

June 2019



Midlands Rail Hub

The case for transformational investment
in the region's rail network



Foreword by Sir John Peace Chair, Midlands Connect

Connectivity has a huge influence on all of our lives. It dictates the education we receive, the people we meet, the job we secure and ultimately, our economic potential. In this region, east-west rail connectivity between our great economic centres is poor. Slow, unreliable and infrequent services dent productivity, and if left unchecked, could stifle growth. We must fight to secure a rail network that is fit for the future, one that promotes social mobility and entrepreneurialism, one that allows our businesses to reach clients, collaborators and skilled labour, one that reduces our carbon footprint.

Rail usage is growing faster in the Midlands than anywhere in the UK. As the region's professional services sector continues to go from strength to strength, it is essential that the Midlands Rail Hub is brought forward to support this growth. By bringing our communities closer together and opening up access to High Speed Two, we can create the integrated, efficient and attractive rail network our region deserves. We now ask that Government endorses the development of these plans and gives us the tools we need to turn our vision into reality.

What is the Midlands Rail Hub?

Enhanced mobility makes us more productive, more prosperous and better able to reach our economic potential. The Midlands Rail Hub, our flagship rail project, is the most ambitious upgrade of our rail network for a generation. It will transform east-west rail connectivity, open up space for faster, more frequent services across the region and beyond, and create new opportunities for passengers and businesses alike.

A chronic lack of investment means that in many places, ageing rail infrastructure is no longer fit for purpose. Older and lower specification sections of track push down line speeds, an absence of passing points create bottlenecks, and a lack of capacity at our stations means that we're unable to keep pace with growth in passenger demand.

The Midlands Rail Hub is an ambitious yet deliverable programme of new and upgraded infrastructure that will be implemented in phases between now and 2033. It will strengthen rail links between

the economic centres of Birmingham, Leicester, Nottingham, Coventry, Derby, Hereford and Worcester, improve services to Wales and the South West and allow more people to access HS2.

Our plans will activate six million more rail journeys each year, creating space for up to 24 extra passenger trains an hour. Implementing these improvements will bring 1.6 million more people to within an hour of the region's biggest towns and cities by public transport.

Building a transport network fit for the future means empowering our communities and businesses to make greener choices – the availability of quicker, more frequent, direct services will reduce unnecessary car usage and encourage more frequent rail travel.

The Midlands Rail Hub will also unlock 36 extra freight paths a day, creating space for 4,320 lorries' worth of goods to be shifted from our roads to onto railways, reducing congestion.

“Our people and businesses are suffering from poor connectivity and it's time that Government took action to bring the great economic centres of the Midlands closer together. The Midlands Rail Hub is a vehicle for change, it will change where we work, where we live and who we do business with, it will encourage us to make greener choices and allow the network to keep pace with growing demand.

We must accelerate these plans to enable faster, more frequent journeys across our network and to make more space for freight trains that will transport goods UK-wide. Nottingham, Birmingham, Leicester, Derby, Coventry, Hereford, Worcester and beyond will all benefit from this ambitious yet pragmatic set of interventions.”

Lilian Greenwood, MP for Nottingham South and chair of the Transport Select Committee

The Midlands Rail Hub in numbers



24 extra passenger train services per hour



36 more freight paths a day



Space for an extra **4,320** lorries' worth of goods to be transported on our rail network each day



Bringing **1.6 million** more people to within an hour of the region's biggest towns and cities by public transport



85,000 more seats every day in and out of central Birmingham



6 million more rail journeys a year



£649 million added to the UK economy each year by 2037

Why? The need for change

Across the Midlands, rail services between our major towns and cities are too slow, too infrequent, and lack the capacity needed to support the projected growth in passenger demand.

The economy

Poor connectivity is holding the region back from reaching its full potential. Despite the Midlands' continued economic renaissance, productivity ranges from just 85 per cent (East Midlands) to 89 per cent (West Midlands) of the UK average¹.

We must make it quicker and easier for our residents and businesses to reach each other; giving more people access to more jobs and empowering businesses to reach a wider pool of market opportunities.

By 2030, major economic centres in the Midlands such as Birmingham and Nottingham are projected to create over 320,000 new jobs². Many of these will be

in the region's burgeoning professional services sector and are likely to be situated in city centre locations. We must deliver the frequent, fast and efficient rail network needed to support this growth.

Lack of capacity

Over the past two years, rail patronage in the Midlands has grown faster than anywhere in the UK³, building on a sustained swell in passenger numbers. Last year, we welcomed more passengers than ever before onto our rail network. We must future proof existing infrastructure to meet this increase in demand.

**Growth in rail journeys
over the past decade**

West Midlands + 121%
East Midlands + 37%

¹ONS: Regional and sub-regional productivity in the UK: February 2019

²Midlands Connect Barriers to Growth report (2016)

³https://orr.gov.uk/__data/assets/pdf_file/0003/26598/Regional-Rail-Usage-2016-17.pdf
https://orr.gov.uk/__data/assets/pdf_file/0011/40520/regional-rail-usage-2017-18.pdf

Pinch points

Rail infrastructure in and around Birmingham cannot provide the capacity our growing economy needs. The busiest station outside London and the sixth busiest in the UK, Birmingham New Street is unable to accommodate the extra services required, with any further additions likely to have a negative effect on reliability and punctuality across the whole network.



Birmingham New Street Station



2017/2018:
43.7m
passengers

**Volume of
passengers
has increased
24% in the past
three years**

The arrival of HS2 will see the opening of a new Birmingham Curzon Street station, and widespread regeneration of the south and east sides of the city.

Expanding and making better use of Birmingham Moor Street station, located alongside the new high speed terminus, provides the perfect opportunity to improve services to the East Midlands and South West. Other pinch points in Nottingham, Leicester, Nuneaton and beyond are stopping the network from performing as it should.

Slow, infrequent services

In many instances, services between the major towns and cities of the Midlands are too slow, too infrequent or indirect.

Average speeds on Leicester to Birmingham and Nottingham to Birmingham routes are below 50 miles an hour, while Coventry and Leicester, two major cities with a combined population of over 600,000 people have no direct train service. To the west, direct services between Birmingham and Hereford run just once per hour.

These shortcomings mean that on many inter-city routes, travellers are forced to

make slow, unproductive journeys by car. Fewer than one in four journeys between Birmingham and Nottingham, Birmingham and Leicester and Birmingham and Derby are made by train. Just one per cent of journeys between Coventry and Leicester are made on the railway.

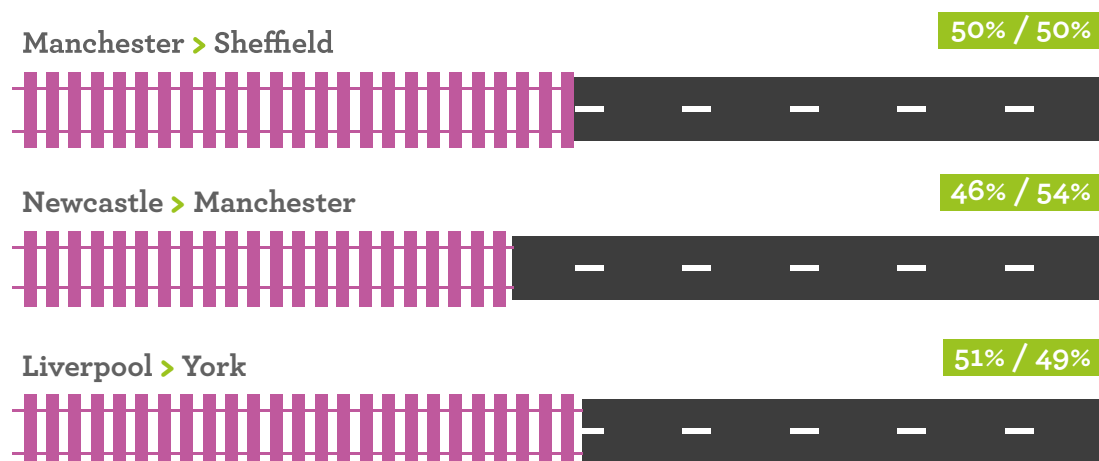
On equivalent routes elsewhere in the UK, rail usage between economic centres is significantly higher. Approximately half of the journeys between Manchester and Sheffield, Manchester and Newcastle and Liverpool and York are made by train.

Journey mode splits between economic centres¹; rail vs. road

Midlands Rail Hub routes



Other inter-city routes



¹Midlands Connect Rail Programme: Economic Evidence, 2018



Matthew Hammond,
Midlands regional chair, PwC

“Our new home at One Chamberlain Square in Birmingham is PwC’s single largest investment in the UK outside of London. As a key employer and investor in the professional services sector in the Midlands we are delighted to see the capital investment in progress and planned for road, rail and air travel connectivity. Infrastructure improvement is one of the many enablers of economic growth.

“The Midlands Rail Hub, alongside HS2, will deliver connectivity for many future generations. This package of investment will purposefully transform the Midlands whilst opening opportunity to a wider talent pool.”



Space for freight

The pursuit of a greener future relies on businesses shifting non-perishable cargo from the roads to our railways. Transporting goods in this way produces 76 per cent less CO₂¹, costs less and reduces traffic congestion. Increasing the proportion of goods transported by rail is an essential step in improving air quality and empowering the region to become carbon neutral.

Currently, rail freight movements in the Midlands are limited by a lack of network capacity, with additional trains only able to run when passenger demand is low, often overnight or on Sundays. We must open up space for freight trains to run regularly, at all times of the day, to ensure services are competitive and attractive to businesses.

Four out of the UK’s five busiest rail freight routes run through the Midlands. Only by increasing rail freight capacity in this region can we empower businesses nationwide to make more environmentally-friendly choices and support continued growth in freight usage across all sectors, particularly in the construction and consumer goods industries.

A yellow Freightliner freight train engine is shown on tracks, with a large white quotation mark overlaid on the image. The train has a green stripe and the word 'Freightliner' in green on its side. The background shows some trees and a building.

“

“The biggest challenge for our rail network is its success. More passengers and freight are travelling by rail and that means we need greater capacity to move more trains.

We’re moving everything from clothes and mobile phones to building supplies and industrial commodities in our freight containers, and businesses are asking us all the time to move more materials by train to help reduce their carbon footprint.

“Freightliner is backing the Midlands Rail Hub because for the first time we have a long term strategy for rail infrastructure in the region. Reducing bottlenecks and congestion for freight trains will allow us to move more goods in a more environmentally-friendly way and support economic growth UK-wide.”

**Lindsey Durham, Head of Rail Strategy,
Freightliner**

What? Our plans for a modern network for the Midlands

There is no single intervention that can provide the extra capacity the Midlands rail network needs. The Midlands Rail Hub consists of a comprehensive yet modest series of measures that will create space for more passenger trains and freight links on our railways, as well as boosting station capacity.



Notable interventions include:

- Construction of the Bordesley Chords, two viaducts creating new paths to the East Midlands and South West from Birmingham Moor Street Station
- The reinstatement of direct services between Coventry, Leicester and Nottingham, via a dive under, flyover or reversal at Nuneaton
- New track and improved signalling to increase line speed, reduce journey times and avoid network congestion
- New freight loops and extra track to create space for more freight




















The Midlands Rail Hub will deliver:

- Up to 24 more trains per hour on the passenger network
- 36 extra freight paths per day
- Faster, more frequent and more reliable rail services between our towns and cities
- 85,000 extra seats per day in and out of central Birmingham

Key *

- Frequency improvements
- Journey time improvements
- Reintroduction of direct services
- Access to HS2 services



	Potential improvements to service frequency (in each direction)	Projected average journey time before MRH (minutes)	Projected fastest journey time after MRH (minutes)	* Benefits
Birmingham – Nottingham	+1 train per hour	72	59	 
Birmingham – Leicester	+2 trains per hour	55	42	 
Birmingham – Hereford	+1 train per hour	85	65	  
Birmingham – Worcester		40	35	
Birmingham – Derby	+2 trains per hour	38	38	
Coventry – Leicester	+2 trains per hour	57	38	  
Coventry – Nottingham		99	63	
Birmingham – Bristol	+1 train per hour	85	80	 
Birmingham – Cardiff	+1 train per hour	117	112	 
Birmingham – Kings Norton (via Camp Hill - Moseley, Kings Heath, Hazelwell)	+2 trains per hour	18	14	 

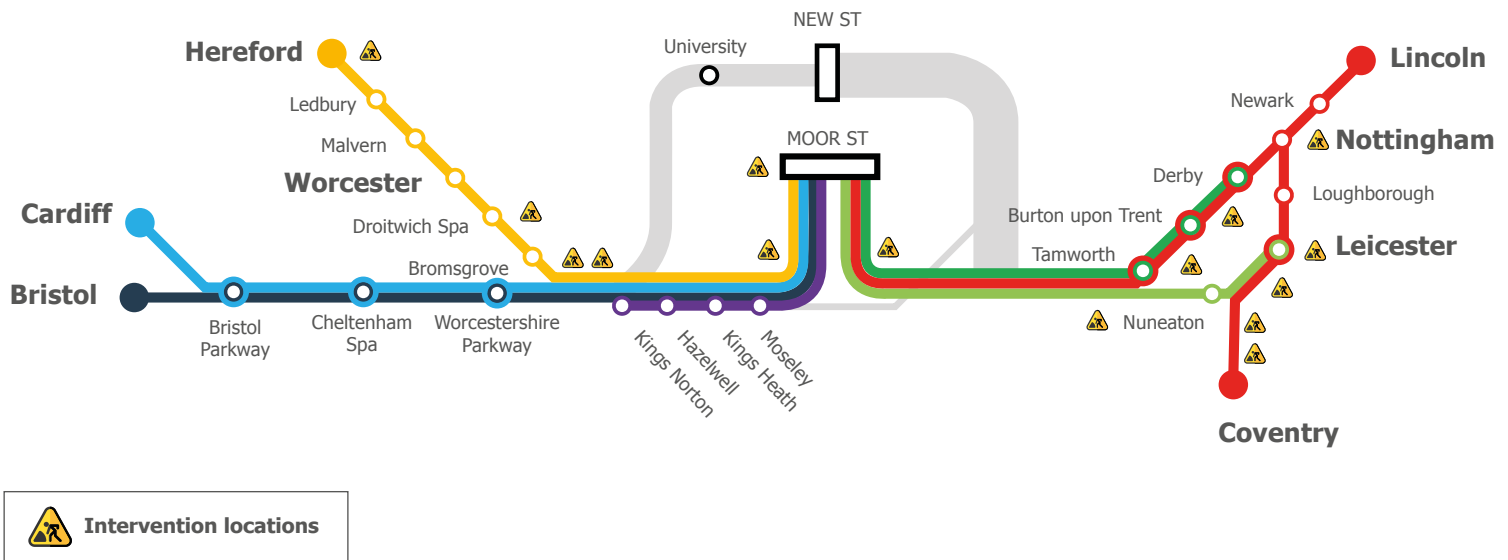


Midlands Rail Hub Map

The locations below could benefit from enhanced services following the delivery of the Midlands Rail Hub. Exact routes and stopping places will be examined at the next stage of project development.



Map of interventions



Interventions, costs and timing

Delivering the Midlands Rail Hub in its entirety will require an investment in the region of £2billion, with improvements made in phases from 2024-2033.

Intervention	Description	Timing	Indicative Cost (£ million)
Coventry to Nuneaton line speed improvements	Realignment and upgrade of the track to enhance running speed, reducing journey times for new and existing services	2026-2033	10-15
Nuneaton dive under or flyover	Reinstatement of a dive under or the construction of a fly over at Nuneaton to create capacity for a new, direct service between Coventry, Leicester and Nottingham.	2026-2033	100-120

Leicester incremental enhancement	Installation of freight loops and track improvements to increase speeds and capacity for extra services.	2026-2033	15-25
Nottingham area enhancement	Extra track west of Nottingham station to increase flexibility and capacity for additional services.	2026-2033	15-25
Elford Loop	Improved freight loop to make it easier for passenger trains to overtake slower freight services.	2026-2033	10-15
Water Orton capacity enhancement	Improved signalling to allow more trains to run through a bottleneck in the Tamworth area, between Birmingham and Derby, reducing delays.	2026-2033	35-45
Kingsbury freight enhancements	Improved access to an oil terminal (supplies planes at Birmingham Airport), reducing frequency with which freight trains need to block main lines, reducing hold ups for passenger services.	2026-2033	45-55
Leicester (Wigston) – Nuneaton capacity improvement	Improved signalling to allow passenger and freight trains to run closer together, increasing frequency	2026-2033	80-90
Water Orton four tracking	Extra track and new points at Water Orton to allow more passenger and freight trains to use new four-arm junction	By 2026	155-175

Birmingham Moor Street – Bordesley Chords	Two new viaducts to link services from the South West and East Midlands in to Moor Street station, including opening up extra platforms to provide extra fast services on those corridors, and link to HS2 at Curzon Street.	2026-2033	900-950
Birmingham Snow Hill enhancements	Reinstating the fourth platform at Snow Hill station. Additional services can call at and terminate at the station, opening up space at Moor Street.	2024-2026*	20-30
Kings Norton Turnback Siding	New passing place creates space for additional Camp Hill services between Birmingham and Kings Norton.	2024-2026*	30-35
Longbridge – Barnt Green turnout loop extensions	Restoring the four-tracking from Longbridge to Barnt Green, to allow the running of additional fast services.	By 2026*	110-120
Worcester – Hereford capacity improvement	Doubling part of the line west of Ledbury, and additional signals to allow more trains to run throughout the day.	2026-2033	225-235
Leicester corridor speed improvements	Minor realignments, track improvements and enhanced signalling to increase speeds along the Leicester corridor.	By 2026*	55-85
TOTAL: 1,805 - 2,020 million			

* These schemes have been earmarked for early intervention. Midlands Connect is eager to secure funding to develop and ensure the delivery of these improvements by 2026.



TOTAL INDICATIVE COST:
2.02 billion

Allows for higher cost intervention at Nuneaton. Costs are indicative, more detailed estimates will be gathered at the next stage of research.

Integration with HS2

Key

- Midlands Rail Hub
- Local rail links to East Midlands Hub
- HS2
- HS2 Conventional Compatible services



“The Midlands Rail Hub is a vitally-important project. Rail has been a huge part of the success story of this region, and we need this kind of investment if our network is to keep growing and supporting our economy.

At around £2 billion, the Midlands Rail Hub is genuinely a bargain, especially when you consider some of the projects that have already been delivered in London.

The Secretary of State for Transport must persuade the Treasury to support this project to boost the region’s connectivity and with it, the region’s economy”.

Andy Street, Mayor of the West Midlands



Integration with HS2

Delivering the Midlands Rail Hub is essential if we’re to make the most of High Speed Two (HS2).

Opening in three phases, from 2026 to 2033, HS2 will provide a transformational step-change in inter-regional connectivity by linking major economic centres in the North, the West Midlands, the East Midlands and London. As well as providing a century’s worth of additional capacity on our railways, its state-of-the-art high-speed technology will slash journey times and catalyse tens of billions of pounds worth of regeneration opportunities across the UK.

Dec/2026 Phase One opens, West Midlands to London

Dec/2027 Phase 2a opens, West Midlands to Crewe

Dec/2033 Phase 2b opens, Crewe to Manchester and West Midlands to Leeds via the East Midlands



By bringing dozens of additional services into Birmingham Moor Street station each day, the Midlands Rail Hub will connect Herefordshire, Worcestershire, South West England and Wales to high speed services via Birmingham, widening national access to the high speed network.

Our proposals are fully integrated with West Midlands Rail Executive's vision to redevelop Birmingham Moor Street station. Directly next to

Birmingham's high speed terminus, plans are being drawn up for a major transformation of Moor Street, including a shared Station Square and a footbridge leading passengers to Curzon Street station, where they can board high speed services. This 'one station' concept, which also includes better pedestrian access to nearby New Street station, will ensure passengers can move seamlessly from the traditional to high speed network.



Benefits for the Midlands and beyond

Current estimates suggest that by 2037, the Midlands Rail Hub could deliver an annual economic benefit of £649million.

For businesses

By enhancing the speed and frequency of regional journeys, the Midlands Rail Hub will improve business' access to skilled labour, bringing 1.6million more people to within an hour of the region's biggest towns and cities using public transport. It will also make it easier for organisations to do business with clients and collaborators in neighbouring regions, opening up new market opportunities. Faster journeys and quicker connections will enhance regional productivity.

Improvements to inter-regional services will be particularly beneficial to the region's professional services businesses, members of which make a high proportion of journeys by train.

For residents

The Midlands Rail Hub provides the choice and connections our communities need to reach their full potential. It means access to more education and employment opportunities, a wider range of leisure options and greater variety of cultural experiences, via improved links to towns and cities in the region and beyond. Greater capacity, including 85,000 more seats per day in and out



Artist's impression of Paradise
Birmingham redevelopment

of central Birmingham, will reduce crowding, increasing journey comfort for commuters and visitors.

Once completed, the Midlands Rail Hub will activate six million additional rail journeys each year.

For the environment

Reduced emissions and less congestion can only be achieved by empowering business and individuals to make different decisions. Faster, more frequent train services will increase the proportion of journeys made by rail, reducing the reliance on private vehicles to travel between cities, especially between the East and West Midlands.

By reducing waiting times at bottlenecks, creating more passing places to allow us to have a mix of fast and stopping services and making improvements to existing track, the Midlands Rail Hub will create space for 36 extra freight paths a day, making space to shift the equivalent of 4,320 lorries' worth of goods from the roads onto our railways. Each year, £22 billion worth of additional goods can be transported via rail, reducing the carbon footprint of transportation by 76 per cent.



What's next? Our asks of government

Midlands Connect submitted a Strategic Outline Business Case for the Midlands Rail Hub to the Department for Transport in June 2019. We now ask that Government provides the £25 million in funding required to bring this essential project to the next stage of its development.

In the next stage, we will research and outline:

- Scheme development and sequencing
- Precise and refined costs
- A full overview of benefits
- Project designs
- An advanced risk assessment and construction challenges

We have also outlined a series of early interventions that we are keen to fast track for development, and ask that Government maintains an open and timely dialogue with us to ensure these plans are accelerated for delivery.

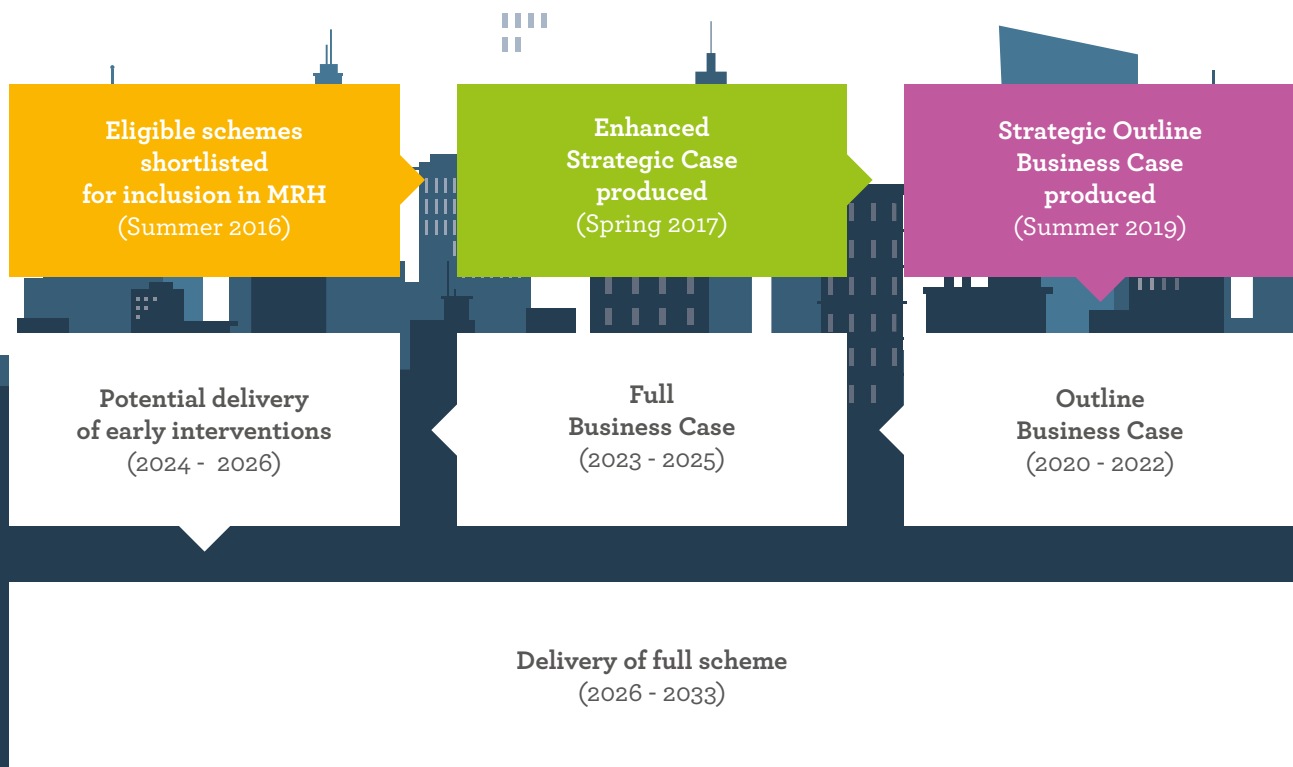
If completed during the desired time frame of 2024-2026, these interventions will act as enabling works for the wider programme and allow early benefits to be realised.

Early interventions (for delivery between 2024 and 2026)


Potential Interventions	Outputs	Estimated Cost (£ million)
Snow Hill platform 4	Increased capacity for services into Birmingham Moor Street station and improved access to Birmingham's business district	20-30
Kings Norton	Enables running of local services into Birmingham Moor Street along Camp Hill Line, allowing for journey time savings and increased frequency	30-35
Barnt Green	Creates space for an additional service from Birmingham to the South West	20-30
Leicester Corridor	A series of incremental improvements allowing faster new and existing services from Birmingham to Leicester	150-200*
Nottingham Corridor	Delivers speed benefits on the Derby corridor, including new and existing services running to the South West	40-50

* This represents the full cost of improvements along the whole line. However, improvements can be made on an incremental basis subject to funding.

Midlands Rail Hub Development





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**MIDLANDS
ENGINE**