Midlands Rail Hub

Going for Growth A summary of our Outline Business Case



Midlands Connect Transport | Investment | Growth

December 2022



Sir John Peace. chairman, Midlands Connect

In the last five years we've have seen some of the most radical changes to our political, societal and environmental landscape in living memory. Yet, with support from Government, the Midlands Connect Partnership has worked tirelessly to advance the Midlands Rail Hub from an ambition. set out in the 2019 Conservative election manifesto, to a credible and investable proposal which, when delivered, will truly level up the Midlands.

This is a truly momentous occasion for us at Midlands Connect, we are proud to unveil this detailed plan for infrastructure changes which will transform our region. This work, delivered in partnership is a testament of collaboration and shows what happens when you set strong priorities and work together to try and deliver them.

We know the project has the backing of the businesses, communities and political leaders in the Midlands, and we stand ready to kickstart its delivery and get spades in the ground. That is unique for schemes of this magnitude and shows the willingness and determination of colleagues to work, in concert, to go for growth and level up the Midlands.

The Midlands Rail Hub will significantly impact the future of travel for generations to come. I hope the government will now look on this report and its recommendations favourably.



Midlands Rail Hub would be a game changing scheme for our region. The benefits it can bring to local people and businesses are many - whether it's connecting millions more people to the HS2 network, creating space for millions more rail journeys or opening up faster and more frequent rail links for commuters as well as business and leisure travellers.

As we bounce back from Covid. Midlands Rail Hub will support our recovery by better connecting the East and West Midlands, opening up access to opportunities right across the region and supporting thousands of jobs. Beyond the economic imperative, getting more people and businesses using the rail network is a vital tool in our armoury when it comes to tackling the climate emergency. Midlands Rail Hub helps to put us on a pathway to sustainable growth and the changes we set in motion now will not be a mere 'flash in the pan'. Our new, faster, vaster rail network will be used by Midlanders for many years to come - even a century from now.

So given how high the stakes are here, I urge the Government to help maintain our momentum and give Midlands Rail Hub their full backing in the weeks, months and years ahead. When our region succeeds, the country succeeds and the sooner Government enables us to start delivering this project, the sooner our local residents will experience the plethora of benefits to come.



Andy Street, Mayor of the West Midlands

Executive summary

This document outlines our plans for the future of the Midlands Rail Hub, following the publication of Government's Integrated Rail Plan. Important highlights include:



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Midlands Connect is committed to the delivery of the Midlands Rail Hub in full, including two new chords. Midlands Connect has collected evidence, contained within this document and our Outline Business Case, which, we believe, represents the best possible way to enhance capacity on the region's railways and boost east-west connectivity between its major towns and cities including Leicester, Birmingham, Worcester and Hereford.

New opportunities exist to create enhanced connections to towns and cities across the Midlands. While the Integrated Rail Plan delivers services to Nottingham and Derby via HS2, this doesn't provide any benefit between Birmingham and Leicester (and communities in between) and for this reason, better Birmingham to Leicester connections through Midlands Rail Hub remain as important now as they always did.

We're gearing up to deliver, as soon as possible. We've identified some parts of the scheme that could be delivered very quickly, including the reinstatement of platform 4 at Birmingham Snow Hill station, subject to Government support. This would deliver immediate benefits, including extra trains to London from Snow Hill, and reliability benefits for all services.





What is the Midlands Rail Hub?



Part of the Midlands Engine Rail programme, Midlands Rail Hub is the region's biggest and most ambitious rail improvement scheme - a £900m -£1.5bn blueprint for faster, better and more frequent connections across the Midlands.

The concept of constructing two new links (or chords) into Birmingham Moor Street station was born in the 1990s, driven by a desire to create space for more trains to move into and out of central Birmingham.

Since its inception as the region's Sub-national Transport Body in 2015, Midlands Connect has worked with local leaders, authorities and Network Rail, alongside the Department for Transport to develop and progress the Midlands Rail Hub, focusing on the benefits it can bring in enhancing eastwest connectivity across the Midlands and linking seamlessly with HS2 at Curzon Street. As well as gaining political consensus for the scheme, Midlands Connect and Network Rail managed to secure £20million in funding for the project's development in March 2020. The project was also listed as a transport priority in the 2019 Conservative Party Manifesto and in Government's Integrated Rail Plan, published in November 2021. The importance of Midlands Rail Hub was also reinforced by the Transport Select Committee's review in July 2022, emphasising the need for the scheme to be delivered in full.

Historically, turning rail projects from concept to reality has been a long and frustrating process. Midlands Connect is keen to break this cycle by securing the future of this project now and planning for its delivery, allowing Government to apply the principles of 'Project Speed' to its construction, as soon as possible. Given this aim, this document outlines what Midlands Connect, Network Rail and the Department for Transport are doing to progress the Midlands Rail Hub, with the aim of benefitting local people, our environment and our economy sooner.

The project so far...

1990s -

Project identified as a viable investment option by Network Rail in its Central Birmingham Rail Capacity Study

2015

Strategic Outline Business Case completed

2020

Project's South-West corridor endorsed in Government's Integrated Rail Plan

2022

Concept of two new rail connections or 'chords' into Moor Street station identified as a way of increasing capacity in central Birmingham

2013/14

Midlands Connect commenced work on the Midlands Rail Hub in partnership with Network Rail.

2019

Network Rail and Midlands Connect secured £20million in funding for the project's development in March 2020

2021

Outline Business Case submitted in Autumn 2022, seeking a 'Decision to Design'



The Midlands Rail Hub in numbers

Travel



Faster, more frequent or new rail links for over 30 locations including: Birmingham, Bromsgrove, Nuneaton, Worcester, Hereford, Cardiff, Bristol, Cheltenham and Leicester





Key facts and figures

Shorter journey times: Improved rail journey times between Birmingham and Worcester by up to five minutes, Cardiff by six minutes and up to 13 minutes to Hereford.





Boost economic growth:

For every pound we invest, we generate over £1.50 in benefits, inclusive of those to the wider economy. This demonstrates clear value for money.



Support increased demand: Housing and jobs growth is forecasted across the region in the coming years, resulting in additional demand for travel. For example, 30,000 new homes and 23,000 new jobs are expected in Herefordshire and Worcestershire by 2045. Similarly, between 2020 and 2045, an additional 144,000 new jobs are expected in the West Midlands, of which 96,000 will be in Birmingham; the highest growth rates are expected between 2030 and 2035, the period in which HS2 is due to be delivered.



Safeguard jobs: Maximise the benefits of HS2 and safeguard 1,600 jobs in the engineering and construction sector.

local connectivity by creating capacity for new services to/ from New Street, including reintroducing six trains per hour on the Cross City line. All of this will add to greater regional connectivity delivered by the Midlands Rail Hub to create a strong package of improvements for the Midlands.

Better connectivity: Improved



Create higher wages: Contribute towards improved wage levels in areas with improved rail connectivity to and between key economic centres. Areas with 10% higher rail connectivity have been shown to have wage levels 1.3% higher than comparable locations with lesser rail connectivity.



Midlands Rail Hub map



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Midlands Rail Hub Schematic V1. 6

Options for delivery

Option A: MRH West

In this scenario, a new West Chord is provided between Bordesley and Moor Street, allowing access to Birmingham Moor Street from the South-West and Wales, which allows us to operate extra hourly trains from Birmingham Moor Street to Hereford, Bristol and Cardiff. This option provides a great interchange between future HS2 services at nearby Curzon Street and non- high speed services at Moor Street itself. In addition, our new infrastructure means that the busy Birmingham Cross City Line enables an additional two train per hour, linking the towns of Bromsgrove and Redditch with the city of Lichfield, via Birmingham New Street. As well as serving these towns and cities, it gives us much improved access to important intermediate locations including the University of Birmingham and the Queen Elizabeth Hospital. Before Covid, this service used to operate every 10 minutes, and with our extra two Midlands Rail Hub trains, the 10-minute interval service will be fully restored, offering a 'turn up and go' service. Last but not least, we can run local trains from Kings Norton into Birmingham Moor Street, again providing a great interchange with future HS2 services.

While this option gives us some great new services, it doesn't address our poor connections between the West and East Midlands, and it doesn't provide any future capacity for extra services towards East Birmingham.

Option B: MRH West, Central and East

This is a more comprehensive option which requires two new chords at Bordesley. First, the West Chord, which means we get all the services described above in Option A, so extra trains to Hereford, Bristol and Cardiff, plus the restoration of a turn up and go service on the Cross City Line. Second, we introduce a new East Chord, which means we can run an extra two services every hour between Birmingham and Leicester, giving these two important cities a four trains per hour service – with two faster services calling at Nuneaton only, and two slower services calling at Nuneaton and the other stations on the route. In addition to these services to Leicester, the new East Chord we'll have built at Bordesley gives us the space needed to run more trains in the future – be it those within the West Midlands, or those running further afield. We don't know the specifics of these yet (that will involve more work in the future), but we do know that providing vital extra space in Birmingham is key to unlocking these.

The new capacity may also allow us to serve new stations in the future, providing access to the railway network for more people.



Our Preferred Option

It may come as no surprise that of these options, our preference is for Option B. As well as providing a great interchange between 'conventional' train services at Birmingham Moor Street and HS2 services at nearby Birmingham Curzon Street, Option B gives us much improved links from the West Midlands to the East Midlands, and crucially, space to provide further (as yet unspecified) trains beyond that. While both options are demonstrably robust, Option B offers the most societal, environmental and economic benefits, and aligns best with our original objectives for the scheme.

Option B will cost us between £1.48bn and £1.54bn, compared to £925m to £969m for Option A. While Option B costs more, it gives us much more in benefits, offering over £1 billion in benefits over the life of the scheme, of which over £200m are wider benefits to the economy. When compared against the costs, our work shows that for every pound we invest in this scheme, we get over £1.50 in benefits, demonstrating value for money for the Government. In addition, our research

The proposed interventions

The Rail Hub will require the following infrastructure requirements for each 'package':

Midlands Rail Hub West	Midlands Rail Hub Central (assuming West infrastructure)	Midlands Rail Hub East (assuming West/Central infrastructure)	
Snow Hill platform 4 Moor Street platform 5 Bordesley West Chord Kings Norton-Barnt Green	Moor Street platforms A & B (east side) Bordesley viaduct widening Bordesley East Chord	Water Orton remodelling Nuneaton to Wigston signalling headways Freight loops between Nuneaton and Leicester	
Stoke Works junction Malvern Wells turnback facility Ledbury – Shelwick partial double-tracking			

shows that we can safeguard 1,600 construction jobs¹. We also believe the Midlands Rail Hub can contribute to improved wage levels by providing improved rail connectivity to and between key economic centres. Areas with 10% higher rail connectivity have been shown to have wage levels 1.3% higher than comparable locations with lesser rail connectivity.

Whilst long term changes in commuting patterns have occurred following the COVID-19 pandemic, rail patronage is growing and is already back to 93% of pre-Covid levels. In the medium term, passenger crowding will return on services into Birmingham impacting journey quality and constraining economic growth. Since the pandemic we have witnessed that patterns of travel are now changing, and we are seeing strong demand for leisure trips that includes people going shopping and seeing cultural attractions. The Midlands Rail Hub will create extra capacity in the network to allows us to deal with this changing demand for work and leisure, while at the same time, offering the Government (and ultimately the taxpayer) a good return on all the investment made.

Benefits

Option A

These tables set out the benefits of the proposals and how they meet Midlands Connect's role in researching, developing & recommending transport projects which will provide the biggest possible economic and social benefits for the Midlands.

Route	Calls at	MRH Frequency Increase	Frequency with MRH in Place	Extra Seats Per Year	Journey Time Improvercents	Access to HS2
Birmingham to Hereford	Birmingham Moor Street Bromsgrove Droitwich Spa Worcester Foregate Street Great Malvern Hereford	+1TPH	2TPH	2 million	~	~
Birmingham to Cardiff	Birmingham Moor Street Worcestershire Parkway Cheltenham Spa Gloucester Newport Cardiff Central	+1TPH	2TPH	2 million	~	~
Birmingham to Bristol	Birmingham Moor Street Cheltenham Spa Bristol Parkway Bristol Temple Meads	+1TPH	2-3TPH	2 million		
Cross City Line (Lichfield Trent Valley to Bromsgrove/ Redditch) - MRH provides capacity for the reinstatement of 6TPH	Four Oaks Sutton Coldfield Wylde Green Chester Road Erdington Gravelly Hill Aston Duddeston Birmingham New Street Five Ways University Selly Oak Bournville Kings Norton Northfield Longbridge Barnt Green* Alvechurch Redditch* Bromsgrove	+2TPH	6TPH	Over 5 million	×	*
Birmingham to Kings Norton	Birmingham Moor Street Moseley Village Kings Heath Pineapple Road Kings Norton	Re-routes from New Street to Moor Street	2TPH	N/A	×	~

Option B

Route	MRH Frequency Increase	Frequenc MRH in
	mercase	
Birmingham to Leicester Calls at: Birmingham Moor Street Nuneaton Leicester (Coleshill Parkway, Hinckley, Narborough and South Wigston expected to benefit too)	+2TPH	4TP

As outlined throughout this report the Midlands Rail Hub will bring significant benefits for the economy and for passengers and it will help the government deliver on its missions to deliver economic growth, rebalance



Key \checkmark = Some benefit $\checkmark\checkmark\checkmark$ = Big benefit



the economy and level up the country. The full delivery of the project will deliver significant benefits for the region, including:

tph Cross City		Re-route 2tph Camp Hill			Space for extra trains in the future?
~		~	×		×
	/	~		~	~
	A more reliable railway that has flexibility for the future?		Improved connections between the West and East Midlands?		
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Phases of Delivery

Midlands Connect recognises and emphasises the importance of taking a programme approach to the delivery of Midlands Rail Hub. This means that although it could be delivered all together, there may be good reasons for phasing delivery.

The benefits of building both chords in central Birmingham are apparent: you can deliver savings for the taxpayer as well as making sure the vital land needed for the project is protected, disruption to the public is minimised and the infrastructure is delivered with the lowest cost possible. Our preferred option is centred around this need to build these chords together as a foundation for the rest of Midlands Rail Hub.

Other parts of the project are at slightly different stages in the development process, and have different interdependencies that might influence when they can be delivered. For example, designs for Midlands Rail Hub East (Leicester corridor) are less advanced and will be subject to a separate Decision to Design funding request, with a supporting Outline Business Case (OBC) planned for submission during 2023. This part of the programme requires Bordesley East Chord to be built to enable it to go ahead, so that the 2 trainsper-hour from Birmingham to Leicester via Nuneaton can operate once other infrastructure upgrades between Water Orton and Leicester are also delivered.

Another example is the section of Midlands Rail Hub between Worcester and Hereford. In that area, the existing signalling is very old and needs to be brought up to modern standards before Midlands Rail Hub can upgrade the route. We are working with Network Rail at the moment to understand the timescales for this signalling renewal so that we can better plan when that part of Midlands Rail Hub may be deliverable. This section of work will enable the second train per hour between Birmingham and Hereford, assuming the rest of Midlands Rail Hub West is already complete.



The Integrated Rail Plan

In November 2021, Government published its Integrated Rail Plan, a document outlining the major upgrades, interventions and improvements it intends to carry out across the across the Midlands and the North. The priorities listed in the Integrated Rail Plan have significant implications for the future of the Midlands Rail Hub project, as listed below.

1. Changes to HS2

Government announced changes to the route of the planned HS2 network, with a new stretch of high speed line now due to run from Birmingham to East Midlands Parkway station. Crucially, this new route will also bring HS2 services directly into the city centres of Nottingham and Derby, allowing fast services from Birmingham to call at Nottingham station, slashing journey times from 75 minutes to just 26 minutes, albeit not until the 2040s. This journey time is much faster than what could have been delivered by the Midlands Rail Hub. Given this step-change in connectivity, created by the HS2 line, we believe there is a future opportunity to use the additional capacity the Midlands Rail Hub creates on the region's conventional rail network to improve links to additional towns and cities in the Midlands.

What now?

As a result of the Integrated Rail Plan, Midlands Connect have worked alongside Network Rail and other partners to work through and define a set of options for the Outline Business Case. This work is now completed and the Business Case has been submitted to government for their consideration.

2. Commitment to delivering the Midlands Rail Hub

As part of the Integrated Rail Plan (IRP) published last year, Government endorsed the continued development of the Midlands Rail Hub with a focus on south-western corridor services, and, explicitly, the Bordesley West Chord, whilst instructing Network Rail and Midlands Connect to work together to review the proposals for the services between the West and East Midlands, including the East Chord.

- Since then and following the clear mandate from Government, Midlands Connect is actively collaborating with DfT and Network Rail - allowing us to explore together, how best to take forward the IRP and in particular the future position with regards to Midlands Rail Hub. In doing so, the Midlands Connect Partnership has reiterated its commitment to seeing all the strategic outcomes of Midlands Rail Hub, as stated in our Strategic Transport Plan (STP) launched in April 2022.
- Midlands Connect has welcomed Government's ongoing commitment to support the region in kickstarting the delivery of the Midlands Rail Hub. In December 2021, the Government confirmed its commitment to working with Midlands Connect on the region's priorities by signing a collaboration agreement. The agreement acknowledged Midlands Connect's efforts in bringing the region closer together and prioritising strategic rail investments such as Midlands Rail Hub that have the ability to enhance the lives of Midlands residents.
- Network Rail and Midlands Connect have now completed the Midlands Rail Hub Outline Business Case comprising a robust and complete evidencebased programme of interventions which will allow government to make an informed decision about which elements of MRH to fund beyond OBC. On behalf of the Midlands Connect partnership our Chairman Sir John Peace is calling the newly formed Government to continue its commitment to the "acceleration of this nationally-critical project, to deliver economic benefits and enhanced connectivity sooner."

Improving capacity at Kings Norton

Kings Norton, in south west Birmingham is the junction for the routes to Birmingham New Street (via University) and Birmingham Moor Street / New Street (via Camp Hill).

To the south, the route heads towards Bromsgrove, Worcester and Bristol. It is already an important junction location and is due to see an additional two trains per hour in December 2023 when the Camp Hill local services will be introduced and will run from New Street to Kings Norton via Camp Hill.

This intervention is common for all MRH options and sees significant works to the existing layout. The currently derelict island platform will be re-instated as platforms 2 and 3, with platform 2 primarily for southbound cross city services and platform 3 for terminating Camp Hill services. It is anticipated that platform 4, the current cross-city south platform will see much reduced usage. A new through line will be provided between the current platform 3 and 4 tracks so terminating Camp Hill services do not reduce through capacity.

The improvements at Kings Norton are expected be delivered as part of a wider package of improvements between Kings Norton and Barnt Green that includes the extension and upgrade of the current freight loop lines, infill electrification and an improved junction at Barnt Green.



"Improving connections for residents in and around Kings Norton will help residents, businesses and commuters and will help further unlock the economic growth and regeneration we have been able to secure for Northfield in the last few years."

Reinstating platform 4 at Birmingham Snow Hill station

Improvements at Birmingham Snow Hill station will allow more passengers to alight or disembark in the centre of the city's business district. After being repurposed as a temporary terminus for the tram (which no longer calls there), its fourth platform now lies unused. Repurposing the platform for heavy rail will bring numerous benefits, improving connectivity to Birmingham city centre and increasing the resilience of the rail network, especially when there are hold ups or blockages elsewhere on the line.

Our analysis suggests that reinstating this platform will bring 350,000 more passengers into Birmingham Snow Hill station every year, to the benefit of local businesses and employers.



Midlands Connect are keen to see this scheme delivered as soon as possible.







"There is a huge amount of development going on around Birmingham Snow Hill station, and the area is already home to thousands of highly-skilled jobs. Reinstating platform 4 will create space for more leisure travellers, and commuters to get to the heart of the city by rail. It's vital we secure this investment and deliver improvements as soon as possible."

Shabana Mahmood, MP for Birmingham Ladywood

Serving the East Midlands

Midlands Rail Hub East will address poor rail connectivity between Leicester and Birmingham, which currently suffers from slow and infrequent services (currently it is two trains per hour). It will also provide improved connectivity, frequency and journey opportunity to Leicester, the fastest growing city in the East Midlands, where the population rose by 11.8% between 2011 and 2021.

Enhancing connectivity to Leicester, will open up opportunities to one of the youngest and most diverse communities in the UK - offering a wealth of opportunities for business to expand and grow in Leicester as well as to the towns and communities along this crucial corridor. This extra Moor Street connectivity for Leicester is in addition to that currently delivered at New Street in our preferred option.

Midlands Rail Hub East is dependent on delivery of the central Birmingham infrastructure in the 'Central' options.

Working with Transport for the East Midlands

Midlands Connect and Transport for the East Midlands (TfEM) have collaboratively agreed a joint statement of six investment priorities for the East Midlands, two of which are relevant to Midlands Rail Hub:

- Making the most of HS2
- Transforming East West connectivity

The delivery of Midlands Rail Hub East will support the above statements by providing greater connectivity and faster journey times between Leicester to Birmingham, as well as direct connectivity to the HS2 network at the Birmingham Moor Street/Curzon Street interchange.



Only the East Chord enables the provision of improved services to Leicester and destinations to the East Midlands – a key strategic outcome of Midlands Rail Hub.





Sir Peter Soulsby, Chair of TfEM & City Mayor of Leicester

"Leicester is a thriving and rapidly growing city, but we need better connectivity by rail to realise the city's economic potential.

The Midlands Rail Hub will double the rail service between Leicester and Birmingham and ensure the city is connected to both New Street and Moor Steet stations. This will provide onward connectivity to Wales and the South West, as well as easy access to HS2 Services at Curzon Street.

We expect that HS2 East will transform connectivity between Birmingham, Derby and Nottingham by the 2040s. In the meantime, the Midlands Rail Hub will preserve onward connectivity for existing services from Birmingham New Street to the West Midlands, Wales and the West Country."

What's this got to do with HS2?

What now?

The Midlands Rail Hub will allow us to get the most out of our new high speed network, HS2, by improving connectivity to the new railway for over 1.6 million people in the West Midlands, South West England and Wales.

By bringing passengers more frequently and quickly to Birmingham Moor Street Station, the Midlands Rail Hub will bring them to HS2's doorstep allowing for fast and easy interchange. Birmingham Moor Street station is right next to the planned Birmingham Curzon Street HS2 station, and the two destinations will share a landscaped pedestrian link.

Birmingham Curzon station

Electrification

In its Transport Decarbonisation Plan, released in July 2021, Government committed to "creating a net-zero rail network by 2050", as well as pledging to remove all diesel-only passenger and freight trains by 2040. Midlands Connect are advocating for the routes enhanced by Midlands Rail Hub to be electrified as soon as reasonably practical to drive the biggest environmental benefits, sooner. Even if diesel trains run for a period before routes are electrified, Midlands Rail Hub will support the Transport Decarbonisation Plan commitments by making rail travel more attractive and more accessible, taking cars off the roads.

With the submission of the Outline Business Case we are now seeking a 'Decision to Design' for MRH West and Central. Furthermore, we want to continue progressing Snow Hill as a quick win project.

When considering the economic and strategic cases alongside the objectives and outcomes that are sought in the delivery of Midlands Rail Hub as part of a holistic investment in the rail network in the Midlands, we strongly endorse Network Rail's recommendation that the Full Business Case development should include both Bordesley Chords and associated additional platforms at Birmingham Moor Street.

As set out in the recently launched Midlands Connect Strategic Transport Plan, the Midlands Connect Partnership remains committed to seeing



Midlands Rail Hub project development



all the strategic outcomes of Midlands Rail Hub delivered. Our proposals and recommendations being submitted to Government, represent a robust and complete evidence-based programme of interventions - allowing Government to make an informed decision with the knowledge that leaders across the Midlands stand ready to kick start the delivery of this transformational programme.



Strategic Outline Business Case produced (Summer 2019) **Outline Business** Case submitted (October 2022) Delivery of full scheme 2025-2030





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