

**Fairer, greener,
stronger:
a Strategic
Transport Plan
for the Midlands**



Midlands Connect
Transport | Investment | Growth

April 2022

Foreword

“In the past five years we’ve seen some of the most radical changes to our political, societal and environmental landscape in living memory. Dealing with the impacts of a global health emergency has put extraordinary pressure on public finances, changing beyond recognition the way we work, live, and travel. The world’s first climate change conference, combined with ground-breaking decarbonisation pledges from governments around the world has spurred on a technological revolution in alternative fuels, green energy generation and electric vehicles. Closer to home, the UK’s exit from the European Union has encouraged businesses to rethink how they trade, where and with whom.

Sir John Peace, Chairman



This Strategic Transport Plan is focused on meeting these challenges, seizing the opportunity to deliver a greener, fairer and stronger Midlands region – one where communities are connected to the jobs, places and services they need to succeed. Our research has analysed how people travel, why they travel and where to, both now, and how this needs to change in future. These insights have led us to this plan; one that seeks investment and innovation in the places that need it most, whether it be improving rail services, boosting mobility in rural areas, future-proofing our road network or cementing the Midlands’ place at the forefront of the electric vehicle revolution.

Although many of the changes we’re experiencing are universal, it’s equally important that we focus on what sets us apart. As a region, the Midlands is a manufacturing giant, a centre for innovation and a pioneer of new, green technologies. That said, we are also home to pockets of poor social mobility, areas where educational attainment is below par and rural communities where a lack of public transport causes feelings of loneliness and isolation.

By working with our partners, playing to the region’s strengths and making a clear case for investment to government, we can ensure that every single person in the region gets to where they need to be. Yes, we must tackle climate change, of course we must spread opportunity, but we must also pursue a future where the Midlands and its people are empowered to reach their full potential.

Our pledge to this region is simple – we will work behind the scenes to gather evidence, to make plans and bring forward delivery, but most of all, we will not forget the people behind these plans. This grand vision is about giving the Midlands, its businesses and its communities the future they deserve. We will now forge ahead and work to deliver this vision of a fairer, greener and stronger region. A region that you deserve.”

Maria Machancoses
CEO of Midlands Connect

Five things you need to know about this plan

This is our Strategic Transport Plan for the Midlands. This summary document is supported by a longer, more detailed technical plan that is available at Midlands Connect | Strategy. Five things you need to know about this plan are:

1

It is built on our 2017 strategy. This previous strategy identified a series of hubs and corridors on which strategic transport infrastructure investment should be focused in order to improve east-west connectivity, make the most of HS2 and improve access to international gateways in order to power economic growth across the Midlands.

2

It updates our investment priorities for the strategic rail and road networks in the Midlands between now and 2030. Our priorities represent the locations on these networks most urgently requiring attention if transport investment is to better connect our region and help develop a fairer, greener and stronger region.

3

Our location in the centre of the country and at the heart of the nation’s transport network ensures that the further development and delivery of these priorities will improve connectivity in the Midlands and the United Kingdom. These priorities also help the region develop a pipeline of transport infrastructure projects to meet both regional needs and infrastructure investment recommendations from the National Infrastructure Commission.

4

Decarbonisation and technology development are driving a re-think in how we deliver improved connectivity. This plan sets out the areas where we are working with our partners in the region and across the country to develop and deliver innovative solutions to the challenges that we face. This includes work to accelerate electric vehicle charging infrastructure delivery, leading research into alternative fuels for freight and logistics, smart ticketing, and developing sustainable rural mobility solutions.

5

We need to deliver improvements in transport connectivity quicker. Our plan sets out how we will work with partners to enable this. We will work with the Midlands Engine, councils and businesses to: identify the jobs, growth and investment needed in the region; make better use of data to improve decisions; and ensure we have enough people with the right skills to develop and deliver the transport infrastructure projects that we need.

Introduction



Since Midlands Connect published England's first regional transport strategy in 2017, we've had a great deal to adapt to. While five years on, next day deliveries and online shopping are the norm, working in an office from 9-5, Monday to Friday is not. The impacts of the COP26 climate conference and an increased drive towards sustainability mean that policies to secure a carbon-neutral transport network by 2050 are now enshrined in law. Meanwhile, the lingering effects of the Covid-19 pandemic have caused us to rethink how we make the case for transport investment and evaluate what interventions are needed most to support our long-term economic revival.

That said, there is much more change to come. Government's Integrated Rail Plan and the highly anticipated Williams Shapps Review have outlined a new future for our railways, one where a high-speed network runs to, through and from the East and West Midlands and where Great British Railways runs our network in a more stable and efficient way. We will play an active role as this policy is shaped and implemented over the coming years. Our own research predicts a boom in the use of electric vehicles, innovative advances are being made in the realms of green energy and alternative fuels such as hydrogen, while government has reaffirmed its commitment to future-proofing our road network, as part of its ongoing Road Investment Strategy.

Perhaps most importantly, last year's Transport Decarbonisation Plan set out how policymakers intend to shift from fossil fuels to renewables, while government and the Midlands Engine's 10-Point Plan for Green Growth provided clarity on the measures we must take across our partnership to tread the path to net neutrality.

The government recognises the role that infrastructure can play in meeting these challenges. In its National Infrastructure Strategy (NIS) it has committed to building the infrastructure the country needs, both to reduce the long-standing inequalities between different parts of the UK and to meet net zero and climate change commitments. The Levelling Up White Paper also recognises the role that improved transport and digital infrastructure can play in levelling up areas across the country. In particular, it sets out aspirations that by 2030: local public transport connectivity across the country will be significantly closer to the standards of London, with improved services, simpler fares and integrated ticketing; and the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population.

At a local level, the Midlands' local authorities are progressing with their Local Transport Plans and have ambitious plans to decarbonise, to boost bus patronage, walking and cycling, to use data to their advantage and to embrace new technology. It's clear that we stand on the edge of a huge step-change in the transport industry; one that is being embraced by our partners - whether in the development of Very Light Rail in Coventry, the building of HS2 trains in Derby or tram extensions in the Black Country.

As a Sub-national Transport Body, Midlands Connect has a clear mandate from government - to research, develop and progress strategic transport projects, bringing forward priority investments that will benefit our region, its people and businesses.

This plan outlines the action we must take to secure a fairer, greener and stronger Midlands.

What we've done in the last five years

Since 2017, we have examined the needs and opportunities identified in our first strategy and considered these in the context of external changes, such as Brexit and a greater understanding of climate change. Our successes since 2017 include:

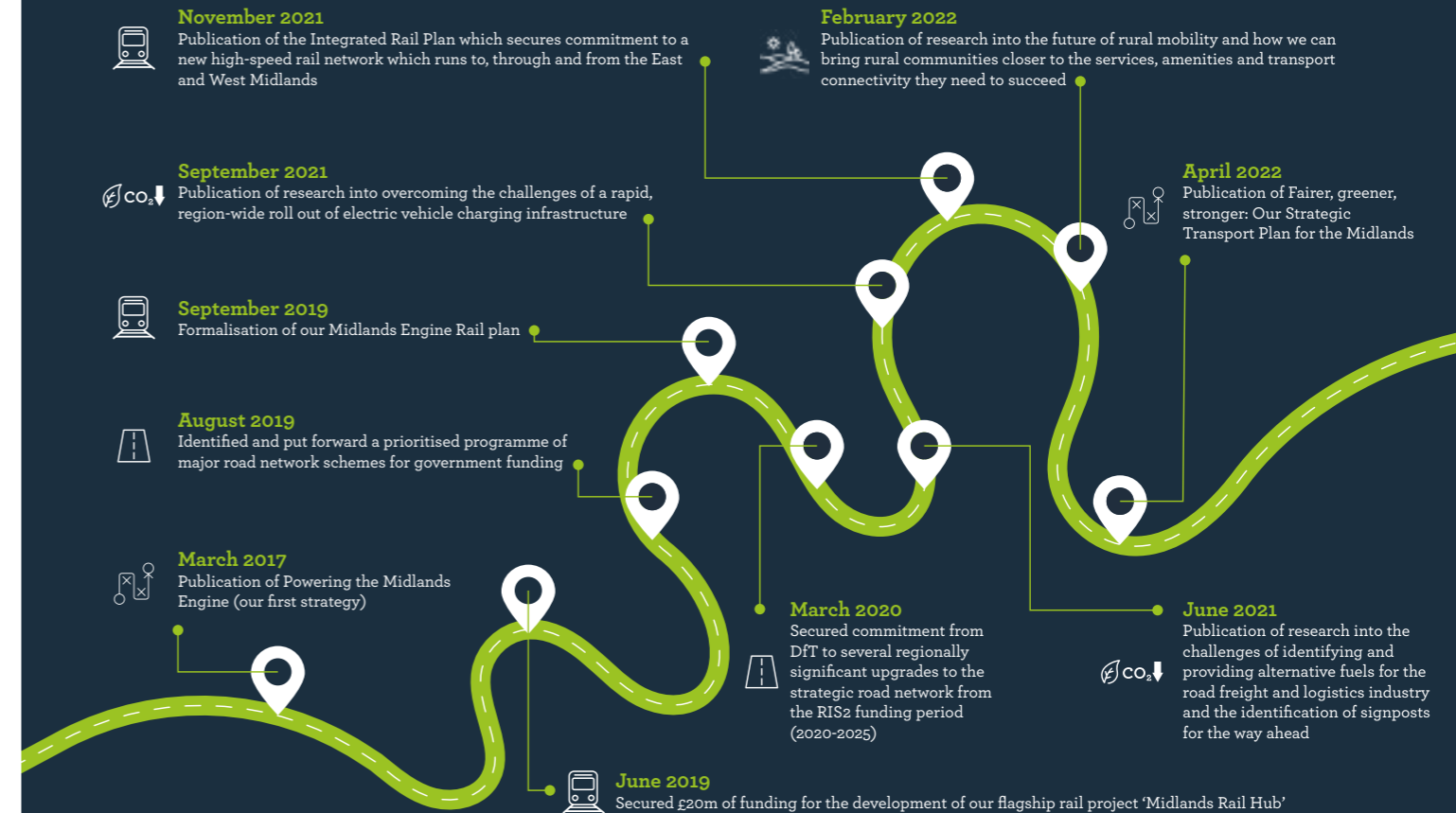


Figure 1: Our successes since 2017

Through the work we have done since 2017 we now have a clear set of investment priorities for our strategic rail and road corridors. These priorities (shown on pages 28-31 of this plan) present how the Midlands will respond to the government's call to 'Build Back Better'.

Government is also challenging our partners to level up and decarbonise the economy. These challenges, plus uncertainties driven by Brexit, post-pandemic travel behaviours and advances in technology ensure we must do more to connect all the Midlands' communities and geographies into strategic transport infrastructure. This plan identifies a number of areas where we are working with our partners to lead, develop and deliver innovative solutions to the challenges that we face. This reflects how our role has evolved over time to become more than simply being about prioritising big infrastructure investments; we are now much more embedded into the fabric of transport planning across the region, whilst still recognising that local transport authorities are the ultimate keepers of policy and strategy in their areas.

A view from the Midlands

The Midlands matters. A region of over 10 million people and 5 million jobs, it creates an economic output of £248 billion a year,¹ bigger than the Gross Domestic Product (GDP) of countries such as Greece, Portugal or Hungary.²

The heritage of our region is rich; we're home to everything from the birthplace of the industrial revolution at Ironbridge to the Staffordshire Potteries, the home of Shakespeare in Stratford-upon-Avon, and the outstanding coast and nature reserves of Lincolnshire. This plan, however, is focused on our future, not our past. There is a solid platform on

which to build – the Midlands produces 20% of the UK's exports,³ more than any other region of the UK, including London and the South East, it is home to over a quarter of its manufacturing jobs, to the UK's largest logistics hub and a burgeoning professional services industry.

Transport investment in our region will help us to reach our full potential, benefitting people and businesses that travel to, through and from the Midlands. We are after all, at the heart of the UK.

Our grand challenges

Our overall ambition is to make the Midlands fairer, greener and stronger. Our plan:

- Sets out the right strategic infrastructure investments;
- Describes how the decarbonisation of our transport system could be accelerated; and
- Contains a focus on the connectivity needs of local people and businesses.



Figure 2: Our three grand challenges and the objectives we will use to guide the development and delivery of this plan

¹ Regional gross value added (balanced) by industry: local authorities by ITL1 region - Office for National Statistics (ons.gov.uk) (As referenced by Midlands Engine Observatory)

² https://data.worldbank.org/indicator/NY.GDP.FCST.CD?end=2019&locations=EU&name_desc=false&start=1970&view=chart

³ Regional Trade in Goods Q3 2021: Midlands Engine Observatory



Fairer: transport and levelling up

Investing in transport and connectivity can improve access to jobs, education and opportunities for everyone in the Midlands.

Transport infrastructure is one of the four main barriers to achieving the levels of productivity required to close the gap between the region and the rest of the country.⁴

Transport improvements like the proposed high-speed rail line between Birmingham and Nottingham will cut that journey to under 30 minutes, meaning that more people in those cities could commute to either place for work, opening up opportunities for people and businesses, demonstrating how transport investment can help level up the region with the rest of the country.

Locally, there is a need to work with our local authority partners to focus on the role that an integrated transport network can play in helping resolve issues such as economic isolation, poor social mobility and deprivation that are hindering people's opportunities. The majority of districts within the Midlands fall into the bottom performing 30% of authorities on social mobility in England.⁵

Post-Brexit, a global Great Britain requires better connectivity to key ports and airports, including maximising the benefits from new freeports, something that the Midlands is ideally placed to provide given our central location. Within the Midlands, by linking all our areas into national strategic transport networks and into our main economic centres, we will ensure prosperity is spread to all corners of our region, so that everyone benefits from the opportunities we will unlock.

There have been decades of underinvestment in our region's transport infrastructure. In 2018/19, the East Midlands was the lowest region in the UK for spend per head on transport, at £268. The West

Midlands was the fifth highest at £467, however, both regions were below the UK average of £481.⁶ To level up our region we need an even greater injection of investment, beyond simply being up with the UK average. This would enable our economy to more rapidly catch up and help to rebalance the UK economy. This plan identifies what we believe that investment should be spent on.



⁴ Midlands Engine Independent Economic Review, Midlands Engine, 2020

⁵ How Strategic Connectivity Facilitates Social Mobility in the Midlands, Midlands Connect Research, 2021

⁶ Transport spending in north of England less per head than London, BBC News, 4 December 2019

Greener: transport and decarbonisation

The publication of the government's Transport Decarbonisation Plan was a step forward in setting out a national framework for how we decarbonise transport. In the Midlands, the vast majority of transport carbon emissions (96%) come from road-based transport⁷. Carbon emissions from HGVs also make up a higher proportion of emissions in our region than they do elsewhere in the country. It is clear we need to make investments that encourage behaviour change, promote public transport use and encourage the take up of new technologies such as electric vehicles and alternative fuels, to reduce emissions.

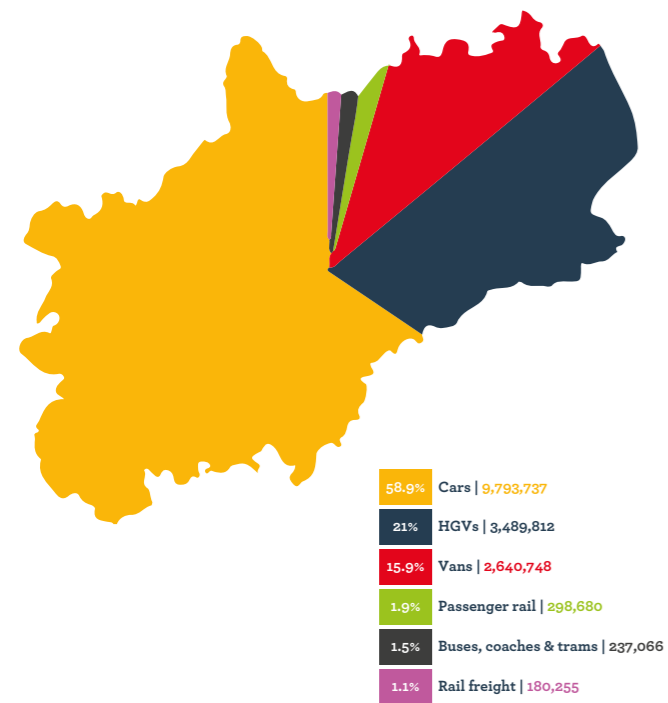


Figure 3: Transport carbon emissions in the Midlands, 2019 (tonnes of CO₂e)

Our research shows that the public are concerned about the challenge and pace of climate change, but encouragingly, are willing to consider playing their part in the changes needed.⁸

With extreme weather events likely to increase in regularity over time, we need to ensure we understand the impacts on our infrastructure and the investment needed to protect our people and our businesses. Finally, we need to ensure new infrastructure both minimises impacts and secures an overall net gain for the natural environment and biodiversity.

⁷ Midlands Connect Transport Carbon Baseline Tool, Midlands Connect, 2019

⁸ Midlands Connect poll of Midlands residents (undertaken by Censuswide), September 2021

Stronger: transport and economic resilience

We can increase the productivity and economic output of the Midlands by making it easier for businesses to trade, access suppliers and employees, and by empowering local people to access job and education opportunities.

There is still work to do and some way to go, but the economy appears to be on track for a faster recovery from Covid-19 than originally feared. However, the Midlands economy has suffered acutely in important sectors such as advanced

manufacturing and engineering, along with tourism and leisure. We need to support our priority economic sectors. These sectors have the potential to grow and maintain our regional competitive advantage, driving our levelling up efforts.



 Professional services sector

We plan to:

- Develop and implement Midlands Engine Rail to establish a competitive pan-regional rail offer that provides improved journey times (versus the car) between our major cities.

 Freight and logistics

We plan to:

- Develop a Midlands Freight Route Map and Improvement Plan that focuses on:
 - Improving connections to ports and other international gateways.
 - Maximising the opportunities from our freeport sites in the East Midlands and the Humber.
 - Leading work to look into alternative fuels for freight and logistics
 - Encouraging and enabling modal shift of freight from road to rail by ensuring freight interventions are built into our Midlands Engine Rail programme

 Manufacturing

We plan to:


- Improve east-west connectivity on the region's strategic road network, focusing on our key corridors of the A1, A46, A50/500, A5 and A38/A42/M42
- Make these roads, and the region's major road network, more reliable
- Improve connections to ports and other international gateways

 Visitor and rural economies


We plan to:

- Establish and use an 'access to rail programme' to drive better integration between national, regional and local transport networks.
- Publish a rural mobility toolkit and work with partners to develop solutions to rural transport challenges.
- Work with Midlands Energy Hub and WM5G to improve digital infrastructure provision in areas that need it most.


72%
agree climate change is the biggest challenge facing humanity



70%
don't think we are doing enough



80%
willing to travel less



41%
willing to use public transport more




Figure 4 – Public views on climate change 2021: Midlands Connect Survey of 5,000 people

As we look to the future, uncertainty around issues such as climate change, housing supply, future jobs and how the global economy changes, all pose potential threats to prosperity. To tackle these threats head on, we must embed resilience at the heart of our infrastructure planning. To do so, we need to ensure the region invests in the delivery of a feasible pipeline of infrastructure options that provide value for money

to the taxpayer. As a region, we do not have the pipeline of infrastructure projects that we need. In particular, there is a 'cliff edge' after 2030 (see Figure 5) where the current pipeline drops off dramatically. This is why our plan focuses on a set of strategic rail and road infrastructure priorities for the next 10-15 years.

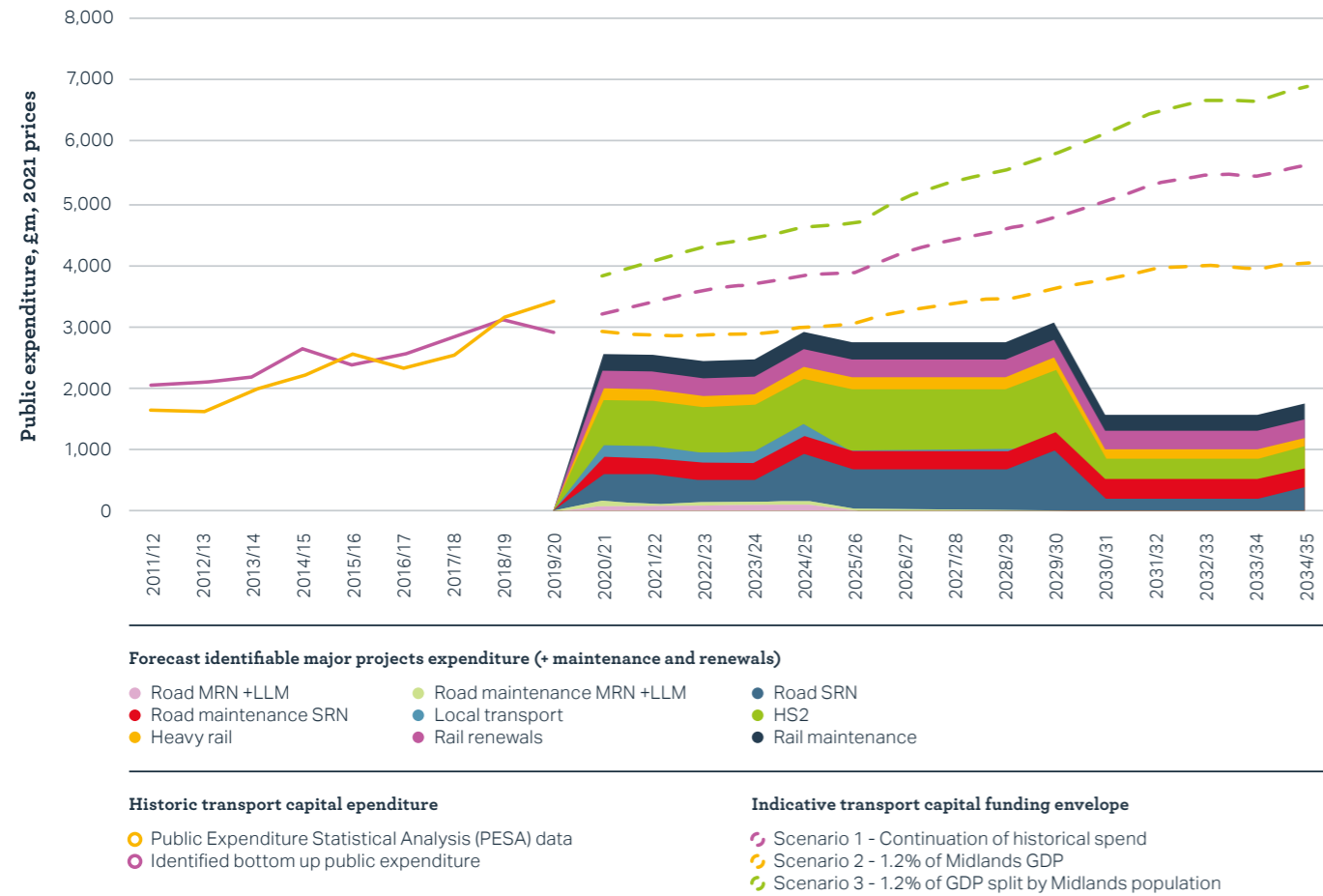



Figure 5: Potential future funding scenarios and pipeline projects in the Midlands, 2021 prices



Our regional connectivity needs and problems

East to west connectivity
Connections between the East and West Midlands are poor by both road and rail



- There are no direct trains between Coventry and Leicester – it takes around an hour to travel just 29 miles; whereas it takes the same length of time to travel 94 miles from Coventry to London.⁹
- There is currently only one full dual carriageway standard road (with grade separated junctions) that traverses just a small section of the Midlands linking west to east: the M42/A42 corridor links Birmingham to Nottingham. This is compared to the M5, M6, M1 and M42/M40 which all run north-south as continuous full motorway standard links from one end of the region to the other.
- Travelling across the region was identified as a barrier to growth and productivity by three-fifths of the organisations interviewed for the Midlands Engine Independent Economic Review.¹⁰

Connectivity to international gateways




- The Midlands produces 20% of the UK's exports,¹¹ more than any other region of the UK.
- On the strategic road network in the Midlands, approximately 16% of vehicles are HGVs,¹² with five of the UK's major road freight routes running through the Midlands.
- Six of the country's 11 strategic rail freight routes run through the Midlands.
- East Midlands airport is arguably the nation's most important freight airport, which lies next to an extremely congested part of the M1. This, and the emerging freeports in the East Midlands and Humber Ports are vital gateways to international markets.

A competitive pan-regional rail offer




- It takes over four hours to travel approximately 140 miles from Lincoln in the north-east of the region to Hereford in the south-west by train - more than four times as long as it will take to travel a similar distance from London to Birmingham once HS2 opens.¹³
- The North's two largest city economies (Manchester and Leeds) enjoy connections of five trains per hour, taking 50 minutes each. Here in the Midlands, our two biggest cities (Nottingham and Birmingham) are connected by just two trains per hour which can take more than 70 minutes. These city pairs are close to identical distances apart.¹⁴

Reduced carbon emissions¹⁵




- Road transport generates 96% of transport carbon emissions.
- HGVs make up a higher proportion of transport emissions in the Midlands than elsewhere.
- Long distance journeys (i.e. those over 10 miles) for cars, vans and HGVs account for over 70% of overall road-based carbon emissions.

More reliable roads




- In 2019, there were over 33 million hours of delays across the motorway network in the Midlands.¹⁵

Improved digital connectivity




- Digital connectivity is incredibly varied across the region, particularly in rural areas (such as the Marches and rural parts of Leicestershire and Staffordshire).¹⁸

Responding to the impacts of Covid-19




- Data suggests that we're still making between 10 and 15% fewer journeys than we did before the pandemic hit. However, this is unevenly split as journeys by car are just about back to where they were, but rail and bus journeys are still significantly lower.²⁰
- Lower public transport patronage and revenue generated by fares is an existential crisis for the industry.
- An even greater shift to online shopping has produced some benefits from reduced car journeys on our roads, but micro-level logistics are often inefficient which leads to many more van trips.
- At the start of the lockdowns there was a huge spike in people cycling, but this has tailed off back to pre-pandemic levels.

Rural transport challenges



- In rural areas, average weekly transport costs are higher when compared to urban areas and people are nearly twice as far from their nearest services than city dwellers.¹⁶
- Our carbon baseline estimates 71% of all carbon emitted from surface transport was done so in shire county areas.¹⁷

Better integrate national, regional and local networks



- Over 80% of the population in the Midlands already live within 5km of a railway station. However, less than 3% of journeys starting or ending in the Midlands are undertaken by rail.²¹

9 National Rail Train Times, National Rail website, November 2021

10 Midlands Engine Independent Economic Review, Midlands Engine, 2020

11 Regional Trade in Goods Q3 2021: Midlands Engine Observatory

12 WebTRIS, National Highways platform for traffic data from SRN sensors, National Highways

13 See 9

14 See 9

15 Road congestion and travel time statistics and road traffic statistics, Department for Transport

16 Future of Rural Mobility Study, Midlands Connect and University of Lincoln, 2020

17 Midlands Connect Transport Carbon Baseline Tool, Midlands Connect, 2019

18 Midlands Engine Independent Economic Review, Midlands Engine, 2020

19 Midlands Connect Transport Carbon Baseline Tool, Midlands Connect, 2019

20 O2 Mobile Phone Data, March 2019 – November 2021, Midlands Connect

21 ONS population data: 2020 mid-year population estimates, MSOA level. Includes MSOAs within Midlands Connect only.

Stations – all within the Midlands Connect region and 10 that are just outside.



What we are doing

Midlands Connect has a clear directive from government: to develop, analyse and prioritise the most important strategic transport investments – the projects and research we need to support a more productive, prosperous and sustainable Midlands.

Our efforts are focused on four areas:

- 1 Rail: improving rail and public transport connectivity.
- 2 Road: the development of a future road network that is reliable, resilient and efficient for all.
- 3 Freight: helping to move goods.
- 4 Decarbonisation, innovation and technology

Rail: Improving rail and public transport connectivity

Rail is a low carbon transport mode which is vital for regional economic growth and levelling up. Encouraging more people to use the rail network is an essential step in reducing transport-related carbon emissions. Our Midlands Engine Rail (MER) programme includes a series of improvements to boost rail connectivity – for both passengers and freight - across our region. The interventions we’re suggesting include making journeys faster, allowing trains to run more frequently and creating new connections that don’t currently exist. MER complements and builds on the Integrated Rail Plan and the arrival of High Speed Two (HS2) in the East and West Midlands. It helps to spread the benefits to the whole of the Midlands, by linking all its economic centres and giving everyone access, not only to rail services, but also to the socio-economic benefits that come as a result of HS2.

Midlands Rail Hub, our flagship project within MER, is designed to improve journeys between key cities and towns across the Midlands. We are planning major infrastructure improvements like the Bordesley Chords that will help to take pressure off Birmingham’s busy New Street station and create new and more frequent journey opportunities from the city to the East Midlands and the South-West. We are also planning to use the released capacity provided by HS2, diverting some of the existing trains to the new railway line. With fewer trains on routes like the Coventry corridor, we are proposing a new Birmingham Airport Connectivity package to enhance connections to Oxford, Reading, Derby and Sheffield. We are also working on plans for better connections to Shrewsbury and direct services between Coventry, Leicester and Nottingham.

But MER isn’t just about the Midlands. We are looking at ways to improve rail connectivity between the Midlands and economic centres in other regions, including to Anglia, England’s Economic Heartland and Wales. In response to the Integrated Rail Plan, we will consider in detail how we can best use released capacity to improve connectivity between Birmingham, the North West and Scotland, and collate our own evidence on how high-speed services can link the East Midlands, Yorkshire and the North East.

Our Midlands Engine Rail programme will create **19 million more passenger seats on our railways²²**

²² Midlands Connect, 2022

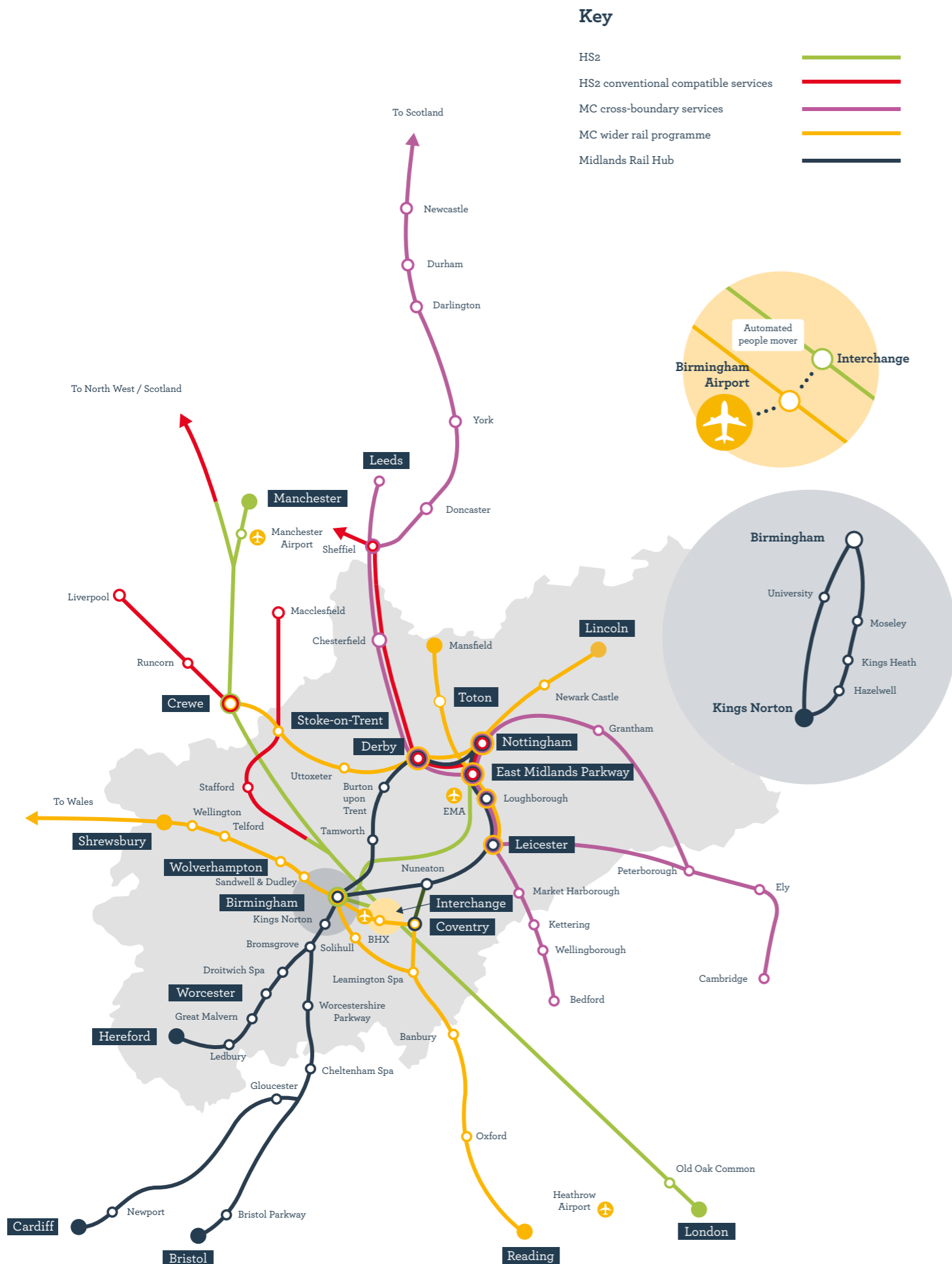


Figure 6: Midlands Engine Rail

Our rail priorities (summarised on pages 28 - 31) include:

- Establishing a direct rail service between Coventry, Leicester and Nottingham
- Delivering ‘early win’ journey time improvements on several corridors including the Birmingham-Shrewsbury, Birmingham-Nottingham and Nottingham-Lincoln routes
- Service improvements between Birmingham and Leicester
- Acceleration of Midlands Rail Hub schemes at Kings Norton and Snow Hill
- Continuing to develop business cases for larger infrastructure investment projects including Midlands Rail Hub
- Improving connectivity between the Midlands and the North, feeding into government’s consultation on the future of HS2’s Eastern Leg from the East Midlands to Leeds and beyond.

Additional work with our partners will identify how we can improve access to, and the reach of, rail services. We want to provide improved transport connectivity to those for whom rail is not currently a viable or attractive option. This will be done through working with partners to consider how we can provide more integrated and seamless journeys on our public transport network, the role of strategic park and ride and the potential benefits of interurban bus opportunities.

Road: the development of a future road network that is reliable, resilient and efficient for all.

Over seven out of every ten journeys are made by road.²³ The Covid-19 pandemic reinforced the essential role our road network plays in our daily lives, allowing us to keep food on supermarket shelves, medicine in our hospitals and providing access to schools and universities.

²³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906276/national-travel-survey-2019.pdf

²⁴ ONS Regional gross value added (balanced) by industry: local authorities by International Territorial Level (ITL) 1 region

We are working with National Highways and others to identify the road improvements that we need. Our roads are vital to the needs of our people and our region. Looking long-term, as our mandate requires us to do, we currently believe that the forecast growth in population and economic activity will likely lead to an increase in overall travel demand, including by car. However, this need not lead to an ever-expanding road network. In a climate emergency we must look to invest in roads in a sustainable way – supporting new housing and jobs, reducing congestion-related emissions and improving the infrastructure road users need to travel via alternative modes such as bus or alternatively fuelled vehicles.

Our strategy will be to firstly make best use of our existing infrastructure, seeking reliability and safety as the primary goals as opposed to capacity and speed. We will advocate maximum use of technology before pouring concrete and our work will promote the minimum amount of new/enhanced infrastructure required in any location. This will likely mean that other initiatives will need to be put in place at specific locations, such as promoting alternative modes and demand management, in order for us to minimise infrastructure-related interventions.

Insight from National Highways suggests that the logistics, manufacturing, energy and construction industries are most reliant on the strategic road network for their operation and success. In 2019, these industries contributed over £80 billion to the Midlands economy.²⁴

On our strategic road network, and as part of our long-term strategy for improved east-west connectivity and reliability, we have promoted the Trans-Midlands Trade Corridor along the A46 across both the East and West Midlands. This is now part of National Highways’ Roads Investment Strategy 2 (RIS2), published in 2020. Other trade routes include our focus on the North Midlands Manufacturing Corridor along the A50 and A500, and the Midlands Logistics Corridor, which spans the A5.

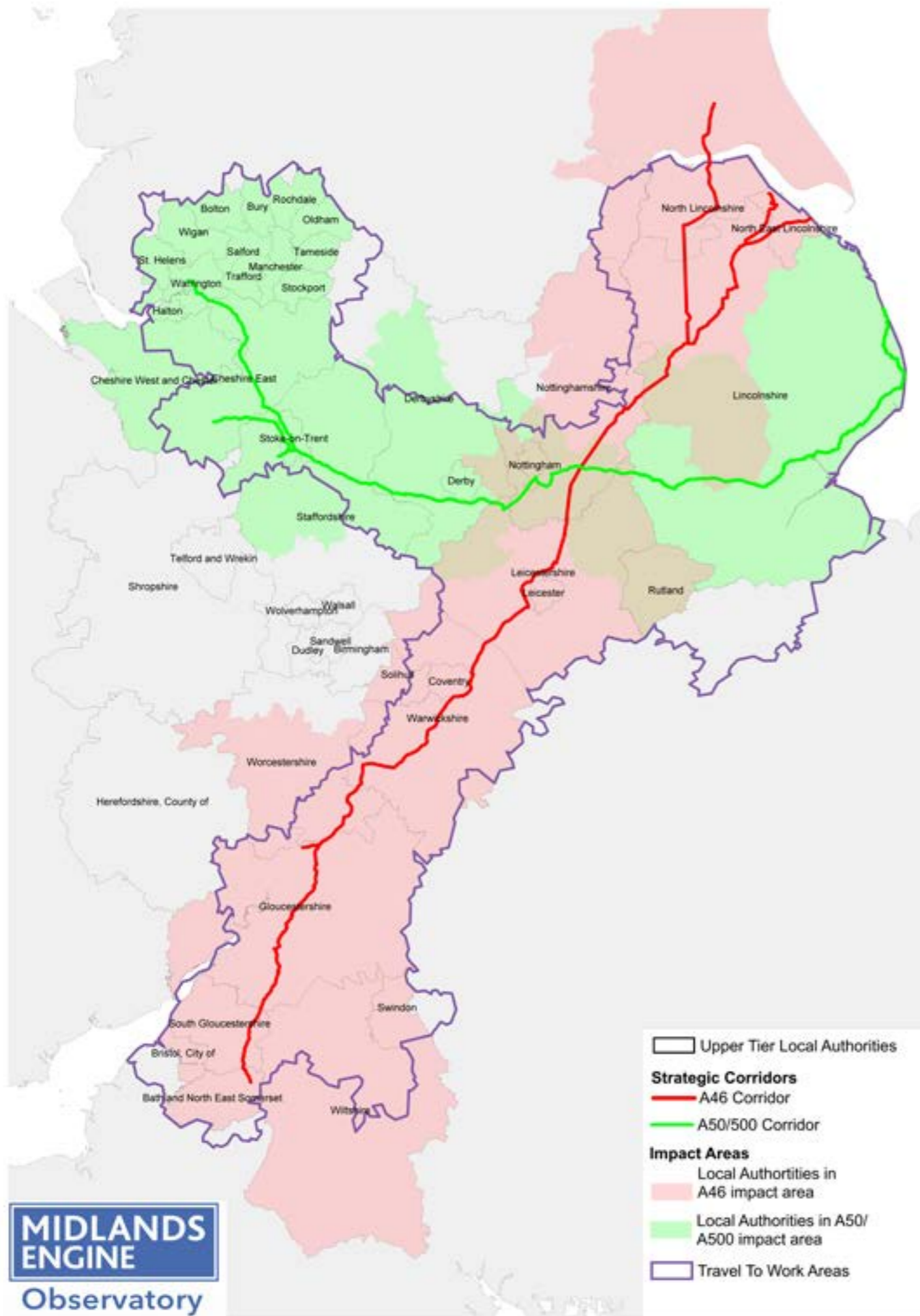


Figure 7: Our nationally significant economic corridors

We have also been mandated by the government to provide a wider programme of strategic road corridor investment priorities and we are working with partners and stakeholders to maintain and update those priorities. It means that decisions are being made by local people, based on local issues, rather than in Whitehall and ultimately, we should be able to accelerate delivery of much needed improvements.

These priorities include:

- Improvements to important east-west corridors including the A46, A5 and A50/500, developed with support from the wider Midlands Engine partnership, delivering on ambitions for increased global reach and trade, innovation, skills and infrastructure

- Enhancing access to important junctions on the M1, M6 and M5 motorways
- Assisting local councils to develop business cases for targeted investments on the major road network, particularly those that improve traffic flow and encourage integration with public transport and active travel modes such as walking and cycling
- Shaping and informing the decisions made by government as it chooses which schemes to progress as part of its Road Investment Strategy (RIS) 3, for delivery in 2025-2030.

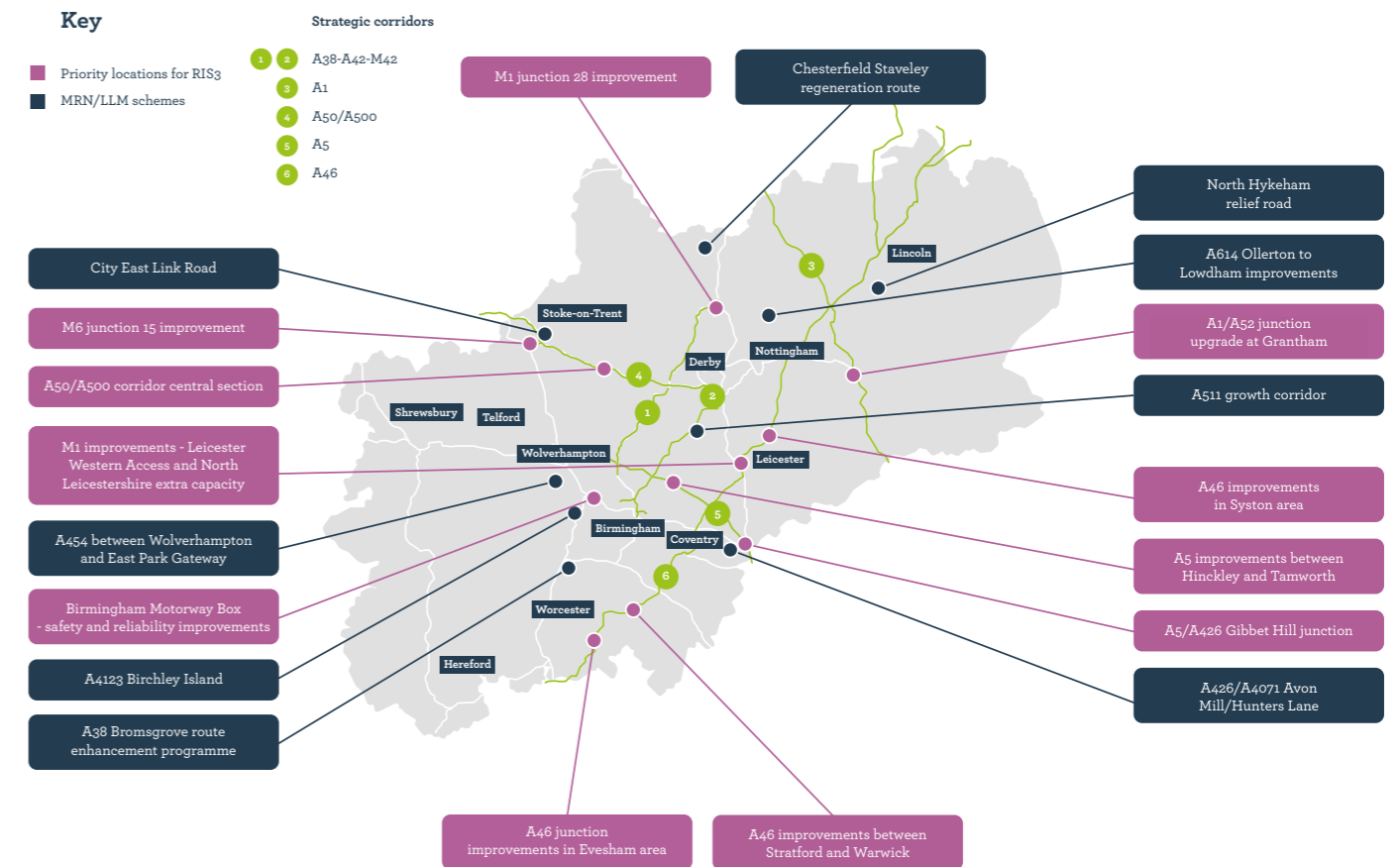


Figure 8: Our road priorities

Freight: helping to move goods and enable a connected and global Britain

Strategic trade corridors, like the A46, are vital because the Midlands plays a crucial role in the movement of lorries and other commercial traffic. The so called ‘Golden Triangle’, which straddles the East and West Midlands, sits within 4 hours drive of most of Great Britain. It has great connections via some of the country’s main motorways, allowing fast deliveries to most of the UK population. Even by rail, goods from the Midlands can reach more places faster than elsewhere. The Midlands has more warehousing

than any other part of the country, with the East Midlands providing the most warehousing space of any region in the UK. The Midlands is home to seven strategic rail freight interchanges. The Daventry Intermodal Rail Freight Terminal helps supermarket chain Tesco move its products to places like Scotland, while the railhead at East Midlands Gateway moves shipments for the food and beverage giant Nestle.

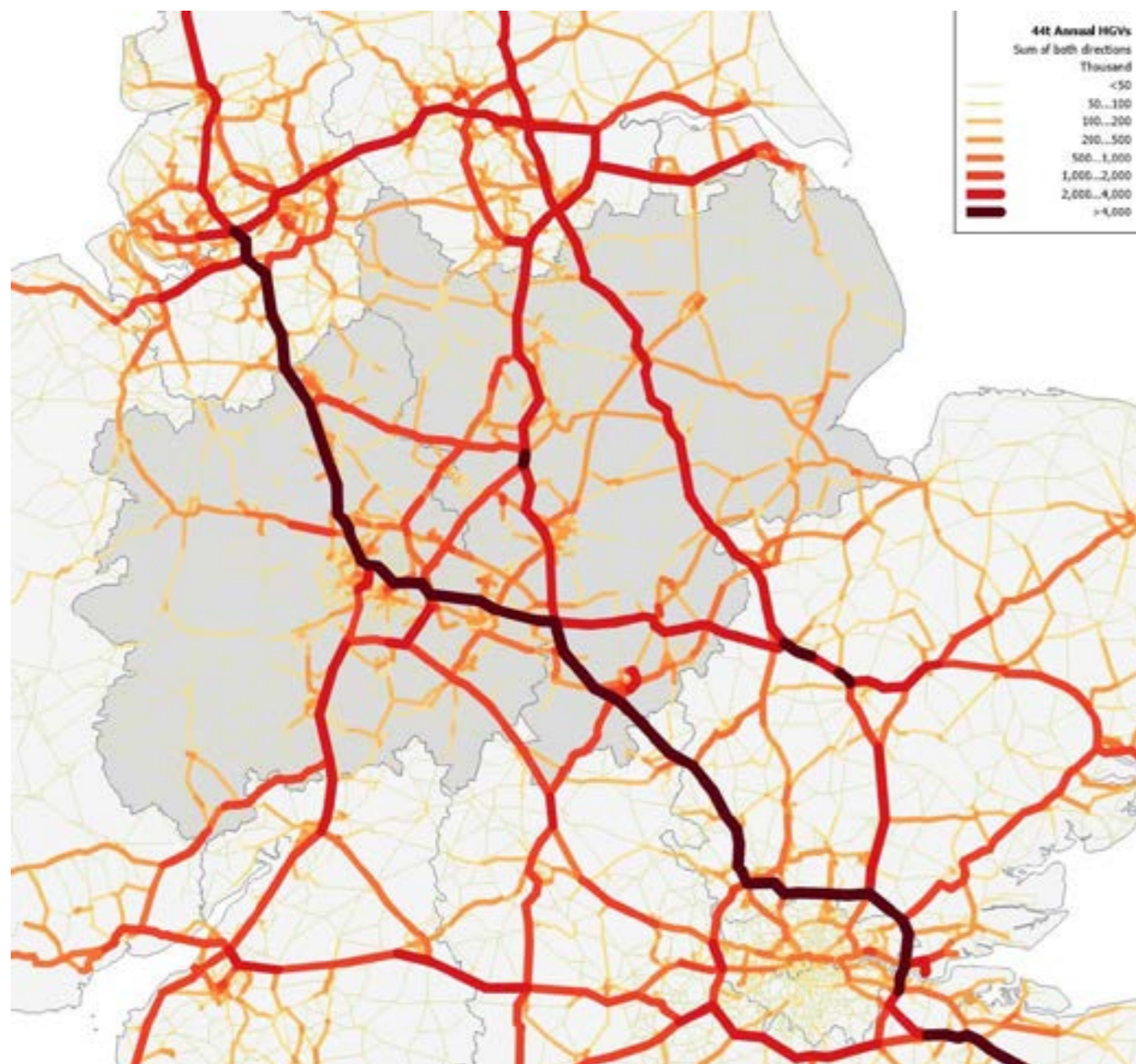


Figure 9: Annual number of HGVs on highway links in both directions (Source: MDS Transmodal)

Each tonne of freight transported by rail reduces carbon emissions by 76% compared to road.²⁵

The Midlands produces 22% of England’s exports, sending goods to 178 countries.²⁶ Before the Covid-19 pandemic, the West Midlands was one of the fastest growing regions for goods exported and it’s hoped that, as the recovery happens, exports will grow rapidly again.

Our plan recognises the importance of improving access to international gateways, including major seaports, airports, and the exciting opportunities offered by the creation of new developments such as inland ports and freeports. Seizing these opportunities and cementing our place in the international economy is fundamental to our long-term, post-Brexit economic strategy. Our two freeports around the Humber Ports and East Midlands Airport will benefit from a streamlined planning process, tax incentives and simplified customs procedures, creating new jobs and boosting the region’s economy.

Our plan also recognises the need to move freight in a more sustainable manner, by encouraging modal shift from road and by helping to accelerate the move to alternative fuels for road freight hauliers.

Decarbonisation, technology and innovation

Decarbonisation

We will build on the momentum from the COP26 climate conference and the publication of the government’s Transport Decarbonisation Plan by working collaboratively with local and national partners to decarbonise the transport sector.

Heavy goods vehicles account for 21% of surface transport emissions in the Midlands, compared to 17% nationally.²⁷ As such, helping to advance the shift to alternative fuels for freight and logistics through the development and provision of energy hub networks is an important element of our programme. We have been involved in a major government funded trial that will help pave the way for hydrogen powered heavy goods vehicles. As part of the H2GVMids partnership, we are working alongside industry partners like Toyota and Arcola Energy to prepare the ground for green hydrogen fuelled 44 tonne trucks. The project identified all the necessary infrastructure, including hydrogen refuelling stations, developing the business case and delivery system, and establishing a trial lease system for truck operators.

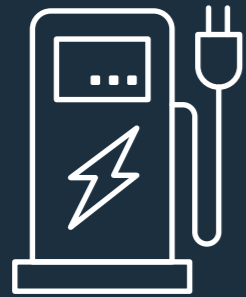
We are developing a joint action plan to create a recharging and refuelling network that will help us meet carbon reduction targets and the needs of our businesses, thereby accelerating the decarbonisation of road freight in the Midlands.

Given most transport carbon emissions in the region come from road-based transport, other efforts to reduce carbon come in the form of detailed work to help facilitate the switch to electric vehicles. We have been working on plans for ‘fit-for-purpose’ charging infrastructure for both cars and light commercial traffic. We have identified the locations across the Midlands where accelerated development of a rapid charging network is needed. These include places close to the big commercial users and the motorways for those passing through the Midlands. We have also been helping to identify where rapid charge points are needed for cars, particularly on-street charging for those who can’t install home chargers. We’re also identifying how many charging points we think will be needed to keep pace with the growth of electric vehicles over time.

²⁵ Rail Emissions 2020-21, Office of Rail and Road (figures using 2012-13 data)

²⁶ Capability, Capacity, Connectivity. The Midlands: Opportunities in Rail, Department for International Trade, 2017

²⁷ Midlands Connect Transport Carbon Baseline Tool, Midlands Connect, 2019



On average, there is currently **1 publicly-available electric vehicle charging point per 19 electric vehicles in the Midlands**, reflecting the national average of 1 charge point per 20 electric vehicles

To meet the charging requirements of a growing fleet, we must install an average of:

10.8

new charging points every day

75.8

charging points every week

or **3,941**

charging points each year, from 2021-2030

That means installing **6x as many charging points as we do now**



Households without access to on-street parking are **3x less likely** to have an EV



93% of EV owners currently have access to off-street parking; however, 32% of households across the Midlands Connect region are reliant on on-street parking

Rural mobility

Investment will also be needed in rural areas. 15% of people in the West Midlands and 27% of people in the East Midlands live in truly rural areas.²⁸ Midlands Connect has identified an investment gap where money for development, the delivery of new technologies and sustainable transport is concentrated on our major cities, with rural communities being left behind. We have worked with academics to find out why. The result has been our high-level 'Rural Mobility Study' which assessed rural needs and looked at a range of mobility interventions. In addition to transport connections, rural communities need fast, reliable digital connectivity to help deliver economic, social and well-being benefits.

Digital infrastructure is particularly important for our rural communities. It helps rural businesses innovate, grow and create jobs. We've created a framework and a toolkit to help illustrate the range of options to improve mobility and access to services for rural residents and businesses. Another key recommendation is to investigate the potential for so called 'rural hubs' to improve connectivity by bringing services to people (and vice-versa) and creating opportunities for much improved non-car travel choices.

Transport technology and innovation

Regardless of where people live, there's a need for a seamless and integrated transport system and we have already been undertaking research to turn this ambition into a reality. It is particularly important as public transport has been hard hit during the Covid-19 pandemic with patronage across the region dramatically down.

To encourage people back, ticketing needs to reflect the trend towards flexible working. Cashless and hassle-free payment systems are now an expectation for many customers with a growing number of journeys paid for using a single card. We are collaborating with transport organisations and operators across the Midlands to provide a platform that will allow seamless travel between all areas of the region.

The new ticketing system will build on smart ticketing that already exists, ensuring that public transport is both accessible and affordable. Our longer-term ambition is to see this idea integrated into local multi-modal 'Mobility as a Service' (MaaS) solutions, offering things like parking, e-scooters and car clubs. Making travel easy to plan and pay for is essential in ensuring sustainable transport is the go-to-choice for as many people as possible.

We have also identified a potential shortlist of locations on the major road network (MRN) where we could work with partners to integrate technology-based interventions, including things like: the provision of improved communications coverage (i.e. 5G/4G); preparation and support for connected and autonomous vehicles; dynamic in-car driver information; and a more optimal use of existing road capacity. Technology-based interventions will also be required to help prepare our major road networks to support the rapid uptake of electric vehicles needed to tackle the decarbonisation of transport.

We are funding a pilot project which is putting data collection technology in the network around the M6 and M6 Toll. This captures information about comparative journey times on competing routes and provides real-time, immediate information to drivers to make informed decisions of which route to choose.

A £360m commitment was included within the Integrated Rail Plan to introduce London-style contactless ticketing across the commuter networks of the Midlands and the North within three years. We will work with partners to ensure the Midlands is ready for this investment.

²⁸ 2011 rural urban classification of local authority districts and other higher-level geographies, Department for Environment, Food and Rural Affairs, updated 2021



Key

- 1 Multi-use hub
- 2 Last mile delivery pods
- 3 Telephone triage
- 4 Online education from home
- 5 Car sharing
- 6 Drone deliveries
- 7 Autonomous tractors
- 8 Demand responsive bus
- 9 Road traffic sensors
- 10 Local businesses
- 11 E-bike hire
- 12 Autonomous vehicles
- 13 Public WiFi
- 14 Delivery lockers
- 15 Real time bus timetable
- 16 Electric car charging points
- 17 Co-working space
- 18 Village/Town hall clinics
- 19 Multi-use space
- 20 Rail freight
- 21 Park and ride/transport hub

Our decarbonisation, technology and innovation priorities include:

- Supporting the roll-out of public electric vehicle chargers across the Midlands region, with a commitment to publishing the first Midlands-wide electric vehicle (EV) charging infrastructure plan
- Analysing how technology and improved 5G coverage can support connected and autonomous vehicles and provide in-driver information on the MRN
- Linking up businesses and local authorities to develop innovative new mobility solutions to improve connectivity in rural areas
- Working with the Midlands Engine Energy Hub to understand how hydrogen and other alternative fuels can be used to power our fleet of freight vehicles and HGVs
- Establishing industry ‘centres of excellence’ where partners come together to share knowledge, collaborate and work together on new emerging technology areas or topics such as decarbonisation, freight and alternative fuels
- Delivering a regional decarbonisation policy toolkit that will provide evidence to partners on the decarbonisation potential of various interventions and policies that could be used in their local transport plans
- Supporting partners in the take-up of a region-wide smart ticketing platform, as developed for Transport for the West Midlands
- Applying the 10% increase in biodiversity required for Nationally Significant Infrastructure Projects (NSIP) to all transport projects
- Creating a network resilience map to understand how transport, technology and energy generation interventions can work together to address climate change.



Our short-term rail and road infrastructure priorities

We share the government's aspiration to accelerate the delivery of the transport infrastructure that the country needs. But we also recognise that we are in challenging times when it comes to public finances.

We have therefore worked hard to identify what we believe is a proportionate programme of the most urgent priorities (see Figure 12). We've identified the parts of our strategic transport network that are most in need of investment in the next 5-10 years and developed a package of road and rail investments which complement each other to deliver on our grand challenges. These locations have been agreed by our partnership as the most immediate strategic transport infrastructure priorities for the region.

For the first time, they ensure that the Midlands is better placed in terms of efforts to develop a long-term pipeline of transport infrastructure projects that meets both regional needs and infrastructure investment recommendations from the National Infrastructure Commission. This means we can both gear up to deliver shorter-term priorities whilst continuing to develop the schemes needed beyond that, so we have a continuous conveyor belt of investment to improve connectivity.

We are confident that investment in these locations will be required even accounting for current uncertainties around economic growth and the demand for travel post-pandemic. The exact schemes or solutions are, in some cases, still to be determined by further detailed technical investigation which will need to account for the needs of all users of the transport network.

If funded, our evidence tells us that investing in these places will create jobs, boost trade, enable much needed housing growth, improve safety, reduce carbon emissions, improve air quality and make our networks more reliable for people and freight.

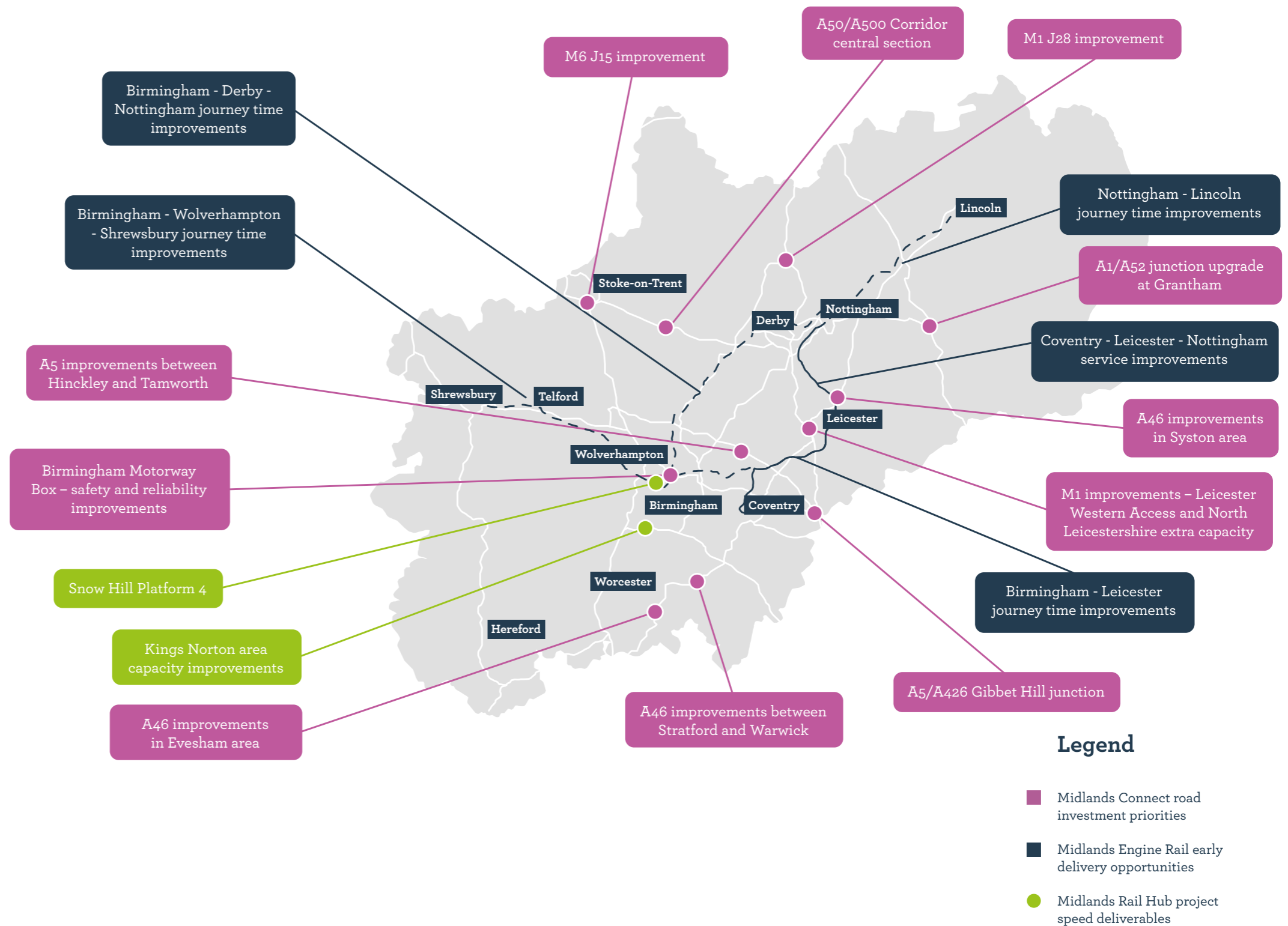


Figure 12: Summary of our strategic rail and road priorities to 2030

These locations are summarised below:

Rail: Birmingham – Derby – Nottingham journey time improvements: We're strongly advocating for early service improvements to benefit passengers between Nottingham, Derby and intermediate stations to Birmingham in advance of HS2 reaching the East Midlands.

Rail: Nottingham – Lincoln journey time improvements: We believe that journey time improvements between these cities can be delivered in phases, with the first being relatively simple and inexpensive to put in place.

Rail: Coventry – Leicester – Nottingham service improvements: We have identified an exciting opportunity to create a new direct rail link between these three cities, which would dramatically increase the speed of travelling by train. This is vitally important when considering, for example, that 97% of current journeys between Coventry and Leicester are by car.²⁹

Rail: Birmingham – Leicester journey time improvements: We wish to see existing passenger services run faster in the short-term while additional services could be added at a later date.

Rail: Midlands Rail Hub: Kings Norton capacity improvements: The Kings Norton area is a pinch-point to more local services running into New Street Station reliably for passengers. Extra capacity here is also a required interim step to eventual increased and faster services to Worcester, Hereford and the South-West.

Rail: Midlands Rail Hub: Reinstate Snow Hill platform 4: This is a first-step intervention to eventually realising opportunities for more regional rail services to use Moor Street Station in Birmingham. In the short-term, local services can make use of improved platform capacity at Snow Hill.

Rail: Birmingham – Black Country – Shrewsbury journey time improvements: We have found solutions to speed up trains that can be delivered quickly to improve reliability, boost local connectivity and strengthen links to Wales. When HS2 Phases 1 and 2a are completed, there will be opportunities to run more local services on this route.

Road: A50/A500 Central Section: The Uttoxeter area is one of the most gridlocked sections of this key east-west road corridor that links Stoke-on-Trent and the M6 with Derby and the M1. This causes difficulties for local journeys by all modes, poor air quality, hampers the flow of freight and restricts jobs and housing growth opportunities.

Road: M1 junction 28: Improvements at this critical location will help solve the peak hour reliability, safety and air quality issues.

Road: A1/A52 at Grantham: This location on the road network needs to support local growth, improve safety for all road users and help keep the nationally and regionally important A1 route moving, particularly for freight.

Road: A46 at Syston: The A46 is one of the country's most important trade routes. Improvements in the Syston area, which provide for all road users, will help ease congestion and help support sustainable growth to the north of Leicester.

Road: M1 – Leicester Western access: There is a need to ease congestion, improve road safety and unlock further economic growth at this location.

Road: A5/A426 Gibbet Hill: We want to see solutions that sustainably support local growth and help the A5 become more reliable at peak times.

Road: A46 improvements between Stratford and Warwick: The A46 between these places currently provides a very poor service. Public transport between them is virtually non-existent, cycling is perilous, freight and commuters get stuck in significant queues and both areas have plans for growth. We wish to see a programme of measures developed and delivered here.

Road: A46 junctions around Evesham: Clogged up roads are hindering local economic growth and having a detrimental impact on the market town of Evesham. We believe there are longer-term ideas which can realise aspirational visions for Evesham, but right now there are some real problems for all road users. These could be solved by relatively minor improvements to junctions on the A46.

Road: Birmingham Box: There are safety and congestion issues that will continue to worsen as the West Midlands grows. Large scale changes to the M5/M6/M42 are physically extremely challenging and not desirable in the context of decarbonisation. We want to see this area of the network run as safely and reliably as possible, largely using technology but also complemented by improved public transport being planned by Transport for the West Midlands (TfWM).

Road: A5 between Hinckley and Tamworth: We believe there are opportunities to improve safety, reduce congestion, support growth and provide active and public transport routes along the A5, one of the region's most important east-west road corridors.

Road: M6 junction 15: We have identified proposals to reduce congestion, improve safety and support the better flow of traffic at this problem location.

Summary of the core benefits our plan will deliver

Our detailed Strategic Transport Plan sets out our road infrastructure priorities for both RIS3 and RIS4 as well as our full aspirations for MER. An initial, order of magnitude assessment of the potential benefits of our rail and road infrastructure priorities is set out below.

Transport user benefits

- Our full package of MER interventions is forecast to deliver transport user benefits of approximately £4 billion over a 60-year period from 2035 and raise revenues by approximately £3.5 billion³⁰
- Our road investment programme for the period up to 2035 (including both our RIS3 and RIS4 priorities) could generate transport user benefits over a 60-year period from 2025 of approximately £40 billion³¹

Additional benefits

- Our combined road and rail priorities could provide up to circa £2 billion more GVA per annum by 2041 in the Midlands, rising to circa £4 billion per annum by 2061.³² This GVA impact represents increased productivity and improvements to labour market access, facilitated by delivery of our priorities.
- Delivery of our priorities will also help support the Midlands Engine ambition for 334,000 additional jobs.³³

²⁹ According to analysis of 2018 mobile phone data of journeys between Coventry and Leicester

³⁰ Forecast Midlands Engine Rail Benefits, Midlands Connect Rail Model Phase 1 Combined Run, Midlands Connect, September 2021

³¹ Midlands Connect road investment programme TUBA modelling, Midlands Connect, February 2022

³² Midlands Rail Hub and Full Core Strategy Modelling, Midlands Connect, November 2021

³³ Future Growth Prospects, 2030 Transformational Scenario, Midlands Engine Independent Economic Review, Midlands Engine, 2020

Speeding up delivery

“The government wants to deliver infrastructure projects better, greener and faster.”

National Infrastructure Strategy, NIC 2020.

We want to do this as well, so that the transport infrastructure projects that meet the Midlands’ needs are delivered more quickly.

Accelerating delivery of the transport connectivity that the region needs is also about working together to co-ordinate new thinking around the strategic transport needs of the region. We will continue to explore existing areas of focus described above, such as the future of rural mobility, accelerating the take-up of alternative fuels and smart ticketing payment mechanisms. We will also identify and explore a number of further areas where we feel there could be benefit in Midlands Connect adopting a co-ordinating role to aid further regional collaboration, research and innovation. These include the development of a regional decarbonisation policy toolkit, understanding the impact and benefits of

freeports, looking into how we pay for roads and the development of a regional technology action plan.

But, delivering more quickly also requires different ways of working. We want to:

- Build on our strong partnership working by taking a ‘One Midlands’ approach to identifying the jobs, growth and investment needed in the region
- Make better investment decisions through the development of better business cases and by better using the economic, social and environmental data we have available
- Have a conversation with government about how to better fund improvements to transport infrastructure – for example, could we get more funding by combining government money for transport investment with money that is currently spent separately on skills, education or housing
- Work with our local authority partners to ensure we have enough people with the right skills to develop and deliver the major transport projects and schemes that we need.



What next?

Midlands Connect will now work with its partners, including local authorities, transport bodies, Midlands Engine and government, to deliver the improvements outlined in this Strategic Transport Plan.

Our immediate commitments:



Building on the Integrated Rail Plan, we will deliver a business case for our full Midlands Engine Rail (MER) programme by spring 2023, including our flagship scheme, the Midlands Rail Hub



Publish a Freight Improvement Plan to support strategic freight movements across the region



Provide evidence to government as it investigates how high-speed trains will run from the East Midlands further north, to Leeds and beyond



Develop a funding plan that outlines the opportunities to bring in private sector funding and finance to deliver on our regional priorities



Strengthen the position of the Midlands as a leader in the take-up of electric vehicles, publishing guidance for partners alongside a tool to help identify sites where public chargers are needed



Support the development of rural mobility solutions, empowering businesses to work with local authorities to solve mobility-related isolation and poor access to services in areas across the region



Publish a Transport Technology Route Plan, examining how technology can make our transport network safer, more sustainable and more efficient



Deliver a Decarbonisation Policy Toolkit, supporting local authorities to examine ways to decarbonise our transport network, analysing the carbon footprint of every project or policy proposed, as well as ways transport initiatives can reduce emissions and encourage behavioural change



Develop a clear plan to assist the take up of alternatively fuelled vehicles in the freight sector (including hydrogen and natural gas)



Establish a Midlands Transport Decarbonisation Forum, bringing together experts from across the region to share best practice.



Continue to invest in the development of new ideas to improve the major road network for all road users, including pedestrians and cyclists

More information on the projects and priorities in this Strategic Transport Plan can be found in the technical version of this plan, available at <https://www.midlandsconnect.uk/strategy/>



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