

Levelling up Stoke-on-Trent, Staffordshire, Derby & Derbyshire: The road to success

A strategic transport road map to improve the A50/A500
North Midlands Manufacturing Corridor



Midlands Connect
Transport | Investment | Growth

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Background

Partners within the Midlands have identified the A50/A500 corridor as a nationally important economic corridor with the opportunity to supercharge growth and productivity by driving innovation in energy, growing local skills and unlocking key infrastructure. Midlands Connect has therefore, alongside the wider Midlands Engine partnership, identified the A50/A500 corridor as a vital east-west route within the region, linking Derbyshire, Nottinghamshire and Leicestershire to Stoke-on-Trent, Staffordshire and the North-West.

At the western end of the corridor, the A500 connects to the M6 via Junctions 15 and 16. At the eastern end, the A50 connects to the M1 via Junction 24 and 24a. This busy route sees between 60,000 and 90,000 private, commercial and public vehicles travel through it every day.

The A50/A500 corridor plays a central role in the Midlands and UK economy. It is home to several renowned national and global brands including AstraZeneca, Toyota, Alstom, Bentley, JCB, Nestle, Rolls Royce, Michelin Tyres, Bet 365 and Steelite alongside an extensive small and medium enterprise (SME) community which ONS data (Jan 2021) shows is growing at a rate outstripping average SME growth in the UK.

With 41% of the corridor's output coming from manufacturing and distribution, these businesses are heavily dependent on the A50/A500 road to link with their supply chain and effective connections to international markets - supporting our world-leading businesses to export and trade across the globe.

In addition to a strong manufacturing-base, the A50/A500 corridor is home to the cities of Stoke-on-Trent and Derby, as well as sizeable towns which have struggled with poor transport connections for many years but still have ambitious plans for future development.

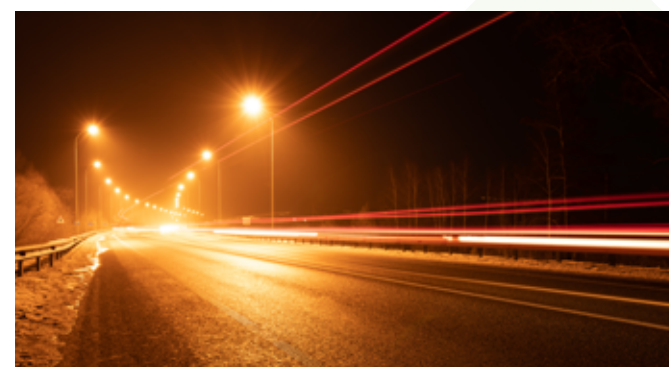
The corridor will also connect HS2 hubs at Crewe and Stoke-on-Trent with HS2 proposals at East Midlands Parkway, East Midlands Freeport and the wider East Midlands Development Corporation. Connectivity

amongst all these strategic assets has the potential to deliver significant infrastructure-led sustainable growth in the future.

In this wider strategic context, Midlands Connect is working with our Midlands Engine partners to deliver a collective ambition – to transform the A50/A500 east-west corridor into one of the primary locations for sustainable growth and investment in the UK. This will be driven by innovation, new technologies and supporting the move towards carbon neutrality, improved provision for HGVs and EV users and a frequent and much improved rail service that connects to an integrated transport offer in each major locality.

This report focuses on presenting a package of recommended transport improvements required along the A50/A500 which if delivered, will provide the capacity, resilience and journey time reliability required to unlock sustainable growth, increasing productivity and supporting the transition to more sustainable means of travel including the provision of electric and hybrid vehicle facilities and charging infrastructure.

Midlands Connect will now work with Government and national bodies like National Highways to seek their support in progressing at pace with our proposals ensuring the businesses, communities, towns and cities it serves are able to reach their potential and benefit from sustainable growth, healthier living and prosperity for decades to come. Our work will be carried out in collaboration with our Council partners along the route, to maximise opportunity for impacted communities in an accountable way.



What we've done

Over the last two years, Midlands Connect has undertaken intensive analysis to help understand the role and function of the A50/A500 corridor (functional economic geography), identifying current and future traffic problems, building the case for investment.

As part of this work, we identified that a very high proportion (around 50%) of industries located on the corridor are dependent on the Strategic Road Network (SRN). In addition, a significant amount of housing growth in the area is expected, according to local plans and suitable sites identified by planning authorities for development in future.

With support from the Midlands Engine Observatory and local partners, we are also constantly strengthening our knowledge and evidence base in relation to Brexit and the COVID Pandemic.

Moving forward and for the purpose of development and prioritisation work, Midlands Connect will now focus its activities on three sections of the 56-mile corridor. The named 'western', 'central' and 'eastern' sections all face unique challenges and serve many different communities. Our research has also modelled the impact of upgrades on all three sections,

taking a 'corridor-wide' approach which highlights the multiple benefits of carrying out all works in a phased programme.

Along with our partner organisations, Midlands Connect has also revised the Uttoxeter Part B scheme. Our plan recommends including improvements to two more junctions on either end of the existing Uttoxeter Part B scheme, forming a larger, more complete central section development. This would help to avoid simply shifting traffic problems from one location to another and improve the performance of the entire central section of the corridor from Blythe Bridge to Sudbury. As a result, we are likely to see wider benefits and would therefore a more successful return on funds invested.

During the Chancellor's October 2021 budget, £49.5 million has been awarded as part of the Levelling Up fund to develop a new junction and upgrade a roundabout on to the A50 to help support the South Derby Growth Zone and Infinity Garden Village. This commitment to development so close by is a great sign for the future of the A50/A500.



1. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1028835/261021_Regional_fact_sheets_v4_Tuesday_230pm.pdf

**Sir John Peace,
Midlands Connect Chairman**



“Whether travelling to a hospital appointment, transporting essential goods, or visiting loved ones, a well-functioning road network is an essential thread in the fabric of the Midlands. Every day, over 7 in 10 journeys are made by road, whether they be by private car, bus, taxi or pushbike. This report outlines why upgrades to the A50/A500 manufacturing corridor are crucial both to keep international markets open after Brexit and to reduce emissions by enabling more direct and efficient journeys.

This suggested strategic enhancement plan from Midlands Connect is based on comprehensive research which, alongside the work of the Midlands Engine observatory, proves just how economically important this 90km East-West stretch of road between Crewe and Derby is. Improvements will also make it easier to run better public transport services and prepare for a future where electric vehicles and alternative fuels become the norm.

A key location for manufacturing and industrial activity due to its fantastic links with major UK cities and local supply chains, the corridor is home to industry leading businesses including JCB, Toyota,

Rolls Royce and Alstom. However, the busy A50/A500 has slowly become more congested over time and regular bottlenecks form at junctions during peak times. Widespread development is planned for the surrounding area, meaning that change is needed now, with this sustainability-led plan to keep locals, employees and businesses moving.”

**Kate Griffiths MP,
Project Champion**



“As MP for Burton and Uttoxeter, I know that our region is an extremely important part of the UK’s wider economy. These improvements to the A50/A500 are vital for local infrastructure to drive future growth and better connectivity for residents.

Midlands Connect’s suggested strategy to upgrade this road corridor will make it easier for multinational businesses in constituencies along the corridor to trade, import and export, as well as opening up new opportunities for employment.

With active travel and EV preparedness built-in, I am committed to working with Government and my MP colleagues along the A50/A500 to start on this innovative programme as soon as possible.”



The A50/A500 Corridor in Numbers

Between 60,000 and 90,000 vehicles travel on the route every day



Commuters currently waste on average **>37 minutes every weekday** on the A50/A500 corridor due to traffic congestion.

Once improvements have been carried out, commuters are likely to get back:

3

working days a year driving through the Central Section by 2025

3.5

working days a year driving through the Central Section by 2050

>4

working days a year on their commute in the Western Section by 2041

Suggested developments on the A50/A500 are likely to generate:

17,760

new jobs in the corridor area by 2061

12,474

new skilled jobs in the Midlands Connect area

21,538

population increase in the corridor area by 2061

12,451

population increase in the Midlands Connect area

£12.04bn

increase in GVA over next 60 years in Midlands Connect area

Road Investment Strategies

Funding for improvements on roads such as the A50/500, which is owned and managed by National Highways on behalf of Government, typically comes from budgets allocated to national 'Road Investment Strategies' (RIS). We are currently in the second RIS period, which runs from 2020-2025. For this period, National Highways was given £27.4bn to cover its operational, maintenance and improvements budget for all of the motorways and major A-roads it oversees.

Although the RIS2 period is just beginning, National Highways is already planning for RIS3 and as such, Midlands Connect has been undertaking work across a number of corridors to put forward our suggestions for improvement plans.

Midlands Connect is committed to minimising the building of new road infrastructure, instead seeking ways to reduce private car travel and emissions, including active travel improvements, alternative fuels and electric vehicle infrastructure. Using strategic planning methods informed by a detailed understanding of planned development, growth locations and timelines in the corridor area ensures that upgrades are kept efficient.

In chapters below, we suggest which improvements should be progressed and when, in order to keep the corridor running efficiently whilst works take place.

If successful, schemes submitted to RIS3, 4 and 5 would be delivered within the following timeframes:

RIS3: 2025-2030

RIS4: 2030-2035

RIS5: 2035-2040

With deadlines fast approaching, it's important that submissions are made to RIS3 as soon as possible and RIS4 asks identified, in order to ensure a successful long-term phased plan for improvement. We continue to work with our partners to achieve this.

Our suggestions form a live strategy based on our best understanding of future requirements at the time of development. The need for these interventions may be revisited at a later date if the circumstances change.



Western Section - M6 J15 and J16 to Blythe Bridge, Staffordshire

The mix of local and through traffic on the A50 and A500 through Stoke-on-Trent results in traffic flows well over 100% capacity, creating significant congestion. This means residents in Stoke-on-Trent see major bottlenecks, especially at the A34/A500 and the A50/A500 junctions.

With major widening of the A500 set to be a challenge, localised traffic management schemes are being considered as an effective alternative. We know that maintaining local traffic access to the A500 is extremely important to the local economy.

We recommend the A500 works as a key gateway to Stoke-on-Trent, with capacity predominantly utilised for travel to, from and around the city, whilst equally recognising the need to improve access to better public transport links.

A range of junction and capacity improvements is recommended to manage the route's current high volumes of inter and intra city journeys made along it. We believe it will be critical to redesign some of the signalled junctions on and off the A500 in particular, with capacity assessed and amendments made to better allow the flow of traffic onto the strategic network.

Capacity enhancements on the A50 to M6 Junction 15 route would re-balance traffic flows, with through traffic having an alternative to taking the A500 through the core of the city.

This would enable the A500 to continue to provide a vital local transport 'valve' for the local road network.

Our recommended ultimate package of improvements:

Most immediate priorities (within the next 10 years, aligning with RIS3 and RIS4):

- Strategic improvements to M6 J15 to resolve congestion, improve safety and facilitate better flow of traffic on M6 and A500. This has been suggested for submission to RIS3.
- Enhancements at Sideway to make traffic flow more smoothly, including strategic changes to the roundabout and lanes at the junction and address the signalled junctions that cause traffic to build up on the route.
- Technology-led improvements to the reliability and safety of the M6 between Junction 15 and 16. Suggested for submission to RIS4.

Projects considered for later periods include:

- New technology to provide resilience on the strategic road network – this would include better pre-travel and in-vehicle information tools to compensate for reduced capacity on the A500 in case of incidents on the M6.
- Midlands Connect's goal is to ensure that our major roads are as safe and reliable as possible for all road users, whilst also ensuring that we plan for growth. With this in mind, we believe the A50's main focus should be strategic and through movements, therefore allowing the A500 to be used for more local journeys. This will allow better integration with public transport, walking and cycling.



Central Section (priority section), from Blythe Bridge, Staffordshire to A50/A38 Toyota junction

The Central Section of the A50/A500 corridor has long suffered from persistent congestion, reliability and air quality problems. Locals will know that enhancements around Uttoxeter have been mooted for many years and championed by local MP Kate Griffiths. Although some improvements have been made, significant issues remain. With an ambitious masterplan for significantly enhancing Uttoxeter town centre currently under review, it's more important than ever that surrounding road networks are made more resilient.

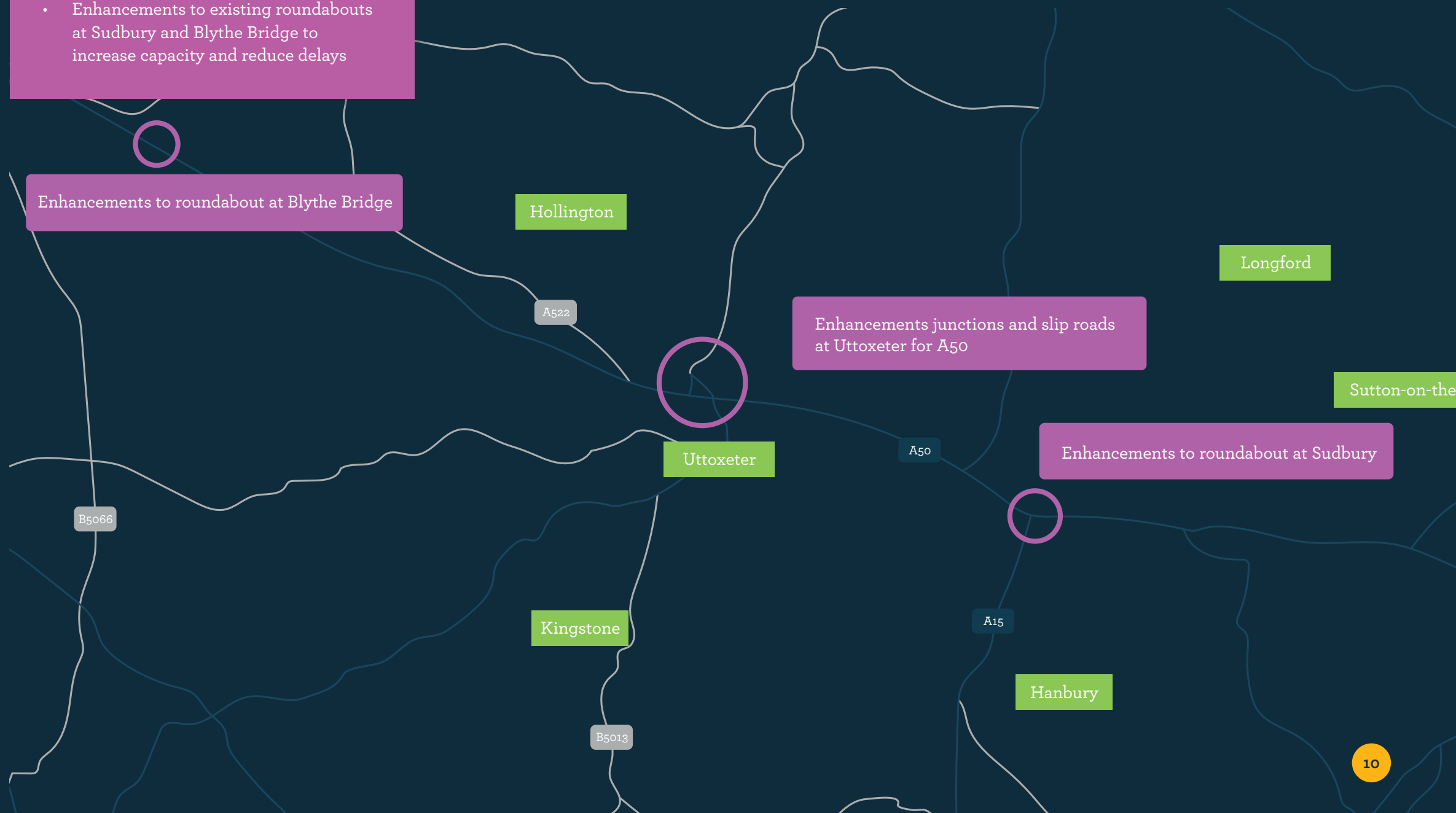
Midlands Connect has considered a package of measures for three locations in this section which should be carried out in a sequenced manner and present good value for money, allowing the full benefits to be enjoyed in a way which does not compromise the rest of the corridor. These projects need to be planned together and considered as a single scheme, being delivered in sequence to minimise disruption during construction.

Our appraisal also highlighted the importance of the Central Section as the priority element of the Corridor Strategy. The proposed packages within the Central Section are integral to enhance the operation of the corridor overall, with significant additional benefits realised in the Eastern and Western Section if the Central Section is improved, due to removal of the existing pinch points.

Midlands Connect has collaborated with Derbyshire County Council, Derby City Council Leicestershire County Council, Staffordshire County Council and East Midlands Chambers to develop an innovative hybrid programme for upgrading the Central Section of the A50/A500. This would combine improvements at three different junctions at Uttoxeter, Blythe Bridge and Sudbury, along with local network enhancements. We recommend this package of improvements in the Central Section should be considered for funding in RIS3.

Our recommended strategy for this section includes:

- Grade separation of the A50 and local roads at two locations in Uttoxeter, with associated slip roads to provide access and other potential enhancements to support growth and enhance local active travel networks
- Enhancements to existing roundabouts at Sudbury and Blythe Bridge to increase capacity and reduce delays



Mark Turner,
Chief Operating Officer, JCB



“JCB is a major, multinational company in the area which continues to create jobs and make a significant investment in Staffordshire. Like many other big employers based along the A50 corridor, we at JCB want to see continued investment and growth, helping to make the A50 more resilient, accessible and reliable 365 days a year.”

We support Midlands Connect’s proposals for improvement, which would work to harness the potential of the North Midlands manufacturing corridor.”

Eastern Section from A50/A38 Toyota junction to M1

Improving the Eastern Section of the A50 presents a challenge, as so much development is being planned or considered in the surrounding area – it's essential that we consider this as part of our strategy. There are aspirations of growth around East Midlands Airport, the planned Freeport, East Midlands Gateway and Rail Freight Terminal, as well as plans for a £13 million East Midlands Institute of Technology campus north of Derby city centre at the existing Enterprise Centre which Government has already given the go-ahead to. All of these plans could substantially change the demand for movement on the A50 and M1 in the future.

In addition to some small junction improvements which may be needed on the A50 itself, the biggest challenge lies with Junction 24 of the M1, which has

recently been partially upgraded but could quickly become congested again following extensive planned growth in the area, as well as HS2 at East Midlands Parkway. To mitigate this, we explored the option of providing additional connectivity between the A50 to the A42, which would enable traffic to avoid the M1 and allow new growth around the Airport and Freeport to have less impact on the motorway. This could be achieved through a combination of some new infrastructure and making better use of what already exists.

Working alongside Derby City Council, Derbyshire County Council and Leicestershire County Council, a recommended improvement plan for the Eastern Section of the A50/A500 has been developed. This is a collection of major junction changes which have been designed to work together to improve traffic flow.

Rolls-Royce plc,
Derby

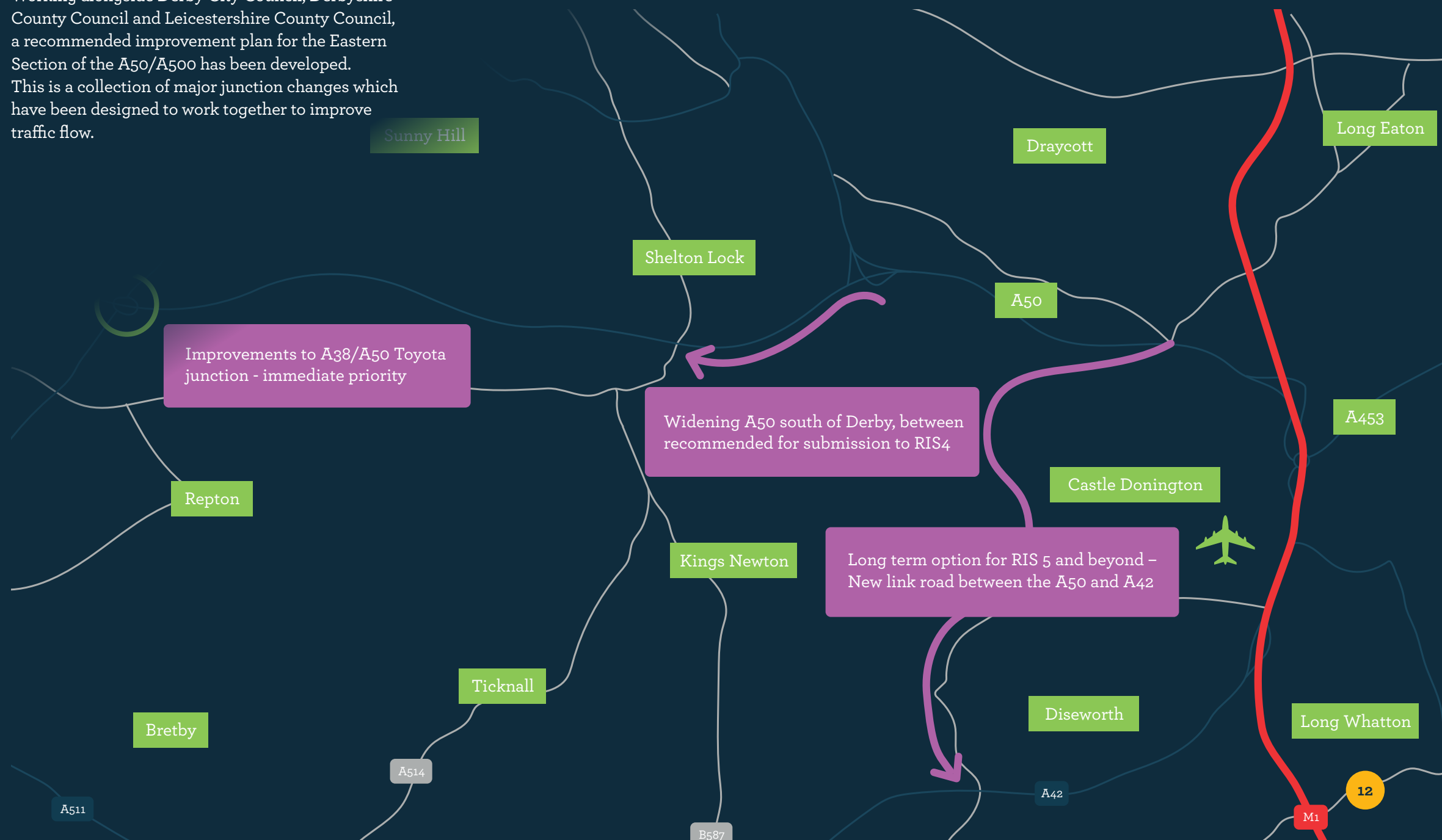


“Rolls-Royce in Derby is a major contributor to the local and regional economy. Without improvement to the A50 corridor, increasing congestion threatens to stand in the way of new jobs and growth in our important Midlands manufacturing industry.

For the team at Rolls-Royce, creating better employee access at Sinfyn and Raynesway is extremely important and Midlands Connect’s innovative development plan supports this. We look forward to a stronger, more resilient network in and around our plant.”

Our recommendations for detailed examination in this section include:

- Improvements to A38/A50 Toyota junction to improve capacity, safety and general operation (recommended as immediate priority to be delivered through an appropriate source of funding).
- Widening of the A50 south of Derby, between Junction 2 for the A6 at Chellaston and Junction 3 for the A514 near Aston-on-Trent (recommended to be undertaken in RIS4).
- Building a new link road between the A50 (near junction 1) and A42 (near junction 14, Breedon-on-the-Hill). This is recommended as a long-term option to be considered for RIS5 or beyond.



Nottingham-Derby-Stoke-on-Trent-Crewe Railway

The Derby-Stoke-on-Trent-Crewe rail corridor (now extended to Nottingham) has a strategic role to play in connecting the main conurbations in the North Midlands and unlocking potential by linking major north to south routes.

The delivery of HS2 services with hubs at Crewe and East Midlands Parkway further highlights the need for a significant upgrade. Midlands Connect has examined the options for doubling services between Derby and Crewe from one to two trains per hour and reducing journey times by 20 minutes from 79 to 59 minutes.

The Stoke-on-Trent Station Masterplan is already in delivery phase with the Goods Yard development being implemented and recently it was announced that a developer has been appointed to the project.

This rail project is critical for manufacturing, housing and general economic growth to allow the M6 and M1 corridor, Midland Mainline and West Coast Mainline to all be connected with this vital rail chord.

We estimate that if both of these are achieved, rail passenger demand could increase by as much as 72%, with reduced traffic on the A50 and reduced emissions a knock-on effect. This project should

ensure that travelling by rail becomes a viable alternative to the congested A50 and M6.

Improvements to the Derby-Stoke-on-Trent-Crewe rail corridor are a part of Midlands Connect's wider Midlands Engine Rail programme, which seeks to improve connectivity and capacity across the whole region. We believe that if funding can be secured then the benefits could be released in phases between 2022 and 2040.

We work alongside local authorities and are aware of other local rail bids, including the desire to improve connectivity in Etruria and Meir and the proposed enhancements between Stoke and Leek.

In addition, new franchise holder Abellio has already extended the service on this corridor to Nottingham and Newark. Midlands Connect is currently undertaking a dedicated North Staffordshire rail corridor study, set for release in March 2022, which is investigating options to deliver further passenger improvements in advance of HS2.

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Doubling services from 1 → 2 trains every hour



Reducing journey times by 20 minutes along the route



Electric Vehicles

Sales of all new petrol and diesel cars will be stopped in 2030, meaning that the A50/A500 corridor must prepare now for widespread electric vehicle (EV) usage.

In a recent Midlands Connect report (Supercharging the Midlands) on the future of EV charging in the region, we set out the scale of the challenge facing local authorities and industry to deliver a recharging network of the scale needed to support full EV take-up.

Midlands Connect is developing a tool, which will help local authorities to determine the most effective places to install charging facilities in their area. We will be rolling this tool out to all of our local authority partners by Spring 2022. It will support local authorities along the corridor to develop a comprehensive charging network best suited to the unique needs of the route.

Stoke-on-Trent City Council is working to deliver a small number of rapid EV charging points at town centre sites adjacent to the A50/A500 corridor.

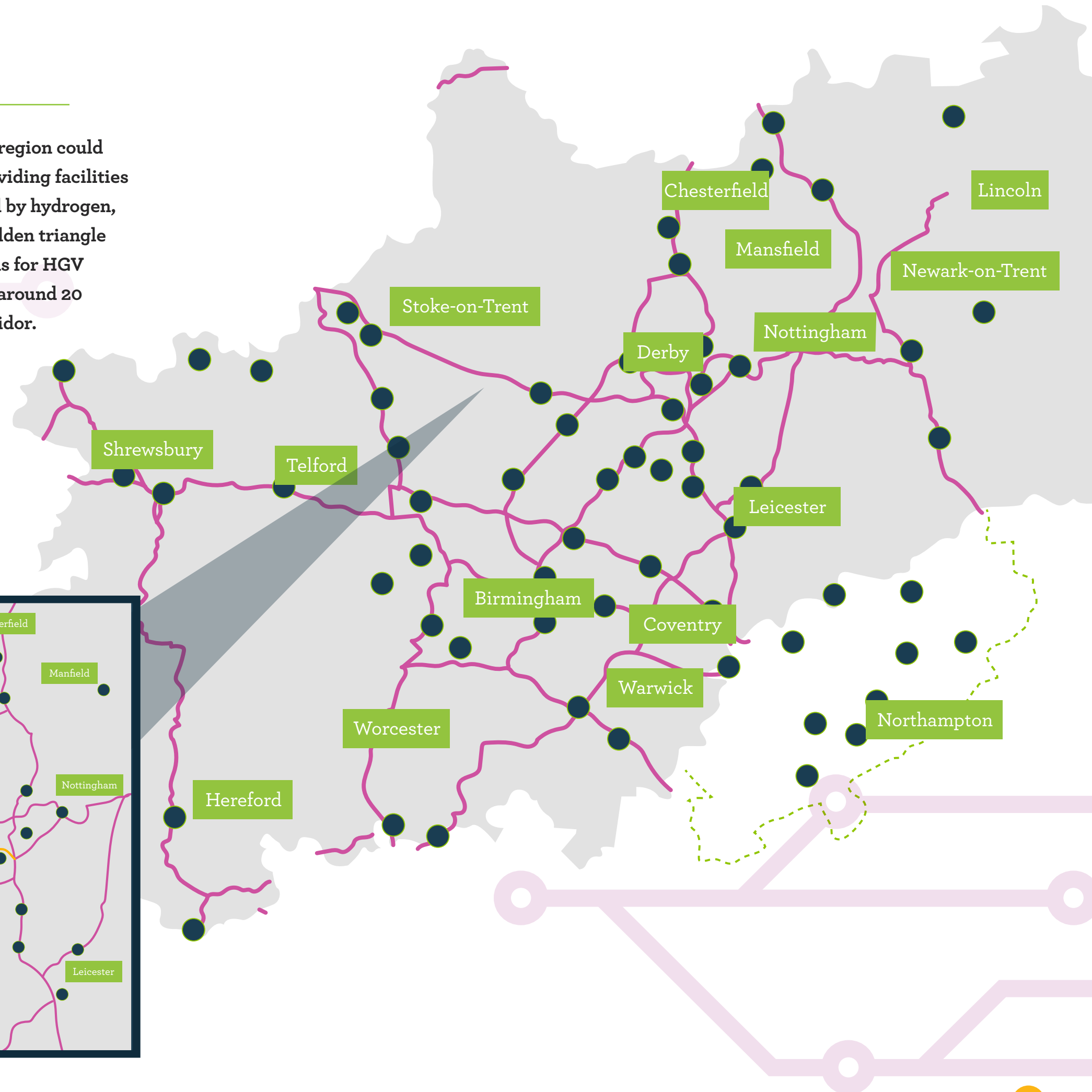
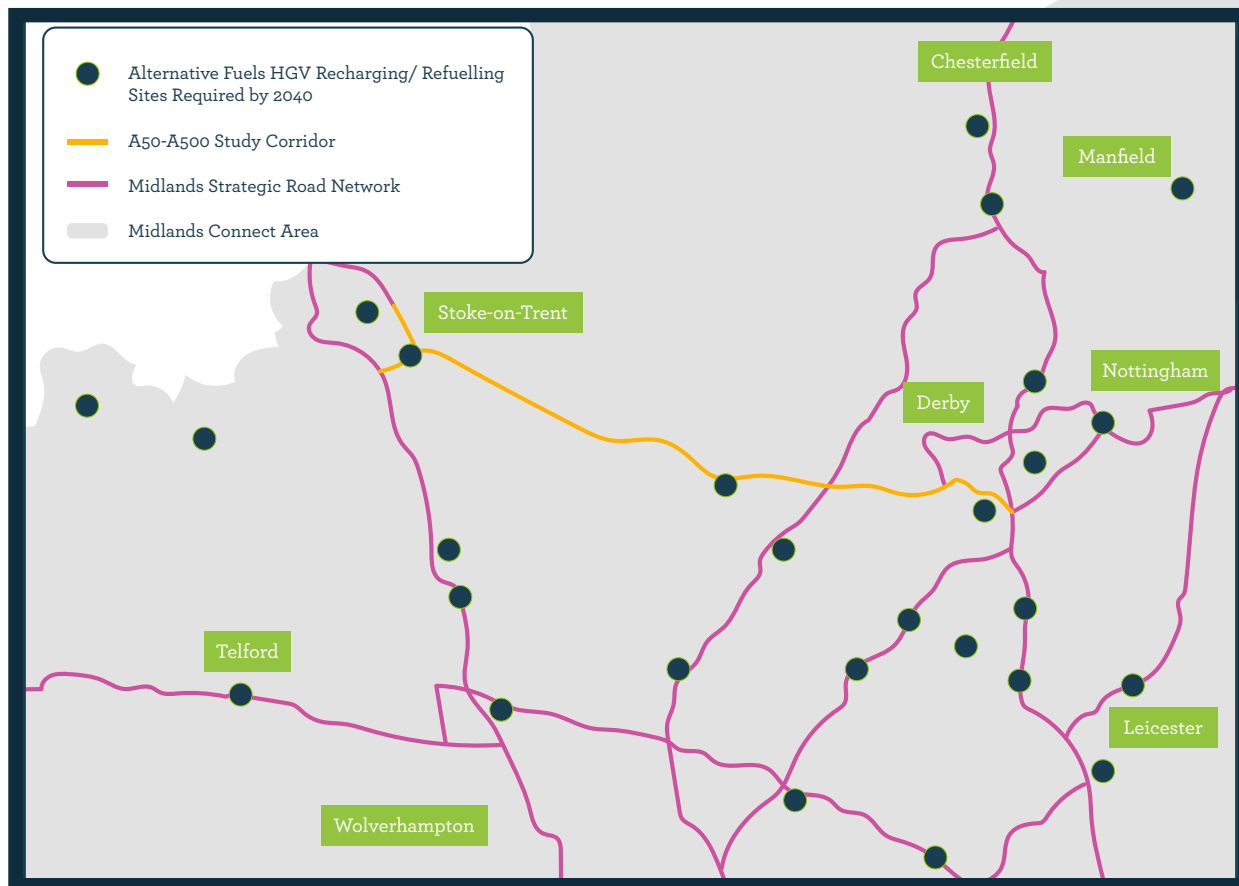
Whilst primarily provided for local users, the potential for a network of rapid charging points along the corridor will help to meet future demand and be a green asset to the corridor.



Alternative Fuels

Midlands Connect has recently proposed that the Midlands region could become a test bed for HGV alternative fuelling stations, providing facilities for large goods vehicles of the future, which will be powered by hydrogen, electric and other innovative clean fuels. As home to the 'golden triangle of freight', our research identified some 66 suitable locations for HGV alternative fuelling stations across the Midlands, including around 20 suggested for installation in and around the A50/A500 corridor.

Midlands Connect's work sits alongside action by local authorities in the region. Stoke on Trent is working directly with Department for Transport to bring forward an alternative fuelling station and modern welfare facilities along the Sideway/Campbell Road corridor. This is just minutes from the A500 and A50 corridor.



Next Steps

Road

Our analysis shows that phased upgrades on the three sections of the A50/500 would bring significant benefits for local residents, businesses and the environment. Along the North Midlands Manufacturing Corridor, connectivity to major employers and skill bases, manufacturers and key international gateways would be enhanced, supporting an important part of the Midlands economy and delivering further economic and social benefits, achieving better value for money.

We will next undertake a sustainability appraisal to complement the transport and economic assessment aspects of the study.

Following this, interventions for further development in National Highways' PCF process to secure inclusion within RIS3 will be identified.

Further development, including feasibility, costs, value engineering and more detailed testing of interventions not prioritised for immediate development and inclusion within RIS3 will also be explored.

Rail

Findings from Midlands Connect's study on the North Staffordshire Rail Corridor will be reviewed and assessments made of how this will impact the corridor as a whole. Now that the Integrated Rail Plan has been published (November 2021), we will also review the potential impact of the proposed HS2 line to East Midlands Parkway on the Eastern Section of the A50/A500.

Freeports

The development of Freeports in the Midlands is still in its initial stages but will be very important for achieving successful business cases for work on the A50/A500 corridor. Midlands Connect will continue to work closely with central and local Government on emerging plans at freeports both in the East Midlands and the Humber, using them to support and develop proposed upgrades.

Engagement

Wider discussions will be held with all relevant partners and stakeholders at the earliest possible opportunity to ensure agreement on broader aspirations for development of the A50/A500, including road, sustainable transport and economic growth.

Midlands Connect continues to partner with Midlands Engine to explore solutions which ensure that non-transport measures are designed alongside, to compliment investment in highways and maximise the benefits to households and businesses both on the A50-A500 corridor and beyond. This wider scope will look at how the A50 (and connections from it), has an influence all the way to the east coast towns and ports.



Maria Machancoses,
CEO of Midlands Connect

“Businesses, local authorities, residents and community leaders all stand in agreement that developing the A50/A500 is essential for supporting international trade and green growth. We now call on Government to enable these strategic works as soon as possible.

We will continue to work alongside our wider Midlands Engine partners to ensure our collective efforts on the A50/A500 truly deliver on our ambitions for increased global reach, innovation, skills and infrastructure.”



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