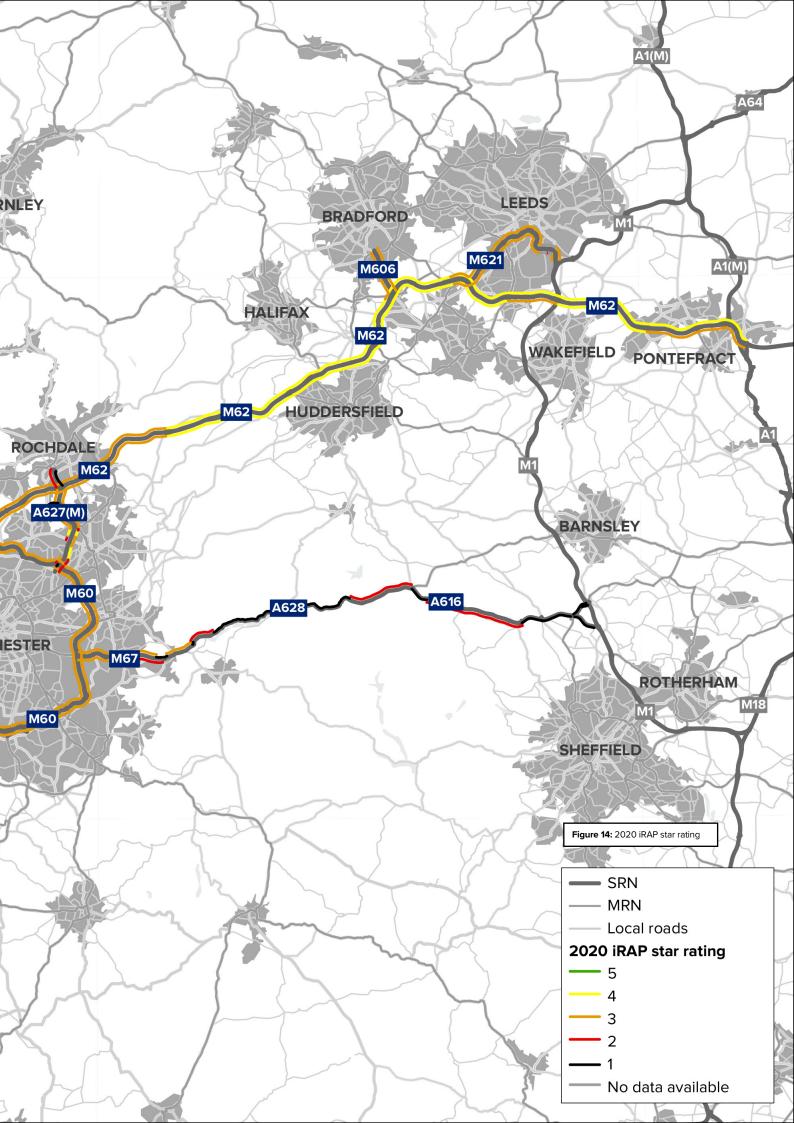
Using the latest RSF Crash Risk Map data, we found the route experiences collisions involving walkers, cyclists and horse riders (WCH) on sections of the A623 near Oldham, the A55 near Chester, the A628 through Hollingworth and the A5036 in Sefton.

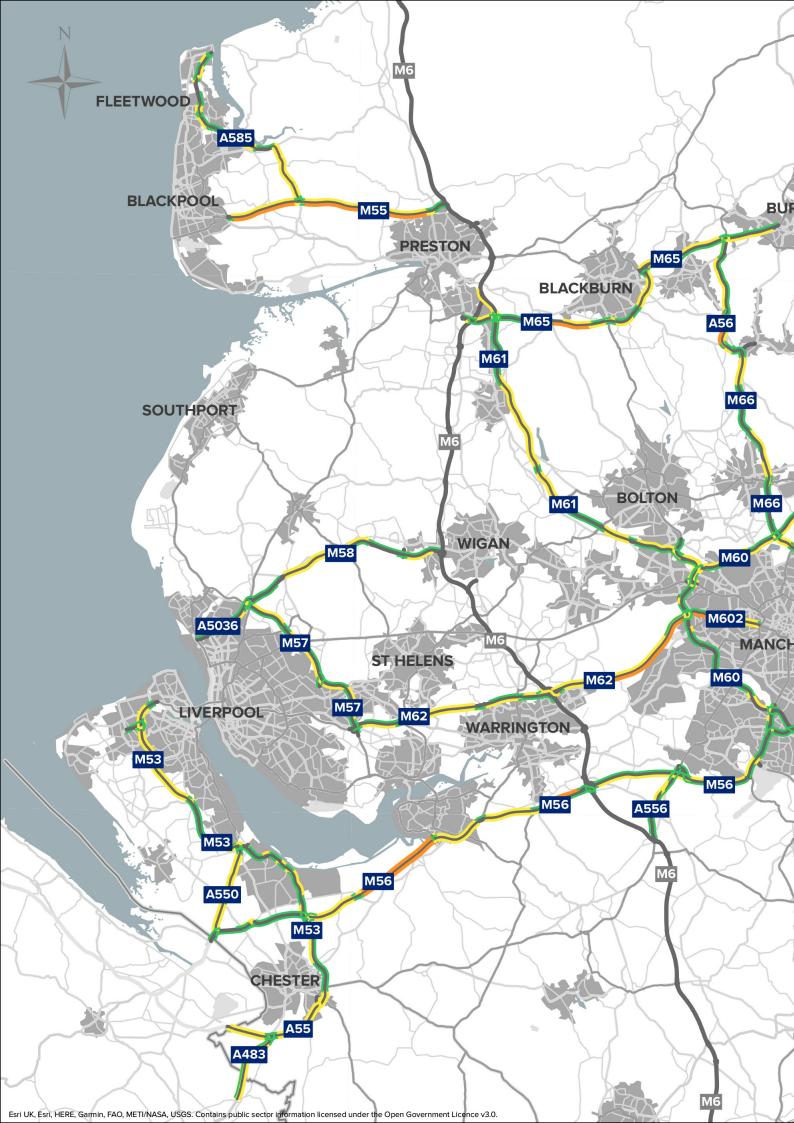
Key challenges

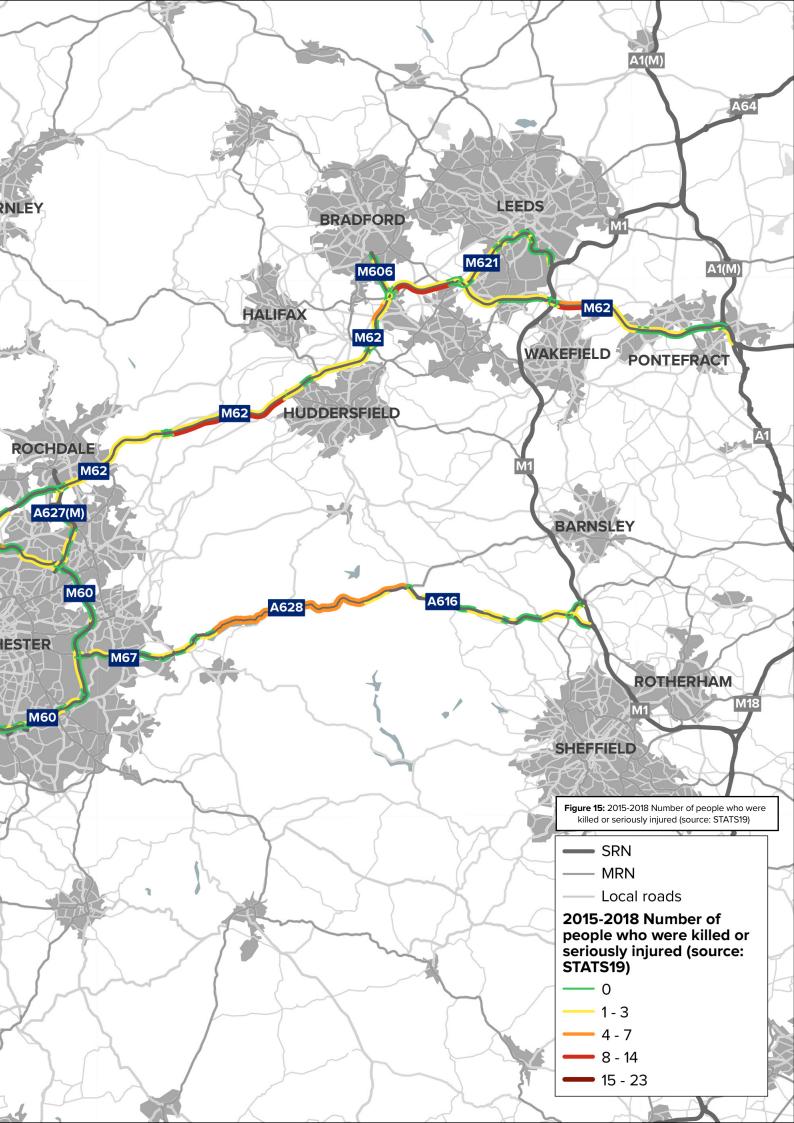
- A proportion of the route is rated 1 or 2 stars in terms of its iRAP rating
- The proportion of collisions which involved someone being killed or seriously injured is higher where the route passes through, or is adjacent to, an urban area. This includes the A5036 through Sefton, the M62 near Irlam and the M67 through Denton and Hyde
- Collisions where someone was killed or seriously injured have also occurred on trans-Pennine routes of the M62 and A628 and A616, on the M55 and M60
- Collisions involving walkers, cyclists and horse riders have occurred, most notably on sections of the A623 near Oldham, the A55 near Chester, the A628 through Hollingworth and the A5036 in Sefton

Improving safety and minimising collision rates is a key consideration for all our routes









55



2. Network performance

Network performance is measured by average peak period delay in the morning or afternoon, seasonal delay, and journey time reliability. Many sections of the South Pennines (West) route experience one or more of these types of delay.

The morning peak average delay from NTIS in 2019 is shown in the delay map presented in Figure 16.

Our interested parties have raised concerns around reliability on several roads on the network, particularly the M62. Sections of the South Pennines (West) route with particular reliability issues include:

- A5036 in Sefton, which serves as the principal access to the Port of Liverpool (where the difference between the typical and observed travel time is up to 23 seconds per vehicle per mile)**
- A585, which provides connectivity to Fleetwood (up to 26 seconds per vehicle per mile)**

- A627(M) and the A663 in Oldham and Rochdale (up to 41 seconds per vehicle per mile)
- M56 Junction 1 to Junction 3 (up to 11 seconds per vehicle per mile)
- M60 Junction 7 to Junction 15 (up to 14 seconds per vehicle per mile)
- A628 trans-Pennine route through Mottram at the end of the M67 (up to 31 seconds per vehicle per mile)**
- A550 in the Wirral (up to 27 seconds per vehicle per mile)
- M62 between Huddersfield and Leeds (up to 9 seconds per vehicle per mile)**
- A61 and A616 at M1 Junction 36 and Junction 35A (up to 19 seconds per vehicle per mile)

Average peak period delay is measured in seconds per vehicle mile and is the difference between average delay in the morning or afternoon peak period and the average delay during free flow conditions.

Seasonal delay refers to the difference between the average afternoon peak delay for Fridays in August 2019 (high demand in summer holidays) and the average delay during very low demand periods (in this case, Christmas day is used). This measure is designed to reflect the parts of the network that do not appear to have a problem on average over the year but have seasonal peaks. Seasonal delay is of interest to tourist traffic, particularly people travelling to airports, or other destinations where arriving later than intended could have significant implications.

Reliability is the difference between the typical travel time, allowing for average peak period delays, and the observed travel time. This measures the amount of variation due to unexpected variations or unplanned events. Like delay, it is measured in seconds per vehicle mile. It is a concern for most drivers, but particularly affects just-in-time freight traffic and other strategic journeys.

^{**} Committed National Highways major schemes in the vicinity of these locations are in various stages of development and construction and are expected to contribute to resolving the issues. Projects include: A5036 Port of Liverpool access, A585 Windy Harbour to Skippool, A57 Link Roads, M62 Junction 25-30 all-lane running, and A61 Westwood roundabout.

In terms of individual junctions, the following have particular reliability issues:

- A55/A483 Posthouse junction south of Chester (up to 15 seconds per vehicle per mile)
- A616 and A61 junctions with the M1 in South Yorkshire (up to 19 seconds per vehicle per mile) **
- M62/M6 Croft interchange (up to 12 seconds per vehicle per mile)
- M56/M6 Lymm interchange (up to 12 seconds per vehicle per mile)
- M606/A6177 Staithgate roundabout in Bradford (up to 20 seconds per vehicle per mile)

The east-west M62 trans-Pennine corridor connects economic and population centres and is currently the only road link of continuous motorway across the North of England. It is estimated that the M62 carries half of all trans-Pennine road traffic, of which up to 20% is HGV traffic. The alternative SRN trans-Pennine route of the A628 and A616 connecting Manchester and Sheffield can suffer from delays and unreliable journey times. The A628 and A616 is a single carriageway road and passes through communities.

Localised disruption on roads adjacent to the SRN is often evident in parts of Greater Manchester at the interfaces between the SRN and the MRN on the M60, at Oldham (A663 Broadway), and Wigan (M58). The SRN in West Yorkshire also features locations where the performance of the adjoining local road network can be impacted by high traffic volumes on the SRN. One such location identified by our interested parties is the M62 between Junctions 24 and 27, as well as the M621 in Leeds which was identified as a route with peak-hour congestion issues. As these routes are urban in character, there is a greater interconnection between the performance of the SRN and local routes. Interested parties identified that bus services in particular are affected by disruption and peak hour congestion on the SRN where they cross it, such as on the M60 in Stockport, the A663 in Oldham and the M62 in West Yorkshire.

Diversion Routes for Unplanned Events (DRUEs) can be less suitable than the SRN routes creating disruption off the SRN. For example, there are limited alternatives on trans-Pennine routes, notably the A628 and A616.

Our interested parties highlighted how congestion on the SRN leads to traffic diverting onto local roads, including routes which have not been agreed between National Highways and local highway authorities leading to associated environmental impacts. This issue was raised in particular relation to the M60 around Greater Manchester.

National Highways has a suite of five regional traffic models (RTMs) covering England's SRN. The models allow us to identify future performance and delay on the network, assisting with the development of the route strategies. The RTM models use projected growth, expected trends and changes to the network (including National Highway's RIS2 schemes) to forecast the performance of the network in 2031.

The RTM output for 2031 has been georeferenced onto the NTIS network to allow a comparison between 2019 observed delay and the RTM 2031 forecast delay. Morning peak average delay is defined as the journey time in excess of the theoretical minimum journey time on the link.

The morning peak average delay from RTMs forecast for 2031 is shown in the delay map presented in Figure 17.

As shown in Figure 17, by 2031, delays are expected to increase on the SRN and connecting routes into urban areas including Bradford, Leeds, and Huddersfield from the M62 and M621. Radial routes into and around Greater Manchester such as the A627(M), A663, M67, A57, M61, M62, M66 and M602 are also forecast to have increases in delay along with the M58 and Junction 7 of the M62 at Widnes.

Areas expected to have notable increases in traffic flows by 2031 include the M56 between the M53 and M6, the M66 between the M60 and Ramsbottom, and the M62 between Manchester and Leeds via Huddersfield.

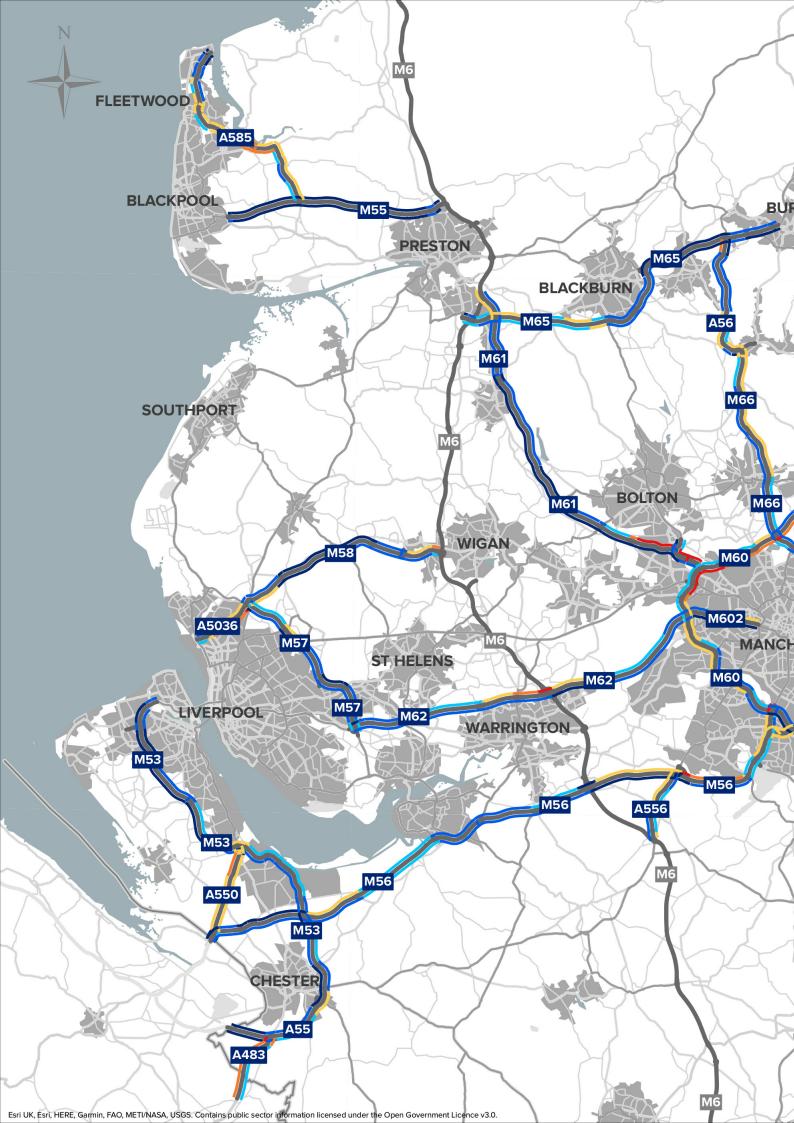
As part of the first two Road investment strategies, several projects have been completed. The smart motorway schemes for M62 Junctions 10 to 12 (All Lane Running), M60 Junction 8 to 18 (Controlled Motorway), M62 Junction 18 to 20 (All Lane Running) have been completed, as well as an experimental pilot project at the M6/M62 Croft Interchange which uses a combination of smart motorway technology and traffic signals on the slip roads connecting the motorways to address what was one of the busiest commuter congestion locations in the North West. The A556 dual carriageway between Knutsford and Bowden was completed in 2017, and provides a quicker and more reliable connection between the M56 and the M6. The old single carriageway was converted to a B-road with improvements to pedestrian and cyclist facilities. New snow gates and carriageway widening at the A61/A616 Westwood roundabout near the M1 were also completed in 2021.

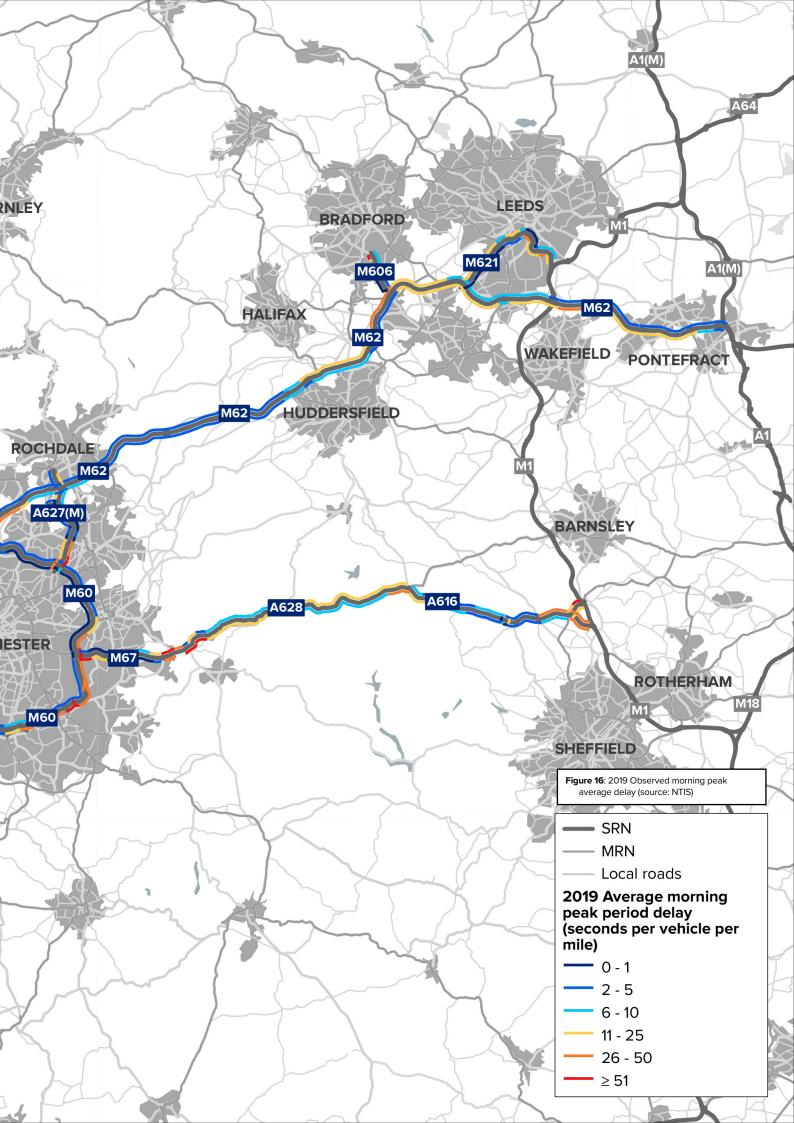
Ongoing projects include improvements to Junctions 1 to 7 of the M621 in Leeds. This is expected to reduce congestion on the M621 and improve safety, through the reduction of low-speed collisions in heavy traffic. In the Leeds City Region, the Transforming Cities Fund will bring improvements to public transport, with schemes in the vicinity of the M62.

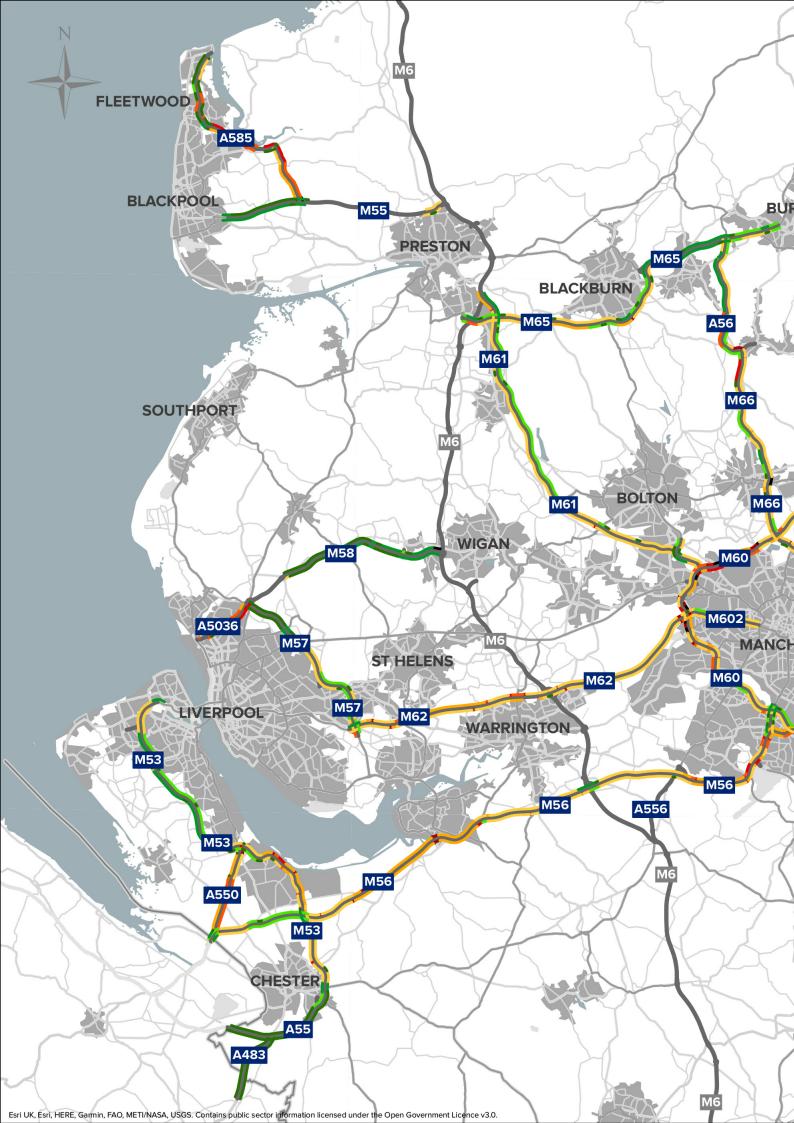
Key challenges

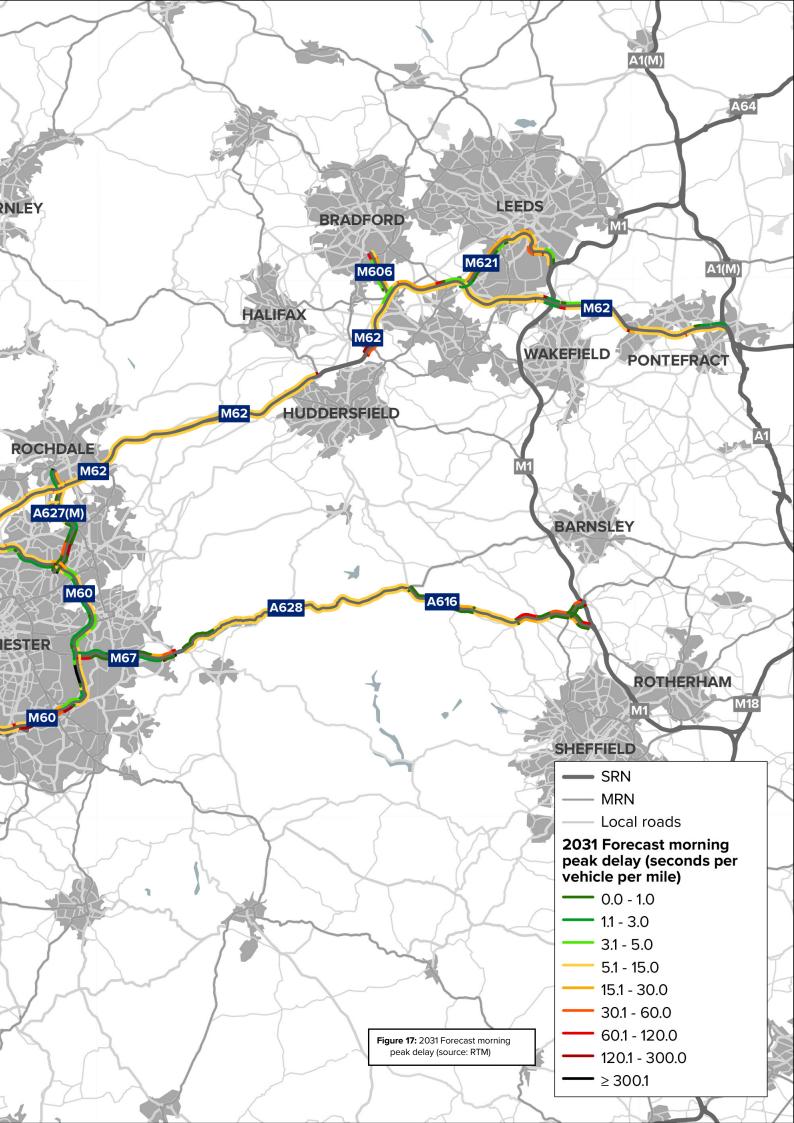
- Network performance across the route varies significantly. Reliability is an issue along many roads with particular issues on the M62. Delay is an existing issue on many sections of the route including the M60 and western sections of the A628
- Delay is also expected to increase on radial routes into Greater Manchester and near the urban areas of Leeds, Bradford and Huddersfield

We want to improve journey times on route sections which currently experience high levels of delay and are expected to worsen in the future









NATIONAL HIGHWAYS



3. Improved environmental outcomes

Climate change is affecting society as a whole, and the transport sector is no exception. As the Government owned company tasked with building and maintaining the SRN, we need to show both how we can help tackle the causes of climate change and how we are preparing for a changing climate. In 2021 we published our *Net zero highways plan*³⁹ to show how we will meet the target of net zero greenhouse gas emissions.

The latest climate projections from the Met Office have helped us to understand how the climate is changing, including that summers will on average be hotter and drier, while winters will be milder and wetter and critically, that extreme weather will become more common.

We have also seen, from reports such as the Climate Change Committee's third and most recent independent assessment of climate risk⁴⁰, that there are key risks from a changing climate for infrastructure, such as risks to bridges from flooding and erosion and risks to subterranean and surface infrastructure from subsidence.

We are committed to net zero carbon construction by 2040 and net zero carbon travel by 2050. This will involve significant changes to the way we build and manage our network, including in the South Pennines (West) area. We will need to consider better integration with other transport modes and how to support the transition to electric cars and zero carbon heavy goods vehicles (HGVs).

Air quality describes how polluted the air we breathe is. Poor air quality can cause both short-term and long-term effects on the health of humans and other living beings. The amount of air pollution depends on the concentrations of different substances in the atmosphere, such as sulphur dioxide, oxides of nitrogen, and particulate matter. In the UK, the concentrations of these pollutants are regulated and regularly monitored. If a local authority identifies any locations within its boundaries where targets are not being achieved, it must declare an Air Quality Management Area (AQMA) and put together a plan to improve air quality in that area.

While noise is often an inevitable consequence of societal activities, it can have serious implications for human health, quality of life, economic prosperity and the natural environment. While there's no legal limit to road noise, environmental noise regulations in the UK require regular noise mapping and the creation of action plans for Noise Important Areas (areas exposed to the highest levels of noise).

Severance is where transport infrastructure or motorised traffic passes through settlements and acts as a physical or psychological barrier, limiting people's ability or desire to move through that area. This can reduce accessibility to key services, and damage local social networks and community cohesion.

³⁹ National Highways (2021) Net zero highways: our 2030 / 2040 / 2050 plan. https://nationalhighways.co.uk/media/eispcjem/net-zero-highways-our-2030-2040-2050-plan.pdf

⁴⁰ Climate Change Committee (2021) Independent Assessment of UK Climate Risk. https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/

Trans-Pennine routes are notably vulnerable to weather extremes of rain, snow, strong winds and flooding. These have the potential to increase in magnitude and frequency because of climate change. Areas at higher risk of surface water flooding include:

- · the A628 in the Pennines
- western sections of the M56 beyond Frodsham
- · south-western sections of the M60
- the A55 south of Chester
- the M53 between Junctions 4 and 5
- M6/M62 Croft interchange
- M58/M57/A5036 Switch Island interchange

In addition, current Diversion Routes for Unplanned Events (DRUEs) may be less suitable to cope with future weather events. For example, interested parties have highlighted issues on the A628 and the A616 are particularly problematic as there is no direct alternative diversion route. As a result, traffic impacts on rural communities.

Interested parties raised concerns regarding the risk of flooding on other routes, most notably on the M56 near Frodsham. Interested parties have also raised concerns regarding air quality, noise pollution and severance, especially where the SRN runs into or close to urban areas.

Given that air pollution is the top environmental risk to health in the UK and the fourth greatest threat to health overall⁴¹, poor air quality can negatively impact the health and well-being of road users and residents in areas across the South Pennines (West) route area. In terms of air quality, there are receptors within 100 metres of the route which may be more likely to experience adverse air quality impacts, including sections of the following:

- M60 at Urmston, Whitefield, Middleton and Stockport
- M602 at Eccles and Salford
- M61 at Bolton
- · M66 at Bury
- · A627(M) at Oldham
- A585 at Fleetwood
- M55 at Preston
- A5036 at Sefton
- M53 at Ellesmere Port
- M621 at Leeds
- · A616 north of Sheffield

Our interested parties highlighted the Air Quality Management Areas (AQMAs) relating to the M62, M6 and M56 in the vicinity of Warrington. The A616 is within the Sheffield AQMA. The M57 west of Liverpool runs within 200 metres of the Liverpool AQMA.

Given the urban nature of the route, many people live near the SRN. For instance, the M621 in the south of Leeds, M602 in Eccles and Salford, M60 in Manchester, M66 in Bury, M621 in Morley, M60 in Tameside and Stockport, A5036 in Sefton, and M65 west of Burnley. The SRN can lead to severance issues for these communities which can limit direct access to jobs and services by non-car modes. This is particularly problematic for households with low levels of vehicle ownership.

Noise exposure can have an adverse effect on human health and quality of life, as well as having implications on economic prosperity and the natural environment. This demonstrates the importance of addressing the management of noise issues and effects on road users and residents from the road network. There are receptors within 300 metres of the route which may be more sensitive to high noise levels, particularly on the M62 west of Greater Manchester, north of Huddersfield and south of Leeds, the M61 east of Chorley, the M56 south of Runcorn and adjacent to Frodsham and Helsby, and the north-west section of the M60.

Noise Important Areas (NIAs) highlight locations with noise issues across the route, which are mainly located in built-up areas and town centres. There are approximately 230 NIAs along the route, with a significant number located along the M53 in the Wirral and around Chester, in and around Greater Manchester, on the M621 in Leeds and on the M62 through West Yorkshire.

Where possible we will seek to protect environmentally important locations and reduce air quality and noise impacts on communities served by the route

Key challenges

- There are environmental challenges for the South Pennines (West) route.
 This includes flooding from surface water, air quality, noise pollution and severance
- Flooding from surface water may create reliability issues on certain sections of the route particularly where there is a shortage of diversion routes of comparable standard
- The route passes through densely populated urban areas where there are a number of receptors in close proximity to the SRN which may be more likely to experience adverse air quality and noise impacts
- The SRN can also create severance between communities particularly for active travel. This can restrict people's access to key services, facilities and employment opportunities
- Maintaining and protecting Areas of Outstanding Natural Beauty, areas with environmental designations and cultural heritage
- · Minimising greenhouse gas emissions
- · Building resilience to future climate change



4. Growing the economy

In order to understand the economic and housing growth aspirations of the area along the route we have considered key growth locations, such as those held in local plans and freeports.

The South Pennines (West) route serves an important economic function in providing access to jobs, services, and businesses in the North of England, and provides strategic connectivity to the wider United Kingdom including cross-border connectivity to Wales.

The South Pennines (West) area is home to the international gateways of the Ports of Liverpool and Salford, and Manchester and Liverpool Airport for both freight and passengers. The SRN plays an important role in ensuring goods from these hubs can be transported within the region and to reach rail freight interchanges, local distribution centres, key employment sites, and consumers.

The SRN also provides access to a range of key employment areas in the region such as Trafford Park and Ellesmere Port, along with several sizable freight logistics hubs such as Omega Business Park in Warrington and Cross Green in Leeds.

Cross-border connectivity to Wales is provided by the A55, A483 and A494 which are accessible from the M56 and M53. These support economic links and provide access to key employment sites at Hawarden and Deeside. Within Wales the A55 provides access to the Port of Holyhead for international connectivity to Dublin and is a significant roll-on roll-off port for freight and passengers.

The economic and business links between North Wales and the Mersey Dee areas of North West England are significant, with an estimated one million journeys per month in terms of cross-border commuter flows⁴². It is estimated the North Wales and Mersey Dee area has an economy worth approximately £26.5 billion GVA. Cross-border routes are therefore important to maintain this economic link but also to support the potential for an estimated 45,000 to 50,000 jobs along the corridor in the next 20 years.

Economic performance across the South Pennines (West) route varies. There are communities with notable levels of deprivation within the route area. Based on the indices of multiple deprivation these are clustered around urban areas including the north and east of Greater Manchester, the Fylde Coast, East Leeds, and East Lancashire. These areas are also noted for having lower levels of employment, and those residents in employment tend to work more locally.

The index of priority places for Levelling Up Fund places local authorities into categories 1, 2 or 3, depending on their identified level of need, with category 1 representing places deemed in most need of investment through this Fund. Blackpool, Preston, Liverpool, Knowsley, St. Helens, Blackburn with Darwen, Hyndburn, Rossendale, Pendle, Burnley, most of Greater Manchester, High Peak, Bradford, Leeds and Wakefield have been identified by the Government as levelling up category 1. These local authorities are therefore in most need of levelling up to increase economic growth through access to employment and opportunities. There are several tourist attractions in the region with connectivity supported by the SRN, including the cities of Manchester and Liverpool, the Peak District to the south, the Fylde Coast including Blackpool accessed from the M55, and the North Wales coast accessed via the A55.

Important future growth areas within the South Pennines (West) route include the potential expansion of freight facilities such as the freeports associated with the Port of Liverpool, the Port of Salford and further warehouse development along the M62 corridor in Castleford and Normanton. Further expansion is planned at existing employment sites in Skelmersdale notably next to Junctions 4 and 5 of the M58, Warrington, Haydock Park and St Helens.

Growth is expected across Greater Manchester as part of the proposed development sites included in Greater Manchester's development plan *Places for everyone*⁴³ and *Stockport local plan*⁴⁴. Interested parties highlighted the Places for everyone Northern Gateway allocations around Heywood, for up to 1.2 million square metres of employment use and approximately 1,200 dwellings at Pilsworth, north of the M62 Junction 19, and up to 1,550 dwellings at Simister, east of the M60. M66 Junction 3 and M62 Junction 19 will be under particular pressure from traffic generated by the Northern Gateway sites. Other major strategic housing sites include Carrington Village and Godley Green in Hyde.

The HS2 proposals at Manchester Airport and Piccadilly will support over 22,000 jobs during construction, many of which will be accessed via the SRN, including the M6, M56 and M60. Once operational, HS2 is expected to be a catalyst for further growth as it improves connectivity through improved journey times and additional rail capacity.

⁴³ Greater Manchester Combined Authority (2021). Places For Everyone. https://www.greatermanchester-ca.gov.uk/media/4838/places-for-everyone.pdf

⁴⁴ Stockport Metropolitan Borough Council (2022) One Stockport Local Plan 2021 to 2038. https://democracy.stockport.gov.uk/documents/s190998/Appendix%20A%20-%20One%20Stockport%20Local%20Plan.pdf

Manchester Airport is continuing to expand through its £1 billion transformation programme. Increased demand is expected on routes to the airport including the M56 and M60.

There are significant potential housing developments within the Liverpool City Region at Page Moss and Whiston. These have the potential to each comprise over 1,000 dwellings near to the M57.

Other potential housing developments of a similar magnitude outlined in local plans include sites at East Runcorn off the M56. Several major housing developments are also proposed at Lytham St Annes, Leyland and Buckshaw, Blackburn, and Huncoat.

In West Yorkshire there are major housing developments in Dewsbury, Wakefield and Castleford which are along the M62 corridor. Similarly, there are plans for large employment sites near Pontefract and Normanton.

Local authorities along the route have transport and planning policies in order to reduce the adverse impact of new developments. All of the authorities are committed to measures to achieve a shift from car usage to walking, cycling and public transport through the provision of improved transport infrastructure. This will help to mitigate the impact of new development on the SRN.

The strategic road network has a critical economic function in supporting national and cross-border connectivity and areas with high levels of deprivation

Key challenges

- The South Pennines (West) route is vital to the continued growth of the area it serves and beyond. There are significant plans for expansion to major distribution and logistics hubs across the route. Similarly, there are a mix of housing and employment sites planned across the route from Liverpool in the west, to Wakefield in the east. These developments will put further pressure on locations which already suffer from congestion across the route including the M62, M56 and M60
- The route also provides key connections to Wales and across the Pennines to Yorkshire and beyond. To support the regional economy, the route needs to provide a reliable service to its users now and into the future



5. Managing and planning the SRN for the future

Maintaining the strategic road network

We deliver a comprehensive programme of maintenance to keep our assets in the right condition to provide our customers with the right level of service; ensuring that the road network remains safe and fully open for use. We collect data on the condition of all of our assets so that our teams of specialist engineers can fully understand their current condition and identify the optimum time to intervene, maintaining the asset and replacing parts before they fail and impact customer journeys.

Our asset inspections to collect much needed condition data are undertaken through a number of methods - survey vehicles collecting road surface condition for the whole of the network every year right through to structures inspections, where we undertake over 23,000 inspections of individual structures every two years. The majority of our asset routine maintenance activities and the replacement of thousands of asset components as they near end of life are undertaken at night to minimise customer disruption, meaning that most of this work is never seen.

Road surface

The measure for road surface condition has been updated for 2022/23 onwards. The condition is reported as one of our Key Performance Indicators and shows the condition of all available lanes of the main carriageway (excluding DBFO lengths) based on 3 elements of the road surface condition namely - the levels of surface rutting (caused by wheel tracks being formed in the surfacing), skid resistance (how slippery the road is) and longitudinal profile (how bumpy the road feels) with a target of 96.2% or more in good condition. At the time of publication, the road surface had a score of 96.7% in good condition, thereby meeting the national surfacing condition target.

This route consists of approximately 2,950 lane-kilometres of road surfacing. The surface condition across the route is considered to be sound, with 97% of pavement asset not requiring investigation for possible maintenance.

Bridges and structures

There are 2,439 structures across the route, including bridges and large culverts. According to an analysis of current data, 84% of our structures are in very good or good condition. By carrying out inspections of each individual structure every two years, we identify any defects that may require maintenance, thereby helping to ensure that structural components are replaced before they fail.

This route has only one tunnel, the Lofthouse tunnel, which opened to traffic in 1999. The management of tunnel assets vary from the management of other structures in two ways. Firstly, the assets within a tunnel have a wide variety of design lives, from 120 years for the tunnel structure, to far less for the technology systems for operations and fire life safety. Secondly, tunnel systems require 24/7 control by our operations centres, to maintain safe operation.

Figure 18 below shows how investment in this route has improved the average condition scores of structures, since 2006. The average condition score is derived from asset inspections on structural components, accounting for the relative importance and size of each component. If no maintenance or renewals were planned, the scores would be expected to decline from 100 (perfect) as the structures deteriorate over time. We have a rolling renewals programme to replace asset components identified in our inspection programme, improving the structure condition to ensure all structures remain in a safe condition and fully open for use. We have identified significant structures renewals for RIS3, and these schemes affect 7 structures in this route.

Drainage

Drainage assets are represented by both linear assets (for example underground pipes, channels, ditches, drains) and nonlinear assets (for example gullies and chambers). At national level, 90% of the drainage assets are in good structural condition and 87% are in good service condition.

Geotechnical Features

The geotechnical asset, comprising over 12,000 kilometres of earthworks embankments and cuttings carrying the road network is assessed through a programme of inspections and rated for its ability to provide the right level of safe functionality. The condition assessment of this asset is that 99.61% is in good condition to continue to function correctly. We use the inspection surveys to identify where any of our geotechnical features may require maintenance now or in the future, to ensure they are never at risk of failure.

Future developments

We have been transforming our approach to maintenance through our Operational Excellence and Asset Management Transformation Programmes. Bringing our key asset maintenance decision making and planning activities back in-house so that our own staff are responsible for planning maintenance activities, along with improving the consistency of our end to end maintenance and asset replacement programmes will bring significant benefits.

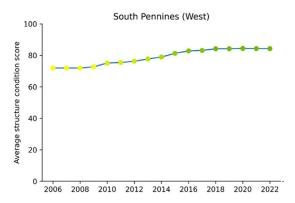


Figure 18: Average condition scores of structures, since 2006

Our asset management transformation also includes the improved analysis to identify the investment required on the strategic road network during the next road period. The business case will provide evidence to support future maintenance investment, clearly articulating the costs and benefits of delivering an effective maintenance and asset replacement programme.

Operations

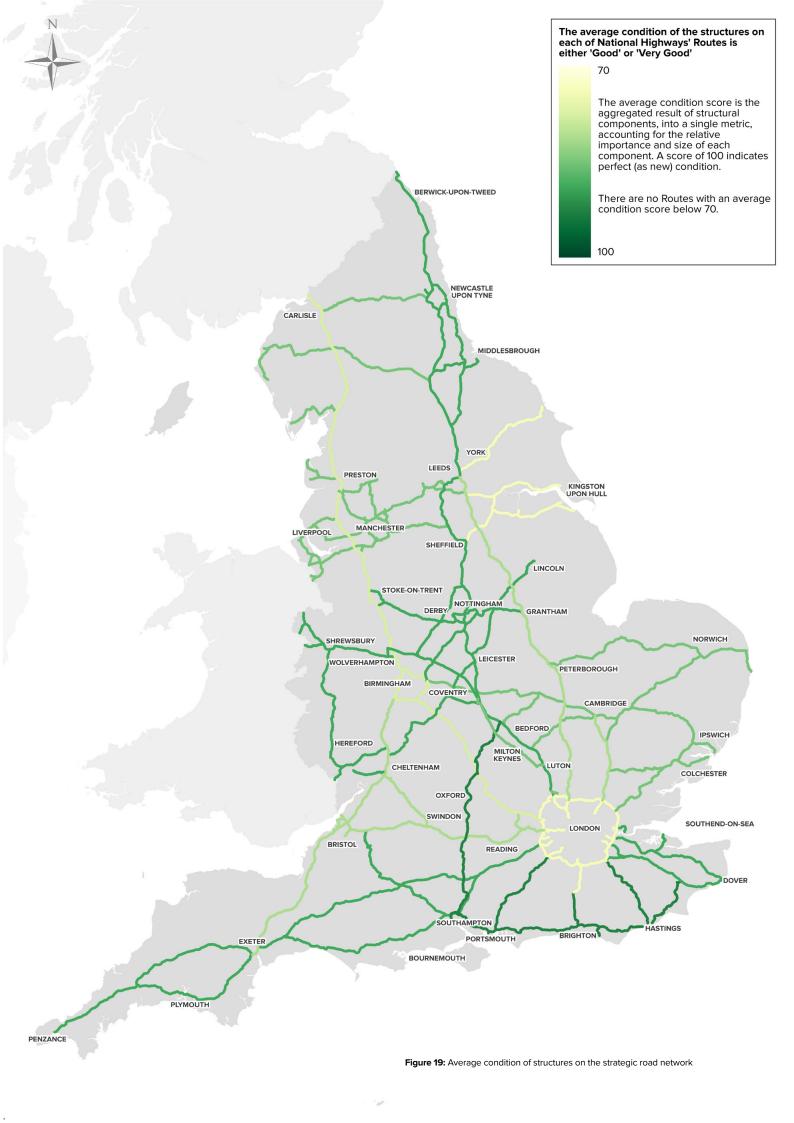
We are establishing a nationally consistent approach to the management of our operational capability through our Operational Excellence change programme. This will deepen our understanding of how our interventions impact on the performance of the network and on the journeys of our customers. We are using the latest analytical software to process traffic data and gain insight into:

- how our operational services can improve safety and provide security to road users
- how the attendance of a traffic officer has an impact on incident durations
- how information provided by National Highways can benefit road users who plan their journeys beforehand and then while on their journeys

By better understanding our current operational performance, we can create a baseline from which we can identify opportunities for improvement.

Key challenges

- Contributing toward the national target of 96.2% or more of carriageway being in good condition
- Maintaining the good condition of the SRN's geotechnical assets
- Ensuring that drainage assets are maintained so that their good structural and service conditions can be upheld





6. A technology-enabled network

Facilities to improve journey quality and network efficiency on the SRN are of key concern to our interested parties, road users and communities. High quality travel information before and during travel helps to:

- reduce day-to-day delays and improve reliability of the SRN
- minimise the adverse impacts of incidents
- · improve quality of journey experience
- allow people to make more informed travel choices, including about when and how to travel

A technology-enabled network is one that is able to support electric vehicles through the regular provision of quality charging points, as well as one that uses technology to improve communication and safety for road users.

There are recently opened smart motorway schemes between M60 Junction 8 and M62 Junction 20, and M62 Junctions 10 to 12. These provide improved communication to users and improve network efficiency. The Department has announced that smart motorways earmarked for construction during the future Road Investment Strategy periods and previously paused schemes will now not go ahead.

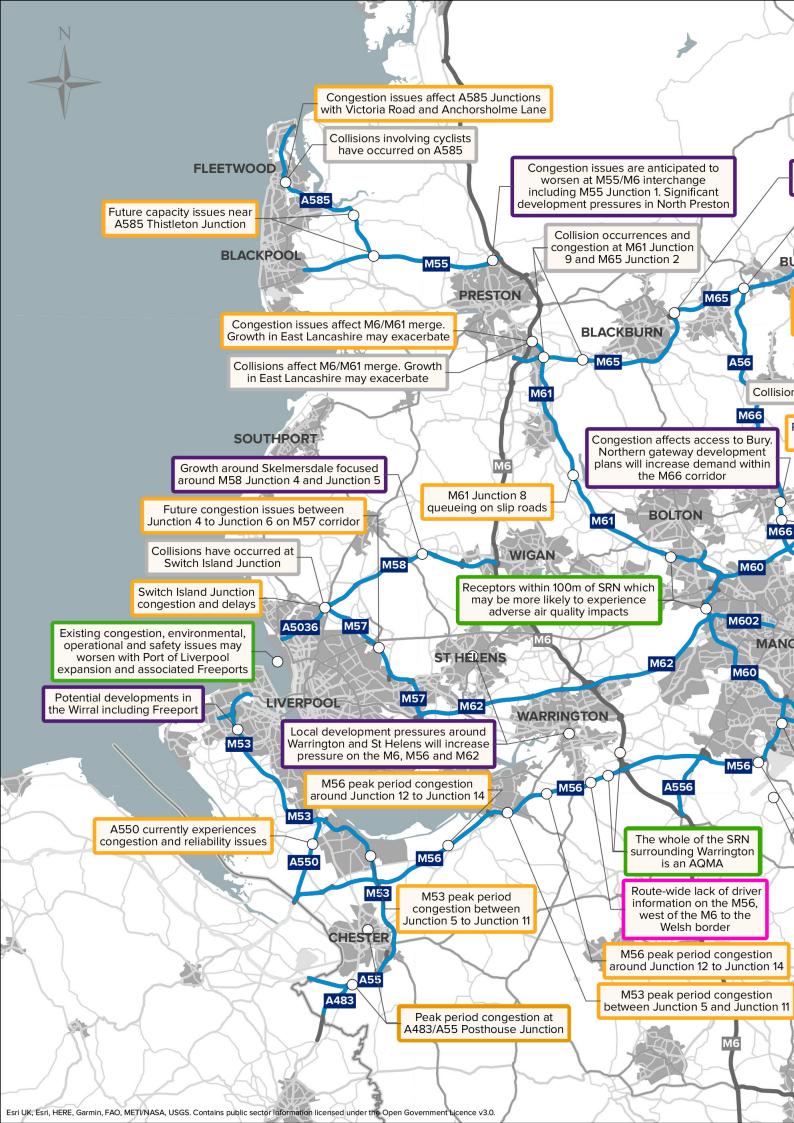
The network of existing electric vehicle charging infrastructure, which supports net zero carbon ambitions, in the South Pennines (West) area is mixed. Larger urban areas in proximity to the SRN such as Manchester, Leeds, and Preston tend to have more charging provision, with less provision in rural areas such as the trans-Pennine routes of the M62, A628 and A616.

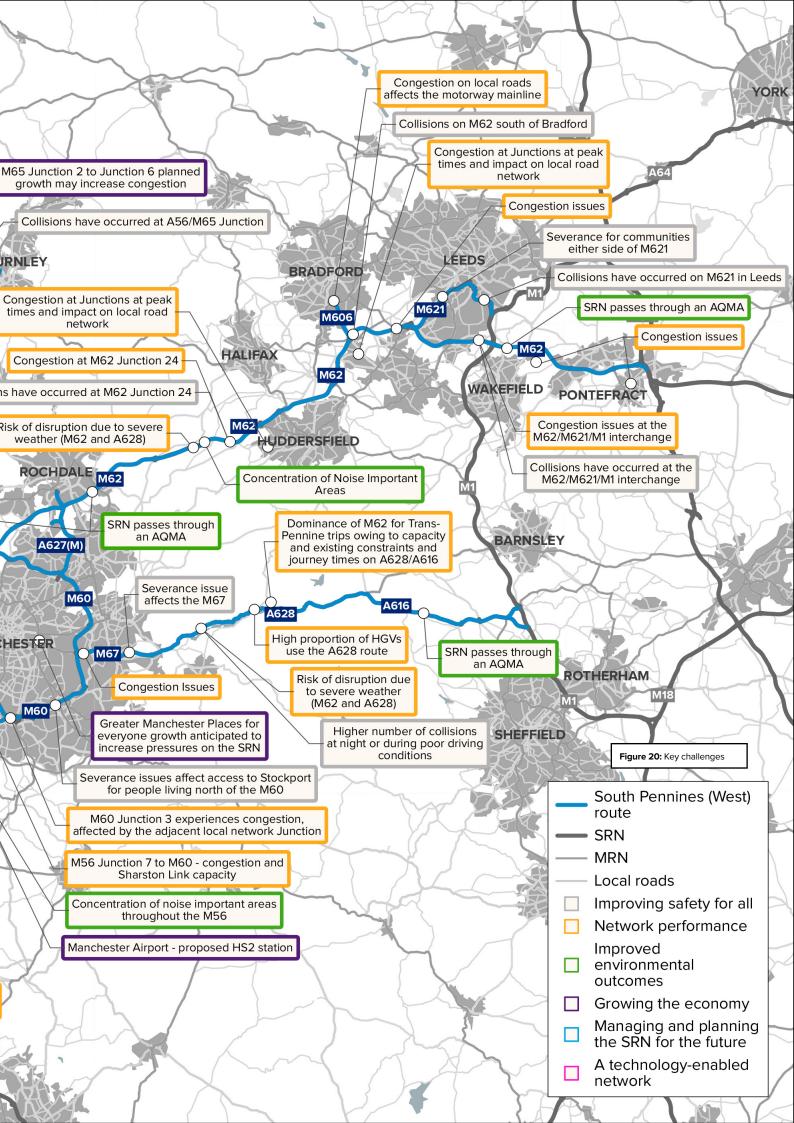
We will support improved communications and facilities for all

The Government's March 2022 Electric vehicle infrastructure strategy⁴⁵ sets out a vision for 2030 where charging infrastructure will be removed as both a perceived and real barrier to the adoption of electric vehicles. The Strategy outlines the intention to accelerate the rollout of high-powered chargers on the SRN through the £950 million Rapid Charging Fund⁴⁶.

Key challenges

- Our interested parties highlighted a desire for greater information to improve road users' experience. The availability of information is improving through smart motorways on some sections of the route but is lacking in other locations
- As there is an increase in the uptake of electric vehicles, demand for charging points across the network is also likely to increase.
 At present, there are greater distances between charging points in rural areas







06 Initial route objectives

We want to provide safer and more reliable journeys for all those who use or live alongside our network on the South Pennines (West) route, and help the region achieve its economic and housing growth ambitions. Based on our engagement and data analysis, we have defined seven route objectives for the area.

We developed the route objectives based on:

- feedback from customers and neighbours outlined in Chapter 3
- opportunities to collaborate with other network operators, outlined in Chapter 4
- constraints and challenges, as highlighted in Chapter 5
- how best to contribute to the DfT's six strategic objectives

Each route strategy includes a series of specific route-based objectives. These objectives, informed by extensive data analysis and engagement with customers and neighbours, set out our ambition for each route. Although route objectives are route-specific, they should also be considered in the context of our commitments and ambitions for the whole network, as per our Licence agreement. This means that, while we may identify certain locations within a route for further consideration, we will seek to address these locations in line with our ongoing commitment to achieving our safety, environmental and technology obligations across the SRN.

It should be noted that there is overlap between the objectives, and we recognise they cannot be considered in isolation from each other. They should be considered alongside our asset plan.

The route objectives, their supporting narratives, and locations for further consideration will together inform the development of the Road investment strategy (RIS). They do not represent a commitment to road-based interventions but are intended to enable multimodal interventions to be explored as part of later study phases. It should be noted that the route objectives do not signify an assurance of investment in a particular route, nor do they remove the need to follow statutory processes.

As these are initial route objectives subject to wider feedback, we have not at this stage set out in detail how we will measure progress against them. Understanding how interventions and initiatives have addressed the challenges identified is a complex and long-term task and the approach to it will need to be devised alongside the wider performance specification for the third road period. We expect to set out our approach to this more clearly in the finalised route strategy overview reports to be published alongside our *Strategic business plan* and *Delivery plan* later in this road period.

Route objectives and DfT's strategic objectives

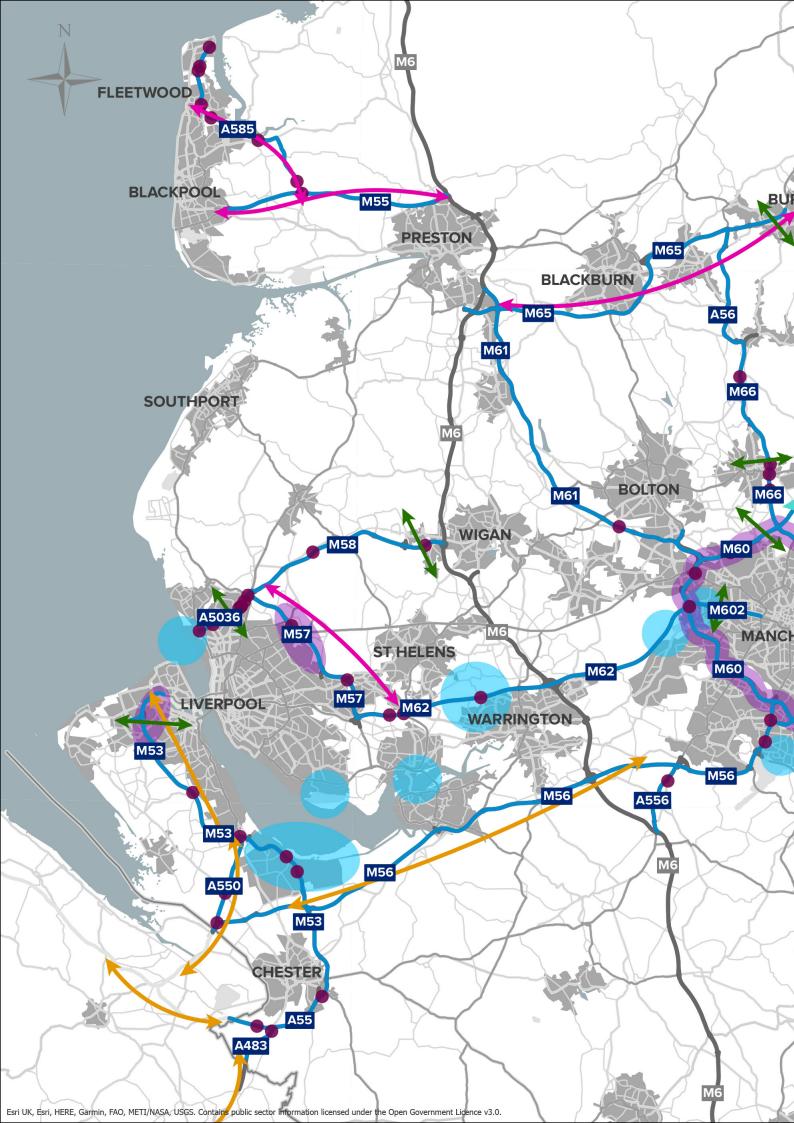
In Figure 21 we illustrate the seven route objectives on our route map and, in Table 1, we show how they contribute to the Government's strategic objectives for our network as a whole.

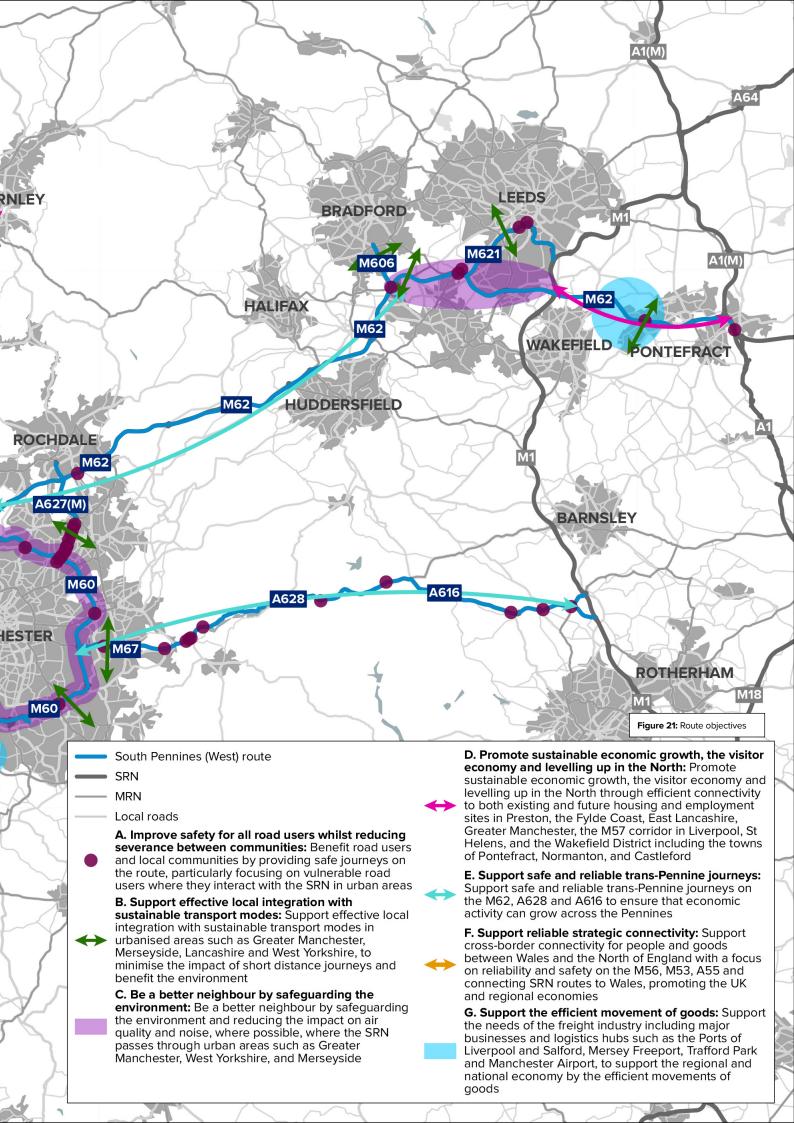
Table 1: How the route objectives map to the DfT's strategic objectives

	Ref.	Route objective
	A	Improve safety for all road users whilst reducing severance between communities Benefit road users and local communities by providing safe journeys on the route, particularly focusing on vulnerable road users where they interact with the SRN in urban areas
	В	Support effective local integration with sustainable transport modes Support effective local integration with sustainable transport modes in urbanised areas such as Greater Manchester, Merseyside, Lancashire and West Yorkshire, to minimise the impact of short distance journeys and benefit the environment
	С	Be a better neighbour by safeguarding the environment Be a better neighbour by safeguarding the environment and reducing the impact on air quality and noise, where possible, where the SRN passes through urban areas such as Greater Manchester, West Yorkshire, and Merseyside
	D	Promote sustainable economic growth, the visitor economy and levelling up in the North Promote sustainable economic growth, the visitor economy and levelling up in the North through efficient connectivity to both existing and future housing and employment sites in Preston, the Fylde Coast, East Lancashire, Greater Manchester, the M57 corridor in Liverpool, St Helens, and the Wakefield District including the towns of Pontefract, Normanton, and Castleford
~	E	Support safe and reliable trans-Pennine journeys Support safe and reliable trans-Pennine journeys on the M62, A628 and A616 to ensure that economic activity can grow across the Pennines
· · · · · · · · · · · · · · · · · · ·	F	Support reliable strategic connectivity Support cross-border connectivity for people and goods between Wales and the North of England with a focus on reliability and safety on the M56, M53, A55 and connecting SRN routes to Wales, promoting the UK and regional economies
P	G	Support the efficient movement of goods Support the needs of the freight industry including major businesses and logistics hubs such as the Ports of Liverpool and Salford, Mersey Freeport, Trafford Park and Manchester Airport, to support the regional and national economy through the efficient movements of goods

DfT's strategic objectives for our route

Improving safety for all	Network performance	Improved environmental outcomes	Growing the economy	Managing and planning the SRN for the future	A technologyi- enabled network
✓					
	✓	>			
		✓			
	√		√		
√	√		✓	√	
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	√		✓		







A. Improve safety for all road users whilst reducing severance between communities

Objective

Benefit road users and local focusing on vulnerable road

Context

The DfT has identified improving safety for all as a key priority in its Planning ahead for the strategic road network⁴⁷. This is also reflected within TfN's Strategic transport plan48 that states "A safe and inclusive transport network is a fundamental requirement. This determines how people use and perceive the transport network".

Transport for Greater Manchester (TfGM) Transport Policy 15 states, "Working with partners, including through the Safer Roads Partnership, we will deliver initiatives to improve highway network safety, with a focus on walking and cycling."

It is also stated in the *Greater* Manchester transport strategy 2040⁴⁹ that "safety and security are fundamental. Good progress has been made in reducing the number of people killed or seriously injured on our roads but all partners must work hard to deliver our vision of reducing deaths to close to zero by 2040."

The West Yorkshire transport strategy⁵⁰ has also identified a key policy to "improve safety on our transport networks particularly for road users". It states that in West Yorkshire, "currently 13% of collisions involve cyclists, and 11% involve motorcycles. With our focus on encouraging a shift to active modes of travel, we need to ensure we provide a safer road environment that gives people the confidence to make this shift".

Our network considerations

There are several locations in the South Pennines (West) route where collisions involve vulnerable road users such as walkers, cyclists, and horse riders (WCH). These are more concentrated in areas where the SRN passes through urban areas.

The A5036 in Sefton which passes through several residential areas, the M67 East of Manchester through Hyde and the M66 through Bury are all sections of the route identified as locations of collisions involving vulnerable users.

Other locations where collisions have occurred which involved vulnerable road users include the A623 near Oldham, A55 near Chester and A628 through Hollingworth. These are examples of locations where numerous local roads are accessed off the SRN and pedestrian footways are adjacent to the road.

⁴⁷ Department for Transport (2021) Planning ahead for the Strategic Road Network. https://assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf

⁴⁸ Transport for the North (2019) Strategic Transport Plan. https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

⁴⁹ Transport for Greater Manchester (2021) Transport Strategy 2040. https://assets.ctfassets.net/

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⁵⁰ West Yorkshire Combined Authority (2017) Transport Strategy 2040. https://www.westyorks-ca.gov.uk/media/2379/transport-strategy-2040.pdf

Outcomes

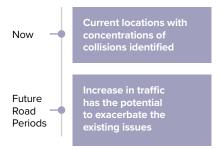
- Number of collisions reduced, contributing to a safer network for all users
- Reduced risk for vulnerable road users, such as walkers, cyclists and horse riders
- Reduced risk to people living near the route

DfT's Strategic objectives

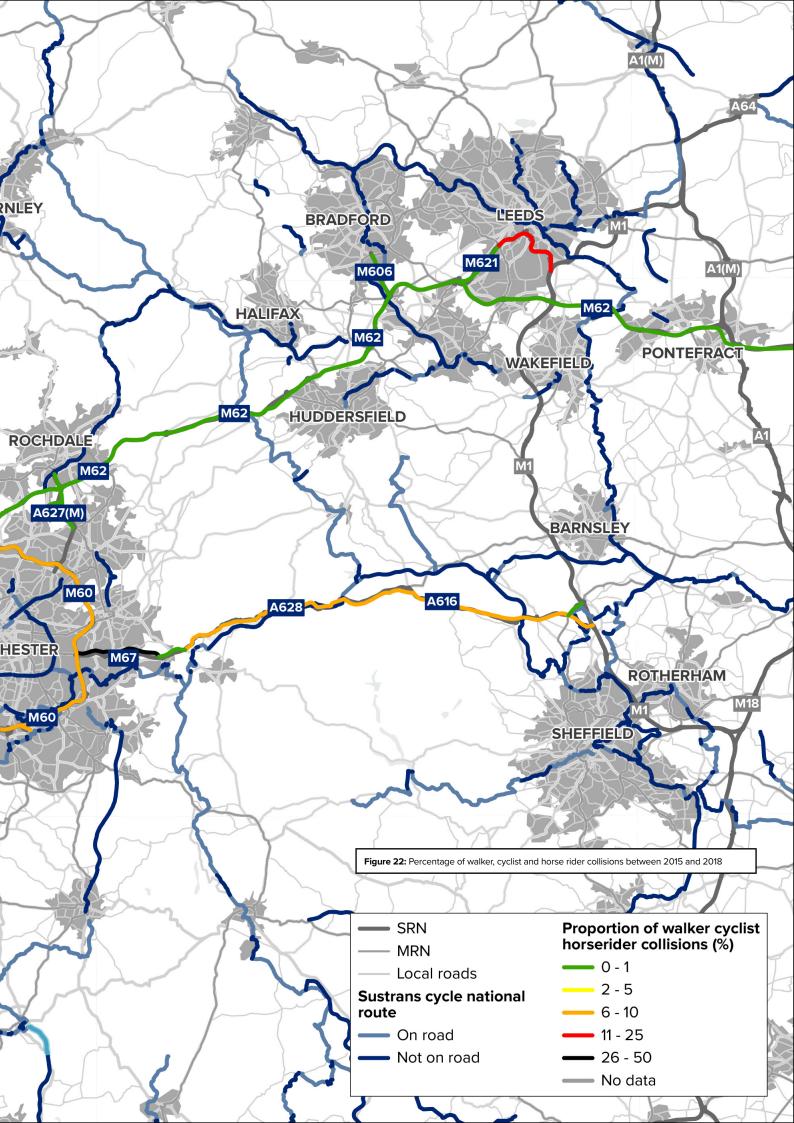


Improving safety for all

Timeframe based on the issues and constraints identified









B. Support effective local integration with sustainable transport modes

Objective

Support effective local integration with sustainable transport modes in urbanised areas such as Greater Manchester, Merseyside, Lancashire and West Yorkshire, to minimise the impact of short distance journeys and benefit the environment

Context

Encouraging active modes of transport for shorter, local journeys aligns with the aims of the recently published Transport decarbonisation strategy⁵¹ by Transport for the North (TfN) which sets out a decarbonisation trajectory of a 56% reduction in emissions by 2030 to be achieved through mode-shift and demand reduction. As noted in the TfN Major roads report⁵², walking, cycling and active travel are the best options for short urban journeys and increasing local active travel should be the most practicable option. This objective recognises the need to support behavioural change towards using active travel for local journeys, and including upgraded facilities for cyclists and pedestrians.

This objective aligns with the recently published DfT Planning ahead for the *strategic road network*⁵³ report in terms of recognising the interaction of the SRN with other modes. This emphasises the role of the SRN in supporting other modes of travel such as walking and cycling for shorter journeys. It also aligns with the Greater Manchester Places for everyone (PfE) aim of 'improving sustainable transport and active travel to key locations' along with helping to achieve West Yorkshire's goal of becoming a 'great, safe place for cycling and walking'⁵⁴.

Within the four main city regions covered by the route:

- Greater Manchester has an ambition for 50% of all journeys in Greater Manchester to be made by walking, cycling and public transport by 2040⁵⁵
- The West Yorkshire transport strategy has a target for 300% more journeys made by bicycle by 2027
- Within the Liverpool City Region 66% of journeys in Merseyside are less than 5 kilometres in length but half of these are currently undertaken by car. There is a significant opportunity to encourage active modes for local journeys, subject to provision⁵⁶

- Sheffield City Region has 2040 targets to increase bus journeys by 18%, rail journeys by 100%, tram journeys by 47%, walking journeys by 21% and cycling journeys by 350%. There is also a target of reducing the mode share of car journeys from 71% to 63% over the same timeframe⁵⁷
- Greater Manchester and Leeds have ambitious plans which are already being implemented to reach these targets through the 'Manchester Bee Network' and the Leeds 'City Connect' schemes.

In addition, the UK Government has recently set out City Region Sustainable Transport Settlements (CRSTS) with a total value of £3.18 billion, connecting all four Combined Authorities via the route. The settlements will be used to provide investment in roads, bus, rail and tram services, including electric buses, Park & Ride sites and electric vehicle charging points. Greater Manchester's allocation will also help fund the development of the integrated transport Bee Network, which aims to integrate the walking, cycling, bus and tram networks by 2024 and the rail network by 2030.

⁵¹ Transport for the North (2021) Transport Decarbonisation Strategy. https://transportforthenorth.com/decarbonisation/

⁵² Transport for the North (2021) Major Roads Report. https://transportforthenorth.com/reports/major-roads-report-dec-2021/

⁵³ Department for Transport (2021) Planning ahead for the Strategic Road Network. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf

⁵⁴ West Yorkshire Combined Authority (2017) Transport Strategy (2040). https://www.westyorks-ca.gov.uk/media/2379/transport-strategy-2040.pdf

⁵⁵ Transport for Greater Manchester (2021) Transport Strategy (2040). https://assets.ctfassets.net/ nv7y93idf4jq/01xbKQQNW0ZYLzYvcj1z7c/4b6804acd572f00d8d728194ef62bb89/Greater_Manchester_Transport_Strategy_2040_final.pdf

⁵⁶ Liverpool City Region Combined Authority (March 2018) Local Journeys Strategy. https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA_LCL_JRNYS_STRATEGY.pdf

⁵⁷ Sheffield City Region (2019) Sheffield City Region Transport Strategy. https://southyorkshire-ca.gov.uk/getmedia/69c38b3f-1e97-4431-91f4-913acf315632/SCR_Transport_Report-v4-5-04-06-19-(1).pdf

The DfT's Bus back better strategy⁵⁸ aims to support Local and Mayoral Combined Authorities with Enhanced Partnerships and Bus Service Improvement Plans (BSIPs) with operators. These seek to provide high quality vehicles, infrastructure and priority measures on the bus networks.

BSIPs have been agreed with the Mayoral Combined Authorities of West Yorkshire, Greater Manchester and Liverpool City Region. Measures which will affect the SRN include Proposed Bus Rapid Transit, Quality Bus Transit (including some segregation) and bus corridors. These will cross the A5036, M57, Junctions 17 and 27 of the M60 and Junction 2 of the M66.

Our network considerations

There are several locations in the South Pennines (West) route where the SRN can be a barrier for high quality walk/cycle routes between communities. There are also many locations where the performance of the SRN can hinder access to public transport hubs or reduce the reliability of services (e.g. buses which cross congestion on the SRN). This can reduce the opportunities for residents who do not have access to a car.

Locations where the SRN is a barrier to walking and cycling include:

- · M62 in West Yorkshire
- M621 in Leeds
- A5036 in Sefton
- · M67 in Manchester

Locations where public transport performance can be disrupted include:

- · M62 in West Yorkshire
- M60 in Stockport
- A663 in Oldham

Outcomes

- Reduced severance caused by the SRN to nearby communities
- Increased uptake in active travel for shorter-distance journeys near the SRN, meaning reduced congestion on the SRN and local road network
- Increased use of public transport by reducing delay to bus services and improving reliability of bus services which operate near to the route
- Healthier lifestyles, contributing to improvements in public health

DfT's Strategic objectives



Network performance



Improved environmental outcomes

Timeframe based on the issues and constraints identified

Now -

Locations identified where the SRN is a barrier to walking and cycling, or where public transport performance can be disrupted

Future Road — Periods Delays expected to increase in these locations, thereby exacerbating the existing issues

⁵⁸ Department for Transport (2021) Bus Back Better: national bus strategy for England. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/980227/DfT-Bus-Back-Better-national-bus-strategy-for-England.pdf



C. Be a better neighbour by safeguarding the environment

Objective

Be a better neighbour by safeguarding the environment and reducing the impacts on air quality and noise, where possible, where the SRN passes through urban areas such as Greater Manchester, West Yorkshire, and Merseyside

Context

Emissions from vehicles impact upon air quality and therefore have an environmental and societal impact on the surrounding landscape and communities adjacent to the SRN. The South Pennines (West) route is characterised by several urban conurbations which the SRN passes through, some of which have designated Air Quality Management Areas (AQMAs).

This objective aims to reduce the impact on air quality and noise which communities adjacent to the route are exposed to, including Stockport, Salford, Frodsham and South Leeds communities. It also supports Action Area 3 from the *Net zero highways plan*⁵⁹ published by National Highways, which seeks to limit emissions from vehicles on our roads, and includes a commitment to facilitate the introduction of zero emission heavy goods vehicles (HGVs) on the network.

This corresponds to the targets in the DfT's Decarbonising transport - a greener, better Britain strategy⁶⁰ which commits to consulting on phasing out non-zero emission HGVs by 2040 (2035 for vehicles of 26 tonnes and under).

Our network considerations

Figure 23 shows the air quality and noise receptors on the South Pennines (West) route which may be more likely to experience adverse air quality or noise impacts. In terms of air quality, there are receptors within 100 metres of the route which may be more likely to experience adverse air quality impacts, including along the M60, M602, M61, M66 and A627(M) in Greater Manchester, M621 in Leeds, M55 north of Preston, M53 in Ellesmere Port, A585 at Fleetwood, A5036 at Sefton, and A616 north of Sheffield.

Interested parties have raised air quality as an issue where the SRN passes through conurbations including Liverpool, Manchester (particularly the M60), Leeds, and the M62, M6 and M56 around Warrington.

The urban nature of the route means AQMAs are particularly focused on the SRN that surrounds cities such as Manchester, Liverpool, and Wakefield. The entirety of the M60 is in an AQMA, demonstrating the air quality issues around Manchester. This also extends from Manchester to other urban areas via the M62 to Warrington, the M61 to Bolton, the M6 to Bury, and the A627(M) to Oldham. To the north-east of Sheffield, the A616 is within the Sheffield AQMA. The M57 at Liverpool also runs within 200 metres of the Liverpool AQMA.

There are receptors within 300 metres of the route which may be more sensitive to high noise levels, particularly on the M62 west of Greater Manchester, north of Huddersfield and south of Leeds, the M61 east of Chorley, the M56 south of Runcorn and adjacent to Frodsham and Helsby, and the north-west section of the M60.

⁵⁹ National Highways (2021) Net zero highways: our 2030 / 2040 / 2050 plan. https://nationalhighways.co.uk/media/eispcjem/net-zero-highways-our-2030-2040-2050-plan.pdf

⁶⁰ Department for Transport (2021) Decarbonising transport - a greener, better Britain strategy. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

Outcomes

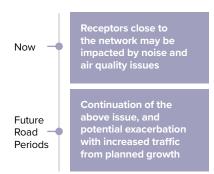
 Improved air quality and noise levels for communities along the route

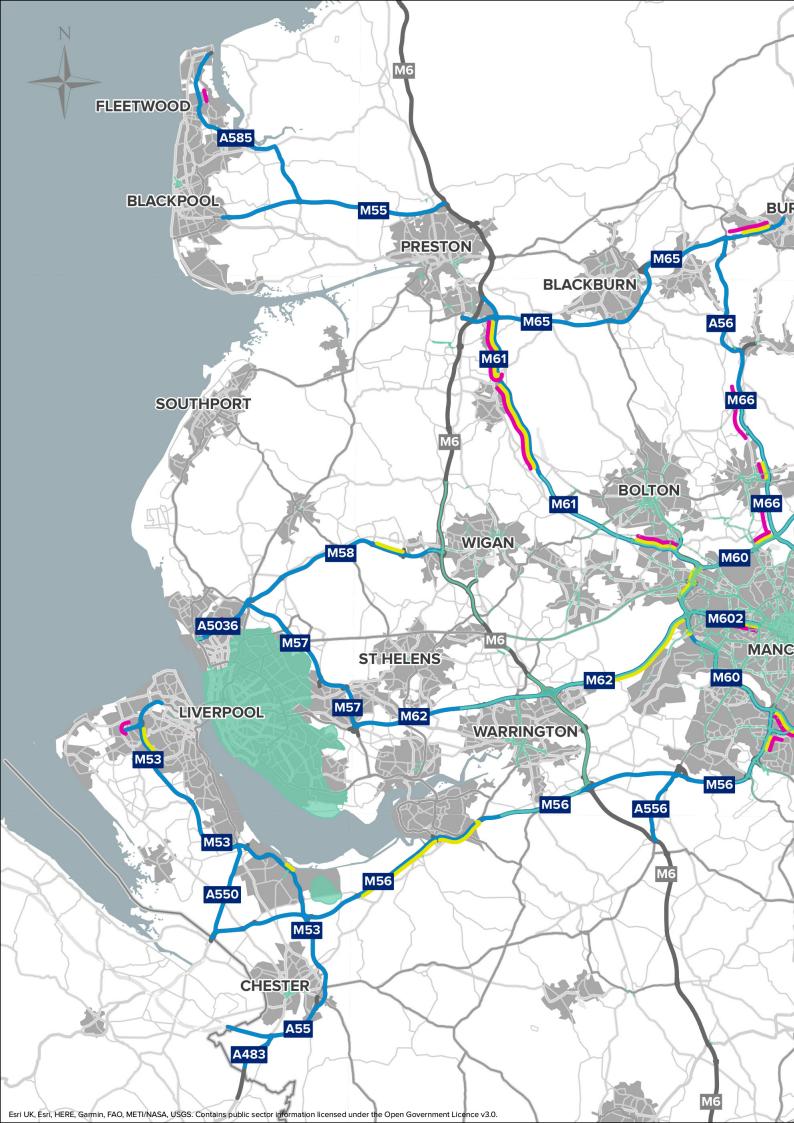
DfT's Strategic objectives

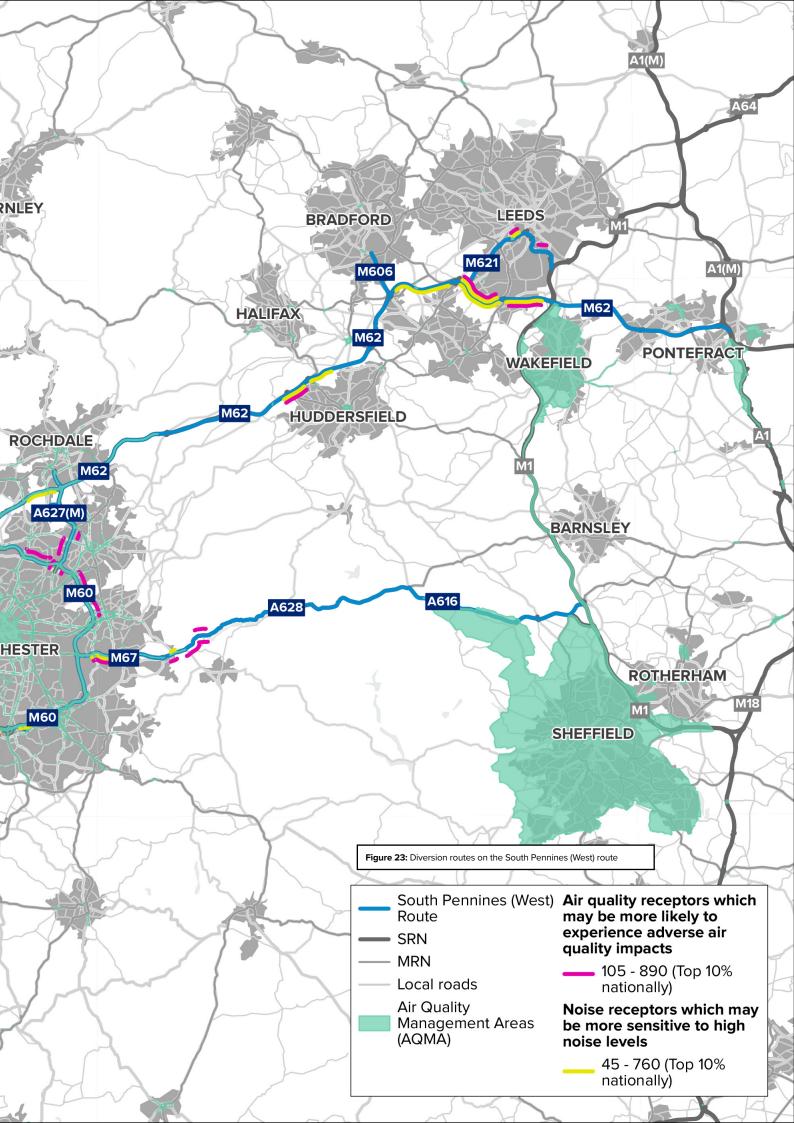


Improved environmental outcomes

Timeframe based on the issues and constraints identified









D. Promote sustainable economic growth, the visitor economy and levelling up in the North

Objective

Promote sustainable economic growth, the visitor economy and levelling up in the North through efficient connectivity to both existing and future housing and employment sites in Preston, the Fylde Coast, East Lancashire, Greater Manchester, the M57 corridor in Liverpool, St Helens, and the Wakefield District including the towns of Pontefract, Normanton, and Castleford

Context

The South Pennines (West) route is critical for connectivity to jobs, businesses and services. It has an important role to play alongside other transport modes to support sustainable economic growth through providing connectivity between key city regions and employment areas.

A significant proportion of the population live close to the SRN, making it part of many people's daily lives. Therefore, the network needs to be reliable and efficient to provide a travel choice for people to access jobs and services.

As noted in the recent UK Government Levelling up white paper⁶¹, areas of the North West such as Blackpool suffer from a skills shortage, lower earnings, and lower life expectancy compared to other parts of the country. Areas such as the north and east of Greater Manchester, the Fylde Coast and East Lancashire are noted for having lower levels of employment, and those residents in employment tend to work more locally. These areas are identified as being in most need of 'levelling up' to increase economic growth through access to employment and opportunities.

Transport-related social exclusion (TRSE) is where, due to financial and practical barriers, access to transport is limited, meaning people cannot access goods and services as they would like to. TfN has recently launched a major new research programme on TRSE in the North to develop the evidence base underpinning its *Strategic transport plan*⁶² objectives. This objective aligns with overarching themes of the TfN *Strategic transport plan* on transforming economic performance and improving access to opportunities for all.

The visitor economy is an important contributor to the North's economic output, with an estimated value of £9.4 billion in 201963. Key tourist attractions served by the South Pennines (West) route include the Yorkshire Dales National Park; The Forest of Bowland and Nidderdale Areas of Outstanding Natural Beauty (AONBs); the UNESCO World Heritage Site at Saltaire in West Yorkshire: coastal destinations at Blackpool, Southport and Formby; and other key visitor destinations such as Liverpool Riverside, Chester Zoo, Tatton Park, IWM North in Manchester, and the Royal Armouries in Leeds.

Our network considerations

There are significant areas of planned development in proximity to the SRN. Major proposed developments include sites to the north and west of Preston in the vicinity of the M55, Blackburn in proximity to the M65, St Helens, and housing and employment growth in Huncoat near the junction of the M65 and A56. M66 Junction 3 and M62 Junction 19 will be under future pressure from traffic generated by future growth associated with the Northern Gateway sites designated in the *Places for everyone proposals*⁶⁴.

 $^{61 \ \} HM\ Government\ (2022)\ Levelling\ Up\ in\ the\ United\ Kingdom-\ White\ Paper.\ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052708/Levelling_up_the_UK_white_paper.pdf$

⁶² Transport for the North (2019) Strategic Transport Plan. https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

⁶³ Transport for the North (2021) Visitor Economy and Transport in the North of England. https://transportforthenorth.

com/reports/visitor-economy-and-transport-in-the-north-of-england-final-report/

Within the Wakefield District of West Yorkshire, the M62 suffers from delays and journey time reliability to the east of the Lofthouse Interchange where it intersects with the M1. This section provides access to a range of employment areas adjacent to the SRN in Castleford, Normanton and Pontefract.

Access to and from the northern Fylde Coast and Fleetwood relies on the A585 to connect to the wider regional and national network. Interested parties have stated that currently the A585 suffers from congestion and safety issues at Thistleton, Victoria Road, and Anchorsholme Lane. However, the A585 Windy Harbour to Skippool dual carriageway, which is under construction, is expected to improve the performance of this road.

Major transport hubs are also expected to grow, Manchester Airport through its transformation scheme and HS2 via stations at Manchester Airport and Piccadilly. These developments will need to be supported by an efficient road network, particularly the M56.

Outcomes

- Improved connectivity to jobs and businesses both now and in the future, helping to overcome the 'performance gap' (the difference in productivity, employment rate, age structure and jobs per worker between the North of England and the rest of England)
- Levelling up ambitions supported through sustainable economic growth
- Visitor economy supported as journeys increase to key attractions

DfT's Strategic objectives



Network performance



Growing the economy

Timeframe based on the issues and constraints identified



Significant development locations, key tourist attractions, and areas for levelling up identified

Future Road — Periods Development of planned residential sites expected to occur; potential increase in journeys to key tourist attractions



E. Support safe and reliable trans-Pennine journeys

Objective

Support safe and reliable trans-Pennine journeys on the M62, A628 and A616 to ensure that economic activity can grow across the Pennines

Context

Strategic east-west connectivity via trans-Pennine routes is important to link key economic and population centres across the North of England, which is home to approximately 15 million people and over a million businesses. The M62 is the only continuous east-west motorway across the North of England and carries half of all trans-Pennine road traffic65. This provides a vital economic artery across the nation and transports 10,000 heavy goods vehicles (HGVs) every day. Our interested parties highlighted the importance of eastwest trans-Pennine links, indicating how disruptive closures can be to local businesses and communities.

Addressing east-west connectivity is a priority for TfN and, as noted in the *Strategic transport plan*⁶⁵, a failure to address current connectivity constraints will restrict the growth potential of this corridor and the wider northern economy. Trans-Pennine journeys are often less efficient and reliable than similar length journeys elsewhere in the UK.

There is a broader need to provide enhanced, additional road and rail capacity across the Pennines to help support sustainable economic growth across the North of England. Therefore, this objective should be seen as complementary to strategic rail programmes such as the trans-Pennine rail upgrade through supporting improved connectivity across the North of England.

In addition, improved connectivity offers freight-related opportunities to connect industrial sites, freight hubs and logistics warehouses on both sides of the Pennines. The route serves an especially large concentration of distribution centres in the Liverpool City Region, Greater Manchester, Warrington and Lancashire. The route also serves the ports of Liverpool, Manchester and Fleetwood, and links road to rail in Merseyside, Sheffield, Trafford Park, Stourton (Leeds) and Wakefield, as well as the proposed rail freight terminal at Newton-le-Willows. The route also serves the proposed Strategic Rail Freight Interchanges at Wakefield and Ditton (Widnes).

A safe and efficient east-west connection across the Pennines is important to connect the country to Ireland via Holyhead, and the Continent via the North Sea and Channel ports. It connects to the Liverpool City Region (LCR) Freeport sites, including the customs site at Port Salford.

It also provides connections for HGVs from the North West across the Pennines to the Freeport sites at East Midlands Airport, the Humber and Teesside (via other SRN routes).

Although the M62 is the most well used trans-Pennine route, the A616 and A628 also provide strategic connectivity between Greater Manchester and South Yorkshire. Between them these city regions have a combined population of over four million and over 170,000 businesses, yet connectivity issues are a barrier to future growth. In addition, the M65 also forms part of a trans-Pennine route along with the A6068, A629 and A6120 (which are not part of the SRN), running from Preston to Leeds via Keighley.

The South Pennines (West) route has an important role in facilitating interurban coach services and intra-urban bus services (the latter on urban sections of the network). In addition, the route provides connectivity to several important transport hubs for local, regional and national bus and rail services. The route connects to key railway stations on the West Coast Main Line, and the Trans-Pennine Line. It also connects to Park and Ride sites around Merseyside, Greater Manchester, Chester, Leeds and Sheffield, facilitating onward journeys by bus, rail or tram, thus reducing urban congestion and air pollution.

Our network considerations

In terms of trans-Pennine SRN roads. interested parties have highlighted issues such as inclement weather, road traffic collisions and general network performance on the M62, M67, A628 and A616. During periods of disruption, given the topography of the trans-Pennine roads, this can have consequences for the adioining local road networks which are often of different standards to the SRN. As shown in Figure 24, there are limited high quality eastwest alternatives to the M62 in the event of disruption. This can cause a build-up of delays on local roads, an increase of traffic in urban areas and impacts on public transport networks as vehicles seek alternative routes.

The M67, A628 and A616 provide an important gateway to the Peak District National Park. It is important for the visitor economy that reliable transport links are provided and that visitors can feel safe accessing the park.

The M62 tends to be the dominant trans-Pennine route owing to its capacity, consistent network and constraints associated with other trans-Pennine crossings. This is reflected in its notable HGV movements with approximately 20% of all movements in both directions being HGVs, compared to an average HGV flow of 11.9% for the SRN network in the North of England as a whole. Delays are notable on the M62 in West Yorkshire between Junctions 24 to 27 with congestion at peak times.

Certain sections of the M62 have notable levels of collisions where people have been killed or seriously injured, including the M62 Junctions 26-27 between Leeds and Bradford.

There are peak period delays in both directions along the A628 and A616 particularly at Mottram and further east where the A616 intersects the A629. Figure 24 shows average delay and the A628 and A616 can be seen to experience some of the highest average delays across the route. Delays are predicted to increase along the A628 and A616 into the future.

Peak period delays are notable at the western end of the route, at the terminus of the A67 where the corridor becomes single lane through the settlements of Mottram in Longdendale, Hollingworth, and Tintwistle. The proposed Mottram Bypass, which is currently the subject of a Development Consent Order (DCO), is expected to relieve congestion. Subject to the DCO being granted, construction is due to commence in Spring 2023

Outcomes

- Improved safety for all along trans-Pennine routes
- Improved journey time reliability for trans-Pennine journeys
- More support for the regional economy by improving connectivity for freight and other users across the Pennines, linking the east and west of the country

DfT's Strategic objectives



Improving safety for all



Network performance



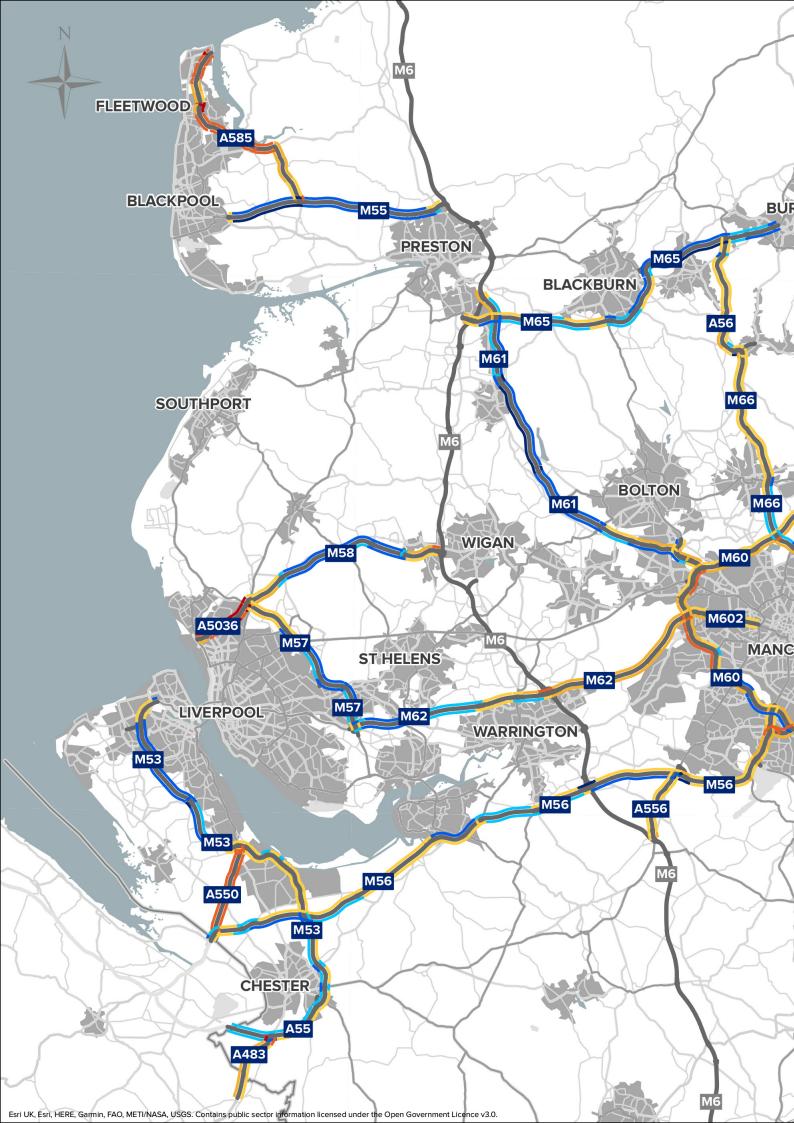
Growing the economy

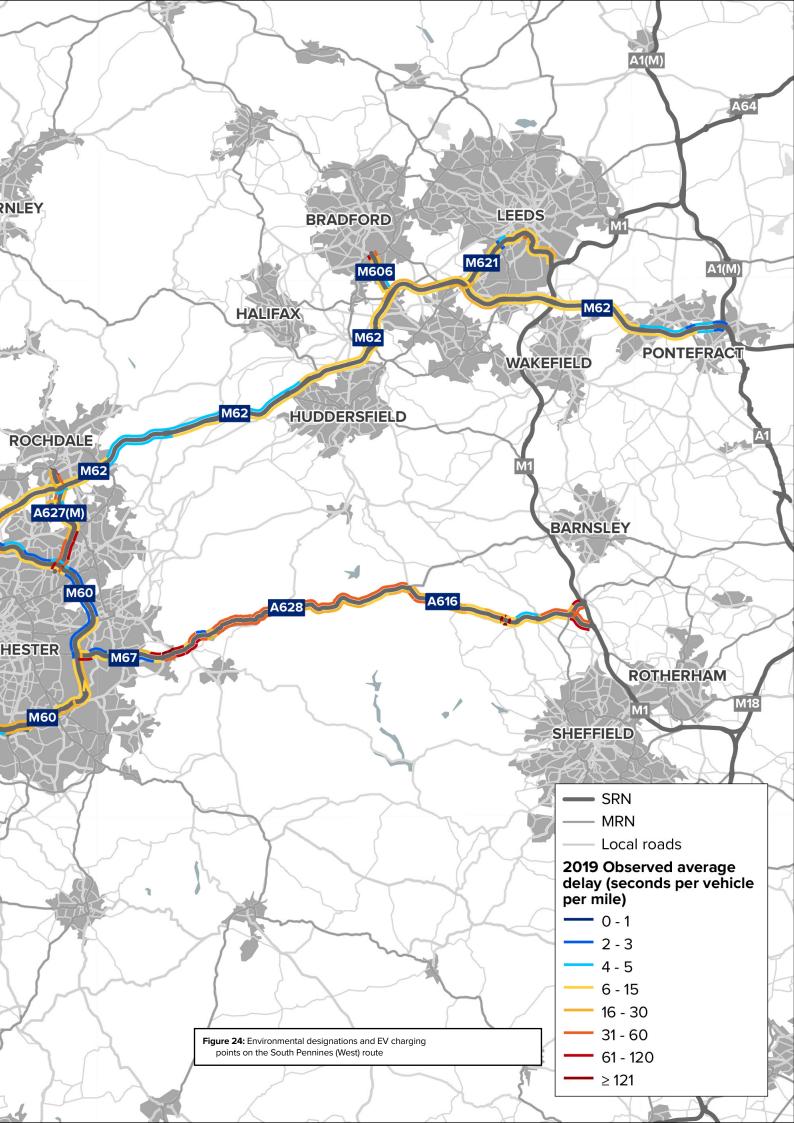


Managing the SRN for the future

Timeframe based on the issues and constraints identified









F. Support reliable strategic connectivity

Objective

Support cross-border connectivity for people and goods between Wales and the North of England with a focus on reliability and safety on the M56, M53, A55 and connecting SRN routes to Wales, promoting the UK and regional economies

Context

The M53, M56, A55 and associated SRN link roads serve as the principal road connections between the North of England and Wales. The economic and business links between North Wales and the Mersey Dee areas of North West England are significant, with an estimated one million journeys per month in terms of cross-border commuter flows⁶⁶. It is estimated that the North Wales and Mersey Dee area has an economy worth approximately £26.5 billion GVA. Cross-border routes are therefore important to maintain this economic link but also to support the potential for an estimated 45,000 to 50,000 jobs along the corridor in the next 20 years.

In Wales, the A55 North Wales Expressway provides strategic connectivity to major employment sites at Deeside and Hawarden and communities along the North Wales coast. The Port of Holyhead is located at the terminus of the A55 and forms a key strategic link for both freight and passenger traffic from Wales and England to Ireland as the second largest roll-on, roll-off port in the UK⁶⁷, with an estimated 700,000 annual HGV movements⁶⁸.

The North Wales coast is also a popular holiday destination. Annual tourism spend for North Wales exceeds £1.2 billion, of which £659 million is from domestic overnight visitors. The North Wales region sees the highest proportion of overnight domestic trips made by British residents to Wales⁶⁹.

The M53 and M56 serve as the principal SRN connecting links to cross-border routes. The M56 provides strategic access between Cheshire and Greater Manchester including Manchester Airport. It experiences high levels of HGV traffic, with between 6,000-7,000 one-way HGVs per day. The M53 serves as an important corridor connecting North Wales to Liverpool via the Mersey Road Tunnels.

It also provides access to the Wirral and economic centres such as Ellesmere Port and Cheshire Oaks. High traffic demands associated with these sites and the wider peninsula impact on journey time reliability between Junctions 5 and 11.

The route provides connectivity to cross-border bus and rail services, including key railway stations on the West Coast Main Line and North Wales Main Line which provide onward connections to North Wales and Scotland. The route also connects to Park and Ride facilities which encourages modal shift for travellers from Wales and Scotland onto public transport to continue their journeys into the region's main urban centres.

This objective aligns with a recommendation from the Department for Transport's *Union connectivity review*⁷⁰ to develop a package of improvements for the North Wales corridor including the A55, M53 and M56 and onward travel to and from Ireland. It is also noted that future cross-border connectivity will be supported by the ongoing North Wales Metro Programme being led by Transport for Wales to enhance rail, bus, and active travel services across North Wales and to improve connectivity to North West England.

⁶⁶ Welsh Government (2017) Moving North Wales Forward Our Vision for North Wales and the North East Wales Metro. https:// gov.wales/sites/default/files/publications/2017-09/north-east-wales-metro-moving-north-wales-forward.pdf

⁶⁷ Welsh Ports Group. https://www.britishports.org.uk/welsh-ports/

⁶⁸ Welsh Government (2020) Statistical Bulletin Sea Transport. https://gov.wales/sites/default/files/statistics-and-research/2021-12/sea-transport-2020.pdf

⁶⁹ Welsh Government (2021) Tourism Profile North Wales (2017-2019). https://gov.wales/sites/default/files/statistics-and-research/2021-03/tourism-profile-north-wales-2017-2019.pdf

⁷⁰ Sir Peter Hendy CBE (2021) Union Connectivity Review Final Report. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036027/union-connectivity-review-final-report.pdf

Our network considerations

The M56 through Cheshire exhibits high traffic volumes, including HGVs, as the main SRN feeder to cross-border routes. There are reliability issues on the M56, including congestion and the risk of flooding from surface water between Junctions 12 and 14.

The A483 / A55 Posthouse junction in Chester is important for onward access to employment sites at Broughton.

Notable areas of growth in the crossborder region include Ellesmere Port and Deeside which both serve as important cross-border employment hubs. The A550 is an important link road between the Wirral and Deeside but suffers from delays and journey time reliability issues.

An important network consideration in the future will be the Welsh Government's Roads review⁷¹. This ongoing review and the outcomes from it will help define the future role of roads in the transport hierarchy (order of priority of different modes of transport) of Wales along with implications for highways connecting England and Wales.

Outcomes

- Improved strategic connectivity between Wales and the North of England
- Improved journey time reliability on cross-border routes to growth areas and key ports

DfT's Strategic objectives



Improving safety for all



Network performance



Growing the economy

Timeframe based on the issues and constraints identified



Current delays identified on some cross-border routes

Future Road -Periods Growth expected in the cross-border region including Ellesmere Port and Deeside, with the potential to reduce reliability for cross-border journeys

⁷¹ Welsh Government February (2022) Roads Review. https://gov.wales/roads-review



G. Support the efficient movement of goods

Objective

Support the needs of the freight industry including major businesses and logistics hubs such as the Ports of Liverpool and Salford, Mersey Freeport, Trafford Park and Manchester Airport, to support the regional and national economy through the efficient movements of goods

Context

The freight and logistics sector plays a key a role in the North of England with over 33% of goods entering the country via Northern ports and 25% of all freight originating and ending in the North of England. It is estimated by 2050 it will be worth over £30 billion and employ more than 500,000 people⁷². Interested parties have raised issues with the limited HGV parking and driver facilities which currently exist along the route. This is particularly an issue on the M57, M58, M56 and the M60 which will increase pressure on existing facilities as potential developments come forward in the region which will likely use these routes for strategic freight journeys.

The South Pennines (West) route connects several important hubs for goods, with the Port of Liverpool and Manchester Airport being some of the largest cargo interchanges in the country. Manchester Airport is the largest airport in the North of England and its World Freight Terminal handles 120,000 tonnes of freight per year⁷³. The Port of Liverpool is the UK's 4th largest maritime hub by tonnage and handles approximately 30 million metric tonnes per year utilising the new Liverpool2 deep water container terminal74. With government ambitions for freeports it is expected the port will be supplemented with a network of freeport sites along the River Mersey. Trafford Park industrial area is also located in the region and supports around 1,300 businesses and employs 35,000 people⁷⁵.

As noted in the *TfN Freight and logistics strategy*⁷⁶, the Manchester Ship Canal could play an important role transporting goods to and from ports at Runcorn, Warrington, Irlam, and Salford with onward road transport provided by the parallel M62 corridor. Within the North West there are also future plans for freight sites at Port Wirral (Eastham and Ellesmere Port Docks), Port Cheshire (Bridgewater Paper Mills), Port Ince (Protos Energy Park), Port Weston, Port Runcorn, Port Warrington, Port Irlam, and Port Salford.

Sizeable inland logistics hubs are also located along or near the route which rely on the SRN for goods to reach their end destination or for onward transit such as the Omega Business Park in Warrington (M62), Haydock (A580) Knowsley (M57), and Cross Green, Leeds (M1).

The SRN plays a crucial role in ensuring goods from these cargo hubs can be transported within the region and to reach rail freight interchanges, local distribution centres, key employment sites and consumers. A high proportion of HGVs is present along the M62 between Leeds and Liverpool, comprising 20% of all vehicles between M60 Junction 3 and Huddersfield, and there are flows of approximately 6,000 HGVs per day in both directions on the M56 in Cheshire.

The TfN Freight and logistics strategy outlines several proposed freight objectives which will align with the TfN pan-Northern Transport Objectives. The freight objectives include reducing the number of unplanned closures of the Major Road Network; the promotion of measures to improve the flow of traffic, and journey time reliability, while reducing air and noise pollution and congestion; and supporting close-to-net zero transport of goods.

⁷² Transport for the North (2021) Draft Freight and Logistics Strategy. https://transportforthenorth.com/wp-content/uploads/Freight-Strategy-Master-Consultation-version-v0.1.pdf

⁷³ Manchester Airport website. https://www.manchesterairport.co.uk/

⁷³ Marichester Airport Website. https://www.marichesterairport.co.uk/
74 Depart ment for Transport (2022) UK Government Statistics: Port and domestic waterborne freight data tables. https://www.gov.uk/government/statistical-data-sets/port-and-domestic-waterborne-freight-statistics-port

⁷⁵ Trafford Council (2022) Business Locations Traffic Park Brochure. https://www.trafford.gov.uk/business/locations-for-business/docs/trafford-park-brochure.pdf

⁷⁶ Transport for the North (2021) Draft Freight and Logistics Strategy. https://transportforthenorth.com/ wp-content/uploads/Freight-Strategy-Master-Consultation-version-v0.1.pdf

Our network considerations

Figure 25 shows the locations of freight distribution centres, Freeport sites and Ports on the route, along with the current average daily HGV flows. Key points on the SRN used by HGVs and freight traffic which suffer from congestion and safety issues include the M62 at Junction 26 in West Yorkshire and the A616 and A628. Similarly, delays occur on the approaches to key freight hubs along the A5036 near the Port of Liverpool and along the M60 between M60 Junctions 7 and 15 which links into Trafford Park and Port Salford.

The M56 through Cheshire exhibits high traffic volumes and HGV demands, acting as the main feeder to cross-border routes. There are performance issues between Junctions 12 and 14 along with sections being at risk of surface water flooding in the vicinity of Junction 12 at Runcorn and Junction 15 with the M53. Interested parties particularly highlighted these two motorways as important for freight distribution to key hubs in the region, with further freight growth expected.

On approach to Manchester Airport in south Manchester, there is existing congestion at M60 Junction 3 and on the M56 from Junction 5 past the airport to the M60.

Consideration is required for existing HGV parking and associated driver welfare facilities. There are limited motorway services in rural areas on the trans-Pennine routes of the M62 between Manchester and Leeds, the A628 and A616, as well as the M60 around Manchester and M58 past Skelmersdale.

A key issue for interested parties was planning for the growth and routing of future freight journeys associated with freight developments such as the Mersey freeports, freight sites and port expansion (for example, Salford) on the A5036, M56, M57 and M62.

Outcomes

- Improved reliability of freight journeys, enabling goods to be transported more efficiently
- Increased productivity of businesses reliant on goods
- Growth ambitions for the freight sector accommodated

DfT's Strategic objectives



Network performance

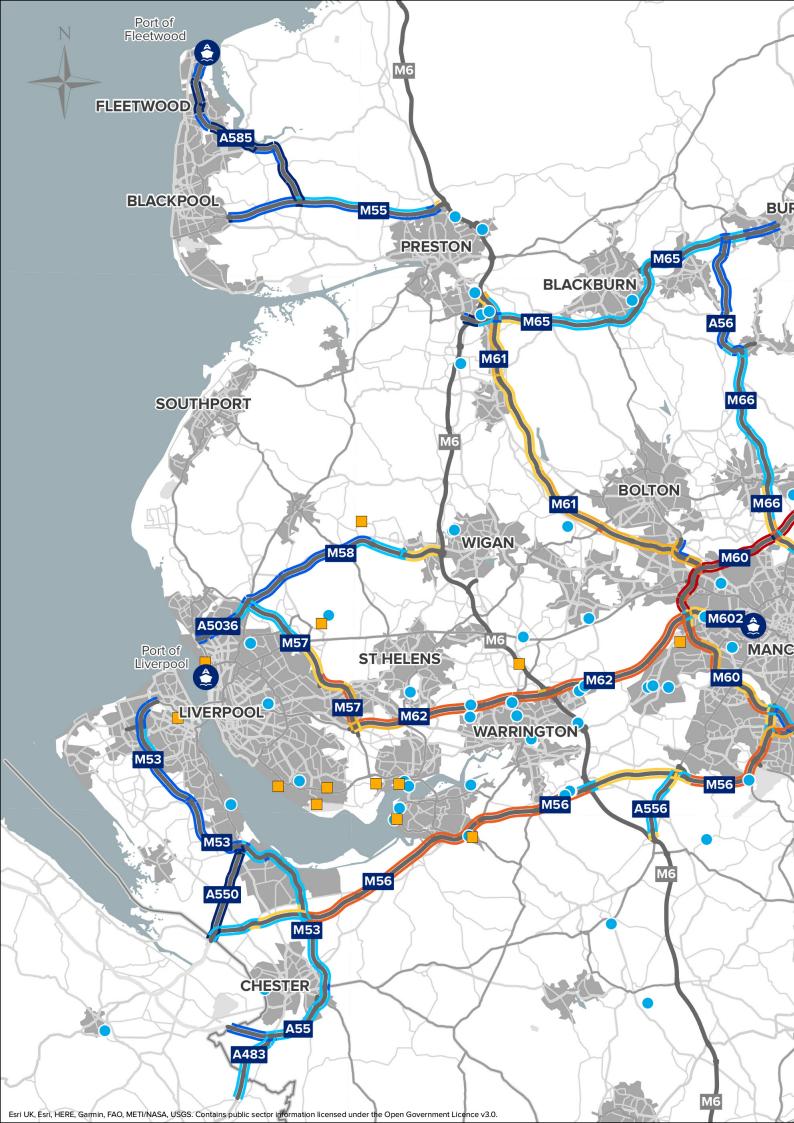


Growing the economy

Timeframe based on the issues and constraints identified



Future Road — Periods Planned growth such as Mersey Freeports and port expansions are likely to exacerbate current issues



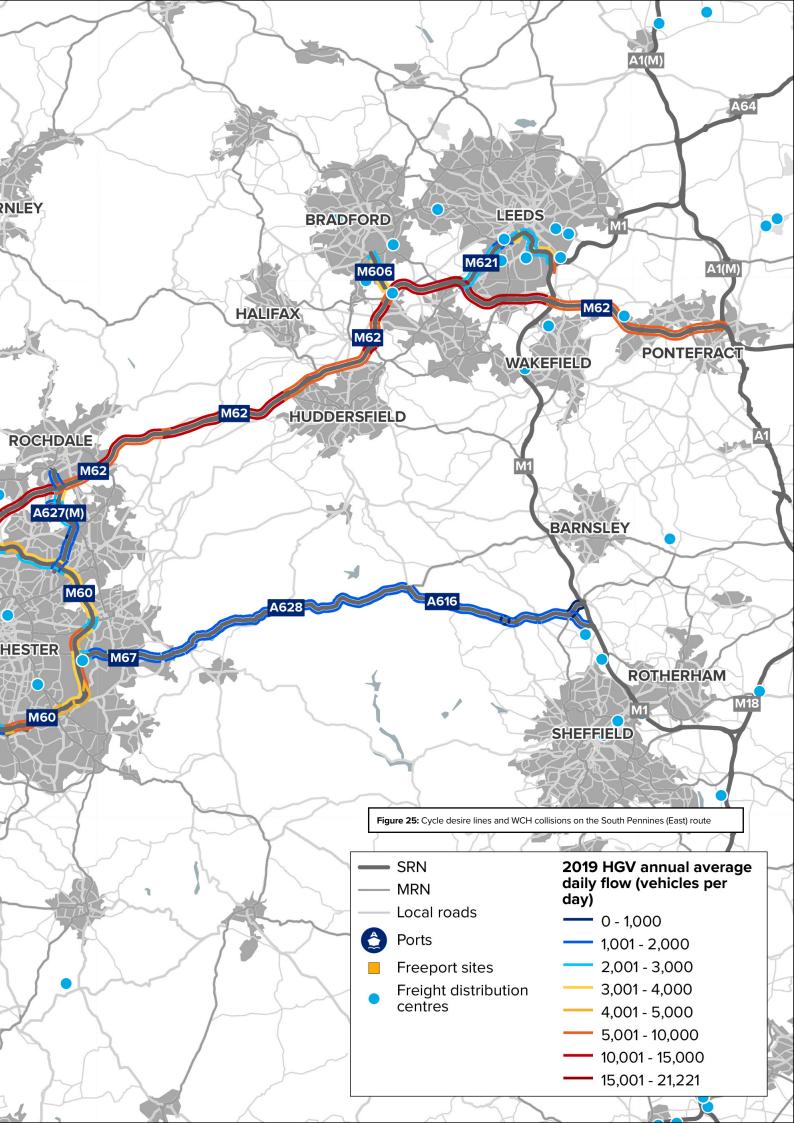


 Table 2: Evidence used to inform objectives

Ob	jective	Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified
Α	Improve safety for all road users whilst reducing severance between communities Benefit road users and local communities by providing safe journeys on the route, particularly focusing on vulnerable road users where they interact with the SRN in urban areas	A5036 in Sefton M67 east of Manchester M66 through Bury M62 near Irlam A623 near Oldham A55 near Chester A628 through Hollingworth	Improving safety for all Interested parties highlighted safety concerns on sections of the route at locations involving vulnerable road users, including the A5036 in Sefton, the M67 East of Manchester and the M66 through Bury.	DfT has identified "Improving safety for all" as a key priority in its Planning ahead for the strategic road network. TFGM's Transport strategy 2040 Policy 15 states they will "deliver initiatives to improve highway network safety, with a focus on walking and cycling"	Improving safety for all A notable proportion of collisions involved walkers, cyclists, or horse riders on the: • A5036 • M67 • M66 through Bury • M62 near Irlam • A623 near Oldham • A55 near Chester; and • A628 through Hollingworth.
В	Support effective local integration with sustainable transport modes Support effective local integration with sustainable transport modes in urbanised areas such as Greater Manchester, Merseyside, Lancashire and West Yorkshire, to minimise the impact of short distance journeys and benefit the environment	M62 in West Yorkshire M621 in Leeds A5036 in Sefton M67 in Manchester M60 in Stockport A663 in Oldham	Improved environmental outcomes Interested parties highlighted the need for integration with modes for first and last mile journeys as well as encouraging integration with local networks and public transport.	Encouraging active modes for shorter, local journeys in line with TfN's Decarbonisation strategy which sets out a decarbonisation trajectory of a 56% reduction in emissions by 2030 to be achieved through mode-shift and demand reduction. The DfT Planning ahead for the strategic road network report recognises the interaction of the SRN with other modes and the role of the SRN supporting other modes of travel	Improved environmental outcomes The SRN creates a barrier by physically severing walking/cycling routes, on the: • M62 in West Yorkshire, • M621 in Leeds • A5036 in Sefton and • M67 in Manchester. The SRN performance hinders the access and reliability of public transport on the M62 in West Yorkshire, the M60 in Stockport and the A663 in Oldham.

Chapter 4 Views raised by our customers and neighbours Integration with our Objective Extent partners' strategies and priorities Challenges and issues identified Be a better • M60 in Improved environmental outcomes There is a national Improved environmental commitment to reducing neighbour by Manchester outcomes Interested parties have raised air safeguarding the emissions from transport, • M62, M6 and quality issues where the SRN passes environment which is supported M56 around through conurbations including in TfN's Maior Roads Be a better Liverpool, Manchester (particularly Warrington report, DfT's Planning neighbour by the M60), Leeds, and the M62, • M61 in Bolton ahead for the strategic safeguarding M6 and M56 around Warrington. • M66 near road network report the environment Burv and the Electric Vehicle and reducing Infrastructure Strategy. • A585 through the impact on air Fleetwood TfN's Transport quality and noise, where possible. decarbonisation • A627(M) to where the SRN strategy commits to Oldham passes through a regional near-zero • Δ616 in urban areas carbon surface transport Stocksbridge such as Greater network by 2045. • M57 at Manchester, West Yorkshire, and Liverpool Mersevside M62 in Kirklees and South Leeds M621 in South Leeds Promote • A585 to Growing the economy The area features sustainable Fylde Coast prominently in the Economic growth was raised by

economic growth, the visitor economy and levelling up in the North

Promote sustainable economic growth, the visitor economy and levelling up in the North through efficient connectivity to both existing and future housing and employment sites in Preston, the Fylde Coast, East Lancashire, Greater Manchester, the M57 corridor in Liverpool. St Helens, and the Wakefield District including the towns of Pontefract. Normanton, and Castleford

- M55 at Preston
- M65 at Blackburn
- M66 Junction 3 and M62 Junction 19
- M62 near Castleford, Normanton and Pontefract
- · M56 around Manchester Airport

many interested parties, including the identification of a wide variety of developments planned in the area which need to be supported by a reliable SRN. Sites included:

- Sefton housing sites
- · Places for everyone sites across Greater Manchester
- · Interface with HS2 and Northern Powerhouse Rail
- Wirral Waters and Birkenhead regeneration
- · Warrington Urban Extension

Department for Levelling Up, Housing and **Communities** Levelling Up White Paper.

In line with TfN's research programme on Transport-Related Social Exclusion in the North to improve inclusivity and access to opportunities for all. TfN's Strategic transport plan also has an overarching theme of transforming economic performance and improving access to opportunities for all.

As large parts of the South Pennines (West) route intersect urban areas there are many locations where there are receptors within 100 metres of the route which may be more likely to experience adverse air quality impacts. This is particularly evident around Greater Manchester on the M60, M602, M61 to Bolton, M66 to Bury and the A627(M) to Oldham. Further from Manchester, the SRN is close to receptors in Fleetwood, near Preston. Liverpool, Ellesmere Port, Leeds and Sheffield amongst others.

There are receptors within 300 metres of the route which may be more sensitive to high noise levels, particularly on the M62 west of Greater Manchester. north of Huddersfield and south of Leeds, and the north-west section of the M60.

Growing the economy

There are significant areas of planned development in proximity to the SRN. Major proposed developments include:

- to the north and west of Preston in the vicinity of the M55
- Blackburn in proximity to the M65
- · St Helens impacting on M62 Junction 7 and 8
- Huncoat near the junction of the M65/A56.
- M66 Junction 3 and M62 Junction 19 (growth associated with the Northern Gateway sites designated by the Places for everyone proposals)

Growth is expected at Manchester Airport through its transformation scheme and the proposed new HS2 which will need to be supported by the M56.

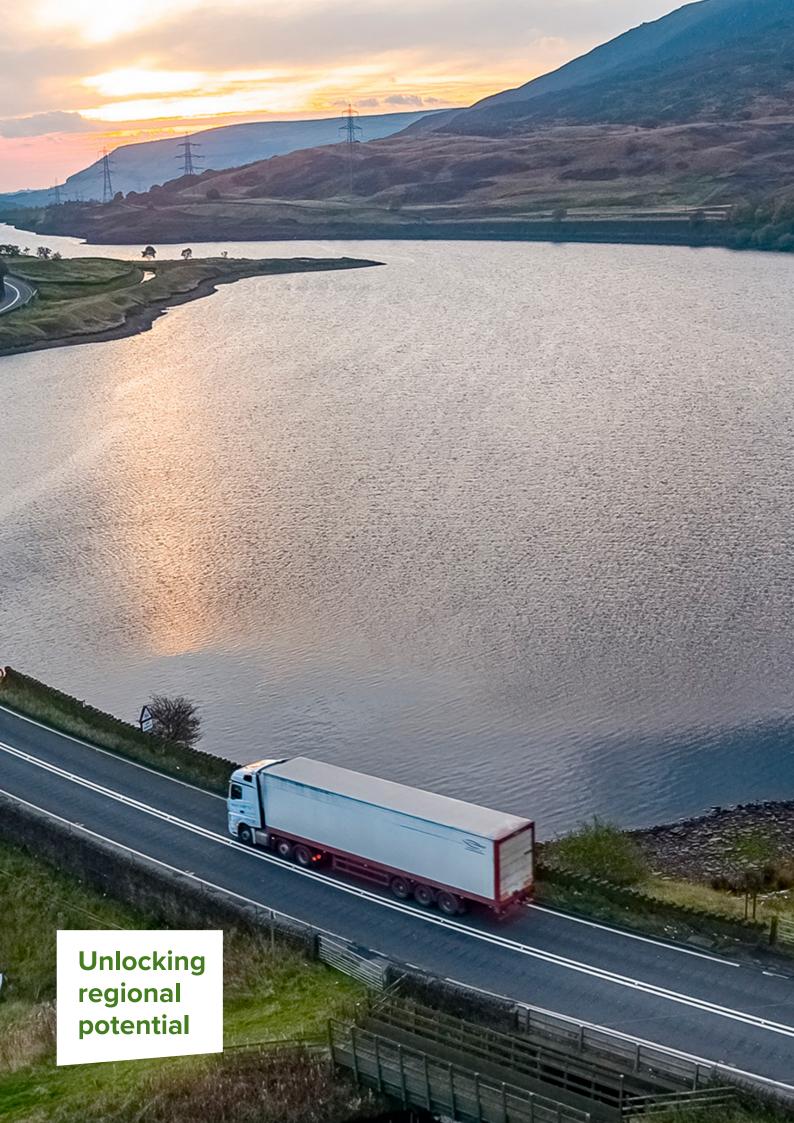
Network performance

Within the Wakefield District, the M62 suffers from delay and journey time reliability to the East of the Lofthouse Interchange.

Chapter 4 Views raised by our customers and neighbours Integration with our Objective Extent partners' strategies and priorities Challenges and issues identified Support safe and • M62 from **Network performance TfN**'s Strategic transport **Network performance** reliable trans-Manchester plan includes addressing The SRN is sensitive to the impacts The A616/A628 provides strategic Pennine journeys to Leeds east-west connectivity as of incidents on the trans-Pennine connectivity between Greater a top priority, recognising • M67, A628 Support safe and network. Interested parties have Manchester and South Yorkshire that a failure to address reliable transand A616 highlighted issues such as inclement however the performance is poor current connectivity Pennine journeys weather, road traffic collisions and with delays and poor reliability constraints will restrict the on the M62, general network performance on especially in the winter months. growth potential of this A628 and A616 the M62 and M67, A628 and A616. There are limited east-west corridor and the wider to ensure that alternatives to the M62 in the northern economy. economic activity event of disruption which can Complementary to can grow across cause congestion on local roads. the Pennines strategic rail programmes Growing the economy such as the trans-Pennine rail upgrade through On the M62 20% of all movements in both directions are HGVs. supporting improved There are notable delays connectivity across the between Junctions 24 to 27. North of England. Support reliable • M53 between **Network performance** Aligns with a **Network performance** strategic Junction recommendation from the There is a need to improve Locations limiting the connectivity DfT's Union connectivity 5 and 11 connections to North Wales efficiency of cross-border review to develop a A550 Support including improving journey connectivity include the: package of improvements time reliability on the M56. cross-border between • M53 between Junctions for the North Wales connectivity for Wirral and Managing and planning 5 and 11 (includes the corridor including the people and goods Deeside the SRN for the future Cheshire Oaks access) A55, M53 and M56 and between Wales • M56 through · A483 / A55 Posthouse Increased "staycation" tourism onward travel to and from and the North of Chester traffic into North Wales with Junction, which is important for Ireland, Future cross-England with a onward access to employment border connectivity will be associated congestion focus on reliability supported by the ongoing sites at Broughton and and safety · Connectivity from Wirral, Chester Business Park North Wales Metro to and through Chester to on the M56, Programme being led North Wales is important. • A550 acts as an important M53, A55 and by Transport for Wales link road between the connecting SRN · Consideration should be given to enhance rail, bus, and routes to Wales, Wirral and Deeside. to the Welsh Government's Road active travel services promoting the review and potential upgrade of **Network performance** across North Wales and UK and regional junctions on the M53 and A494. The M56 through Cheshire is to improve connectivity economies the main SRN feeder to crossto North West England. border routes. Specific challenges along the M56 include: • a notable proportion of HGVs · reliability issues · congestion · risk of flooding from

surface water

Objective		Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified	
G	Support the efficient movement of goods Support the needs of the freight industry including major businesses and logistics hubs such as the Ports of Liverpool and Salford, Mersey Freeport, Trafford Park and Manchester Airport, to support the regional and national economy through the efficient movements of goods	M62 at Junction 26 A616 and A628 A5036 near Port of Liverpool M60 between M60 Junction 7 and Junction 15 M56 through Cheshire M60 Junction 3 M56 Junction 5 past Manchester Airport to the M60 M62 between Manchester and Leeds M58 past Skelmersdale M57 in Liverpool	Managing and planning the SRN for the future • Limited HGV parking and driver facilities along the route, particularly on the M57, the M58, M56 and the M60. • The need to plan for the growth of future freight developments and journeys.	The TfN Freight Strategy states the importance of the M62 corridor in transporting goods to and from ports at Runcorn, Warrington, Irlam, and Salford. It outlines several proposed freight objectives which will align with the TfN pan-Northern Transport Objectives.	Congestion and safety issues at locations which are key to freight traffic, including the: • M62 at Junction 26 • A616/A628 • A5036 near Port of Liverpool • M60 which links to Trafford Park, Port Salford and Manchester Airport. Growing the economy Future development is expected at Port Wirral (Eastham / Ellesmere Port Docks), Port Cheshire (Bridgewater Paper Mills), Port Ince (Protos Energy Park), Port Weston, Port Runcorn, Port Warrington, Port Irlam, and Port Salford.	



O7 Locational areas for consideration and potential collaboration

We know the importance that investment in our network can make locally, regionally and nationally. It can make areas more attractive for inward investment, unlock new sites for employment and housing and facilitate regeneration. It can also ease congestion, improve our customers' journeys and support environmental improvements.

In this chapter, we outline our proposed locational areas for further consideration, which will be explored in future road periods to achieve the South Pennines (West) route objectives and the Department for Transport's (DfT) six strategic objectives. These do not represent a commitment as funding will be considered as part of the development of the third *Road investment strategy* (RIS) and other investment processes.

Furthermore, they do not represent a final list of our potential investment locations and will be refined in our final Route strategy overview report, published alongside our RIS3 *Strategic business plan* and *Delivery plan* for 2025-2030.

Alignment with government objectives

Route strategies are aligned to the DfT's six strategic objectives and will also contribute to the RIS3 performance metrics set as part of the RIS-setting process.



Improving safety for all

Safety is our top priority and we are committed in the second road period (2020-2025) to reducing the number of road users killed or seriously injured on the strategic road network (SRN), by 50% (from the 2005-2009 baseline) by the end of 2025, with a long-term vision of zero harm. This includes our contractors adopting a Safe System approach to ensure roadworker safety. Our operational and strategic planning teams continue to work to prevent incidents from occurring and are focused on reducing incident severity through a package of activities promoting safer roads, safer people, safer vehicles and coordinated collision response. We are also learning from other organisations and interested parties about what works best and are collaborating with them to improve safety for all. Safety is embedded in our study programme to inform future investment priorities for RIS3 and beyond.



Network performance

Our operational and strategic planning teams continue to explore what steps can be taken to make journeys more reliable and not subject to delay, as well as safer, while protecting and respecting the environment. This involves working with our partners, such as sub-national transport bodies and other operators including Network Rail, to consider interventions to improve network performance. We recognise the SRN does not stand alone from other transport infrastructure, in particular local roads, and users expect journeys to be seamless regardless of transport mode or ownership. Through our study programme we will identify appropriate types of intervention recognising the need for integration, environmental and technological consideration balanced against costs.



Improved environmental outcomes

We are continuously working to ensure our roads work more harmoniously with the communities that live alongside them and the environments that surround them. We embed environmental considerations into all our activities, ranging from managing and operating the network to infrastructure design, scheme delivery and ensuring we meet our wider statutory obligations. In developing our programmes, we will consider a broad range of interventions, including technology-enabled solutions and integration with other operators' networks, as we understand the gravity of the climate situation and are committed to playing our part in reducing carbon emissions. Our carbon policy commitments are:

- as a net zero Britain will still travel by road in 2050, we will ensure we can support a properly maintained, future-ready road network that is fitted to support the transition to electric vehicles, and is key to reducing emissions from transport
- this programmatic coordinated delivery approach will act as a catalyst for: production management, off-site construction, reducing network disruptions, unlocking economies of scale, and supporting delivery of net zero targets
- it will also help us understand how interventions should be delivered, either through grouping or as standalone projects
- we expect this approach will create opportunities for increased efficiency, and enable us to deliver more within our funding. We also expect this approach to help us support the Government's long-term aims for the nation, such as contributing to net zero carbon, and social values

□□□□ Growing the economy

We recognise that the strategic road network is a significant economic asset for the UK and is essential for people to access jobs, and for businesses to move goods around the country. Our regional planning teams continue to work closely with local planning authorities to support sustainable growth and development aspirations, including by trying to improve integration between transport modes. We also continue to work with businesses to understand their needs, such as quality lorry parking facilities and ensuring reliable and resilient integration with ports, airports and rail terminals to access global markets. The SRN also has a role in achieving the Government's moral, social and economic programme of levelling up the United Kingdom. Our forward intervention programme will seek to support the growth agenda where possible and appropriate.

Managing and planning the SRN for the future

We recognise that our network is complex and varied and requires careful stewardship to keep it in good condition. Our ongoing maintenance programme is essential to safety and keeping our roads open, while our renewals activity allows us to maintain, safeguard and modernise all our assets, and provide increased resilience in relation to extreme weather. Research and data help us to understand what our network needs over the short and long term, and to inform our planning. We continue to be committed to delivering our work in a way that minimises disruption to our customers and maximises value to taxpayers.

A technology-enabled network

In designing our intervention programmes, we will consider our Digital Roads vision for how we harness data, technology, and connectivity to improve the way the SRN is designed, built, operated and used for the future. This will enable safer journeys, faster delivery and an enhanced customer experience for all. The vision is structured around three themes: Design & Construction, Operations, and Customers. The approach embeds digital, data and technology across the intervention programmes, providing the building blocks for a digital future for roads.

Programmatic approach to investment

As part of our new route strategies process, we are developing a more programmatic approach to how we develop our investment plans. This will help us determine the complexity of potential investments and what high value interventions are more deliverable.

This programmatic coordinated delivery approach will act as a catalyst for; production management, off-site construction, reducing network disruptions, unlocking economies of scale and supporting delivery of net zero targets.

It will also help us understand how interventions should be delivered, either through grouping or as standalone projects.

We expect this approach will create opportunities for increased efficiency, enable us to deliver more within our funding and in collaboration with other investment programmes.

We also expect this approach to help us support the Government's long-term aims for the UK, such as contributing to net zero carbon.

Figure 26 shows how the route objectives defined in the route strategies, along with the associated cluster analysis of performance metrics, help to refine an initial set of locations for future investigation. Further iterations of sifting as information and analysis evolves will help to inform the Government's setting of RIS3 (2025-2030) and beyond. The input from route strategies early on in this process will ensure that all schemes which are ultimately taken forward align with the route objectives.



Figure 26: Process to identify potential investment on the network

Types of investment and funding sources

There are a variety of funding streams that enable us to invest in our network and that form part of our investment planning. These streams are summarised in the following section, along with the current committed schemes associated with each funding source for the South Pennines (West) route. Potential funding sources include:

- RIS Funding a funding stream administered by National Highways, set by the Government's publication of the RIS:
 - RIS2 schemes are committed by DfT to be delivered as part of the Road investment strategy, as outlined in the following RIS2 table. The statement of funding confirmed that £24 billion will be provided during the second road period (2020-2025) to deliver this work, noting that some RIS2 commitments will continue into the third road period

- RIS4 (2030-2035) pipeline schemes, previously earmarked for RIS3 (2025-2030), will continue to be developed in line with our statutory processes and considered for inclusion within RIS4. These are potential future schemes originally identified by National Highways and set as part of RIS2 by DfT. These schemes are not currently committed for construction.
- maintenance funding and asset renewal –
 within National Highways there is funding set
 aside for network maintenance and renewing
 ageing assets across the network. The budget
 for these is included in the RIS settlement
- potential targeted funding streams may be made available to National Highways during the third road period as part of the wider RIS settlement, focused on making improvements that will make the biggest difference and deliver lasting benefits
- other external sources of funding delivering infrastructure enhancements on, or close to, the SRN including central government, third parties, private sector developments, and inward investment

RIS2

The following schemes are committed for the second road period (2020-2025) on the South Pennines (West) route:

Scheme number	Scheme	Description	Start of works	Open for traffic			
Committee	Committed for the second road period (2020-2025)						
1	A585 Windy Harbour to Skippool ⁷⁷	A new offline bypass of the village of Little Singleton, reducing the impact of traffic on the local community and removing a major bottleneck on the main road to Fleetwood.	Started	2023-24			
2	M56 Junctions 6 to 8 ⁷⁸	Upgrading the M56 to All Lane Running smart motorway between Junction 6 (Manchester Airport) and Junction 8 (A556).	Started	2022-23			
3	M60/M62/M66 Simister Island Interchange ⁷⁹	Improvement of the intersection between the M60 (Junction 18), M62 and M66 north of Manchester that improves the traffic flow on the M60.	2024-25	-			
4	A5036 Princess Way ⁸⁰	A proposed bypass will take traffic away from communities by Church Road and Dunnings Bridge Road, reducing congestion at junctions and along local roads.	Deferred to RIS3 (2025-2030) to allow time to ensure stakeholders' views are fully considered	-			
5	Mottram Moor Link Road and A57 Link Road ⁸¹	The creation of two new link roads at the western end of the A57/A628 route, to provide a dual carriageway bypass around Mottram in Longdendale.	2022-2023	RP3			
6	M621 Junctions 1 to 7 ⁸²	Easing congestion along the M621 by creating additional lanes at the Junction 2 roundabout and Junction 3 westbound, as well as between Junctions 2 and 3 where the existing hard shoulder will be converted into a lane for traffic.	Started	2024-25			
7	M62 Junctions 20 to 25 ⁸³	Improving the M62 motorway between junctions 20 to 25 by upgrading it to an 'all-lane running' smart motorway.	Cancelled	-			
8	M62 Junctions 25 to 30	Upgrade dynamic hard shoulder running to all lane running	Cancelled	-			

⁷⁷ National Highways, A585 Windy Harbour to Skippool. https://nationalhighways.co.uk/our-roads/north-west/a585-windy-harbour-to-skippool/

⁷⁸ National Highways, M56 junction 6 to 8 smart motorway. https://nationalhighways.co.uk/our-roads/north-west/m56-junction-6-to-8-smart-motorway/

⁷⁹ National Highways, M60 Junction 18 Simister Island Interchange. https://nationalhighways.co.uk/our-roads/north-west/m60-junction-18-simister-island-interchange

 $^{80\} National\ Highways, A 5036\ Port\ of\ Liverpool\ access.\ \underline{https://nationalhighways.co.uk/our-roads/north-west/a 5036-port-of-liverpool-access/liverpool\ access/liverpool\ access/liverp$

⁸¹ National Highways, A57 Link Roads. https://nationalhighways.co.uk/our-roads/north-west/a57-link-roads/

⁸³ National Highways, M62 junctions 20 to 25. https://nationalhighways.co.uk/our-roads/north-west/m62-junction-20-to-25-smart-motorway/

RIS4 pipeline

The following uncommitted schemes are in the pipeline for consideration for inclusion in the fourth road period (2030-2035) on the South Pennines (West) route.

Scheme number	Scheme	Description
1	Manchester South East junction improvements	Scheme description in development
2	M1/M62 Lofthouse Interchange ⁸⁴	Increase the interchange's capacity to ease traffic flows and reduce accidents. By improving connectivity, the proposals would also support West Yorkshire's development aspirations by enabling wider growth in employment and housing
3	Manchester North West Quadrant ⁸⁵	Reducing congestion around the north-western side of Greater Manchester, adding capacity and improving journey times to help separate local traffic from long-distance traffic, enhancing connectivity, supporting economic growth and, improving the overall experience for road users

Other notable schemes

A585 Norcross roundabout: there is a recently completed scheme at the A585 Norcross roundabout. This scheme supports a wider strategy to resolve congestion in the area and improve road user experience. It also provides benefits for walkers and cyclists who are able to use new controlled crossing facilities. The scheme opened to traffic in April 2020.

M62 Junction 19 link road: there is a new link road at Junction 19 of the M62 which is being constructed to link major new housing and employment sites in the area to the existing network. This scheme is being delivered by third parties with a funding contribution from National Highways. It is expected to open for traffic in 2022-2023.

Strategic studies, trunking and de-trunking

National Highways undertakes strategic studies to analyse complex problems that may need to be addressed over multiple road periods. Strategic studies often involve close working with key partners, including sub-national transport bodies and DfT, and can be used to help to decide on whether to fund any proposed improvements in the future.

National Highways were asked to explore changes to the SRN to ensure the network aligns with RIS2 strategic priorities reflected in the Strategic business plan⁸⁶. This Plan relates to improving connections between main urban centres, to international gateways, to peripheral regions (for levelling up) and strategic cross-border routes (to strengthen union connectivity). It included a commitment to explore potential asset ownership changes between ourselves and local highway authorities that could be implemented no earlier than the start of RIS3. The DfT have produced a shortlist of eighteen trunking and two de-trunking candidates, identified following the draft RIS2 public consultation in 2018, for us to assess desirability and viability of asset transfer. De-trunking is the process of returning a National Highways road to local highway authority control and visa versa for trunking. These candidates were put forward by a range of external stakeholders including local authorities, Local Enterprise Partnerships and chambers of commerce, then shortlisted by DfT. There is ongoing work to review the assessment evidence and recommendations, after which government ministers are expected to announce the candidates that will progress to the detailed development stage, which will be led by National Highways and incorporated in the forward study programme and wider RIS3 process.

The Trans-Pennine Connectivity, Safety and Resilience Study, previously known as the Trans-Pennine Tunnel, is investigating potential improvements on the A628 and A616 trans-Pennine sections. Manchester and Sheffield are not connected directly by a high-quality road, however, the presence of the Peak District National Park means that any action to correct this must take full account of potential environmental consequences. We will work in partnership with Transport for the North, local highways and National Park authorities to finalise whether high-quality but cost-effective connections can provide an appropriate balance between the levelling up of the economy and the environmental impacts on a valued and protected landscape.

Locations identified through route strategies for future investigation

National Highways undertakes route studies to investigate problems at identified locations across the network. In addition, locations of interest have been raised by Interested Parties through the route strategy engagement process.

To supplement this, as part of the route strategies process outlined in this document, National Highways has used cluster analysis to identify further locations for future investigation and undertaken an exercise to align these locations to the route objectives for the South Pennines (West) route.

The cluster analysis allows decision-makers to easily identify which sections of roads should be prioritised for further investigation. The assessment is a two-part process. In the first part, for each route strategy, the objectives are defined geospatially. This allows us to identify over which sections of the SRN the objectives converge, therefore quickly identifying the links that help us to achieve the maximum number of objectives. The second part of the assessment uses our understanding of the network from performance data to allow a further filter to remove links that are already performing well. This results in a filtered shortlist of SRN links or sections of roads that should be prioritised for further investigation. These have been grouped into areas of interest where they are in close proximity geographically. Should a location not be identified for further investigation as part of this initial process, this does not preclude it from being added to the list of areas of interest in the future.

The use of regional traffic models for the 2031 scenario has helped identify locations for further investigation based on the forecast network operation in the future to plan the future of the network beyond the current RIS3 cycle. Typically, this has resulted in the extension of some areas of interest, as shown in the table of locations overleaf. In the final publication version of the Route strategy overview reports, additional data from the regional traffic models will also be considered to enable the identification of locations for further investigation in future road periods.

Further development of any proposed mitigation at each location will follow National Highways' internal processes. In order to fund any proposed improvements, National Highways will draw on the funding streams as previously identified.

Route strategies and regional traffic models

The route strategies have utilised the National Highways regional traffic models (RTMs) to identify future performance and delay on the network, which is the best data currently available.

Working with key stakeholders and interested parties, we have set out a number of potential candidate intervention locations which may require further development upon validation to check their alignment with the route strategy objectives.

New national traffic growth forecasts have now been released by the Department for Transport and as we carry out this exercise, we will consider how updated growth forecasts will impact on the identified areas for further investigation.

Alongside these more traditional road improvement schemes we will also need to support and encourage modal shift through transport integration and embrace emerging technologies to improve the performance of the network.

The impact on carbon and the environment will be central to all our thinking on which interventions are proposed to be taken forward.

Identified locations for future investigation and collaboration

Our analysis has set out the potential constraints and opportunities across the network and, in parallel, we are developing a RIS programme that is more resilient to changing priorities, and responsive to the environmental agenda.

We have a wide range of potential intervention types within our toolkit, including both non-road and road-based solutions, to help us achieve our objectives. These could include:

Potential non-road interventions:

- Supporting wider network initiatives to improve the customer experience, such as provision and enhancements of facilities for the freight industry and electric vehicle charging
- Exploiting technology to improve safety and network operation, including roll out of connected corridors
- Delivering a portfolio of measures to encourage active travel
- Making environmental enhancements to minimise the impact of the SRN on surrounding communities
- Encourage modal integration and influencing demand for vehicles, particularly at interfaces with urban centres

Potential roads interventions:

- In addition to Lower Thames Crossing we will continue to progress those remaining schemes in RIS1 and RIS2⁸⁷ that will not be in construction at the end of RP2, as well as the RIS4 pipeline. All these schemes will be kept under constant review
- The pipeline schemes announced in RIS2 is the most developed portfolio of potential interventions and we propose a renewed focus to ensure schemes: are resilient with an acceptable value for money; consider the Carbon Management in Infrastructure standard; are affordable, with lower cost options being developed; are environmentally responsible; are deliverable; and, have strong stakeholder support and / or are a good strategic fit with other government strategies e.g. ports, levelling up

We will also develop a significant portfolio of smaller safety and congestion interventions that improve localised issues as well as route treatments that address comparably poor safety performance (International Road Assessment Programme 1-star and 2-star roads) along selected all-purpose trunk road corridors.

Table 3 and Figure 27 show the areas identified for further investigation, where interventions have the potential to help us achieve the majority of route objectives.

In line with National Highways' internal processes, we will draw upon a wide range of funding streams, further developing any proposed mitigation to the issues identified, exploring:

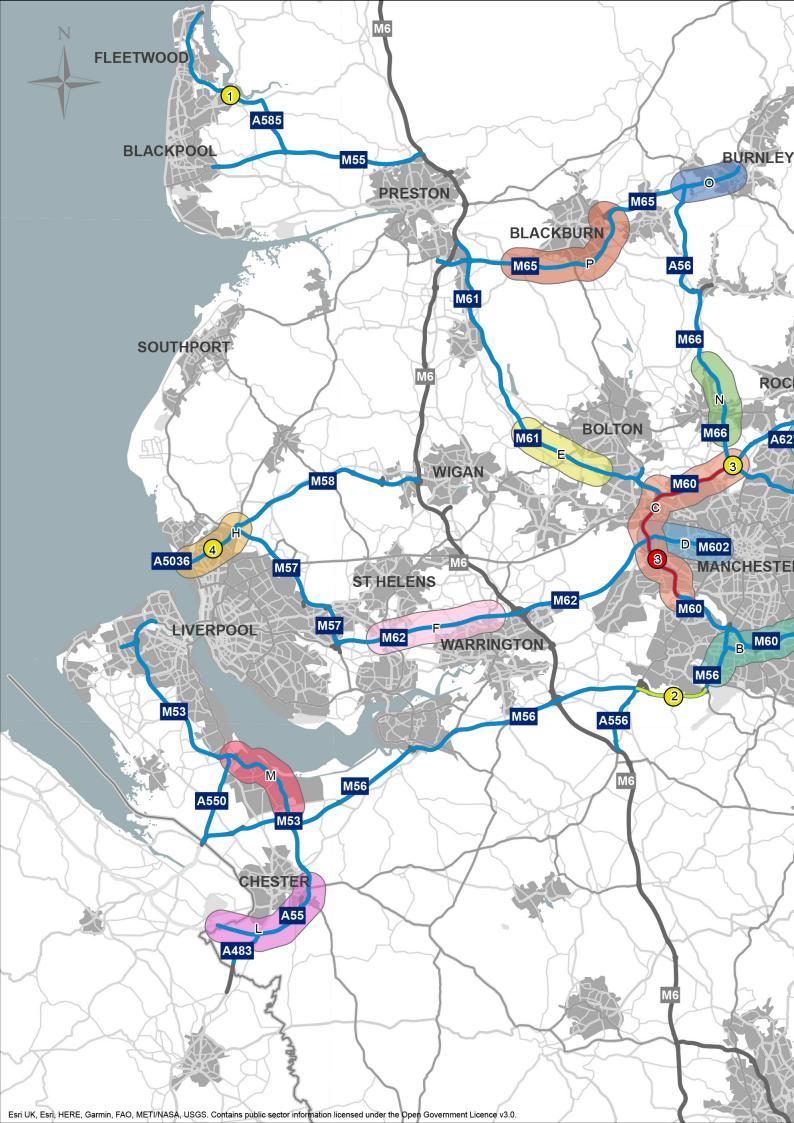
- · collaboration and integration opportunities
- · synergies with existing planned schemes
- opportunities with asset and maintenance priorities as set out in chapter 5.5

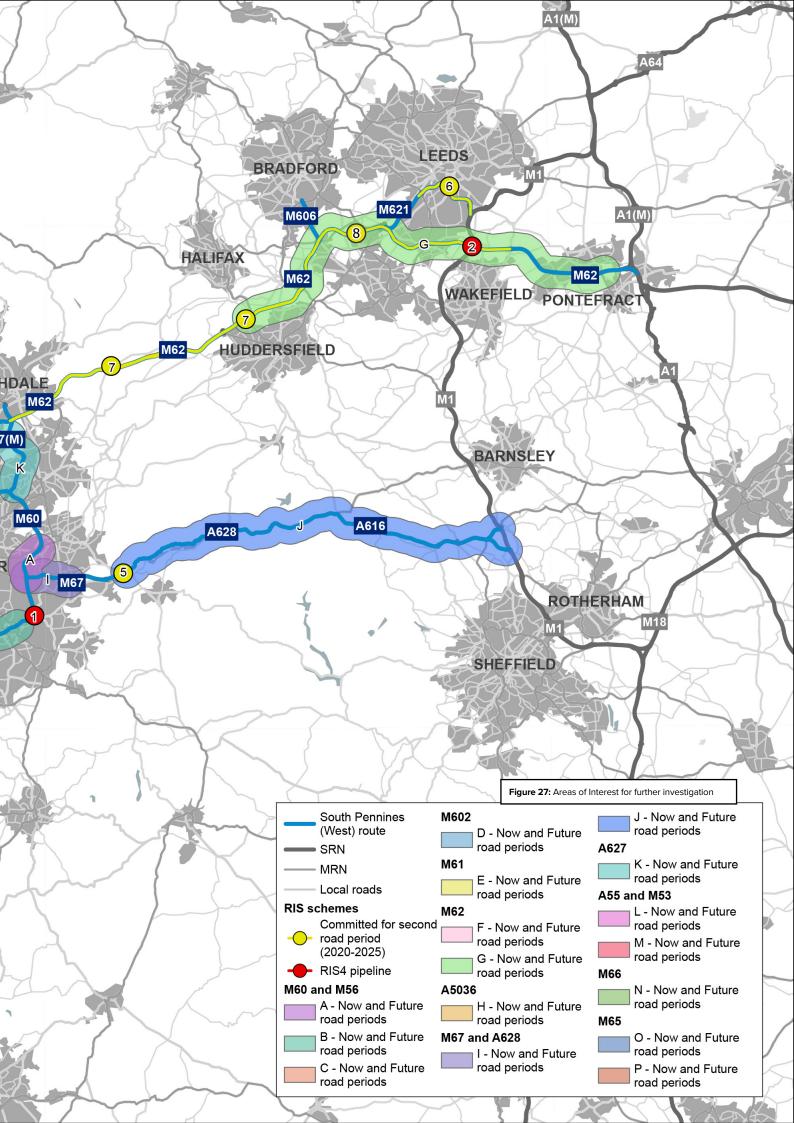
As part of the ongoing evolution of the route strategies toward final publication we will further strengthen its role in being a strategic planning tool for interested parties who have a stake in the SRN and its future.

 Table 3: Areas of interest for further investigation

Area location	Area of interest	Area issues	Now	Future road periods
		M60 and M56		
M60 Junction 24 to 23	Α	This is a key section of the route to support trans-Pennine journeys . There is a risk of surface water flooding , reducing the reliability of the network. In terms of noise and air quality, this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. Delays occur in the morning and afternoon peak periods, especially at Junction 24.	√	✓
M56 Junction 5 to M60 Junction 27	В	This is a key link for major growth areas at Manchester Airport which is important for supporting economic growth . In terms of noise and air quality , this section is in proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. Supporting effective local integration with active modes of travel is important, especially in the context of the HS2 station planned adjacent to this location.	✓	√
M60 Junction 8 to 18	С	Poor reliability and delay in a location which is critical for access to employment and supporting the efficient movement of goods given its proximity to Trafford Park and Salford Quays, and importance for the wider network including trans-Pennine journeys .	✓	V
		M602		
M602 Junction 1 to 3	D	In terms of noise and air quality , this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. There is morning peak delay eastbound towards Manchester and, conversely, afternoon peak delay westbound. As a key link to major attractions in Manchester and Salford Quays, the link is important in promoting economic growth including the visitor economy.	~	✓
M61				
M61 Junction 4 to 6	E	In terms of noise and air quality , this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. Morning peak delay southbound towards Manchester is an issue which affects the efficient movement of goods and access to jobs. The area is significant in terms of economic growth given the number of planned development sites. It is also a category 1 area for levelling up.	✓	√
		M62		
M62 Junction 7 to 9	F	This section of the route has poor reliability and delay in the morning and afternoon peak periods. It provides access to major distribution and development sites. It therefore has a role in supporting economic growth and the efficient movement of goods .	✓	V
M62 Junction 24 to 32	G	This section of the route has poor reliability and peak period delay particularly on the approaches to key junctions such as Junction 24, Junction 26 and Junction 27. It is key for supporting trans-Pennine journeys and supporting economic growth with planned development sites along the route. In terms of noise and air quality , this section is in proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts.	✓	√
		A5036		
A5036	н	This section has poor reliability and peak period delay . It acts as the approach to the Port of Liverpool so is key for the efficient movement of goods .	✓	√

Area location	Area of interest	Area issues	Now	Future road periods
		M67 and A628		
M67 from M60 to Hyde	I	This section is characterised by poor reliability and peak period delay . In terms of noise and air quality , this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. There are safety issues with a number of collisions where people were killed or seriously injured including walkers and cyclists in this urbanised area. This link is key for trans-Pennine connectivity between Manchester and Sheffield. Integration with active modes of travel is an issue especially through Denton, where the M67 can cause a barrier for walking and cycling.	√	√
Hollingworth to M1 Junction 36 via A628, A616 and A61	J	This section provides trans-Pennine connectivity and is important for both leisure and business journeys. There are limited alternative routes and the topography of the A628 and A616 means this section can be susceptible to inclement weather, the risk of surface water flooding and periods of disruption, which can make journeys unreliable , particularly as there are long sections of single carriageway.	✓	√
		A627		
A627(M) Junction 2 to M60 Junction 21	к	In terms of noise and air quality , this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts. There is also poor reliability . Integration with active modes of transport is an issue where the SRN passes through Chadderton and delays on the SRN can reduce the performance of local bus services. A number of collisions where people were killed or seriously injured, including walkers, cyclists and horse riders have occurred along this section.	√	√
		A55 and M53		
A55/A51 Junction to Broughton	L	This area is key to supporting cross-border connectivity as it connects England to North Wales. There is delay , particularly at key junctions such as at the A55/A483 junction. In terms of noise and air quality , this section is in close proximity to a number of receptors, which may be more likely to experience adverse air quality or noise impacts.	~	✓
M53 Junction 6 to 9	М	This part of the route is characterised by poor reliability and delay . The link is key to supporting cross-border connectivity between England and Wales. It is also important in the efficient movement of goods with significant manufacturing facilities accessed from here.	V	✓
		M66		
M66 Junction 1 to 3	N	This section is important in the context of economic growth , with significant employment and housing sites planned to the east of Bury. The M66 creates severance in the urban area of Bury where the SRN is a physical barrier between communities.	✓	✓
		M65		
M65 Junction 8 to 10	0	There is significant planned housing and employment growth in the area, which has been designated as a category 1 area for levelling up .	✓	√
M65 Junction 3 to 6	Р	There are delays during peak periods particularly at Junction 4 and Junction 5. There is significant planned housing and employment growth in the area, so this section will be important to enable economic growth . It is also a category 1 area for levelling up .	✓	✓







08 Next steps

Our route strategies allow informed decisions to be made about our network. They have informed our *Strategic Road Network* (SRN) *Initial report*, which sets our vision and priorities for the third road period (2025–2030) and beyond (from 2030). They are a forward planning tool for National Highways and our interested parties in their decision making, helping identify locations on our network for further consideration to inform investment opportunities, as well as to support decisions in prioritising potential solutions to enable us to continue to operate and maintain our network.

Alignment

They also align with the National Highway s Connecting the country: Our long-term strategic plan to 205088 which sets out our 2050 vision for the SRN to be part of a seamlessly integrated transport system that meets our customers' needs by connecting the country safely and reliably, delivering economic prosperity, social value and a thriving environment. Our long-term strategic plan to 2050 describes the short, medium and long-term steps to 2050 we believe are needed to make our vision a reality over successive road periods and has been informed by extensive horizon scanning, foresight analysis and engagement with key stakeholders across nine focus areas. The route objectives identified in the route strategies, which also respond to the needs of stakeholders, road users and communities, and the locations for further consideration to achieve these objectives are aligned with the 2050 vision.

Informing the next stage of planning

The route objectives and locations for further consideration will be used to inform our study programmes and consider opportunities for developing integrated and collaborative solutions with our interested parties.

The extensive engagement we have undertaken ensures feedback from our customers and neighbours is used to inform investment decisions. They will help us consider the interaction of our SRN with other transport networks, including the major road network and local roads. We also expect interested parties will use our route strategies to inform their wider investment programmes, supporting collaborative decision making.

For both the Route strategy initial overview reports and *Our long-term strategic plan* to 2050, there will be an opportunity for stakeholders, road users and communities to provide their feedback. This will be alongside DfT's separate consultation on the *SRN initial report* published at the same time.

The 20 finalised Route strategy reports and *Our long-term strategic plan to 2050* will be published by 2025, the end of the current road period (2020-2025), informing the *Strategic business plan* and *Delivery plan*.

Provide your feedback

To find out more about our route strategies and the development process, please visit our website: nationalhighways.co.uk/our-roads/our-route-strategies

Glossary of terms

Term	Acronym	Description
Active users and active modes of transport		Active users and active modes of transport refers to walkers, cyclists and horse riders.
Air quality management area	AQMA	If a local authority identifies any locations within its boundaries where the Air Quality Objectives are not likely to be achieved, it must declare the area as an Air Quality Management Area (AQMA). The area may encompass just one or two streets, or it could be much bigger. The local authority is subsequently required to put together a plan to improve air quality in that area - a Local Air Quality Action Plan.
Area of Outstanding Natural Beauty	AONB	An area of outstanding natural beauty (AONB) is one of the classes of land protected by the Countryside and Rights of Way Act 2000 (CROW Act). It protects the land to conserve and enhance its natural beauty.
All Lane Running	ALR	All Lane Running (ALR) motorways apply controlled motorway technology, permanently converting the hard shoulder as a running lane, and feature emergency areas.
A-roads		Major roads intended to provide large-scale transport links between regional towns and cities.
Assets		National Highways assets include our infrastructure such as pavements, structures and tunnels
At-Grade Junction		An at-grade junction is a junction where two or more roads converge, diverge, meet or cross at the same height, as opposed to an interchange, which uses bridges or tunnels to separate different roads.
Clean Air Zone	CAZ	A clean air zone (CAZ) defines an area where targeted action is taken to improve air quality, and resources are prioritised and co-ordinated to deliver improved health benefits and support economic growth.
Collisions		The severity of a collision is based on the severity of the most severely injured casualty and is broken down into: Slight collision: One in which at least one person is slightly injured but no person is killed or seriously injured Serious collision: One in which at least one person is seriously injured but no person (other than a confirmed suicide) is killed Fatal collision: A collision in which at least one person is killed
Department for Transport	DfT	Department for Transport (DfT) plan and invest in transport infrastructure to keep the UK on the move. DfT work with agencies and partners to support the transport network that helps the UK's businesses and gets people and goods travelling around the country.
Design-Build- Finance-Operate arrangements	DBFO	With a design-build-finance-operate arrangement, the private party provides financing and design, then builds and operates the facility. The public partner provides funding while the project is being used or is active.

Term	Acronym	Description
Diversionary Routes		National Highways agreed diversion routes represent the recommended routes for road users when a section of road has been closed.
Dynamic Hard Shoulder	DHS	Dynamic Hard Shoulder Running (DHS) motorways apply the controlled motorway technology and temporarily increase capacity by utilising the hard shoulder, and feature emergency areas. The hard shoulder is some of the time, but not always, used as a live running lane, with electronic signs to guide drivers when it is safe to use for live running.
Economic opportunity areas	EOAs	EOAs were developed to give us a more refined understanding of the types of priority economic growth opportunities that exist around the SRN and around the wider road and broader transport network. They are defined in terms of their common economic function and the spatial features of the location. These key growth areas are grouped by broad 'theme' (such as international gateways, multi-modal transport hubs, tourism destinations and housing locations) and their relative reliance on the SRN.
Freeport		Freeports are special areas within the UK's borders where different economic regulations apply. Freeports in England are centred around one or more air, rail, or seaport, but can extend up to 45 kilometres beyond the port(s)
Heavy Goods Vehicle	HGV	A heavy goods vehicle (HGV) is a large vehicle intended for the transportation of heavy loads.
Growth Boards		Growth Boards have been established by some counties as a joined-up way of managing local future growth and supporting economic recovery.
International connectivity		Transport connectivity of the United Kingdom with Europe and the rest of the world.
In-vehicle Technology		This can be in-car systems that typically take the form of a touchscreen or display that is mounted on the dashboard. It can be a collection of hardware and software, which can provide information, data and connectivity to infrastructure to support the customer experience. It can also be the data and technology capability to enable the operation of the car (this might be connected services, autonomous capability, parking sensors, cameras etc.). It can be any technology within a vehicle.
Levelling up		Levelling up is a moral, social and economic programme for the whole of government. It places emphasis on ensuring no community is left behind.
Local Road Network		England's road network consists of motorways, major 'A' roads, and local classified and unclassified roads. The vast majority of motorways and major 'A' roads for the strategic road network (SRN) and are managed by National Highways. All other roads are managed by local authorities and make up the local road network (LRN)
Major Road Network	MRN	The major road network (MRN) is the middle tier of England's road network, comprising the busiest and most economically important local authority A-roads.

Glossary of terms

Term	Acronym	Description
National Highways Licence		The Licence sets out the Secretary of State's statutory directions and guidance to National Highways.
National Traffic Information Service		The National Traffic Information Service (NTIS) is provided by National Highways. The Traffic England website provides a range of services to help you avoid delays and plan your journeys but NTIS also makes data available to subscribers for research purposes or for developers to include it in their own applications.
Noise Action Plans		Noise action plans provide a framework to manage environmental noise and its effects. They also aim to protect quiet areas in agglomerations (large urban areas) where the noise quality is good. Noise Action Plans provide a framework for the local management of the Important Areas.
Noise Important Areas		Noise Important Areas (NIAs) for roads and railways are based upon the strategic noise maps results and are produced in line with the requirements set out in the noise action plans.
Office of Rail and Road	ORR	The Office of Rail and Road (ORR) is the independent safety and economic regulator for Britain's railways and monitor of National Highways
Park and ride		A park and ride offers parking with public transport connections that allows commuters and other people heading to city centres to leave their vehicles and transfer to bus, rail or car share for the remainder of the journey.
Platooning		Heavy Goods Vehicle (HGV) platooning is the use of technology to allow HGVs to travel safely in close proximity at speed with the driver of the lead vehicle controlling the speed, acceleration and braking of the whole 'platoon'.
Receptor (Air quality and Noise)		Location which is sensitive to noise/air quality issues
Regional Traffic Model	RTM	National Highways has a suite of five regional traffic models (RTMs) covering England's SRN. The models allow us to identify future performance and delay on the network, assisting with the development of the route strategies
Reliability		Reliability is the difference between the typical travel time, allowing for recurring delays, and the observed travel time. This measures the amount of variation due to unexpected variations or unplanned events. Like delay, it is measured in seconds per vehicle per mile. It is a concern for most drivers, but particularly affects just-in-time freight traffic and other strategic journeys.
Road investment strategy	RIS	A Road investment strategy (RIS) is a strategy that outlines a long-term programme for National Highways' motorways and major A-roads with the stable funding needed to plan ahead.
Road period		The defined period of time over which the Government gives a funding commitment. The length of a road period will be specified at the beginning of the RIS development process. Road periods will be multi-year in order to provide the supply chain with increased certainty of investment and intent. Based on current practice within the other infrastructure sectors, it is expected that road periods will continue to be five years in length, though the actual length will be decided by the Government of the day.
Route objectives		Objectives for each route, informed by engagement and analysis, to support the current and future needs of customers and neighbours.

Term	Acronym	Description
		The Safe System is the current best practice safety culture in road safety, developed over many years and derived most notably from the Swedish Vision Zero and Dutch Sustainable Safety strategies.
Safe System approach		A best practice road safety culture approach based on the principles that humans make mistakes which could lead to serious injury or death for which it is a shared responsibility of the road user, road managers, vehicle manufacturers, etc. to take appropriate actions to ensure road collisions do not lead to serious or fatal injuries.
Seasonal delay		Seasonal delay refers to the difference between the average afternoon peak delay for Fridays in August 2019 (high demand in summer holidays) and the average delay during very low demand periods (in this case, Christmas day is used). This measure is designed to reflect the parts of the network that do not appear to have a problem on average over the year but have seasonal peaks. Seasonal delay is of interest to tourist traffic, particularly people travelling to airports, or other destinations where arriving later than intended could have significant implications.
Severance		Severance is where transport infrastructure or motorised traffic passes through settlements and acts as a physical or psychological barrier, limiting people's ability or desire to move through that area. This can reduce accessibility to key services, and damage local social networks and community cohesion.
Sites of Special	CCCI-	A Site of Special Scientific Interest (SSSI) is the land notified as an SSSI under the Wildlife and Countryside Act (1981), as amended.
Scientific Interest	SSSIs	SSSI are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features.
		A smart motorway is a section of motorway that employs active traffic management (ATM) techniques to increase capacity through the use of technology including variable speed limits. There are three types of smart motorway: 1. Controlled Motorway: variable speed limits with the hard shoulder operating as it would on a conventional motorway. 2. Dynamic Hard Shoulder (DHS) Running: Variable speed limits with the hard shoulder selectively opened as a running lane during periods where traffic levels are too high for only three lanes of running traffic. When activated, vehicles can use the hard shoulder as a running lane. 3. All Lane Running (ALR): variable speed limits with the hard shoulder removed and converted to a permanent running lane.
		Smart motorways have a whole system of inter-related safety features, not present on conventional motorways, working together to help keep drivers and their passengers moving safely. The system includes:
Smart motorway		 Variable speed limits to help keep traffic moving, reducing frustrating stop-start traffic and making journeys quicker
		 Clearly signed and orange-coloured emergency areas set back from the road and with telephones linking directly to our control rooms
		Detection systems to monitor traffic for changes in flows
		 CCTV cameras that our operators are able to move and zoom to monitor and manage congestion and incidents, where notified. The system has the ability to see 100% of the carriageway
		 Signs and signals to provide better information to drivers which can alert drivers to hazards ahead and display Red X signs to close lanes to other traffic when a stopped vehicle is identified
		• Enforcement cameras to deter the minority who break speed limits and ignore Red X signs
		Radar stopped vehicle detection
Spatial planning		Spatial planning decides how land should be used or protected. It also organises, designs and makes decisions on where new homes, roads and other infrastructure should be built. Spatial planning aims to make places attractive, safe and environmentally friendly. National Highways is a statutory consultee in the planning system and we encouraged others to seek early advice from us if their development proposal is likely to impact the strategic road network.
Special Areas of Conservation	SACs	A Special Area of Conservation (SAC) is the land designated under Directive 92/43/ EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

Glossary of terms

Term	Acronym	Description
STATS19		Data on road traffic casualties on the roads in Great Britain are collected via the STATS19 process. These statistics are collected by police forces, either through officers attending the scene of incidents, from members of the public reporting the incident in police stations after the incident, or more recently online and then validated and published annually by DfT. STATS19 road traffic collision and casualty data is published annually by DfT in the Autumn and provides details of the previous calendar year. These reports have used the data available at the time of analysis, 2015-2018.
Statutory consultee		Statutory consultees are those organisations and bodies, defined by statute, which local planning authorities are legally required to consult before reaching a decision on relevant planning applications.
Strategic Rail Freight Interchange		A large multi-purpose rail freight interchange and distribution centre linked into both the rail and road system.
Strategic Road Network	SRN	The strategic road network (SRN) covers more than 4,500 miles of motorways and major A-roads.
Strategic Traffic / Strategic journeys		Long distance traffic / journeys
Sub-national Transport Bodies	STBs	Sub-national Transport Bodies (STBs) have a key role in formulating transport strategy and identifying investment priorities at the sub-national level, including for highways. There are seven STBs in England, which are tasked with developing transport strategies and studies for their region. Through the development of their evidence bases with their constituent local authorities and Local Enterprise Partnerships, their work highlights multi-modal issues, need and opportunities, with investment priorities provided to the Secretary of State for Transport.
Transport-related social exclusion		Where limited access to transport or other issues with the transport system means that people cannot fully participate in society in the way they would like
Trunking / De-trunking		De-trunking is the process of returning a National Highways road to the local highway authority control and vice versa for trunking
UNESCO World Heritage Site		Inscription as a UNESCO World Heritage Site is an acknowledgement of the global significance of such places.

Term	Acronym	Description
Union connectivity		Transport connectivity between the nations of the United Kingdom.
Variable Messaging Signs		The Traffic Signs Regulations and General Directions 2016 (TSRGD) define a variable message sign as a device "capable of displaying, at different times, two or more aspects". These aspects may take the form of a sign prescribed by the TSRGD, a legend in accordance with Schedule 16 to TSRGD, a non-prescribed temporary sign or a blank grey or blank black face. Thus, the expression "variable message sign" (VMS) encompasses all types of variable sign from simple flap-type signs to complex light-emitting panels
Vulnerable Road User		Walkers, cyclists and horse riders



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