Delivering a better railway for a better Britain

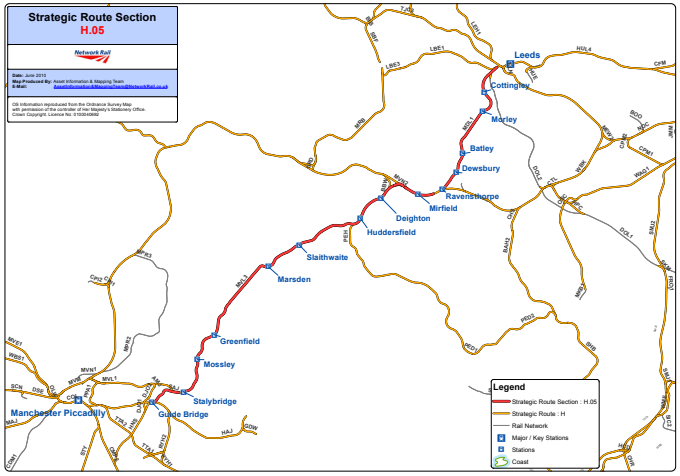
Route Specifications 2021
North West and Central (NW&C) region

Contents

Route H: Cross-Pennine, Yorkshire & Humber and North West (North West section)

SRS H.05 North Transpennine: Leeds to Guide Bridge

Geographic Map



Route specification description

SRS H.05 links Greater Manchester and Leeds via Huddersfield, and covers both Eastern region and the North West and Central region, crossing the boundary west of Standedge Tunnel. The 36 mile double track route isn't electrified and serves local, inter-regional, commuter and freight markets.

The route has 14 stations (excluding Leeds) with the busiest* being Huddersfield, Dewsbury and Stalybridge stations.

Stalybridge Junction to the west of the station is where the route divides towards either Manchester Victoria or Manchester Piccadilly. Other key junctions include Guide Bridge West Junction for routes from Manchester Piccadilly towards Glossop and Hadfield; Thornhill LNW Junction for routes towards York; and Holbeck Junction for routes towards Bradford Interchange.

The route incorporates some major viaducts at Dewsbury, Batley, Milne and Huddersfield.

The route carries a number of freight services including aggregates, domestic waste and biomass, with a strategic freight site at Hillhouse.

As part of the Transpennine Route Upgrade, Network Rail is currently delivering a number of interventions across this route to deliver a high-performing, reliable railway with greater capacity and faster journeys between Manchester and York via Huddersfield. For more information, please see: https://www.networkrail.co.uk/running-the-railway/railway-upgrade-plan/key-projects/transpennine-route-upgrade/ .

Busiest refers to the busiest station based on ORR figures for estimation of station usage 2018/19.*

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Doncaster, Marshgate Junction to Neville Hill East Junction (in part) Diggle Junction to Copley Hill East Junction Miles Platting Junction to Marsden (in part) Stalybridge to Guide Bridge West Junction		
Section start	Leeds, west of Leeds station		
Section end	Guide Bridge		
Route availability†	RA8, RA9		
Gauge†	W6, W7, W8, W9	W10, W12	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	80 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL for Manchester Victoria to Stalybridge committed under TRU programme, remainder of route dependent on industry aspirations.	
Level Crossings†	4	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Leeds to Guide Bridge 42 minutes (approximate time as no direct passenger service) Leeds to Guide Bridge 78 minutes (change at Manchester Piccadilly) Leeds to Stalybridge 36 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Leeds to Stalybridge 5 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

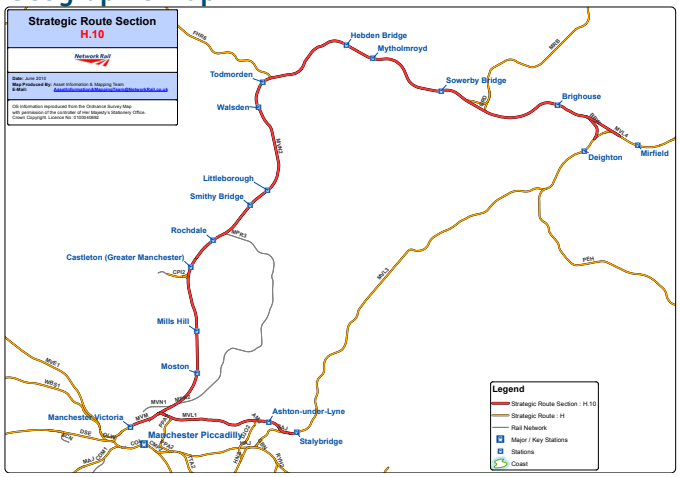
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Transpennine Route Upgrade	Increased capacity and improved line speed.	SAJ, MVL3, MVL4, MDL1	CP6	To deliver improved performance, capacity and journey time between Manchester and York.		In delivery

SRS H.10 Manchester Victoria to Mirfield (via Rochdale) and to Stalybridge

Geographic Map



Route specification description

SRS H.10 provides access from Manchester Victoria to Mirfield and Stalybridge via two routes.

The first of these connects central Manchester via Rochdale towards Mirfield. The route is mostly two track and not electrified, and predominantly carries passenger services with occasional freight services. Hall Royd Junction at Todmorden enables connections via the Todmorden Curve onwards towards Burnley. There are 14 stations on the route with Manchester Victoria being the major station; other busy stations include Rochdale and Hebden Bridge. From this route, Milner Royd Junction provides routes towards Halifax; Bradley Wood and Heaton Lodge Junctions from where routes head towards Huddersfield; and from Mirfield routes head towards York and Leeds. The Todmorden Curve, built in 2018, provided a new junction to connect the Calder Valley with East Lancashire.

The second route connects Stalybridge to Manchester Victoria. The route is approximately nine miles long, with mostly two track formation and is partly electrified. There are four stations on the route with the busiest* being Manchester Victoria. The route is predominantly a passenger route with occasional freight services, and serves inter-regional and commuter markets. The route has key junctions at Miles Platting Junction, connecting from Stalybridge towards Victoria; and then at Deal Street Junction from Victoria towards the Ordsall Chord or Bolton. The Ordsall Chord, built in 2018, enables services from Manchester Victoria towards Manchester Piccadilly via Deansgate.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Miles Platting Junction to Marsden (in part) Manchester Victoria West Junction to Hebden Bridge (in part) Hall Royd Junction to Skelton Junction (in part)		
Section start	Manchester Victoria		
Section end	Mirfield / Stalybridge		
Route availability†	RA8, RA9		
Gauge†	W6, W7, W8	W8	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL within Manchester Victoria station	25kV OHL dependent on industry aspirations.	
Level Crossings†	2	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Manchester Victoria to Mirfield (via Rochdale) 61 minutes Manchester Victoria to Stalybridge 15 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Manchester Victoria to Mirfield (via Rochdale) 1 tph Manchester Victoria to Stalybridge 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

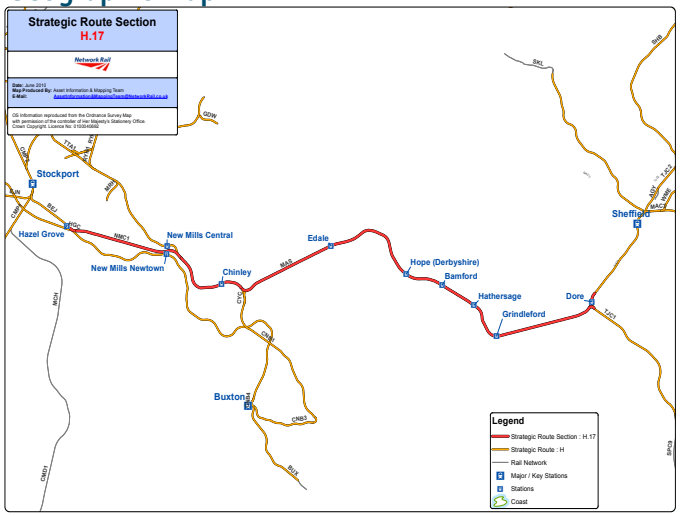
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Manchester and North West Transformation Programme	To deliver a better performing and more resilient network that also meets the passenger capacity requirements until 2030.			To support continued growth in rail usage on the corridors in and out of Manchester.		Phased approach - some in design, some in development

SRS H.17 South Transpennine: Dore to Hazel Grove

Geographic Map



Route specification description

SRS H.17 is an interurban route from Dore, south of Sheffield, through the Hope Valley to Hazel Grove in Greater Manchester. The route is 30 miles long, almost completely double track but not electrified, and serves local, inter-regional, commuter and freight markets. There is tourist traffic throughout the year with popular walking destinations located on the route.

There are ten stations on the route with Hazel Grove being the busiest* followed by New Mills Central, New Mills Newtown and Dore & Totley.

The route is linked towards central Manchester via Hazel Grove East Junction and Hazel Grove High Level Junction and Chester (via Stockport) on a single track bi-directional route from Northenden Junction.

The route is a key freight route with the line carrying aggregates traffic from the Peak District quarries, which joins the route at Chinley via Chinley South Junction, and traffic to and from Hope Cement Works, which serves terminals across the country.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Dore West Junction to Edgeley Junction No.1 (Hope Valley lines) (in part)		
Section start	Dore		
Section end	Hazel Grove		
Route availability†	RA8		
Gauge†	W6, W7	W6-8	
Signals†	Track Circuit Block Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	90 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

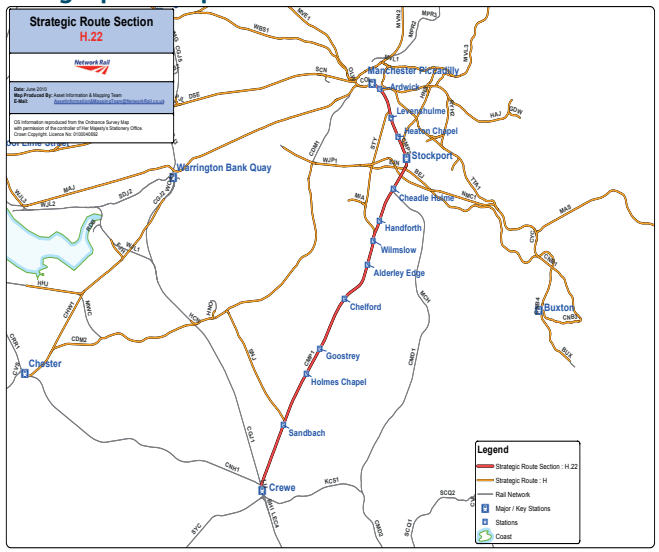
Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Hazel Grove to Dore 30 minutes (fast) Chinley to Dore 36 minutes (slow)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Hazel Grove to Dore 11 trains per day Chinley to Dore 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0						
Project	**Project Description**	**ELR**	**Implementation Date**	**Output change**	**Funder**	**Status**
Hope Valley Capacity		MAS		To provide additional capacity on the Hope Valley line.		In design

SRS H.22 Manchester Piccadilly to Crewe

Geographic Map



Route specification description

SRS H.22 links Crewe with Manchester city centre via Wilmslow and Stockport. The line is 30 miles long, fully electrified, and consists of a mixture of two track, four track and six track sections. The route serves long distance, inter-regional, local, commuter, and freight markets; and, due to being bi-directionally signalled between Sandbach and Wilmslow, offers a high level of flexibility to mitigate disruption during planned or unplanned works.

There are 13 stations on the route, the busiest* being Manchester Piccadilly which, together with the key stations of Stockport, Wilmslow and Crewe, serves as an interchange. The other stations on the route serve smaller conurbations and are primarily only served by 'slow' trains for commuter markets.

The route connects to the West Coast Main Line at Crewe North Junction. Slade Lane Junction provides access to Manchester Airport, with Edgeley Junction No. 1 linking Stockport with Hazel Grove, and with Edgeley Junction No. 2 being the link between Stockport and Chester.

There is a large rolling stock depot at Longsight, one mile south of Manchester Piccadilly. The Edgeley area is signalled by two signal boxes using Absolute Block rather than the Track Circuit Block seen on the rest of the route.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Crewe North Junction to Manchester Piccadilly		
Section start	Manchester Piccadilly		
Section end	Crewe North Junction, on the approach to Crewe station		
Route availability†	RA8		
Gauge†	W9, W10		
Signals†	Track Circuit Block One section of Absolute Block in Stockport area	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	110 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Manchester Piccadilly to Crewe 35 minutes (fast) 1 hour (slow) Manchester Piccadilly to Stockport 7 minutes (fast)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Manchester Piccadilly to Crewe 2 tph (fast) 1 tph (slow) Manchester Piccadilly to Stockport 11 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

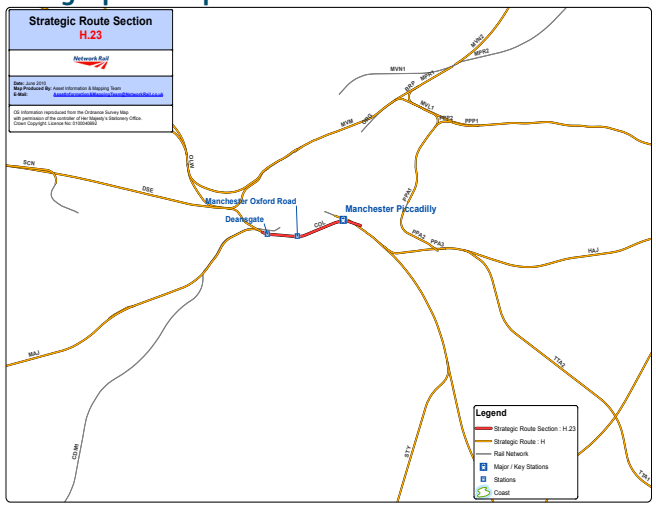
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Crewe Hub	Interventions to support the delivery of HS2					In development
Manchester and North West Transformation Programme	To deliver a better performing and more resilient network that also meets the passenger capacity requirements until 2030.			To support continued growth in rail usage on the corridors in and out of Manchester.		Phased approach - some in design, some in development

SRS H.23 Manchester Piccadilly to Deansgate

Geographic Map



Route specification description

SRS H.23 is known as the 'Castlefield Corridor' and links Manchester Piccadilly with Manchester Oxford Road and Deansgate, the three stations on the route. It is a key route built on viaducts through central Manchester; serving long distance, inter-regional, commuter and local traffic; with freight traffic to and from Trafford Park. Trains using this route travel onwards to/from Scotland, Liverpool, North Wales, Yorkshire via Manchester Victoria, Manchester Airport and the East Midlands to Norwich.

All passenger services call at Manchester Piccadilly, the busiest* station, with most also calling at Manchester Oxford Road. The route is one mile long, is two track except in Manchester Oxford Road station, and is electrified.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Manchester Piccadilly East Junction to Euxton Junction (in part)		
Section start	Manchester Piccadilly (platforms 13/14)		
Section end	Deansgate		
Route availability†	RA8		
Gauge†	W10, W12		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	There are proposals in the Manchester and North West Transformation Programme for resignalling of the Castlefield Corridor.
Predominant Linespeed†	35 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	7 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	13 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

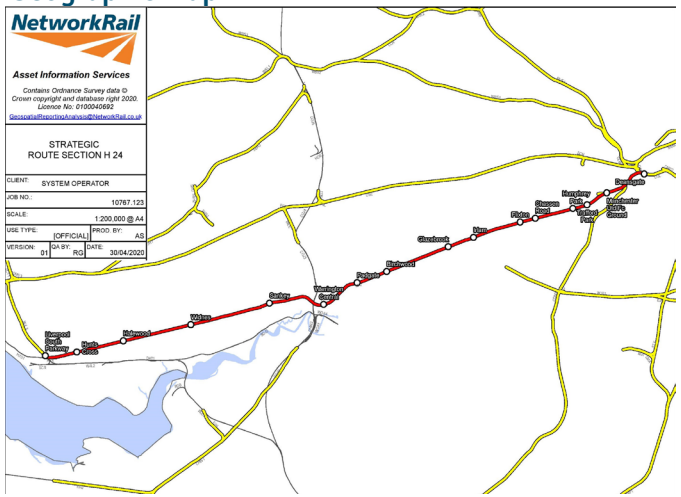
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Manchester and North West Transformation Programme	To deliver a better performing and more resilient network that also meets the passenger capacity requirements until 2030	COL		To support continued growth in rail usage on the corridors in and out of Manchester.		Phased approach - some in design, some in development
Manchester Oxford Road station	Re-design and expansion of the gateline, removal and reolcation of redundant infrastructure, and associated building works	COL	2023	To reduce overcrowding and congestion in Manchester Oxford Road station, particularly at the gateline and concourse area	DfT SOEF	

SRS H.24 Deansgate to Liverpool South Parkway

Geographic Map



Route specification description

SRS H.24 between Deansgate in central Manchester and Liverpool South Parkway is an important commuter route between Manchester and Liverpool, also serving Widnes, Warrington and suburbs of east Liverpool and west Manchester. This route is also well known locally as the CLC (Cheshire Lines' Committee) corridor.

The route is 33 miles long consisting of two tracks; electrification extends from Deansgate only as far as Trafford Park freight terminal. The two main junctions are Hunts Cross West and Castlefield.

There are 18 stations on the route with the busiest* being Warrington Central, Liverpool South Parkway and Hunts Cross, with the latter two both serving as an interchange onto the Merseyrail network. The newest station, Warrington West, is located between Warrington Central and Sankey.

There is a rolling stock depot at Allerton, near Liverpool South Parkway; and Trafford Park West Junction on the route provides access to and from Trafford Park freight terminal.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Castlefield Junction to Allerton Junction (Cheshire Lines Committee)		
Section start	Castlefield Junction, on approach to Deansgate station		
Section end	Allerton Junction, on approach to Liverpool South Parkway station		
Route availability†	RA7, RA8		
Gauge†	W8, W9 (W10 to Trafford Park freight terminal)		
Signals†	Track Circuit Block Absolute Block from Glazebrook East Junction to Padgate	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	85 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL from Castlefield Junction to Trafford Park West Junction and into the Trafford Park freight terminal; also from Hunts Cross West Junction to Allerton Junction. 750V DC from Hunts Cross to Hunts Cross West Junction. Remainder of SRS not electrified.	25kV OHL throughout dependent on industry aspirations	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	36 minutes (fast) 59 minutes (slow)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	4 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

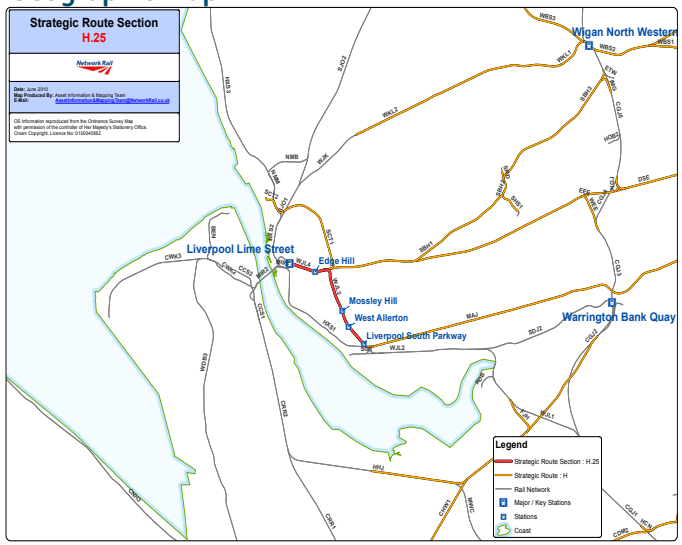
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Trafford Park OLE Extension	Extension of the OLE along the Reception Road into Freightliner's terminal at Trafford Park (a key rail freight distribution site)	MAJ	2021	This will allow an increased amount of electrically hauled freight trains to operate into the depot	DfT SOEF	

SRS H.25 Liverpool Lime Street to Liverpool South Parkway

Geographic Map



Route specification description

SRS H.25 covers a six mile route from the high level station at Liverpool Lime Street to Liverpool South Parkway via Edge Hill. The route serves long-distance, inter-regional, local, commuter and freight markets. The section between Edge Hill station and Liverpool Lime Street Station has a steep gradient situated in a series of cuttings and tunnels.

The electrified route is mostly a four track line, apart from one section near Wavertree Junction where two lines diverge towards Huyton and central Manchester via the Chat Moss line.

There are five stations on the route with Liverpool Lime Street being the busiest* as well as being an interchange for the Merseyrail network, as is Liverpool South Parkway.

There is a maintenance depot at Edge Hill, and sidings at Wapping and Tuebrook which are required for freight services to reverse for access to and from the Port of Liverpool via Bootle Branch Junction.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Weaver Junction to Liverpool Lime Street (in part)		
Section start	Liverpool Lime Street high level station		
Section end	Liverpool South Parkway		
Route availability†	RA8		
Gauge†	W6, W10		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	80 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	11 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	8 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

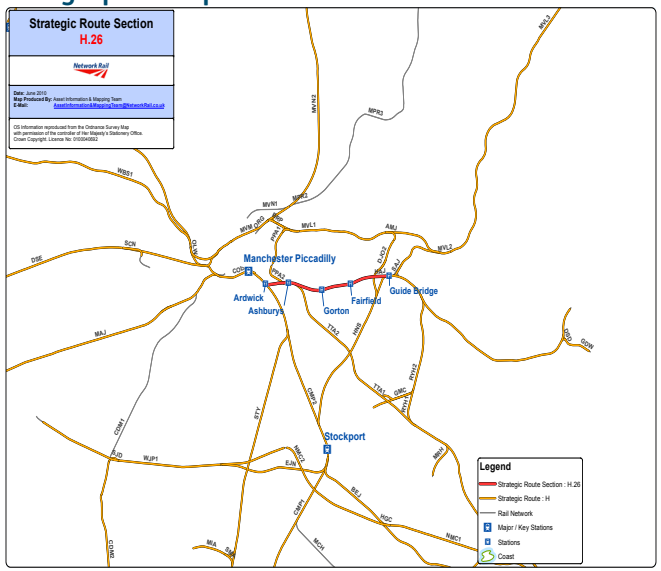
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.26 North Transpennine: Manchester Piccadilly to Guide Bridge

Geographic Map



Route specification description

SRS H.26 is a two track section of route in south-east Manchester running from Guide Bridge to Ardwick Junction, on the approach to Manchester Piccadilly.

The route is five miles long, electrified, and serves inter-regional, local, commuter and freight markets, acting as a section on the route from Manchester via Ardwick Junction towards Hull via Guide Bridge West Junction with links towards Huddersfield and Leeds. There is a further junction at Guide Bridge station used by freight services for onwards travel towards Stockport.

There are five stations on the route with the busiest* in terms of passenger usage being Guide Bridge.

Between Ardwick and Ashburys stations there is Ardwick Traction Maintenance Depot; part of the depot is electrified for maintenance and stabling purposes. Between Ashburys and Gorton stations, Tarmac has an asphalt plant and Breedon Group has an aggregates depot.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Hadfield to Ardwick Junction (in part)		
Section start	Ardwick Junction, on the approach to Manchester Piccadilly		
Section end	Guide Bridge West Junction, east of Guide Bridge station		
Route availability†	RA8		
Gauge†	W6, W9		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	4 minutes (fast) 12 minutes (slow)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	6 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

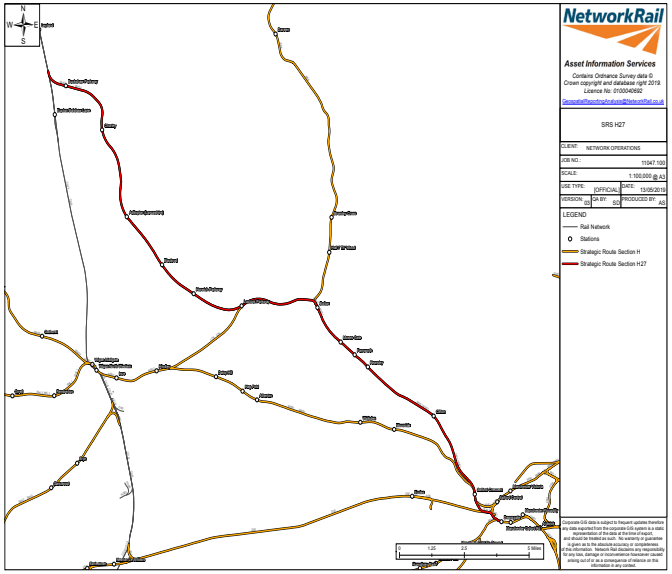
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.27 Deansgate to Euxton Junction

Geographic Map



Route specification description

SRS H.27 is a route between Deansgate station, in the centre of Manchester, and Euxton Junction which provides access onto the West Coast Main Line towards Preston. The route is 26 miles long with two tracks and is electrified. It serves inter-regional, commuter, local and freight markets. This is an important commuting route for Manchester as well as a diversionary route for the West Coast Main Line during planned and unplanned disruption.

The key junctions on the route include Castlefield Junction, which provides access from this route towards Liverpool via Trafford Park; and Ordsall Lane Junction for access towards Manchester Victoria from Deansgate over the Ordsall Chord, towards Merseyside via Patricroft and this route towards Bolton. There is a further set of junctions at Windsor Bridge (North and South Junctions) that allow access from Salford Crescent towards Manchester Victoria and Wigan and Southport; and Lostock Junction towards Bolton and Wigan.

There are 12 stations on the route with the busiest* being Bolton and Salford Crescent, with two freight terminals between Clifton station and Salford Crescent station being used by SUEZ Recycling and Recovery UK and Tarmac Agecroft.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Manchester Piccadilly East Junction to Euxton Junction		
Section start	Deansgate station		
Section end	Euxton Junction, on the approach to Preston station		
Route availability†	RA8		
Gauge†	W9 to Bolton West Junction W6 from Bolton West Junction to Euxton Junction		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	100 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	30 minutes (fast) 42 minutes (slow)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	3 tph along the whole route, supported by additional services that run on part of the SRS	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

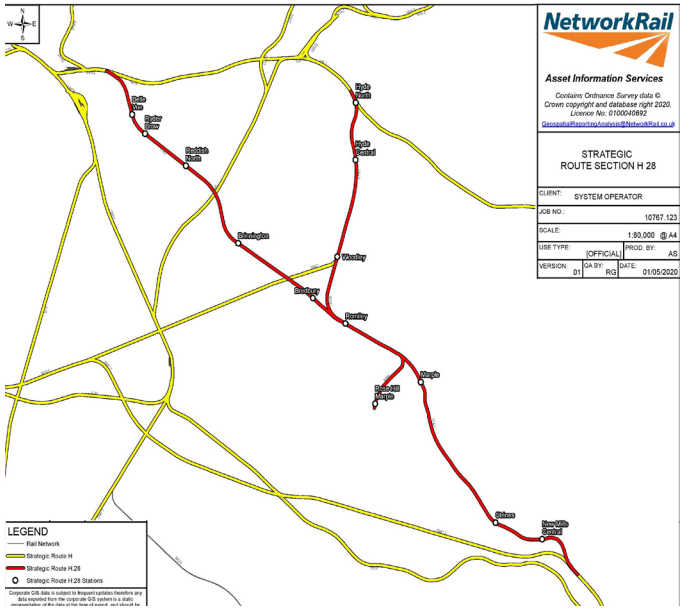
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Manchester and North West Transformation Programme	Introduction of 3rd platform at Salford Crescent	MVE1				In design

SRS H.28 Ashburys and Hyde North to New Mills Central and Rose Hill

Geographic Map



Route specification description

SRS H.28 is divided into three sections. The main route between Ashburys and New Mills South Junction is two track and is a route between Manchester Piccadilly via Ashburys East Junction to Sheffield via New Mills South Junction. A further two track line runs from Romiley Junction on the main route to Hyde Junction near Hyde North station, with a route for services from the south end towards Hyde. A further branch line runs from Marple Wharf Junction towards Rose Hill Marple station on a single line. The route as a whole is not electrified and serves inter-regional, local, commuter and freight markets.

The route has 13 stations (excluding Ashburys) with the busiest* stations being Marple and Romiley.

There are freight facilities at Bredbury for SUEZ Recovery and Recycling UK and Tarmac which use this route to access the facilities via a branch line at Woodley Junction.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	New Mills South Junction to Ashburys East Junction Marple Wharf Junction to Rose Hill Romiley Junction to Hyde Junction		
Section start	Ashburys, Hyde North		
Section end	New Mills Central, Rose Hill		
Route availability†	RA7 Romiley Junction to Ashburys East Junction RA8		
Gauge†	W6, W7		
Signals†	Mostly Track Circuit Block, some Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

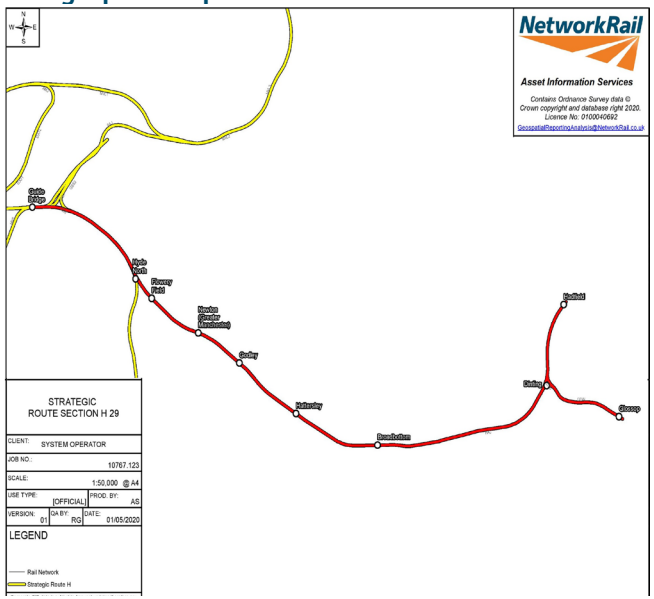
Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Ashburys to Romiley 16 minutes Hyde North to Romiley 9 minutes Romiley to New Mills South 9 minutes Romiley to Rose Hill Marple 6 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Ashburys to Romiley 2 tph Hyde North to Romiley 2 tph Romiley to New Mills South 2 tph Romiley to Rose Hill Marple 2 tph Sheffield to Manchester Piccadilly stopping at Romiley 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0						
Project	**Project Description**	**ELR**	**Implementation Date**	**Output change**	**Funder**	**Status**
No confirmed developments at time of publication.						

SRS H.29 Guide Bridge to Glossop and Hadfield

Geographic Map



Route specification description

SRS H.29 is a route between Guide Bridge towards Dinting and onwards to Glossop and Hadfield.

The route between Guide Bridge and Dinting is two track and is electrified. The route then splits to two single electrified lines: one towards Glossop via Dinting South Junction, and the other towards Hadfield via Dinting East Junction. These two routes are linked by a single line chord between Dinting East and Dinting South Junctions to allow direct access between Hadfield and Glossop.

The main route is nine miles long and each single section is a further mile. It serves commuter and local markets for access to and from Manchester city centre via Guide Bridge West Junction.

There are eight stations on the route (excluding Guide Bridge), with Glossop being the busiest* in terms of passenger usage.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Hadfield to Ardwick Junction Dinting South Junction to Dinting East Junction Glossop to Dinting West Junction		
Section start	Guide Bridge		
Section end	Glossop / Hadfield		
Route availability†	RA8		
Gauge†	W6 W9 from Hyde Junction to Ardwick Junction		
Signals†	Track Circuit Block, Absolute Block, Token	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	34 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	2 tph (3 tph peak)	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

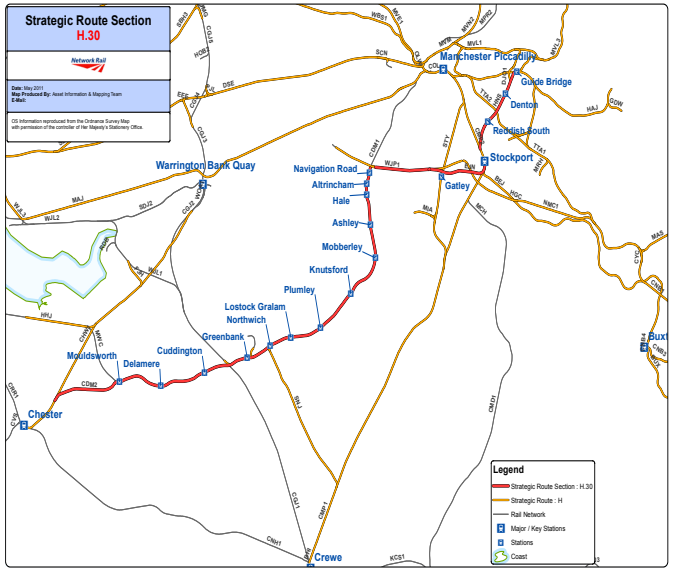
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.30 Guide Bridge to Chester (via Stockport)

Geographic Map



Route specification description

SRS H.30 is a predominantly two track, non-electrified route of 45 miles in length. The route is split into two parts near Stockport station. The route serves mainly local, commuter and freight markets to and from towns in Cheshire such as Northwich and Knutsford.

There are 15 stations on the route (excluding Stockport and Guide Bridge stations) with Knutsford and Altrincham being the two busiest* stations. Navigation Road and Altrincham stations provide an interchange for Manchester Metrolink tram services that also use Network Rail infrastructure on this route. The track between Navigation Road station and Deansgate Junction reduces to single line due to Metrolink tram services running parallel to the railway. There are also single line sections between Mouldsworth and Mickle Trafford Junction as well as at Northenden.

There are a few key junctions on the route including Heaton Norris Junction linking the northern leg of the route with routes to Stockport and Crewe. Edgeley No.2 Junction links the southern leg with Stockport and Manchester Piccadilly.

Both sections of the route are used by freight services which include aggregates from the Peak District to Cheshire and beyond, and biomass running from Liverpool to Drax via the link between the West Coast Main Line and H.30 Greenbank to Cuddington. The line also functions for freight services to avoid central Manchester. There are some important freight facilities along the route such as Lostock Works and Northenden Longley Lane for Greater Manchester Waste plc.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Heaton Norris Junction to Guide Bridge Station Junction Crewe North Junction to Manchester Piccadilly (in part) Edgeley No.2 Junction to Mickle Trafford Chester East Junction to Acton Grange Junction (in part)		
Section start	Guide Bridge Station junction		
Section end	Chester station		
Route availability†	RA8		
Gauge†	W6, W7		
Signals†	Track Circuit Block, Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	10	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Stockport to Chester 78 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Manchester to Chester 1 tph Weekly 'parliamentary' service between Stalybridge and Stockport calling at Reddish South and Denton	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

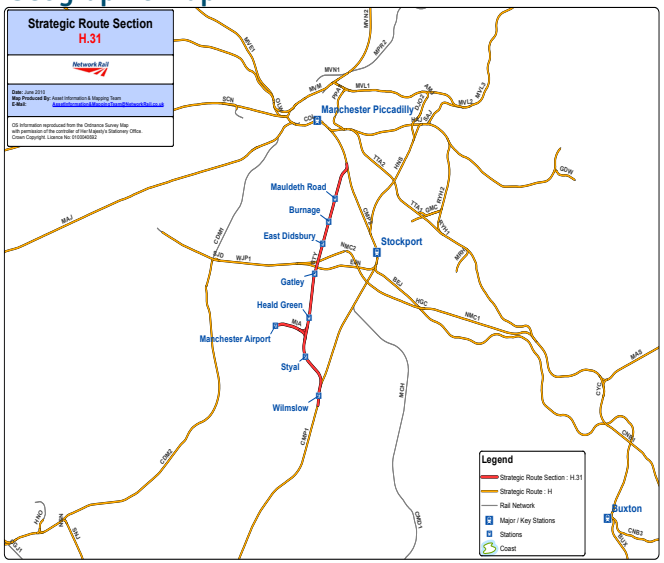
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.31 Manchester Airport to Wilmslow and Slade Lane Junction

Geographic Map



Route specification description

SRS H.31 links Manchester Piccadilly and the city centre to Manchester Airport via the suburban areas of south Manchester. The line is ten miles long, electrified, and consists of two track formation. The route serves long-distance, inter-regional, local, commuter and freight services and provides a key link between Manchester International Airport and the wider network.

There are eight stations, with the busiest* being Manchester Airport. Wilmslow is another key station, providing an interchange from the main line to Stockport and the airport.

The route has three key junctions. Wilmslow South Junction is the southern point of the route connecting with the mainline between Stockport and Crewe. Slade Lane Junction forms the northern point of the route connecting this route with other routes towards Manchester. Heald Green North and South Junctions connect the branch line to Manchester Airport via a 1.4 mile stretch of track.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Manchester Airport to Heald Green North Junction Heald Green South Junction to Heald Green West Junction Wilmslow to Slade Lane Junction (Styal lines)		
Section start	Manchester Airport station		
Section end	Wilmslow Junction/Slade Lane Junction		
Route availability†	RA8		
Gauge†	W10 except Manchester Airport to Heald Green North Junction and also Heald Green South Junction to Heald Green West Junction, which are W6		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Slade Lane Junction to Manchester Airport 18 minutes Wilmslow to Manchester Airport 17 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Slade Lane Junction to Manchester Airport 8 tph Wilmslow to Manchester Airport 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

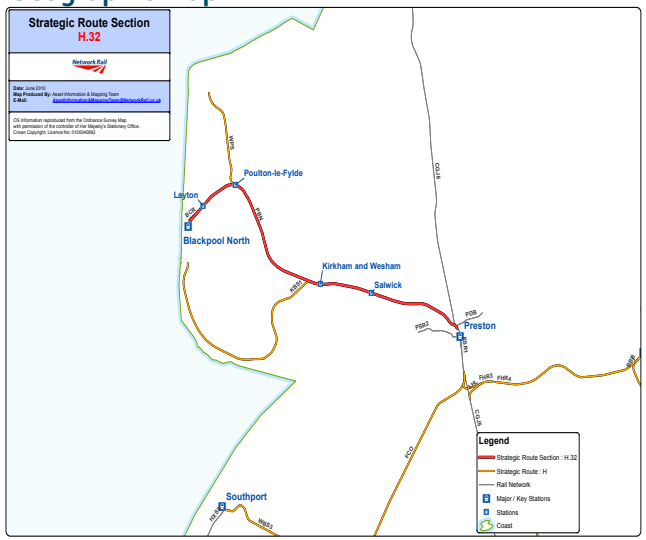
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Manchester and North West Transformation Programme	Manchester Airport remodelling					In development

SRS H.32 Blackpool North Branch

Geographic Map



Route specification description

SRS H.32 links Blackpool and the surrounding area with the rest of the rail network via Preston. The line is 17.5 miles long with two track formation throughout, and is electrified.

The route has five stations, with the busiest* being Blackpool North, and serves several markets, including inter-regional, local and commuter. There are also tourist passenger flows all year round travelling to Blackpool.

The route links with Preston via Preston Fylde Junction at the end of the route. There is another junction, Kirkham North Junction near Kirkham and Wesham station, that diverges towards the South Fylde Line towards Blackpool South station.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Preston Fylde Junction to Blackpool North		
Section start	Preston Fylde Junction, on approach to Preston station		
Section end	Blackpool North station		
Route availability†	RA8		
Gauge†	W6		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	70 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	27 minutes (slow) 20 minutes (fast)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	5 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

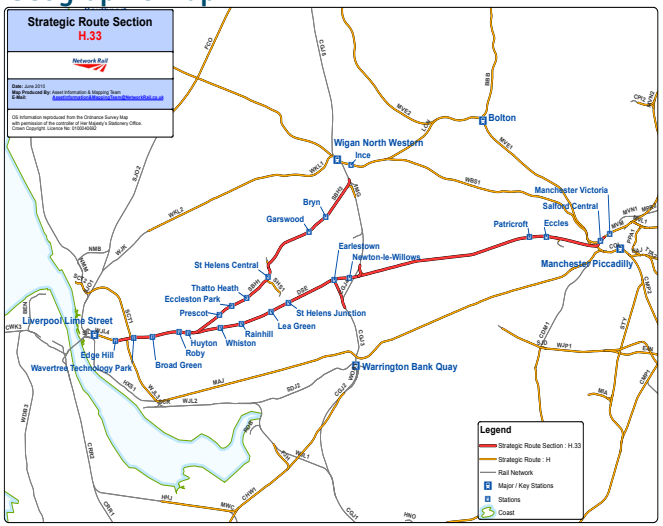
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.33 Edge Hill to Manchester Victoria (via Earlestown) and Wigan

Geographic Map



Route specification description

SRS H.33 links Liverpool and eastern Merseyside (including St. Helens) with Wigan, Warrington, Salford and Manchester. This route is an important commuting route between Liverpool and Manchester, and is also the primary freight route to and from the Port of Liverpool, via either Bootle Branch Junction or Olive Mount Junction. It also serves long-distance, inter-regional and local markets. This route is known locally as the Chat Moss line.

The main route between Edge Hill and Manchester Victoria is 32 miles long, with Edge Hill East Junction providing access to Liverpool Lime Street station. The line between Huyton Junction and Springs Branch Junction is 12.5 miles long.

Earlestown West and East Junctions provide access onto the West Coast Main Line from Merseyside towards Warrington Bank Quay.

A further line between Newton-Le-Willows Junction and Parkside Junction allows for connections between Warrington and the Merseyside area and then Manchester and Wigan North Western on the West Coast Main Line. The route then crosses Ordsall Lane Junction towards Manchester Victoria.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Ordsall Lane Junction to Edge Hill Deal Street Junction to Ordsall Lane Junction Manchester Victoria East Junction to Windsor Bridge South Junction (in part) Springs Branch Junction to Huyton Junction (St Helens lines)		
Section start	Edge Hill East Junction, on the approach to Edge Hill station		
Section end	Manchester Victoria station; Springs Branch Junction, on the approach to Wigan North Western station		
Route availability†	RA7, RA8		
Gauge†	W8, W9		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	5	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Edge Hill to Springs Branch Junction 41 minutes (slow) Edge Hill to Manchester Victoria 32 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Edge Hill to Springs Branch Junction 3 tph Edge Hill to Manchester Victoria 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

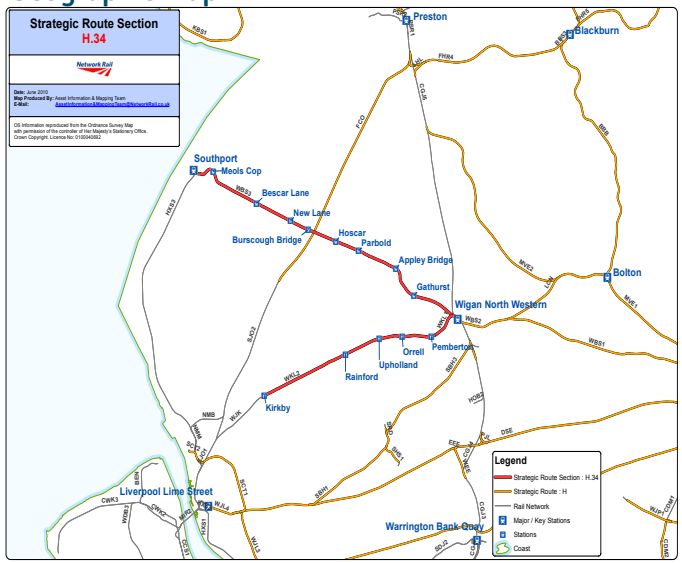
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
School Lane Bridge W10a	Gauge clearing for School Lane overbridge 65 for W10 freight traffic	SJO2	2023	This will remove the one remaining infringement for the line between the Port of Liverpool and WCML at Earlestown	DfT SOEF	

SRS H.34 Southport and Kirkby to Wigan Wallgate

Geographic Map



Route specification description

SRS H.34 links Wigan Wallgate station with Southport (northern branch) and Kirkby (southern branch). The route serves commuter, local and freight markets; and links Southport and west Lancashire with Greater Manchester via the Wigan Wallgate to Manchester Victoria route. The northern leg is 17.5 miles long with the southern leg being 12 miles long; neither is electrified.

There are 16 stations on the route with Wigan Wallgate, Kirkby and Southport being the busiest*. Wigan Wallgate provides interchange for services towards Manchester; Kirkby and Southport are also terminal stations for the Merseyrail network.

The two legs converge at Wigan Wallgate Junction. There is no direct access from Southport to Kirkby.

The majority of the route is two track, with the exception of a five mile section of single track between Rainford Junction and Kirkby station on the southern leg. Knowsley Freight Terminal is located on this single track section.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Windsor Bridge North Junction to Southport (in part) Wigan Wallgate to Kirkby		
Section start	Southport station, Kirkby station		
Section end	Wigan Wallgate station		
Route availability†	RA7 Kirkby to Wigan RA8 Southport to Wigan		
Gauge†	W7		
Signals†	Absolute Block Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	70 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	15	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Southport to Wigan Wallgate 85 minutes Kirkby to Wigan Wallgate 24 minutes Kirkby to Manchester stations 71 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Southport to Wigan Wallgate 2 tph Kirkby to Wigan Wallgate 1 tph Kirkby to Manchester stations1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

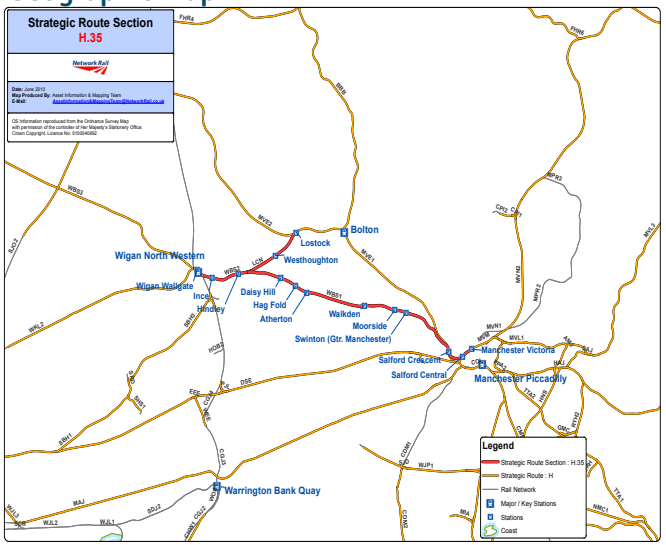
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.35 Wigan Wallgate to Manchester Victoria

Geographic Map



Route specification description

SRS H.35 links Wigan Wallgate to Manchester Victoria with a branch line to Lostock towards Bolton. The route serves commuting and local travel markets, particularly to and from Manchester. The main line is 17.5 miles long; the branch line is four miles long and diverges from the main line near Hindley via Crows Nest Junction towards Lostock where Lostock Junction provides access towards Bolton.

There are 13 stations on the route, with the busiest* being Manchester Victoria, Salford Crescent and Wigan Wallgate.

Windsor Bridge North and South Junctions provide access from Salford Crescent to and from Manchester Victoria.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Windsor Bridge North Junction to Southport (in part) Manchester Piccadilly East Junction to Euxton Junction (in part) Manchester Victoria East Junction to Windsor Bridge South Junction Lostock Junction to Crows Nest Junction		
Section start	Wigan Wallgate station		
Section end	Manchester Victoria / Lostock Junction, near Bolton station		
Route availability†	RA8		
Gauge†	W7		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL Salford Crescent - Manchester Victoria, rest of SRS not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Wigan Wallgate to Manchester Victoria 46 minutes Wigan Station Junction to Lostock Junction 14 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Wigan Wallgate to Manchester Victoria 3 tph Wigan Station Junction to Lostock Junction 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

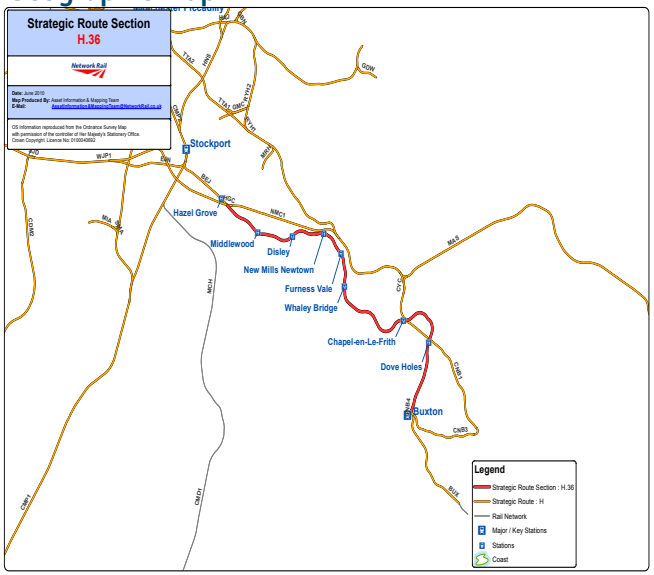
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Wigan - Bolton Electrification		WBS2, LCN		To electrify remaining section of route originally proposed under NW Electrification Programme.		In development
Manchester and North West Transformation Programme	To deliver a better performing and more resilient network that also meets the passenger capacity requirements until 2030			To support continued growth in rail usage on the corridors in and out of Manchester.		Phased approach - some in design, some in development

SRS H.36 Buxton Branch

Geographic Map



Route specification description

SRS H.36 links Buxton and Hazel Grove and is a commuting route from the High Peak area towards Stockport and Manchester. The route is 17 miles long, is two track throughout, and not electrified. It serves commuting and local markets.

There are eight stations on the route with the busiest* being Hazel Grove and Buxton.

There are important junctions at either end of the route with Hazel Grove East Junction providing access towards Stockport and onto Manchester Piccadilly, and Buxton Station Junction linking to the Peak Forest freight line.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Buxton to Hazel Grove East Junction		
Section start	Buxton station		
Section end	Hazel Grove East Junction		
Route availability†	RA8		
Gauge†	W6		
Signals†	Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	50 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	5	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	38 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

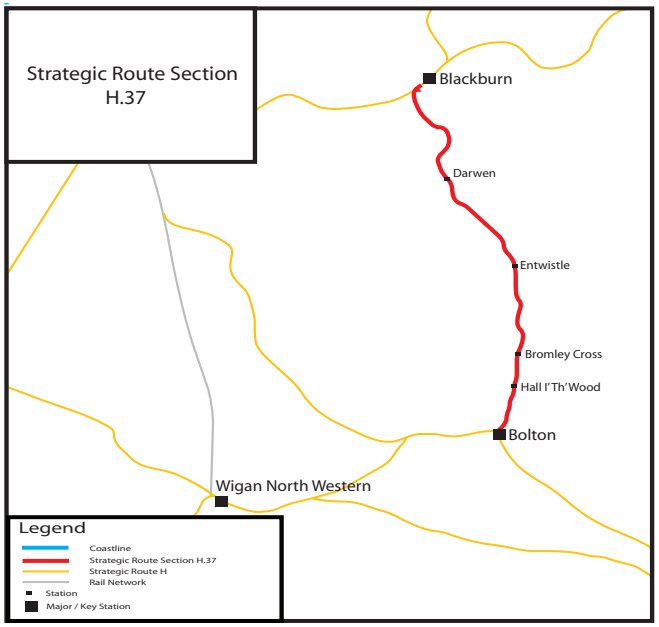
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Buxton Freight Points	Installation of a set of points on the line to Buxton to allow direct access to the CNB1/2/3 lines from the BEJ lines,	CNB1/2/3	2022	This will provide a diverse route into this area for freight customers. This enhancement provides value to all customer stakeholders in the area and FOC's as a key part of their business.	DfT SOEF	

SRS H.37 Bolton to Blackburn

Geographic Map



Route specification description

SRS H.37 links Bolton and Blackburn and is an important commuting route that connects east Lancashire with Greater Manchester. The route is 14 miles long consisting of a mix of two track and single track line, and is not electrified.

The route has six stations of which Bolton and Blackburn are the busiest*.

Bolton West Junction connects the main route with Bolton station providing interchange towards Manchester and Preston. Blackburn Bolton Junction near Blackburn station provides access to Blackburn station from the route.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Bolton West Junction to Blackburn Bolton Junction		
Section start	Bolton station		
Section end	Blackburn station		
Route availability†	RA8		
Gauge†	W6		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	3	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	32 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

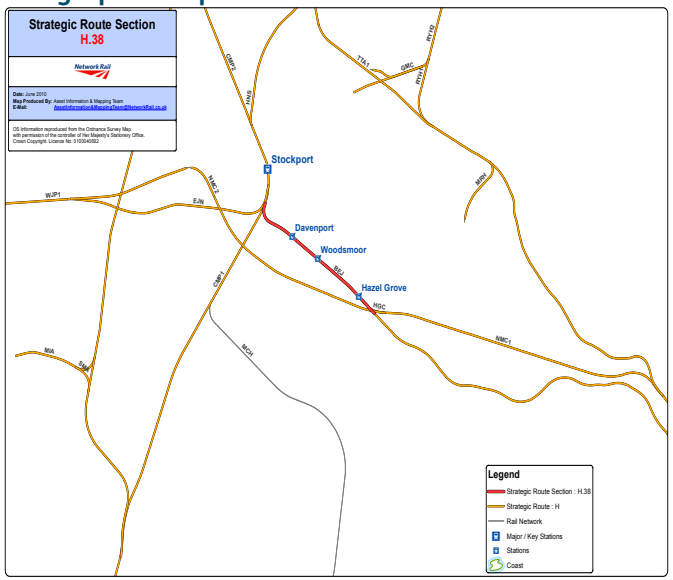
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.38 Hazel Grove to Edgeley Junction

Geographic Map



Route specification description

SRS H.38 links Hazel Grove with Stockport and forms part of the main South Transpennine route between Manchester and Sheffield. The route is two miles long, completely electrified, and is two track throughout. The route serves commuter, local and long-distance inter-regional traffic as well as freight.

There are three stations on the route, with the busiest* being Hazel Grove.

The route has key junctions at each end with Edgeley Junction No.1 providing routes towards Stockport and Manchester, and Hazel Grove East Junction for the Hope Valley and Buxton.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Dore West Junction to Edgeley Junction No.1 (Hope Valley lines) (in part)		
Section start	Hazel Grove East Junction		
Section end	Edgeley Junction No.1, on the approach to Stockport station		
Route availability†	RA8		
Gauge†	W8		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	40 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	8 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	5 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

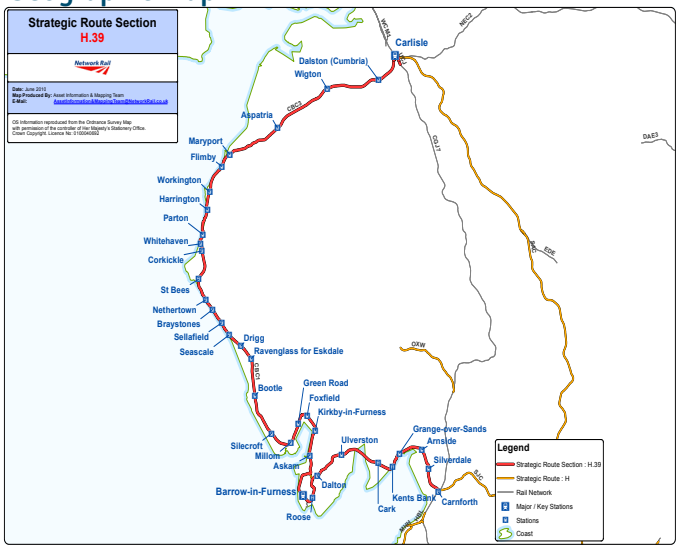
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Manchester and North West Transformation Programme	To deliver a better performing and more resilient network that also meets the passenger capacity requirements until 2030.			To support continued growth in rail usage on the corridors in and out of Manchester.		Phased approach - some in design, some in development

SRS H.39 Cumbrian Coast

Geographic Map



Route specification description

SRS H.39, known as the Cumbrian Coast Line, is an important transport link for rural and coastal communities in Cumbria and providing access to Sellafield. The route is 115 miles long with a mixture of single and two track sections and is not electrified. It serves freight, local and inter-regional markets as well as commuters particularly to Sellafield.

The route has 34 stations (excluding Carlisle) with the busiest* being Barrow-in-Furness which is also an interchange station for onward journeys to Lancaster, Preston, and Manchester Airport. Other key stations are Ulverston, Whitehaven and Sellafield, with the latter also being an important location for freight.

The route connects to the West Coast Main Line at Carlisle station via Carlisle South Junction and at Carnforth station via Carnforth North Junction.

Freight services use Currock Junction to leave this route and connect with either the West Coast Main Line in a southerly direction at Upperby Bridge Junction or the Settle and Carlisle Line to Newcastle via London Road Junction. There are also two diversionary freight routes on the main route, firstly at Maryport station where a junction diverts passenger trains off the main route and through the one-platform station and back to the main line, then another two at Park South Junction and Dalton Junction which allow trains to bypass Roose and Barrow-in-Furness stations and continue on the main route.

As this is a key freight route there are numerous sidings and yards adjacent to the railway other than at Sellafield: these include Dalston Oil Terminal, the Low Level Waste Repository at Drigg, the port of Barrow, and Carnforth sidings.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Carlisle South Junction to Carnforth North Junction (via Barrow) Dalton Junction to Park South Junction		
Section start	Carlisle South Junction		
Section end	Carnforth Station Junction		
Route availability†	RA7, RA8		
Gauge†	W6 with restricted W7, W8 from Workington to Carlisle		
Signals†	Track Circuit Block, Absolute Block, and Token	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL on approaches into Carlisle and Carnforth, otherwise this SRS is not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	106	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Carnforth to Barrow 50 minutes Carlisle to Barrow 150 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Carnforth to Barrow 1 tph Carlisle to Barrow 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

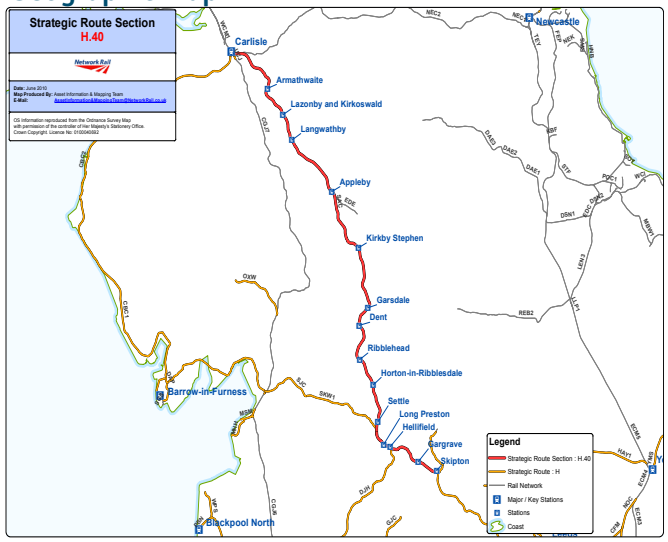
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Energy Coast Rail Upgrade	Capacity and capability enhancement to accommodate scheduled freight growth associated with developments along the line	CBC				In development

SRS H.40 Settle and Carlisle Line

Geographic Map



Route specification description

SRS H.40 links Carlisle with rural communities in east Cumbria and North Yorkshire, through to Skipton with the line continuing to Leeds. The route is 85 miles long, mostly two track and is not electrified. The route caters for the local, freight and commuter markets and it is also a popular tourist route all year round.

There are 14 stations on the route with the busiest* being Skipton and Settle.

At the north of the route Petteril Bridge Junction gives access to Carlisle station on the West Coast Main Line; Settle Junction is a south-facing connection to Carnforth. There is also a junction at Hellifield station at which a route diverges towards Clitheroe and Blackburn, this is mostly used by freight traffic.

There are various sidings and yards adjacent to the line including Howe & Co's siding five miles from Carlisle; Newbiggin, which is a British Gypsum terminal near Kirkby; and Arcow Quarry siding near Horton-in-Ribblesdale.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Gargrave to Carlisle South Junction Whitehall West Junction to Hellifield South Junction (in part)		
Section start	Petteril Bridge Junction, outside Carlisle station		
Section end	Skipton station		
Route availability†	RA8		
Gauge†	W7		
Signals†	Mostly Absolute Block, some sections of Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	11	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	124 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	1 train every 2 hours	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

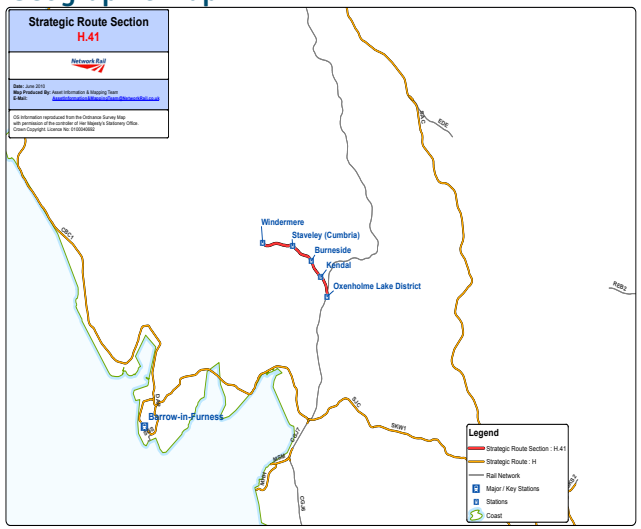
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.41 Windermere Branch

Geographic Map



Route specification description

SRS. H.41, the Windermere Branch line, is a ten mile single line non-electrified route connecting Windermere and the West Coast Main Line at Oxenholme Lake District station. The route serves local, commuter and inter-regional/long-distance markets with a significant tourism flow throughout the year.

There are five stations on the route with Oxenholme and Windermere being the busiest* in terms of passenger usage.

The branch line connects via Oxenholme Junction at Oxenholme Lake District station, where passengers can change to stations towards London and Scotland.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Oxenholme to Windermere		
Section start	Oxenholme Lake District station		
Section end	Windermere station		
Route availability†	RA8		
Gauge†	W6		
Signals†	Token Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	7	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	20 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

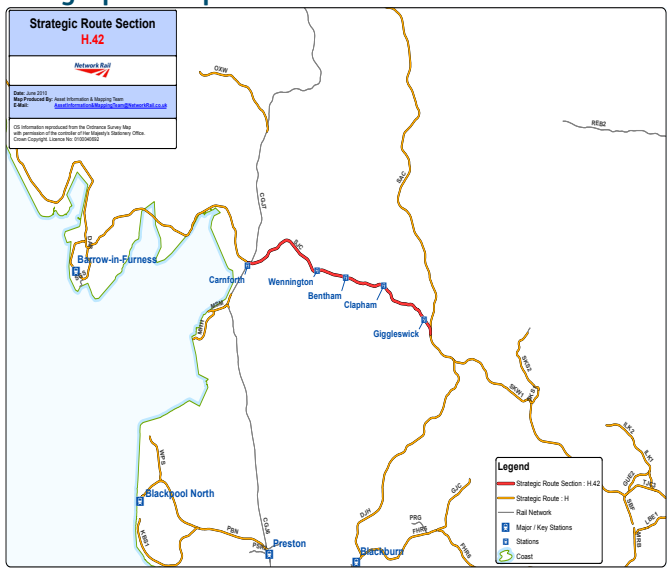
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.42 Carnforth to Long Preston

Geographic Map



Route specification description

SRS H.42 links Carnforth with Settle via the 25 mile long 'Bentham Line'. The route is two track throughout and is not electrified. The route serves local and inter-regional markets and allows for a scenic route from Lancaster and Morecambe towards Leeds.

There are four stations (excluding Carnforth), the busiest* of which is Bentham (in terms of passenger usage).

The route leaves the West Coast Main Line at Carnforth station Junction and connects to the Settle and Carlisle Line at Settle Junction.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Carnforth Station Junction to Settle Junction		
Section start	Carnforth Station Junction		
Section end	Settle Junction		
Route availability†	RA8		
Gauge†	W6		
Signals†	Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	8	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	42 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	8 trains per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

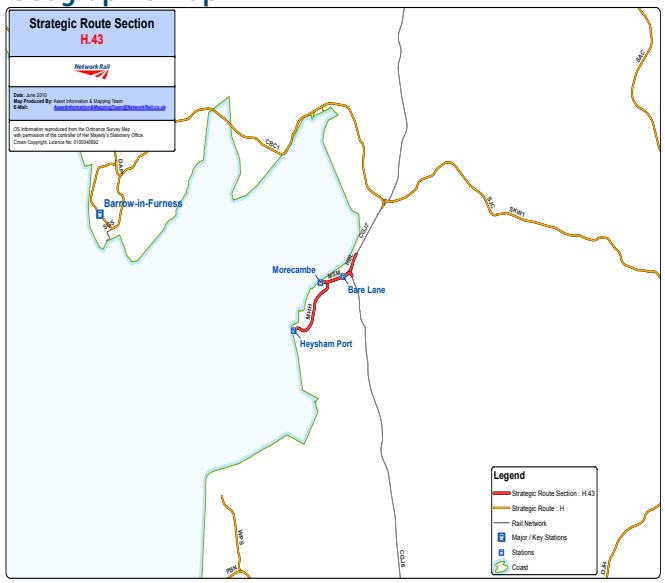
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.43 Morecambe and Heysham Port Branch

Geographic Map



Route specification description

SRS H.43 connects Morecambe and Heysham with the West Coast Main Line. The route from the West Coast Main Line to Morecambe is two track and approximately two miles long, with a single line branch line from Morecambe to Heysham Port station approximately four miles long; there is a further half-mile of single line from Heysham Port station to the Power Station site at Heysham. The route is not electrified and serves local, commuter and freight markets.

There are three stations on the route with Morecambe being the busiest* station. One passenger train per day travels from Morecambe to Heysham Port.

Whilst the route is two track from Morecambe towards the West Coast Main Line, each line is bi-directional, with one joining from the West Coast Main Line at Morecambe South Junction from Lancaster and the south and the other joining the West Coast Main Line at Hest Bank Junction towards Carnforth and the north.

Morecambe Junction links the main route to the branch line for Heysham. The junction faces Morecambe station, resulting in trains to and from Heysham needing to reverse at Morecambe station.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Morecambe South Junction to Morecambe Hest Bank Junction to Bare Lane Morecambe Junction to Heysham Port		
Section start	Morecambe South Junction / Hest Bank Junction, on WCML between Lancaster and Carnforth stations		
Section end	Morecambe station, Heysham Power Station		
Route availability†	RA8		
Gauge†	W8		
Signals†	Track Circuit Block, Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	55 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	5	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Morecambe to Bare Lane 4 minutes Morecambe to Heysham 15 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Morecambe to Bare Lane 1 tph Morecambe to Heysham 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

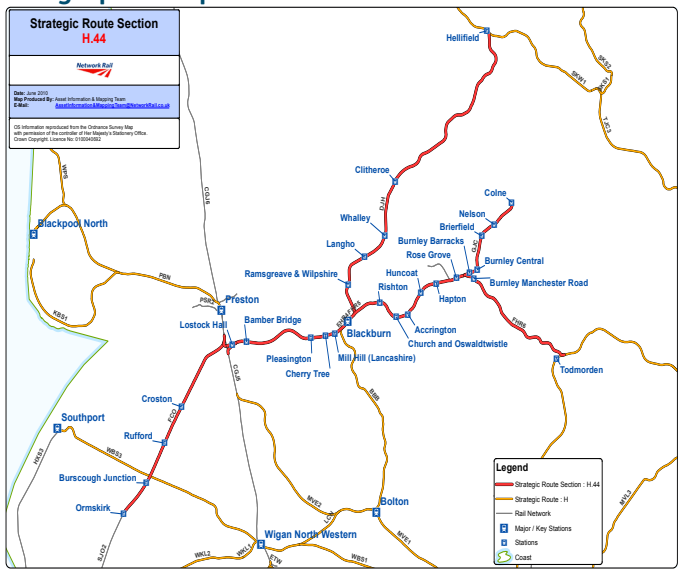
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.44 Roses Line and Branches (including Preston to Ormskirk and Blackburn to Hellifield)

Geographic Map



Route specification description

SRS H.44 consists of four route sections, divided as follows:

- 'The Roses Line' – Farington Curve Junction to Hall Royd Junction
- Ormskirk to Preston branch line
- 'The Clitheroe Line' – Daisyfield Junction to Hellifield
- 'The Colne Branch' – Gannow Junction to Colne station

'The Roses Line'

The main section of this route links central Lancashire, east Lancashire and West Yorkshire. Starting at Farington Curve on Preston's approach, it runs for 30.5 miles on two track non-electrified line to Hall Royd Junction near Todmorden. The route serves long-distance inter-regional, local, commuter and freight markets; and has 13 stations, the largest* of which is Blackburn, allowing interchange between this line, the Clitheroe Line via Daisyfield Junction and the line towards Bolton via Blackburn Bolton Junction. Other key stations include Accrington and Burnley Manchester Road. The route connects onto the Colne Branch line via Gannow Junction. This route can also be accessed from Wigan North Western via Farington Junction on the two track Lostock Hall line. Hall Royd Junction at the east end of the route provides access towards Burnley, Bradford and Leeds as well as the Todmorden Curve providing a route towards Manchester via Rochdale.

Ormskirk to Preston branch line

The branch line runs from Ormskirk station to Farington Curve Junction on the approach to Preston station, on a single non-electrified line for approximately 13.5 miles. It serves local and commuter markets with four stations: Ormskirk, an interchange between the main network and Merseyrail network, is the busiest* in terms of passenger usage.

'The Clitheroe Line'

This line links Clitheroe with Blackburn via Daisyfield Junction. The route is 23.5 miles long, it is not electrified and mostly two track, serving local, commuter and freight markets. There are four stations on the route, the busiest* being Clitheroe. There is also a freight railhead at Horrocksford which is owned by Hanson Cement. Although the line connects to Hellifield, there currently isn't a frequent passenger service between Clitheroe and Hellifield.

'The Colne Branch'

This branch line links Colne with services towards Accrington on the Roses Line via Gannow Junction. It is a single non-electrified line of approximately six miles. There are six stations on the route, serving local and commuter markets, with Burnley Central being the busiest*.

SRS H.44 Roses Line and Branches (including Preston to Ormskirk and Blackburn to Hellifield)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Farington Curve Junction to Hall Royd Junction (East Lancs lines) Farington Curve Junction to Ormskirk Daisyfield Junction to Hellifield Gannow Junction to Colne		
Section start	Farington Curve Junction, on the approach to Preston station		
Section end	Ormskirk station, Colne station, Hellifield Junction, Hall Royd Junction near Todmorden		
Route availability†	RA8		
Gauge†	W6, W7		
Signals†	Track Circuit Block, Absolute Block, Token	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	70 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	46	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Preston to Blackburn 16 minutes Preston to Ormskirk 30 minutes Blackburn to Burnley Manchester Road 17 minutes Blackburn to Colne 43 minutes Blackburn to Clitheroe 23 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Preston to Blackburn 2 tph Preston to Ormskirk 1 tph Blackburn to Burnley Manchester Road 2 tph Blackburn to Colne 1 tph Blackburn to Clitheroe 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

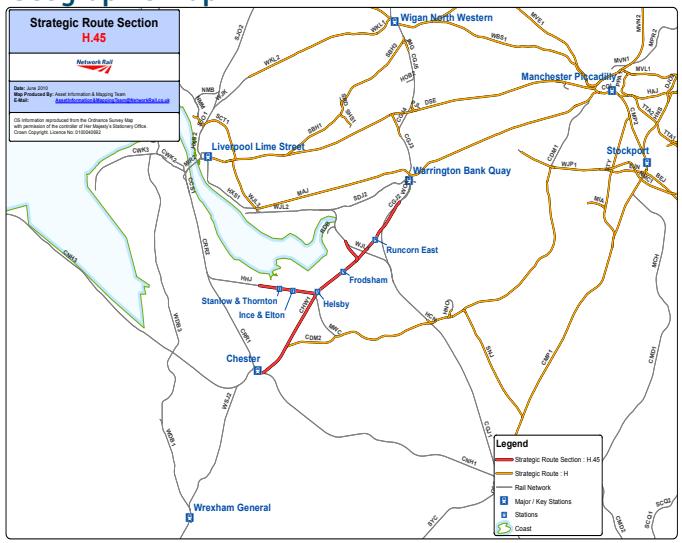
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.45 Chester and Ellesmere Port to Warrington Bank Quay

Geographic Map



Route specification description

SRS H.45 links Chester and Ellesmere Port with Warrington Bank Quay and the West Coast Main Line. The route is split into three sections: the main line, approximately 17.5 miles long, runs from Chester to Acton Grange Junction, south-west of Warrington Bank Quay. The Ellesmere Port branch, approximately five miles long, connects the main line from Warrington Bank Quay to Ellesmere Port via Helsby Junction at Helsby station; the junction is west-facing and therefore does not allow for direct movements from Chester to Ellesmere Port. The final section is the Halton Curve, a 1.5 mile single line section of track that connects the main line via Frodsham Junction to the Liverpool line via Halton Junction and allows trains to travel between Chester and Liverpool.

There are seven stations along the route (excluding Warrington Bank Quay) with Chester being the main station. Chester and Ellesmere Port stations allow for interchanges onto the Merseyrail network; Chester also connects to Crewe and towards Wales.

The combined route serves inter-regional, local and commuter markets as well as freight traffic. There are several freight facilities adjacent to the route, for example Walton Old Sidings which is used by freight operators to form services and store wagons, and Warrington Arpley Yard which is leased by DB Cargo and provides connections to other freight lines.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Chester East Junction to Action Grange Junction Hooton South Junction to Helsby Junction (in part) Frodsham Junction to Halton Junction		
Section start	Chester East Junction, just east of Chester / Ellesmere Port stations		
Section end	Acton Grange Junction, on the approach to Warrington Bank Quay		
Route availability†	RA8		
Gauge†	W7		
Signals†	Track Circuit Block, Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Warrington Bank Quay to Chester 22 minutes Warrington Bank Quay to Ellesmere Port 30 minutes (limited number of direct services)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Warrington Bank Quay to Chester 2 tph Warrington Bank Quay to Ellesmere Port 3 trains per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

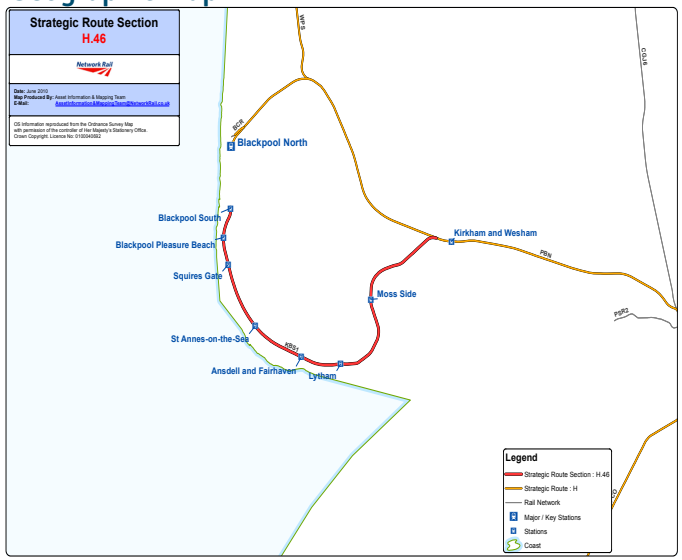
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.46 Blackpool South Branch

Geographic Map



Route specification description

SRS H.46, known as the South Fylde Line, serves local, commuter and seasonal tourism markets for Blackpool Pleasure Beach and major golf tournaments at Lytham St Annes. The non-electrified single line route is approximately 12.5 miles long and joins the main Blackpool North to Preston line at Kirkham North Junction allowing a Preston to Blackpool South service.

There are seven stations on the route, the busiest* (in terms of passenger usage) are Blackpool South, Blackpool Pleasure Beach and St Annes-on-the-sea.

There are Network Rail engineering sidings at Kirkham North Junction.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Kirkham North Junction to Blackpool South		
Section start	Kirkham North Junction, west of Kirkham & Wesham station		
Section end	Blackpool South station		
Route availability†	RA8		
Gauge†	W6		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	70 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	2	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Kirkham and Wesham to Blackpool South 23 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Kirkham and Wesham to Blackpool South 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

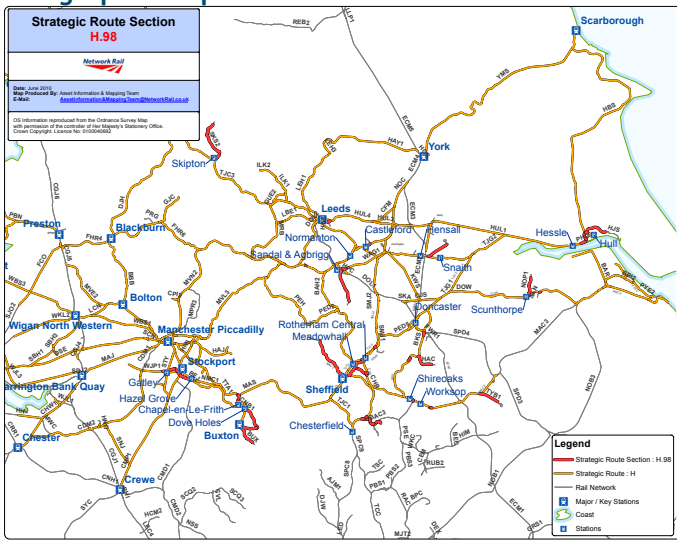
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

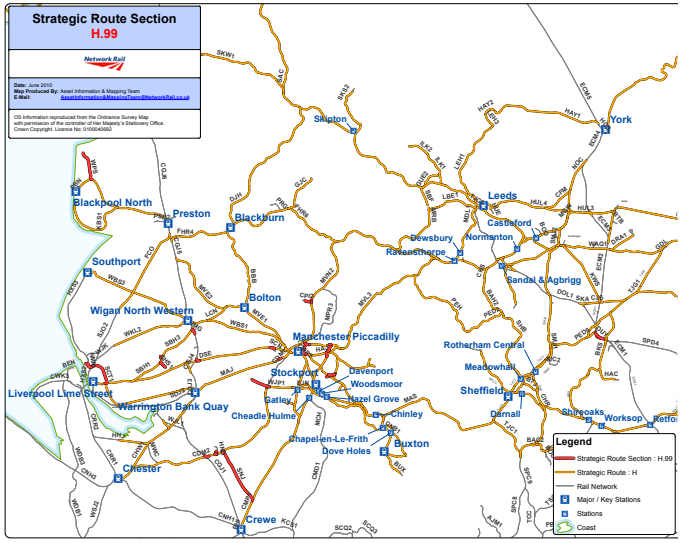
Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS H.98 Freight Trunk Routes and H.99 Other Freight Routes

Geographic Map





Route specification description

See the Freight Network Study for further details.
See maps for further route information.

Buxton to Hindlow (BUX)

This single track line, known as the Buxton and High Peak Junction line, links the freight terminals at Dowlow and Hindlow with Buxton.

Peak Forest Junction to Chinley South Junction (CNB1/2/3/4)

This is double track railway as far as Great Rocks Junction, then the line splits with a single track towards the freight terminal at Tunstead and a single line towards Buxton. A project to install a set of points on the line to Buxton will allow direct access to the CNB1/2/3 lines from the BEJ lines.

The Peak Forest Northern Connection scheme will deliver a track connection from the Down Goods line to a siding to form a look that will be utilised by inbound freight traffic at the Peak Forest Quarry.

Chinley Chord (CYC)

This single line triangular chord links Chinley South Junction with Chinley East and Chinley North Junctions.

Earles Private Sidings (EPS)

Situated near Hope on the Manchester to Sheffield route, this consists of a Down goods loop and a series of sidings with connections at either end that act as an interchange point for an industrial line to the cement works. The sidings are part of the network but the siding to the cement works is outside the Network Rail boundary.

New Mills South Junction to Northenden Junction (NMC1 & WJP1)

This single track section links the Sheffield to Manchester (Hope Valley) route with the Stockport to Skelton Junction route.

Woodley Junction to Bredbury Sidings (WJP1)

This single line route diverges from the Hyde route (Manchester to Rose Hill / Marple) at Woodley Junction. It runs for approximately one mile catering for SUEZ Recovery and Recycling UK and Tarmac at Bredbury.

Sandbach North Junction to Northwich West Junction (SNJ)

The Northwich Branch line is a mainly single, non-electrified railway line between Sandbach South Junction and Northwich South Junction. The route is approximately 8.5 miles long and caters for occasional freight traffic; it is no longer maintained to passenger standard.

British Salt Ltd has a rail terminal with a south-facing connection approximately 1.75 miles from Sandbach; and there is a passing loop (the 'Middlewich Loop') approximately 3.5 miles from Sandbach, at the site of the former Middlewich station. The prevailing line speed is 20mph (including junctions).

SRS H.24 Deansgate to Allerton Trafford Park Freightliner Terminal

Trafford Park is an Intermodal Freight terminal located adjacent to the Allerton West Junction to Castlefield Junction line to the west of Manchester city centre close to Manchester United Football Ground station. It is accessed via Trafford Park West Junction, which consists of two east-facing crossings, therefore permitting parallel moves to and from the terminal. The reception, departure and main route within the terminal are electrified, but all other sidings and lines are not electrified. There is no access from the west (Warrington/Merseyside direction).

SRS H.98 Freight Trunk Routes and H.99 Other Freight Routes

Winnington Branch – Brunner Mond Oakleigh Sidings (Chemicals) NW3033/3035

The Winnington Branch provides rail access to the Tata Chemicals UK-owned Winnington Works and Northwich Oakleigh Sidings from both directions of the Mid-Cheshire Line via single track chords at Hartford West and Hartford East Junctions. The chords merge into a short single line at Hartford North Junction before splitting to a two track section for three-quarters of a mile.

Hartford CLC to West Coast Main Line Chord NW3037

The Hartford Chord links the West Coast Main Line and Mid-Cheshire Line north of Hartford station and west of Greenbank station. It is a bi-directional link consisting of a small section of two track and small section of single line railway. The single line portion is electrified to allow shunting of electric rolling stock off the West Coast Main Line. The two track section and access to the Mid-Cheshire Line is not electrified, and the whole chord is limited to 30 mph maximum speed. The route is used for diversionary purposes and also for Network Rail engineering trains.

SRS H.32 Blackpool North Branch - Burn Naze Branch (WPS)

The route between Poulton-le-Fylde Junction and the former Thornton Power Station has been formally taken out of use within the Sectional Appendix. The line was a single track branch with passing loops located at Poulton-le-Fylde Junction and the former Burn Naze station. The connection at Poulton-le-Fylde Junction has been severed, with passive provision for reconnection to the east of Poulton-le-Fylde station should the branch be reinstated.

SRS H.33 Edge Hill to Manchester Victoria (via Earlestown) and to Wigan - Bootle Branch (SCT1)

The main Bootle branch is a two track, non-electrified railway linking the Edge Hill area with the Port of Liverpool (via a west-facing connection at the Edge Hill end). The line is situated in a variety of cuttings and tunnels and has a 20mph speed limit. The branch ends in the area of the former Regents Road level crossing, where there is a boundary point between the main network and the port network. There is a secondary bi-directional line (the Olive Mount Chord) which provides an east-facing link with SRS H.33 for traffic heading east towards the West Coast Main Line, Manchester, Yorkshire and the North East. It is connected to the main Bootle Branch line at Edge Lane Junction (approximately half a mile from Bootle Branch Junction). A variety of freight flows access the port via the branch, including coal, containers, steel and biomass.

Pilkington Glass Oil Sidings

Pilkington Glass is adjacent to SRS H.33, approximately half a mile south of St Helens Central station. The private sidings can be accessed via the Down Goods Loop.

Ince Moss Chord Line (IMG)

Ince Moss Chord is a single track, non-electrified route linking the St. Helens Branch (SRS H.33) with the West Coast Main Line freight lines at Bamfurlong Junction. Line speed is 25 mph. The primary use of this route is for freight travelling between Merseyside and the West Coast Main Line.

Up and Down Lowton Branch (NGJ & PJL)

This route links the Chat Moss route (SRS H.33) with the West Coast Main Line at Golborne Junction for services travelling between Manchester and Wigan North Western. The route is electrified with a 20 mph line speed. Northern passenger services from Manchester Airport to Barrow-in-Furness and Windermere use this line.

Eccles Up Goods Loop (SCN)

The Eccles Up Goods Loop is located at Eccles station and also provides access to Weaste. The loop has a speed of 40 mph.

Castleton to Bolton Line (CEH)

Accessed at Castleton South Junction, this non-electrified line runs for three-quarters of a mile under Network Rail control to the boundary with the East Lancashire Railway.

SRS H.98 and H.99 Freight

Buxton to Hindlow (BUX)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Buxton to Brigg's Sidings (Hindlow)		
Section start	Buxton		
Section end	Hindlow		
Route availability†	RA8		
Gauge†	W6		
Signals†	Token Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	20 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS H.98 and H.99 Freight

Peak Forest Junction to Chinley South Junction (CNB1/2/3/4)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Chinley North Junction to Buxton		
Section start	Chinley North Junction		
Section end	Buxton Sidings		
Route availability†	RA8		
Gauge†	Chinley North Junction to former Buxton Junction W7 Former Buxton Junction to Buxton Sidings W6		
Signals†	Absolute Block, Electric Token Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	45 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS H.98 and H.99 Freight

Chinley Chord (CYC)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Chinley East Junction to Chinley South Junction (chord line)		
Section start	Chinley East Junction		
Section end	Chinley South Junction		
Route availability†	RA8		
Gauge†	W7		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	25 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this section.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS H.98 and H.99 Freight

New Mills South Junction to Northenden Junction (NMC1 & WJP1)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Dore West Junction to Edgeley Junction No.1 (Hope Valley lines) Hazel Grove High Level Junction to Northenden Junction		
Section start	New Mills South Junction		
Section end	Northenden Junction		
Route availability†	RA8		
Gauge†	W6, W7		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	45 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS H.98 and H.99 Freight

Woodley Junction to Bredbury Sidings (WJP1)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Woodley Junction to Bredbury Sidings		
Section start	Woodley Junction		
Section end	Bredbury Sidings		
Route availability†	RA7		
Gauge†	W7		
Signals†	See local instructions of NESA	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	15 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS H.98 and H.99 Freight

Sandbach North Junction to Northwich West Junction (SNJ)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Sandbach North Junction to Northwich South Junction		
Section start	Sandbach South Junction		
Section end	Northwich South Junction		
Route availability†	RA8		
Gauge†	W7		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	20 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

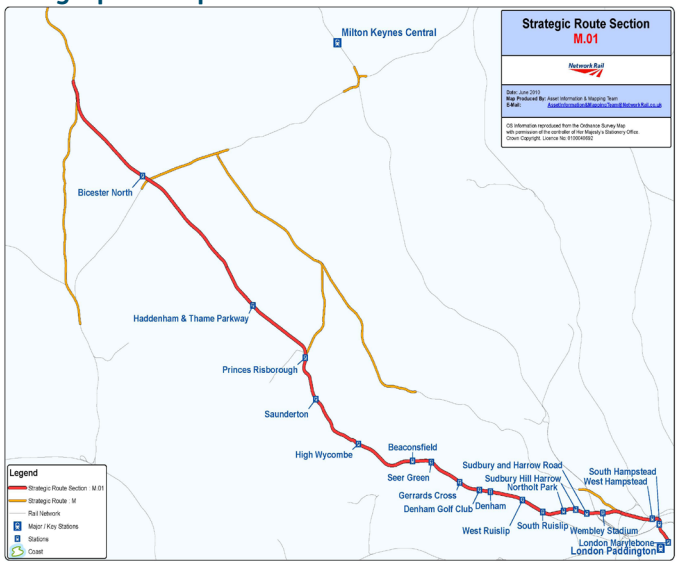
Route M: West Midlands & Chilterns

SRS M.01 London Marylebone to Aynho Junction

SRS M.26 Wolvercot Junction (Oxford) to Bicester Chord

SRS M.12 Leamington Spa to Birmingham Snow Hill

Geographic Maps



Route specification description

SRS M.01, M.26 and M.12 form the Chiltern Main Line, and connects London Marylebone station, Birmingham Moor Street and Birmingham Snow Hill. It is predominantly a two-track railway, non-electrified route.

The mains stations on the Chiltern Main Line are London Marylebone, Birmingham Moor Street and Birmingham Snow Hill.

London Marylebone serves over 14 million passengers annually; the station provides a key interchange facility with the London Underground system.

Birmingham Moor Street currently serves over 6 million passengers annually and is adjacent to the proposed Birmingham HS2 station at Curzon Street.

Birmingham Snow Hill station serves over 4 million passengers annually and is an important interchange for the Midland Metro. An extension to the Metro has taken the line through the centre of Birmingham, to Birmingham New Street station.

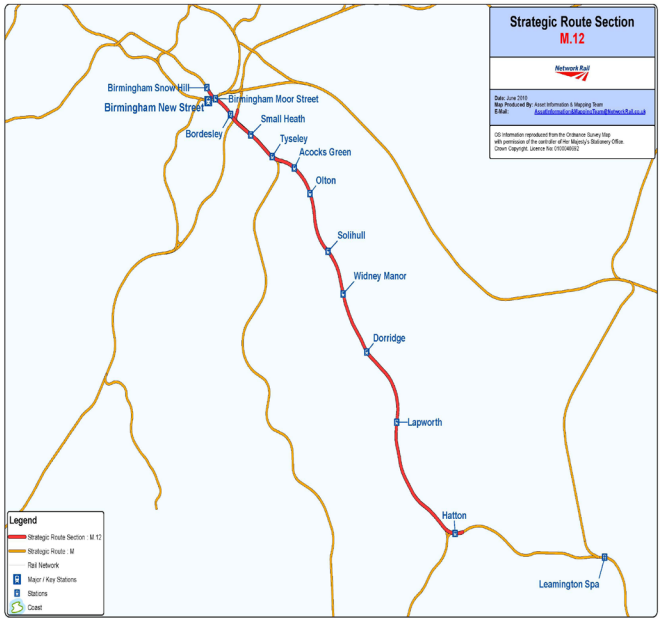
High Wycombe is also a key station along the route, serving over 2.5 million passengers annually.

Recent new stations along the route include Oxford Parkway and Bicester Village, which was previously known as Bicester Town.

The Chiltern Main Line supports three different types of markets: long-distance between London Marylebone and Birmingham; London and South East; and regional urban commuting into key regional centres. The Oxford to London Marylebone market is relatively new but proving popular with passengers.

Freight traffic between Aynho Junction and Leamington is part of a key strategic flow from Southampton to the Midlands and the West Coast Main Line.

There is a Train Maintenance Depot at Tyseley which is used for servicing, maintenance and repair of diesel trains. It is also the location of Tyseley Locomotive Works which is both a museum and steam train depot.



SRS M.01 London Marylebone to Aynho Junction
SRS M.26 Wolvercot Junction (Oxford) to Bicester Chord
SRS M.12 Leamington Spa to Birmingham Snow Hill

Route capability overview

Table 1.0

Information	Current	2043	Notes
Line of route description	London Marylebone to Aynho Junction (see also M.11) Heyford to Bordesley Junction (part), Small Heath South Junction to Birmingham Snow Hill (Stourbridge North Junction) Oxford, North, Junction (Excl.) to Denbigh Hall South Junction (in part)		
Section start	London Marylebone station Oxford North Junction		
Section end	Birmingham Snow Hill station Bicester Eastern Perimeter Road level crossing		
Route availability†	London Marylebone to Aynho Junction RA8, RA7 Aynho Junction to Stourbridge North Junction RA8 Oxford North Junction to Bicester Chord RA8		
Gauge†	London Marylebone to Aynho Junction W6, W7 Aynho Junction to Small Heath Junction W10 Small Heath Junction to Birmingham Snow Hill W6 Oxford North Junction to Bicester Chord W12	There are aspirations in the medium to longer term to gauge clear the route from Neasden to Aynho Junction via High Wycombe, to allow W9 and possibly W10 traffic. Any new structures should be built to W10 / W12 and Electrification clearance.	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	London Marylebone to Birmingham 100 mph Oxford North Junction to Bicester Chord 60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations	
Level Crossings†	8	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

SRS M.01 London Marylebone to Aynho Junction
SRS M.26 Wolvercot Junction (Oxford) to Bicester Chord
SRS M.12 Leamington Spa to Birmingham Snow Hill

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	London Marylebone to Birmingham Snow Hill 92 to 100 minutes London Marylebone to Oxford 64 minutes Leamington Spa to Birmingham Snow Hill 35 to 40 minutes London Marylebone to Banbury 50 to 60 minutes Stratford-upon-Avon/Dorridge to Birmingham Snow Hill 49 minutes (S-u-A) and 23 minutes (Dorridge)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	London Marylebone to Birmingham Snow Hill up to 2 tph (some terminate at Birmingham Moor Street) London Marylebone to Oxford 2 tph Leamington Spa to Birmingham Snow Hill up to 2 tph (some terminate at Birmingham Moor Street) London Marylebone to Banbury up to 3 tph Stratford-upon-Avon/Dorridge to Birmingham Snow Hill 3 tph	Possible changes to service frequency in line with industry aspirations and market requirements. East West Rail is anticipated to increase frequency between Oxford and Bletchley to 6 tph.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS M.01 London Marylebone to Aynho Junction
SRS M.26 Wolvercot Junction (Oxford) to Bicester Chord
SRS M.12 Leamington Spa to Birmingham Snow Hill

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

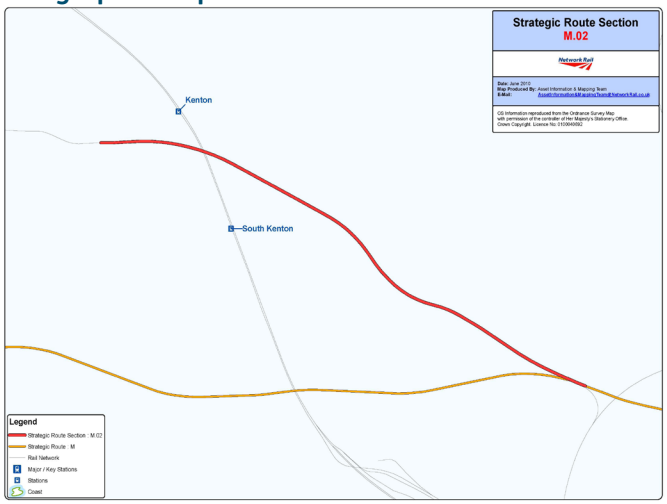
Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
East West Rail link phase 2	Reopening of the Oxford/Aylesbury to Bedford railway between Claydon and Bletchley to create a new route and enable new services and extra capacity	Various	See Enhancements Delivery Plan	Potential new passenger and freight service opportunities	Various funders	In delivery
Strategic Freight Network	Improvements to freight loops at Fenny Compton	DCL	See Enhancements Delivery Plan	Increased performance and operational flexibility	DfT CP5 SFN	In development
Chiltern train lengthening	Platform extensions to standardise at 6 and 9 car train lengths	NAJ2	2024	Increased capacity and operational efficiency		In development
Midlands Rail Hub - central Birmingham enhancements	Bordesley Chords, new platforms at Moor Street and Snow Hill, wider approach to Moor Street	Various	CP7	Up to 10 additional passenger paths into and through central Birmingham	DfT	In development
Solihull Corridor capacity enhancement	Provision of some 4-track infrastructure between Tyseley and Dorridge	DCL	2030	Connectivity and capacity - 4 tph local service to Dorridge		
Birmingham Moor Street main gateline	Reconfiguration of the main gateline and platform 1	Various	2023	Improved pedestrian capacity and flow through the station	DfT SOEF	

SRS M.02 Neasden South Junction to Harrow-on-the-Hill

SRS M.03 Amersham to Aylesbury Vale Parkway

SRS M.04 Princes Risborough to Aylesbury

Geographic Maps



Route specification description

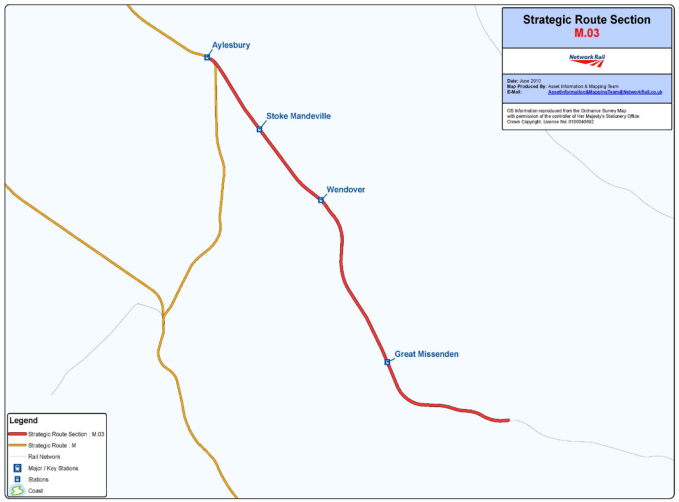
SRS M.02, M.03 and M.04 form part of the southern section of the Chiltern lines. These SRS serve the London and South East commuter market, and support local services from Aylesbury and Aylesbury Vale Parkway to London Marylebone (part of which is known as the Metropolitan Line) and on the single line between Princes Risborough and Aylesbury.

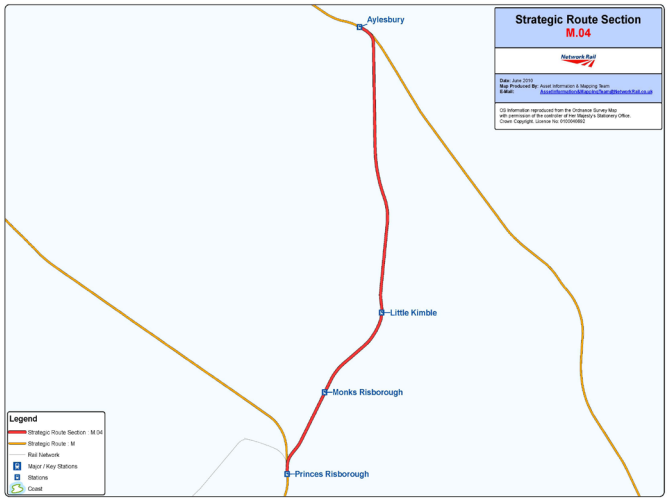
Passenger services operate regularly from London Marylebone to Aylesbury Vale Parkway via Amersham, over infrastructure between Amersham and Harrow-on-the Hill which is owned by London Underground Limited (the Metropolitan Line). The route on either side of the London Underground Limited infrastructure is part of the national rail network and is not electrified.

A passenger service operates in most hours between Aylesbury and Princes Risborough.

Freight services are operated on the freight-only single lines between Bicester Town and Claydon LNE Junction and between Aylesbury and Claydon L&NE Junction.

Harrow-on-the-Hill is a key interchange station with the Metropolitan Line.





SRS M.02 Neasden South Junction to Harrow-on-the-Hill
SRS M.03 Amersham to Aylesbury Vale Parkway
SRS M.04 Princes Risborough to Aylesbury

Route capability overview

Table 1.0

Information	Current	2043	Notes
Line of route description	Neasden South Junction to Harrow-on-the-Hill Amersham to Aylesbury Vale Princes Risborough to Aylesbury Aylesbury to Claydon L&NE Junction		
Section start	Neasden South Junction Princes Risborough		
Section end	North of Aylesbury Vale Parkway station at Claydon L&NE Junction		
Route availability†	RA8		
Gauge†	W6 other than Princes Risborough to Aylesbury W7	W10 / W12 / Electrification clearance.	
Signals†	Track Circuit Block Electric Token Block between Aylesbury and Claydon L&NE Junction	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Neasden South Junction to Harrow-on-the-Hill 50/60 mph for sprinter vehicles Amersham to Aylesbury 75 mph Princes Risborough to Aylesbury 40 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Non-electrified with the exception of the LUL infrastructure between Amersham and Harrow-on-the-Hill which is electrified by fourth rail.	25kV OHL dependent on industry aspirations.	
Level Crossings†	5	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

SRS M.02 Neasden South Junction to Harrow-on-the-Hill
SRS M.03 Amersham to Aylesbury Vale Parkway
SRS M.04 Princes Risborough to Aylesbury

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	London Marylebone to Aylesbury 1 hour London Marylebone to Aylesbury Vale Parkway 1 hour Aylesbury to Princes Risborough 18 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	London Marylebone to Aylesbury 1 tph London Marylebone to Aylesbury Vale Parkway 1 tph Aylesbury to Princes Risborough 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	A review of service mix on the LUL line will help to determine how to deliver the capacity required on the route from Aylesbury into London Marylebone.
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

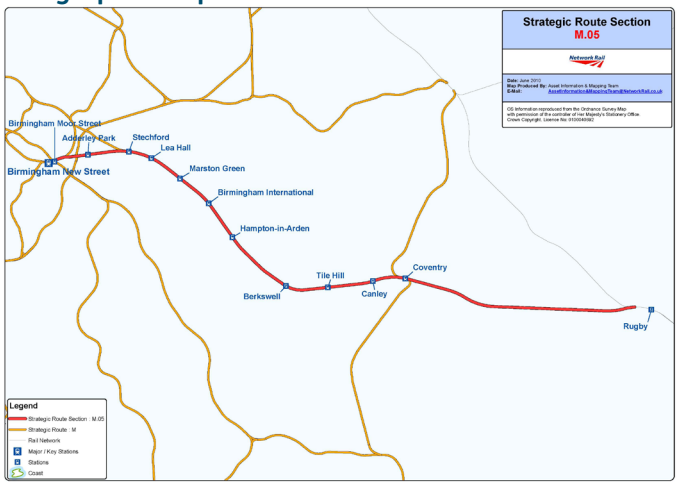
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Metropolitan line resignalling	Introduction of modern signalling technology between Amersham and Harrow-on-the-Hill (part of TfL's Four Lines Modernisation Programme (4LM))	LUL infrastructure	2023	Improved capacity, performance and operational flexibility.	TfL	In development

SRS M.05 Rugby to Birmingham New Street

Geographic Map



Route specification description

The Rugby to Birmingham New Street Strategic Route Section is an important route within the West Midlands and is one of the busiest mixed-use sections of the West Coast Main Line.

SRS M.05 serves long-distance, regional urban and freight markets. Long-distance services operate from London Euston to Birmingham New Street; and services operate from Reading and the South Coast to the north. The regional urban services serve the commuter market between Birmingham, Coventry, Northampton, and Rugby. These services also provide access to Birmingham Airport and the National Exhibition Centre via Birmingham International.

There are significant freight flows on the route, key flows operate to and through the West Midlands from the port of Southampton and London areas.

The services on this route call at Birmingham New Street, Birmingham International, and Coventry stations. Birmingham International station serves 4.5 million passengers annually. Coventry station serves 5.5 million passengers annually

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Rugby (to Penkridge) via Birmingham (in part)		
Section start	Rugby Trent Valley Junction		
Section end	Birmingham New Street station		
Route availability†	RA8		
Gauge†	Rugby Trent Valley Junction to Stechford Junction W10 Stechford Junction to Birmingham New Street station W8	W10 / W12	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	EPS of 125 mph (100 mph PS) from Rugby to Coventry, with EPS dropping to 110 mph to Birmingham International and then predominantly 100 mph through to Birmingham New Street	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham New Street to Coventry 20 to 27 minutes Birmingham New Street to Rugby 32 to 38 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Coventry 7 tph Birmingham New Street to Rugby 4 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	Longer term plan: preferred industry strategy is HS2 which will release future capacity on this corridor.
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

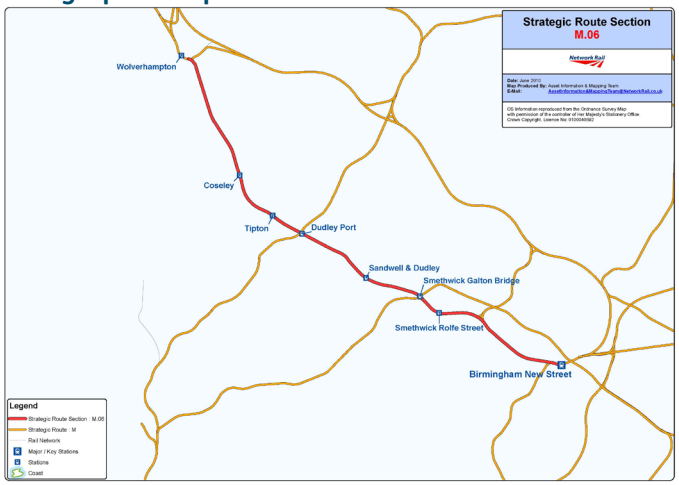
Table 3.0

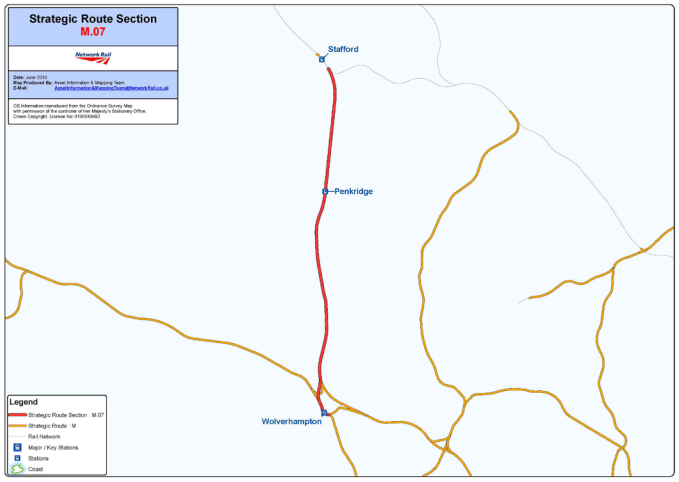
Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Birmingham New Street resignalling	Renewal of life expired signalling equipment in the Birmingham New Street Power Signal Box control area.	Various	2021	Improved capacity, performance and operational flexibility	NR renewals	In delivery
Coventry Station improvements	Provision of second access to the station, improved facilities and interchange.	RBS1	CP6	Improved station facilities and interchange	Local Enterprise Partnership	In delivery
NUCKLE Phase 1 - package 2	Provision of bay platform at Coventry station, loop at Three Spires to enable enhanced frequency between Coventry and Nuneaton.	CNN	CP5/6	Increased capacity	DfT, Local Enterprise Partnership	In development
Birmingham New Street wayfinding	Replacement of all wayfinding signage	Various	2022	Enhanced passenger experience, giving station staff versatility in signage	DfT SOEF	

SRS M.06 Birmingham New Street to Wolverhampton

SRS M.07 Wolverhampton to Stafford

Geographic Maps





Route specification description

SRS M.06 and M.07 connect Birmingham New Street station with Wolverhampton and Stafford. These Strategic Route Sections are predominantly two track electrified railway. This route serves long-distance business and leisure services to London, the North West, and Scotland. The regional urban market supports commuters and leisure travellers to Stafford, Wolverhampton and Birmingham city centres.

Wolverhampton station is at the centre of the route and links the two Strategic Route Sections. It serves as an interchange station for passengers travelling on both local and intercity services, and offers an alternative interchange location to Birmingham New Street. Local commuter, suburban and intercity services all operate to Wolverhampton, making it a very busy station serving over 4 million passengers per annum.

Smethwick Galton Bridge station is an interchange offering services to Kidderminster, Stourbridge, Solihull, Leamington and the Stratford-upon-Avon lines.

A Network Rail maintenance depot is located at Sandwell and Dudley. Wolverhampton Steel Terminal is located on the approach to Wolverhampton station at Monmore Green. The terminal handles steel, typically arriving from the North East of England.

Phase 2 of the West Midlands Metro expansion will see Dudley Port become an interchange between light and heavy rail.

SRS M.06 Birmingham New Street to Wolverhampton
SRS M.07 Wolverhampton to Stafford

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Rugby to Penkridge via Birmingham (in part) Penkridge station to Trent Valley Junction No 1 (Stafford)		
Section start	Birmingham New Street station		
Section end	Trent Valley Junction No 1		
Route availability†	RA8		
Gauge†	Birmingham New Street to Wolverhampton W8 Wolverhampton to Stafford W10		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Birmingham New Street to Wolverhampton varying linespeed of 40 mph, 60/65 mph, 75 mph Wolverhampton to Stafford linespeed is 90 mph with an EPS of 125 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham New Street to Wolverhampton 17 to 25 minutes Birmingham New Street to Stafford 29 to 33 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Wolverhampton 11 tph Birmingham New Street to Stafford 3 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Birmingham New Street resignalling	Renewal of life expired equipment in Birmingham New Street Power Signal Box control area and transfer of control to the West Midlands Signalling Centre..	RBS2	2021	Improved capacity, performance and operational flexibility	NR CP6 Renewals	In delivery
Wolverhampton station upgrade	Improved concourse facility and integration with Metro tram system.	RBS2, RBS3	2021	Improved station facilities and interchanges	Local Enterprise Partnership, DfT	In delivery
West Midlands Interchange (freight terminal)	Third party scheme to establish a new freight terminal at Four Ashes, between Wolverhampton and Penkridge.	RBS3	Medium term	Increased freight terminal capacity	Third Party	In development

SRS M.08 Birmingham New Street to Barnt Green

SRS M.09 Barnt Green to Stoke Works Junction

SRS M.19 Redditch to Barnt Green

SRS M.21 Camp Hill line

Route specification description

The route between Birmingham New Street and Stoke Works Junction is a highly used route, known as the cross city south. It is predominantly a two track railway with partial electrification; electrification covers the line to Bromsgrove and Redditch but does not include the Camp Hill lines. Between Kings Norton and Longbridge the route is four-track.

The route supports high frequency cross-city commuter services, regional urban services to Worcester and Hereford, long distance cross country services and a number of significant freight flows. Cross city services operate to all stations between Birmingham New Street and Barnt Green, usually on a 10-minute frequency on weekdays alternating to Redditch and Bromsgrove; and, combined with the cross-city north, form the busiest local rail corridor within the West Midlands.

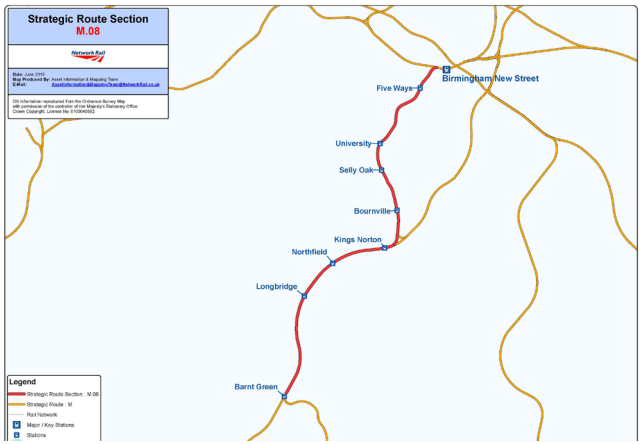
The key stations along this route are Selly Oak, Bromsgrove, Redditch and University. University serves over 2.3 million passengers each year, attracted by the Birmingham university campus and nearby Queen Elizabeth hospital.

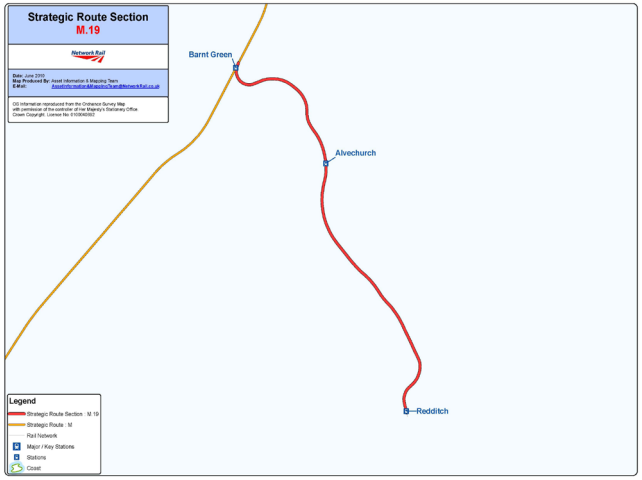
The main route from Barnt Green Junction is two track. It continues down the Lickey Incline towards Bromsgrove station where electrification ends. The Lickey Incline is one of the steepest sections of main line railway in the United Kingdom, and has a 1 in 37.7 gradient for a distance of two miles. Some freight trains require the assistance of a banking locomotive to reach the top.

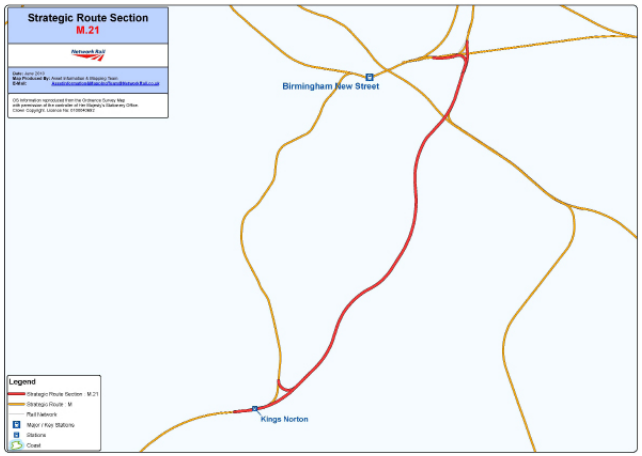
Moseley Tunnel is a gauge constraint on the Camp Hill route.

SRS M.21 is the Camp Hill line which runs from Kings Norton Station and Lifford Junctions to St Andrews and Grand Junctions. The line is used by freight services and by long distance services, and as a diversionary route when the line from Kings Norton to Birmingham New Street via University is blocked. It is a two track line and is not electrified.

Geographic Maps







SRS M.08 Birmingham New Street to Barnt Green
SRS M.09 Barnt Green to Stoke Works Junction
SRS M.19 Redditch to Barnt Green
SRS M.21 Camp Hill line

Route capability overview

Table 1.0

Information	Current	2043	Notes
Line of route description	Birmingham New Street to Ashchurch via Dunhampstead (in part) Barnt Green Junction to Redditch Saltley (Landor Street Junction) to Kings Norton (Camp Hill lines)		
Section start	Birmingham New Street Landor St Junction / Grand Junction		
Section end	Stoke Works Junction Redditch station		
Route availability†	RA8		
Gauge†	W8 except for Kings Norton/Lifford Junctions to Bordesley Junction (W7) and Bordesley Junction to St Andrews Junction (W10) Barnt Green to Redditch W6a		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Varying speeds, predominantly 60 mph to Kings Norton, 90 mph to Bromsgrove, 60 mph on the Camp Hill lines.	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Partially 25kV OHL, remainder not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		

†See Sectional Appendix for further details.

SRS M.08 Birmingham New Street to Barnt Green
SRS M.09 Barnt Green to Stoke Works Junction
SRS M.19 Redditch to Barnt Green
SRS M.21 Camp Hill line

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Birmingham New Street to Redditch 39 minutes Birmingham New Street to Bromsgrove 20 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Redditch 3 tph Birmingham New Street to Bromsgrove 4 tph Cross-Country services pass through non-stop on this corridor.	Possible changes to service frequency in line with industry aspirations and market requirements. Service levels will increase in line with the outputs of the Midland Rail Hub project.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

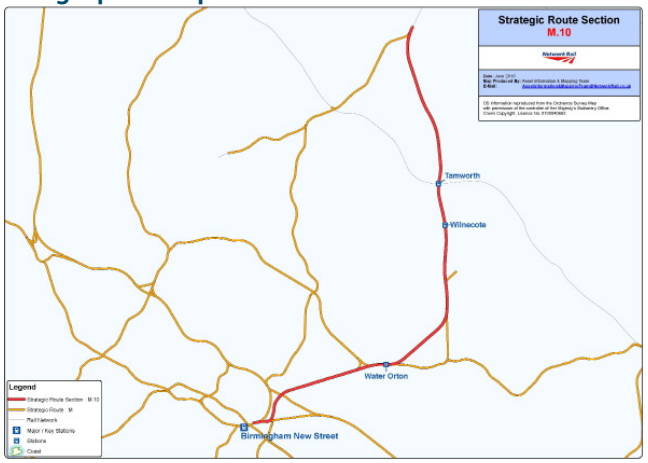
Table 3.0

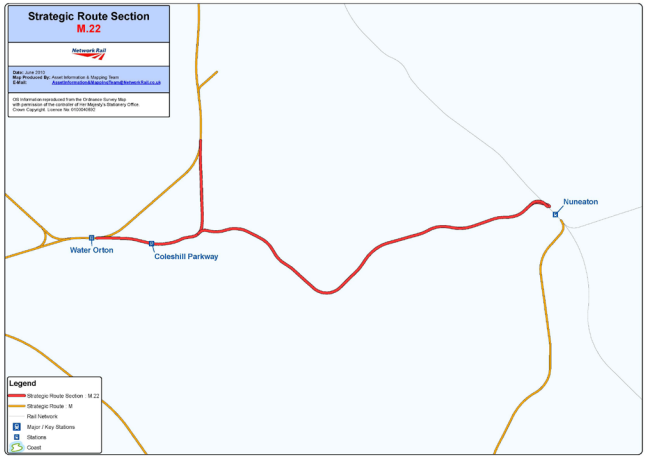
Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
University station	Refurbishment	BAG1	CP6	New station building	WMRE/DfT	In design
Camp Hill line	New stations at Moseley, Kings Heath and Hazelwell	SKN	2024	Half-hourly new service from Birmingham New Street to Kings Norton via new stations	WMRE	In development
Midlands Rail Hub - central Birmingham enhancements	Bordesley Chords, new platforms at Moor Street and Snow Hill, wider approach to Moor Street	Various	CP7	Up to 10 additional passenger paths into and through central Birmingham	DfT	In development
Midlands Rail Hub - Kings Norton enhancements	Reinstatement of central island platforms, improved station facilities, and remodelled junction layout. Potential for provision of turnback facility.	BAG1	CP7	Improved interchange opportunities at Kings Norton	DfT	In development

SRS M.10 Birmingham New Street to Wichnor Junction

SRS M.22 Water Orton to Nuneaton

Geographic Maps





Route specification description

The lines between Birmingham New Street and Wichnor Junction and Birmingham New Street and Nuneaton, which form Strategic Route Sections M.10 and M.22, are key corridors linking the West Midlands to the East Midlands and beyond. The route between Birmingham New Street and Wichnor Junction forms one of the busiest mixed traffic corridors in the West Midlands.

The markets served include the long distance market linking the North East with the Midlands, South West England and South Wales. The regional urban market includes commuters from Tamworth to Birmingham.

There are significant freight flows on the route to and from local terminals and marshalling yards; and a substantial volume of freight traffic also uses the route to and from locations outside of the Midlands.

The key stations on these routes are Coleshill Parkway, and Tamworth. Tamworth station provides an interchange with services on the West Coast Main Line.

Constraints: There is a capacity constraint in the Water Orton area, including the layout of the station area which creates traffic conflicts. The restrictive access arrangements into the oil terminal at Kingsbury is also a capacity constraint.

There are several major freight terminals and sites on Strategic Route Sections M.10 and M.22 including Lawley Street Freightliner terminal, Jaguar at Castle Bromwich, Hams Hall Eurotterminal, Kingsbury freight terminals, and Birch Coppice. Entry into Kingsbury terminal from the north direction is currently restricted leading to slow access in and out of the Kingsbury branch and Birch Coppice.

The line between Water Orton East Junction and Whitacre Junction to Kingsbury Junction (slow lines) is also used as a diversionary route for services if the line between Water Orton East Junction to Kingsbury Junction (fast lines) is blocked.

Impact of HS2 : The HS2 route to Birmingham will run adjacent to the Water Orton corridor, on its new line into Curzon Street station.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Tamworth to Birmingham, Proof House Junction Kingsbury Junction to Whitacre Junction Water Orton East Junction to Nuneaton North Junction		
Section start	Birmingham, Proof House Junction		
Section end	Wichnor Junction Nuneaton North Junction		
Route availability†	RA8		
Gauge†	W8, W10	W10 / W12	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominant linespeed 90/125 mph Birmingham to Wichnor. Whitacre Junction to Kingsbury Junction 45 mph. Water Orton to Nuneaton is predominantly 70 mph.	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham New Street to Tamworth 16 to 19 minutes Birmingham New Street to Nuneaton 28 to 30 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	A certain number of long distance services serve Tamworth and Nuneaton. All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Tamworth 2 tph Birmingham New Street to Nuneaton 2 tph Cross-Country services pass through non-stop on this corridor.	Possible changes to service frequency in line with industry aspirations and market requirements. Service levels will increase in line with the outputs of the Midland Rail Hub project.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

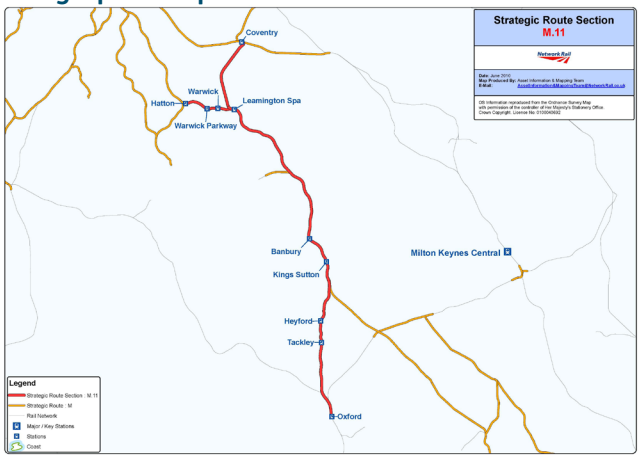
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

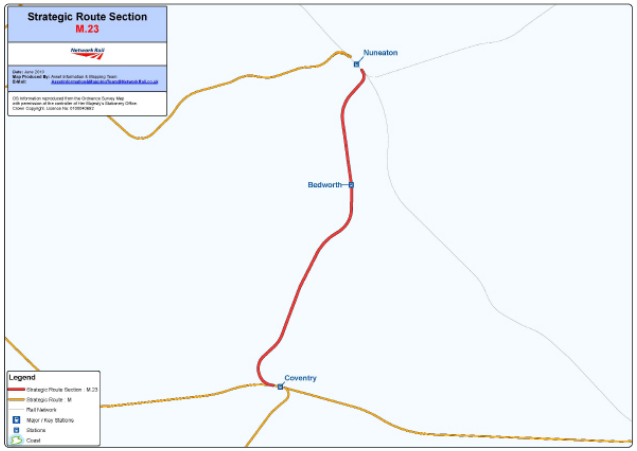
Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Water Orton Corridor - HS2 enabling works	Works to facilitate the construction of the HS2 route	DBP1 DBP2	CP6-7	Building of HS2 adjacent to the existing rail network	HS2	In development
Midlands Rail Hub - central Birmingham enhancements	Bordesley Chords, new platforms at Moor Street and Snow Hill, four track approach to Moor Street	Various	CP7	Up to 10 additional passenger paths into and through central Birmingham	DfT	In development
Midlands Rail Hub - Water Orton capacity enhancements	Four tracking and improved segregation of passenger and freight flows. Improve signalling headway, improve access from the north to Kingsbury terminal	DBP1 DBP2	CP7	Increased capacity, improved performance and support additional passenger and freight services	DfT	In development
Birmingham to Nuneaton and then Wigston electrification	Electrification of the route between Grand Junction and Nuneaton via Coleshill	DBP3 NWO	Medium term			Decision to Initiate

SRS M.11 Oxford to Coventry
SRS M.23 Nuneaton to Coventry

Geographic Maps





Route specification description

The route between Oxford and Coventry (SRS M.11) is a connecting corridor, which forms part of longer distance cross country routes between the North and the South.

SRS M.11 supports long distance market flows between the South, and Manchester and the North East. It also forms a key component of the London Marylebone to West Midlands services. Services from Banbury to London Marylebone support the London and South East market. Regional urban flows serve the key towns and cities on the route, supporting commuting and leisure. The route also supports the freight market, including flows between Southampton and the West Coast Main Line.

SRS M.23 links Nuneaton and Coventry, supporting a local passenger service and through freight flows connecting to the West Coast Main Line.

Part of the route between Coventry and Leamington Spa is single track, which constrains capacity over the route. Consideration is being given to double tracking the route in order to meet future capacity requirements. Other constraints include Leamington station and the low line speeds on the Coventry to Nuneaton line.

The key stations on these SRS are Leamington Spa, Coventry and Oxford.

Many freight services are routed via Leamington Spa and Coventry to reach freight terminals in the surrounding area and also to travel to key locations beyond the West Midlands.

Freight services operate to the Murco Petroleum and Prologis Park terminals and also use the line to connect from Leamington Spa to the West Coast Main Line via Nuneaton. Lafarge Aggregates have a terminal at Banbury Reservoir Sidings.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Coventry North Junction to Nuneaton South Junction Leamington Spa Junction to Coventry South Junction Heyford to Bordesley Junction (in part) Didcot to Heyford (in part)		
Section start	Heyford Nuneaton South Junction		
Section end	Coventry		
Route availability†	RA8		
Gauge†	W10	W12	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Coventry North Junction to Nuneaton South Junction 45 mph Leamington Spa Junction to Coventry South Jn 60/80 mph Heyford to Bordesley Junction (in part) 70/ 90/95 mph Didcot to Heyford (in part) 90/ 95 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	14	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Coventry to Leamington Spa 11 minutes Coventry to Nuneaton 18 minutes Coventry to Banbury 29 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Coventry to Leamington Spa 1 tph Coventry to Nuneaton 1 tph Coventry to Banbury 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Nuneaton to Coventry service enhancements (NUCKLE) phase 1 b	Provision of a bay platform at Coventry station, and signalling improvements facilitates half hourly passenger train service frequency	CNN	CP6	Increased capacity and new service opportunities	Third Party	In development
Leamington to Coventry capacity enhancements	Doubling of single line section between Milverton Junction and Kenilworth to increase capacity on the line.	LSC2	CP7	Increased capacity	TBC	In development
Banbury depot	Extension of the existing automatic depot control system	DCL	2022	Capacity for new HS2 funded roads	DfT SOEF	

SRS M.13 Stechford to Wolverhampton via Aston

SRS M.18 Rugeley to Bescot

SRS M.24 Soho Junctions to Perry Barr Junctions

Route specification description

Strategic Route Sections M.13, M.18 and M.24 make up the Rugeley, Wolverhampton and Birmingham New Street route, including the section between Aston to Stechford which connects two corridors (Cross City and West Coast Main Line). These route sections form important diversionary routes for both passenger and freight traffic.

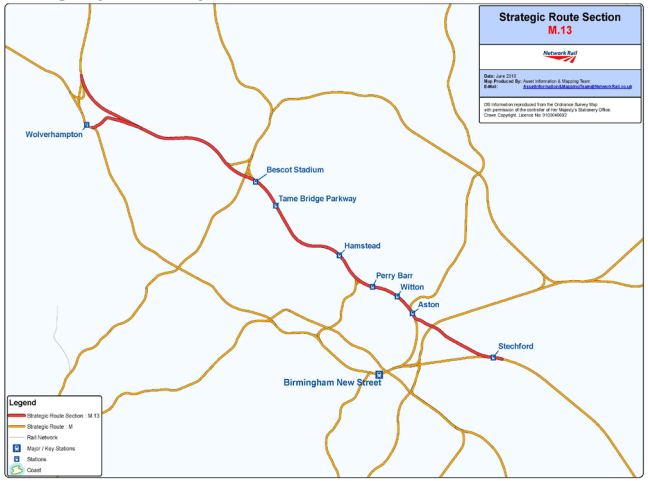
The Rugeley and Walsall corridor serves a busy commuter market into Birmingham New Street from Rugeley Trent Valley, Cannock and Walsall.

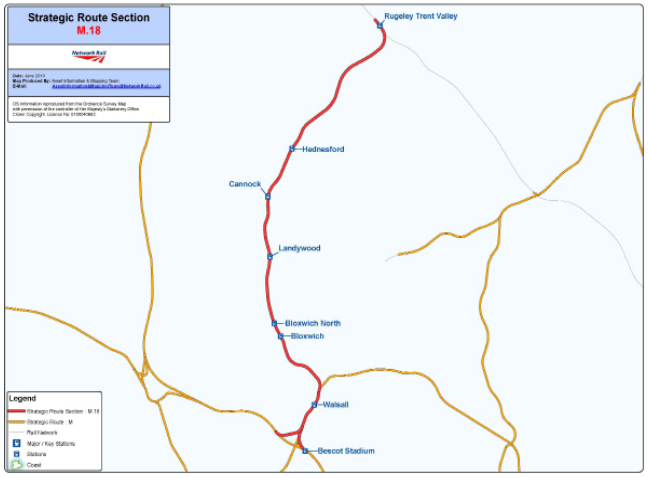
The key stations on these SRS are Walsall and Rugeley Trent Valley, where passengers can interchange with local and WCML services. No regular passenger services operate between Stechford and Aston.

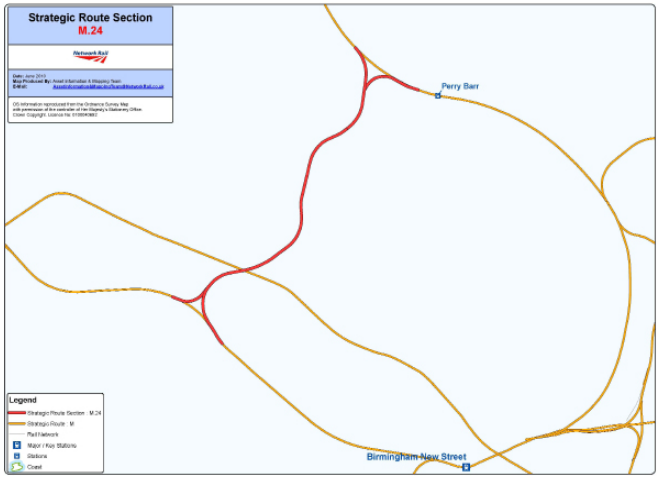
It is recognised that this is a busy corridor for freight traffic, serving a number of freight yards including Bescot Yards and Mid-Cannock for the transportation of intermodal containers. West Midlands Trains have a proposal for an electric train depot at Bescot.

If the route section between Pleck Junction and Rugeley Trent Valley is closed, there are no alternative options for local passenger services. However, freight services heading north would generally divert via Bushbury Junction and south bound traffic via Aston Junctions or Birmingham New Street for W8 traffic.

Geographic Maps







SRS M.13 Stechford to Wolverhampton via Aston
SRS M.18 Rugeley to Bescot
SRS M.24 Soho Junctions to Perry Barr Junctions

Route capability overview

Table 1.0

Information	Current	2043	Notes
Line of route description	Stechford South Junction to Aston South Junction Proof House Junction to Bushbury Junction (via Bescot) (in part) Bescot Junction to Rugeley North Junction (Excl) Rugeley Town (Excl.) to Rugeley North Junction Portobello Junction to Wolverhampton Crane Street Junction Soho South Junction to Perry Barr North Junction		
Section start	Stechford Rugeley Soho South Junction		
Section end	Wolverhampton Bescot Junction Perry Barr		
Route availability†	RA8		
Gauge†	Stechford to Wolverhampton via Aston W9 / W10 Rugeley to Bescot W10 Soho Junctions to Perry Barr W8	W10	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Stechford to Wolverhampton via Aston 75 mph Rugeley to Bescot 50/60 mph Soho Junctions to Perry Barr 45 mph	M.18: 60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.
Electrification†	25kV OHL		
Level Crossings†	3	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

SRS M.13 Stechford to Wolverhampton via Aston
SRS M.18 Rugeley to Bescot
SRS M.24 Soho Junctions to Perry Barr Junctions

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Walsall to Birmingham New Street 23 to 29 minutes Walsall to Aston 17 minutes Rugeley Trent Valley to Birmingham New Street 50 to 53 mins	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Walsall to Birmingham New Street 4 tph Walsall to Aston 2 tph Rugeley Trent Valley to Birmingham New Street 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

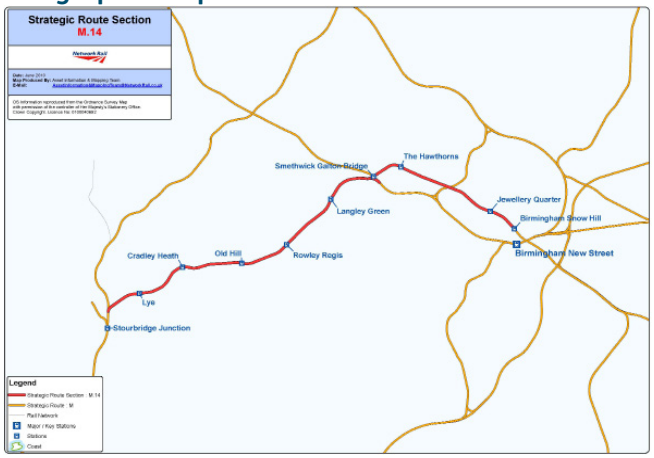
Table 3.0

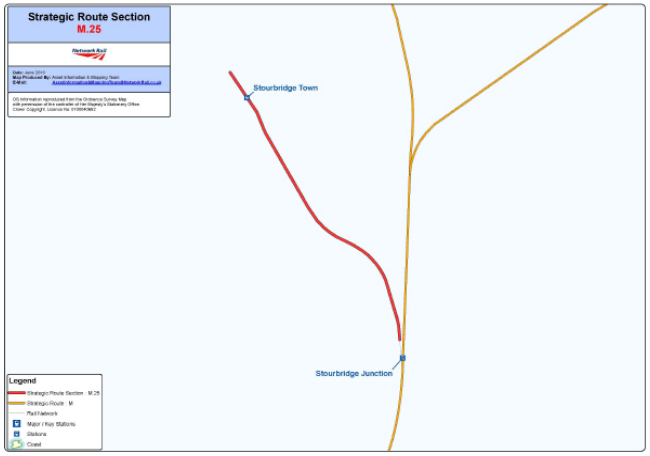
Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
New station at Aldridge. West Midlands and Chilterns Route Study presents the latest business case analysis.	Battery EMU between Rycroft and Aldridge, new turnback platform and associated facilities	CBR2	CP6-7	Improved connectivity	Third Party	Study
New stations at Willenhall and Darlaston			2024	Improved connectivity		In development
Perry Barr station	Refurbishment					

SRS M.14 Birmingham Snow Hill to Stourbridge Junction

SRS M.25 Stourbridge Town branch

Geographic Maps





Route specification description

Strategic Route Section M.14 is a busy commuter corridor within the West Midlands, connecting towns in the Black Country with Birmingham city centre.

This SRS serves the Worcester, Kidderminster and Stourbridge markets, with a long distance service to London Marylebone in the peaks. It also serves the regional urban market from local Black Country stations into Birmingham Snow Hill. The route has significant freight operations, with freight yards located at Handsworth, Round Oak, and Brierley Hill. Key services are metals and metal recycling and vehicle recycling.

Birmingham Snow Hill is a terminus for local commuter services into Birmingham and is also a key destination on the Chiltern Main Line. Stourbridge Junction station is an important station on the route, with six trains an hour calling on route to various locations in the West Midlands and beyond. Stourbridge Town branch line also runs from the station to Stourbridge Town Centre (Strategic Route Section M.25). Services on his single-track branch line are operated by very light rail vehicles.

Old Hill tunnel is an important structure on the route and is located between Old Hill and Rowley Regis stations. This forms a constraint to running higher gauge freight traffic.

The route between Snow Hill and Stourbridge Junction is not electrified.

Chiltern Railways operate a Light Maintenance Depot (LMD) at Stourbridge for stabling and basic service preparation. These are to the north of Stourbridge Junction station, and are used to stable various maintenance vehicles and trains. There are two network sidings in use for stabling at Birmingham Snow Hill which can be accessed from Platform 1.

SRS M.14 Birmingham Snow Hill to Stourbridge Junction
SRS M.25 Stourbridge Town branch

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Small Heath South Junction to Stourbridge North Junction (in part) Droitwich Spa to Stourbridge North Junction (in part) Stourbridge Junction to Stourbridge Town		
Section start	Birmingham Snow Hill station		
Section end	Stourbridge		
Route availability†	RA8		
Gauge†	W8, with the exception of the down line between Rowley Regis and Stourbridge North Junction and Old Hill Tunnel (W7)		
Signals†	Track Circuit Block (TCB) Stourbridge Town branch line: One Train Working	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Birmingham Snow Hill to Stourbridge Junction 60 mph Stourbridge Junction to Stourbridge Town 20 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	2	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham Snow Hill to Stourbridge Junction 26-31 minutes Stourbridge Town to Stourbridge Junction 3 minutes		All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham Snow Hill to Stourbridge Junction 6 tph Stourbridge Town to Stourbridge Junction 6 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

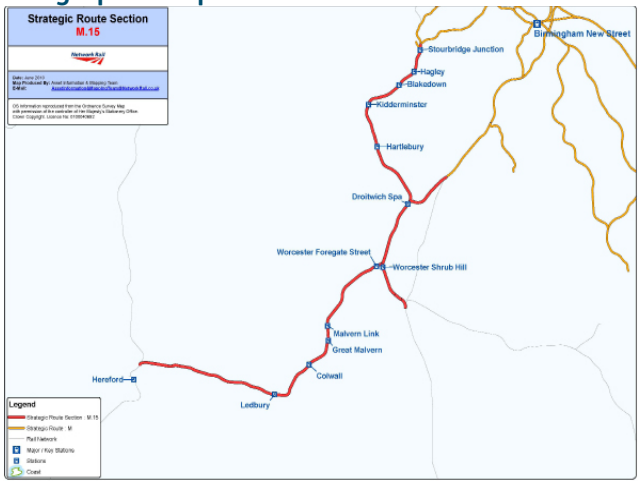
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Midlands Rail Hub - central Birmingham enhancements	Bordesley Chords, new platforms at Moor Street and Snow Hill, four track approach to Moor Street	Various	CP7	Up to 10 additional passenger paths into and through central Birmingham	DfT	In development

SRS M.15 Stourbridge Junction to Worcester and Hereford

Geographic Maps



Route specification description

The route is predominantly a two track, non-electrified railway which supports the commuter market from north Worcestershire and the Black Country into the West Midlands.

The SRS serves large conurbations such as Kidderminster and Stourbridge; and southwards it offers services from Hereford to Birmingham via Bromsgrove and Hereford to London Paddington via Worcester. There are a small number of daily freight services on this SRS, including steel to Round Oak; there is no regular freight west of Worcester.

Key stations on the route include Kidderminster, Worcester Foregate Street, Worcester Shrub Hill, Great Malvern and Hereford. Kidderminster station serves the regional urban commuter market into Stourbridge and Birmingham and southwards to Droitwich Spa and Worcester.

Worcester has two stations, Foregate Street and Shrub Hill. Foregate Street is situated closer to Worcester city centre and serves over two million passengers annually. Both stations serve the regional urban market to Birmingham and Hereford and with long distance services to London Paddington. Worcester Shrub Hill station is situated further away from the city and is the larger of the two stations.

Worcester Shrub Hill has a light maintenance depot which undertakes light maintenance activities and train preparation. There is also a Network Rail maintenance depot at Worcester Shrub Hill supporting track and signalling activities.

Hereford station serves the regional urban market to Birmingham and has long distance services to London Paddington via Worcester. It is an interchange station with the Welsh Marches Line with services between Manchester Piccadilly and Cardiff or Carmarthen.

Two single line sections between Worcester and Hereford, together with the track layout around central Worcester, constrain capacity.

The Severn Valley Railway at Kidderminster is a significant tourist attraction operating steam train services between Kidderminster and Bridgnorth.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Stourbridge Junction to regional boundary (Cutnall Green) Cutnall Green to Droitwich Spa Junction Abbotswood Junction to Stoke Works Junction via Worcester Shrub Hill (in part) Worcester Shrub Hill to Shelwick Junction Severn Bridge Junction to Newport, Maindee West Junction (in part)		
Section start	Stourbridge Junction station		
Section end	Hereford station		
Route availability†	Stourbridge Junction to Worcester Shrub Hill RA8 Worcester Triangle to Shelwick Junction RA7 Shelwick Junction to Hereford RA8		
Gauge†	Stourbridge Junction to Worcester Shrub Hill W8 Worcester to Hereford W6	W10	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Stourbridge Junction to Worcester Tunnel Junction 65-75 mph Worcester Triangle 35 mph Worcester Foregate Street to Hereford 65-75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	6	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Birmingham Snow Hill to Kidderminster 45 minutes Birmingham Snow Hill to Worcester Foregate Street/Worcester Shrub Hill 53 minutes Birmingham New Street to Hereford 85 minutes Worcester Shrub Hill to Malvern – from Bristol via Gloucester 16 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham Snow Hill to Kidderminster 4 tph, of which 2 tph continue to Worcester Birmingham New Street to Hereford 1 tph Worcester Shrub Hill to Malvern – from Bristol via Gloucester 1 train every 2 hours	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

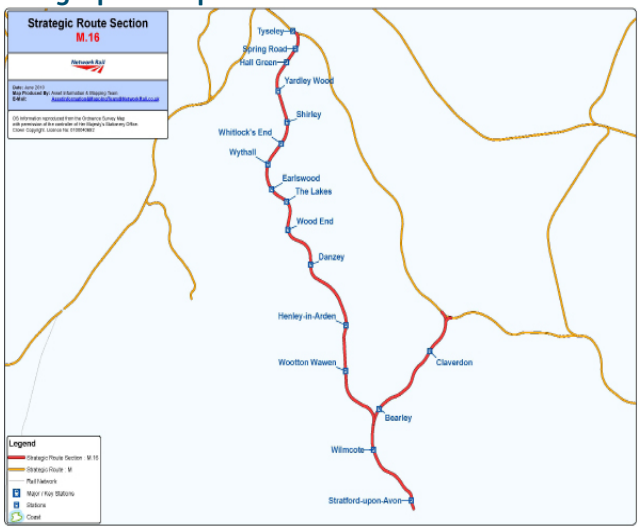
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Worcester area resignalling	Replacement of signalling in the Worcester area, with opportunities for improved track layouts. Signalling control to be moved to the West Midlands Signalling Centre	Various	Medium term	Improved operational flexibility, improved layout in the Worcester area	Network Rail renewals	In development
Worcester area enhancements	Aligned with the future resignalling there is an opportunity to undertake targeted enhancements in the Worcester area	Various	Medium term	Improved operational flexibility and performance		In development
Midlands Rail Hub	Capacity improvements Worcester - Hereford		CP7	To enable 2 tph to Hereford	DfT	In development

SRS M.16 Stratford-upon-Avon lines

Geographic Maps



Route specification description

The Stratford-upon-Avon lines link the city of Birmingham with Stratford-upon-Avon, and also include the single branch line between Hatton Junction and Bearley Junction.

The line serves a regional urban market supporting access to jobs and leisure. Stratford-upon-Avon is a nationally important tourism centre. Services operate frequently between Birmingham, Whitlocks End and Stratford-upon-Avon but infrequently between Stratford-upon-Avon and Hatton. There are a number of long distance services each day from Stratford-upon-Avon to London Marylebone.

There are no freight markets on this SRS.

Key stations are Stratford-upon-Avon, Shirley, and Whitlocks End. Stratford-upon-Avon has just under 1 million passengers annually.

A new station Stratford-upon-Avon Parkway was opened in May 2013, and a Birmingham to Dorridge service extended in December 2013 to form a new Dorridge to Stratford upon Avon service.

This route is non-electrified and has a single line between Hatton and Bearley Junction. The SRS also has a number of request stop only stations.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Hatton station to Stratford-upon-Avon Tyseley South Junction to Bearley Junction		
Section start	Tyseley South Junction / Hatton station		
Section end	Stratford-upon-Avon station		
Route availability†	RA8		
Gauge†	W7		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	9	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Birmingham Snow Hill to Stratford-upon-Avon 55 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham to Whitlocks End 2 tph, of which 1 tph continues to Stratford -upon-Avon Birmingham to Stratford-upon-Avon via Dorridge 1 tph Stratford-upon-Avon to Leamington Spa via Hatton 1 train every 2 hours	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

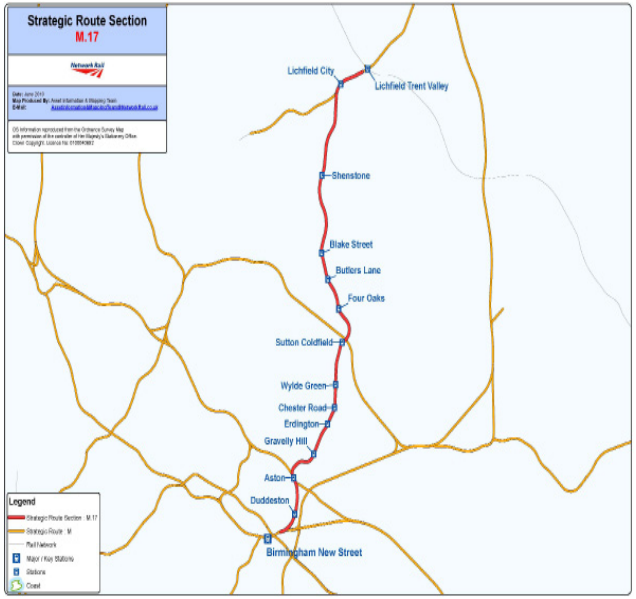
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS M.17 Cross-City North

Geographic Maps



Route specification description

Strategic Route Section M.17 runs between Proof House Junction in Birmingham and Lichfield Trent Valley, and is known as the Cross-City North line. The route goes north from Aston Junctions, where the line between Wolverhampton and Stechford North Junction crosses. The route is electrified.

This SRS serves the regional urban market to the north of Birmingham. Combined with the Cross-City South line, it is the busiest local rail corridor within the West Midlands, with a ten minute weekday service from the majority of stations.

Key stations on this route include Lichfield City and Sutton Coldfield. Lichfield City has 650,000 passengers annually. Aston station is an interchange serving both the Cross-City line and the Walsall Line (from Wolverhampton to Walsall via Birmingham New Street). Lichfield Trent Valley provides an interchange with the West Coast Main Line.

The junctions at Aston are a constraint on capacity on the route.

On the line between Proof House and Aston Junctions, there is a former wagon workshop and stabling yard situated at Duddeston. This location is being considered as a potential site for new stabling facilities in the West Midlands.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Proof House Junction to Bushbury Junction (via Bescot) (in part) Aston North Junction to Alrewas (in part)		
Section start	Proof House Junction, Birmingham		
Section end	Lichfield Trent Valley Junction		
Route availability†	RA8		
Gauge†	W8	W10 / W12	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL Lichfield Trent Valley Junction is the limit of electrification.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham New Street to Four Oaks 26 minutes Birmingham New Street to Lichfield Trent Valley 40 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Four Oaks 6 tph Birmingham New Street to Lichfield City 4 tph Birmingham New Street to Lichfield Trent Valley 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

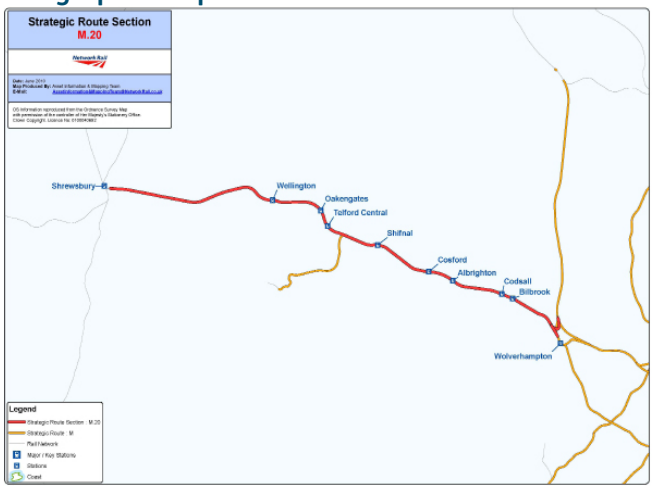
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Birmingham New Street resignalling	Renew all life expired signalling equipment in the Birmingham New Street Power Signal Box (PSB) control area and transfer control to West Midlands Signalling control centre. The boundaries of the project includes Aston.	PBJ	CP6	Improved performance and operational flexibility	Network Rail Renewals	In development
Aston re-control	Cross City North re-control (Aston to Lichfield Trent Valley station) re-control signalling area to West Midlands Signalling control centre	ALC1 ALC2 BJW3	CP6	Improved performance and operational flexibility	Network Rail Renewals	In development

SRS M.20 Wolverhampton to Shrewsbury

Geographic Maps



Route specification description

The line between Wolverhampton and Shrewsbury is a two track railway which provides a vital rail link from mid-Wales and Shropshire to the West Midlands. The SRS serves a mix of traffic, rolling stock types and is not electrified.

Markets served include the regional urban market from Shropshire towns to and from Wolverhampton and Birmingham. The route also forms a key corridor for the long distance market from north and mid- Wales, to Birmingham and Birmingham Airport.

Ironbridge at the southerly edge of Telford is a major tourist attraction and there is a significant tourism market at Shrewsbury. Passenger train services on this route have been growing at more than 5% per annum.

This SRS forms a key freight diversionary route. Telford International Railfreight Park (TIRP) is located at Donnington.

Key stations along the route include Wolverhampton (an interchange station), Wellington, Telford and Shrewsbury.

The line is not electrified other than the extent from Wolverhampton North Junction into Oxley Depot.

Oxley Chord is a non-electrified chord line which runs between Oxley (Stafford Road Junction) and Bushbury Junction, providing a direct route from Shrewsbury to Stafford.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Oxley Stafford Road Junction to Bushbury Junction (Oxley Chord Lines) Wolverhampton North Junction to Abbey Foregate Abbey Foregate to Ruabon (in part)		
Section start	Bushbury Junction / Wolverhampton North Junction		
Section end	Shrewsbury station		
Route availability†	RA8		
Gauge†	Wolverhampton North Junction to Donnington Junction W6a Donnington Junction to Abbey Foregate W7		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	50-70 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
Typical passenger train journey time	Birmingham New Street to Shrewsbury 55-70 minutes Wolverhampton to Shrewsbury 36/50 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham New Street to Shrewsbury 3 tph Wolverhampton to Shrewsbury 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

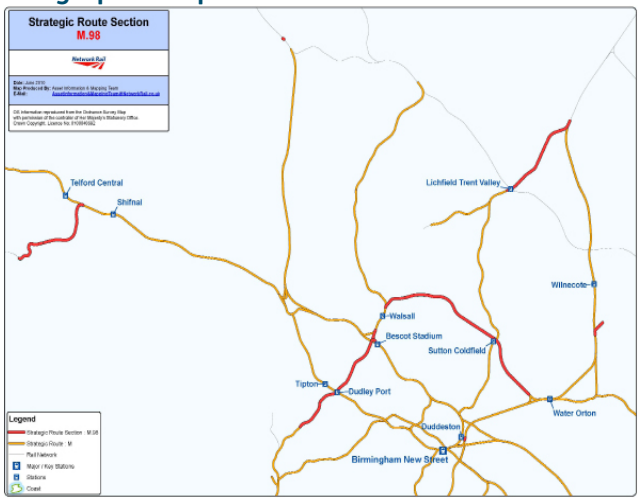
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS M.99 Freight Lines

Geographic Maps



Route specification description

Strategic Route Section M.99 is split into two sections - freight trunk routes and other freight lines. Both include freight branch lines.

Freight trunk routes include the key freight corridors within the West Midlands area which provide dedicated freight paths. These corridors have no stations and enable freight flows to operate without major conflict with passenger services.

The key trunk routes comprise:

Lichfield Trent Valley Junction to Wichnor Junction, including Lichfield Trent Valley curve

The route runs via Alrewas to Wichnor Junction and is not electrified. The route is used as a freight route and also for access to a maintenance depot at Central Rivers. When engineering work takes place between Birmingham New Street and Tamworth, the route can be used for diversionary purposes. Lichfield Trent Valley curve is a single track chord connecting to the West Coast Main Line. The route is not electrified and is primarily a freight route and used for engineering access.

Castle Bromwich Junction to Ryecroft Junction via Sutton Park

This is a freight only route that connects Walsall to Castle Bromwich and Water Orton, and enables most freight trains to avoid congestion through Birmingham New Street station. It runs through Sutton Park at Sutton Coldfield.

St Andrews Junction to Landor Street Junction to Castle Bromwich Junction

The route supports significant volumes of through freight traffic and to local terminals including Lawley Street Freightliner terminal. The route is double track between St Andrews Junction and Landor Street Junction, then becomes four track railway with dedicated goods lines from Landor Street to Castle Bromwich Junction. The Midlands Rail Hub project will introduce regular passenger services to this section.

Kingsbury Junction to Birch Coppice

The route which provides rail access to Kingsbury Oil terminal, European Metal Recycling and Birmingham International Freight Terminal (Freightliner) at Birch Coppice is known as the Kingsbury Branch. The branch is currently only accessible from the south, requiring a 15-18 minutes timetable slot for trains from the north to propel on and off the branch at 5 mph.

SRS M.99 Freight Lines - Trunk Routes Lichfield Trent Valley Junction to Wichnor Junction including Lichfield Trent Valley curve

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Alrewas to Wichnor Junction Aston North Junction to Alrewas (part) Lichfield Trent Valley Junction to Lichfield Trent Valley (chord line)		
Route availability†	RA8		
Gauge†	W12 other than Lichfield Trent Valley curve which is W8		
Signals†	Absolute Block (Lichfield Trent Valley Signal Box) Track Circuit Block (Alrewas Signal Box) Track Circuit Block (Rugby Signal Control Centre)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph (30 mph through Wichnor Junction)	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	8	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS M.99 Freight Lines - Trunk Routes Castle Bromwich Junction to Ryecroft Junction via Sutton Park (including Water Orton West Junction to Park Lane Junction)

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Water Orton West Junction to Park Lane Junction Castle Bromwich Junction to Ryecroft Junction		
Route availability†	RA8		
Gauge†	W10		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Water Orton West Junction to Park Lane Junction 30 mph Castle Bromwich Junction to Ryecroft Junction 45 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS M.99 Freight Lines - Trunk Routes St Andrews Junction to Landor Street Junction to Castle Bromwich Junction

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Saltley (Landor Street Junction) to King's Norton Junction (Camp Hill Lines) (part) Tamworth to Birmingham Proof House Junction (part)		
Route availability†	RA8		
Gauge†	W10		
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Main line 40 mph (slow) / 75 mph (fast) increasing to 75 mph after Washwood Heath West Junction Down Goods line 40 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Route capability overview

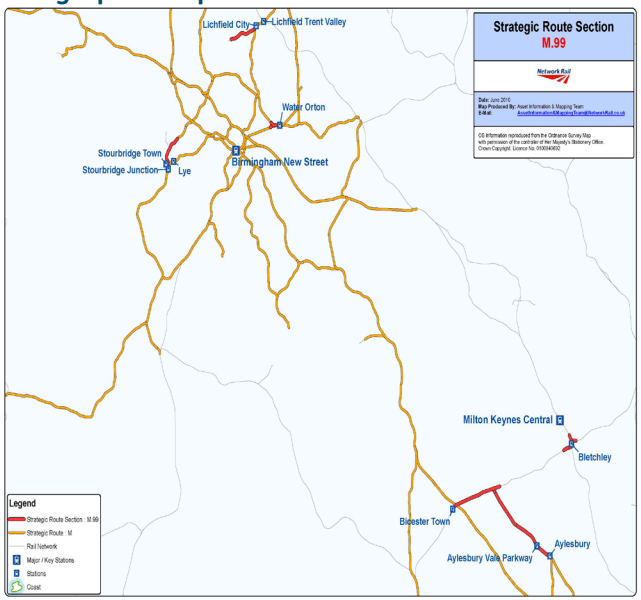
Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Tamworth to Birmingham Proof House Junction (part)		
Route availability†	RA8		
Gauge†	W8	W10	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	5 mph into the branch 15 mph Birch Coppice Exchange sidings	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	*Improve access into the branch from the north so that it removes the need for a time consuming shunt move on the main line*
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS M.99 Other Freight Lines

Geographic Maps



Route specification description

In addition to the freight trunk routes that run within Route M, there are a number of **other freight lines** which support freight traffic flows within the route:

Aylesbury to Claydon LNE Junction

The route is single track with a set of loops into the Waste Recycling Group's Calvert Waste Transfer terminal. The terminal is served by freight trains carrying containerised domestic waste which are transported to the site for landfill. Freight trains run to the terminal from the Aylesbury and Bicester Village directions.

Madeley Junction to Ironbridge

The Madeley branch is accessed from the Wolverhampton to Shrewsbury line at Madeley Junction. Ironbridge Power Station (which was operated by E.ON UK) has recently closed. Currently, the future use of the branch line is under review.

Stourbridge North Junction to Round Oak Steel terminal

The section between Stourbridge and Round Oak is used by freight traffic to access Round Oak steel terminal.

Other lines within the West Midlands and Chilterns Route which are classed as 'other freight routes' include the access routes and sidings for the following freight sites:

- Northolt Waste Transfer Terminal
- Saltley EMR
- Coventry Prologis Park
- Bordesley STVA and Aggregates
- Bescot Yards

Claydon LNE Junction to Bletchley

The section of line beyond Claydon LNE Junction to Bletchley is currently out of use. The East West Rail Phase 2 project will see this route re-opened to passenger and freight services in CP6.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Aylesbury to Claydon L&NE Junction		
Route availability†	RA8		
Gauge†	W6a W8 prohibited between former Calvert Junction and Claydon L&NE Junction. W7 W8 15 mph at Bridge No.179 [42m 76ch] on Single Line.	W10	
Signals†	Electric Token Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	30 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	*Improve access into the branch from the north so that it removes the need for a time consuming shunt move on the main line*
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Madeley Junction to Ironbridge National Power Station		
Route availability†	RA8		
Gauge†	W6a	W10	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	25 mph		
Electrification†	Not electrified.		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

SRS M.99 Other Freight Lines
Stourbridge North Junction to Round Oak

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Stourbridge North Junction to Round Oak via Kingswinford Junction South		
Route availability†	RA8		
Gauge†	W8	W10	
Signals†	Track Circuit Block (TCB)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	10-15 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified.	25kV OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0			
	Current	**2043**	**Notes**
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

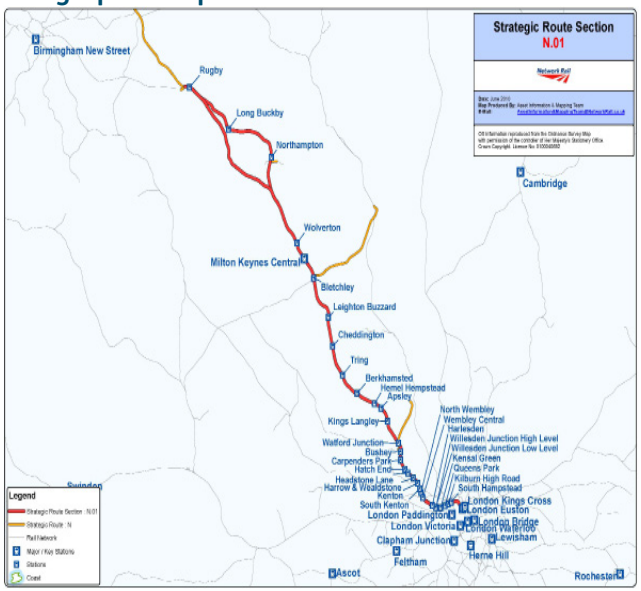
Route N: West Coast Main Line

Interface with other routes (refer to separate Strategic Route Specifications documents)

Scotland Route:	SRS Q.01 Glasgow Central to Carstairs
Sussex Route:	SRS B.13 West London Line - Milton Keynes to East/South Croydon
Anglia Route:	SRS E.01 Richmond to Willesden Junction - Acton Branch (freight line)
	SRS E.02 North London Line - Willesden Junction to Gospel Oak
LUL Network:	Bakerloo Line on DC lines - Harrow & Wealdstone to Queens Park
Wales Route:	SRS L.04-05 Newport to Crewe
	SRS L.13-14 Chester to Holyhead
East Mids Route:	SRS I.01 St Pancras International to Bedford
	SRS I.11 North Staffs Junction to Stoke-on-Trent

SRS N.01 Euston to Rugby

Geographic Map



Route specification description

Euston to Rugby is focused on long-distance and commuter markets to and from London, together with key freight services and flows serving more northerly destinations. Long-distance passenger services are operated between London Euston and Glasgow Central and Edinburgh, to the West Midlands (Coventry, Birmingham and Wolverhampton), Manchester Piccadilly (via Crewe and Stoke), Liverpool, Chester and North Wales. Some services have additional stops during peak times to serve intermediate stations on the route between Rugby and Stafford. Overnight sleeper trains run from Euston to Glasgow and Edinburgh, Fort William, Aberdeen, and Inverness.

Regional urban services operate between London Euston and Tring, Milton Keynes Central, Northampton, Birmingham New Street and Crewe via Stoke on Trent. An hourly service operates between East and South Croydon and Milton Keynes Central via Kensington Olympia although in certain hours the service begins at Clapham Junction, and only operates as far as Watford Junction. This line is known as the West London Line and has Southern services operating on it.

Arriva Rail London operates services on the London Overground network on the DC lines between Watford Junction and London Euston. Arriva Rail London services also interface at Willesden Junction with the North London Line (Anglia Route) services to Gospel Oak and Stratford. London Underground Ltd services operate on the DC lines between Harrow and Wealdstone and Queens Park and then into central London via the Bakerloo Line.

Two branches feed the southern end of the West Coast Main Line (WCML), the St. Albans Abbey line which joins the WCML at Watford Junction and the Marston Vale line which joins the WCML at Bletchley. Both are designated as 'Community Rail' lines.

This route plays a key role in distributing freight traffic that has arrived in the UK via the Channel Tunnel and deep sea ports. Traffic operates to a Strategic Rail Freight Interchange at Daventry, which continues to expand its facilities as the freight warehousing and distribution markets grow.

Capability: This route section is 82 miles long, electrified, and is a four track railway from London Euston to just north of Hanslope Junction near Roade. Here, the four track railway diverges, with two tracks going direct to Rugby and two going via Northampton. The 23 mile loop via Northampton to Rugby is an electrified two track railway, with a line speed of 75 mph. The four track section from Euston to Hanslope Junction has a mix of fast and slow lines: the fast lines operate with 125 mph Enhanced Permissible Speeds (EPS), with between 75 mph and 100 mph permissible speeds on the slow lines. The EPS facility allows trains that are fitted with a 'tilt' system mechanism to operate faster than conventional trains and hence offer shorter journey times. The SRS also includes the section of line that runs from Wembley Yard South Junction towards Mitre Bridge Junction which allows trains going to and from the West London Line to pass under the WCML.

There are a significant number of freight terminals, depots and sidings on this route, including Wembley Freight Operating Centre, Stonebridge Park Royal Mail terminal, and Daventry Strategic Rail Freight Interchange. Maintenance depots, stabling and carriage sidings on the route are located at Camden, Wembley, Willesden, Bletchley, and Northampton Riverside and Northampton Kings Heath Depot.

Constraints: There are a number of tunnels between London and Rugby which act as a capacity constraint. Capacity is also constrained on the St Albans Abbey single line due to the one train working operation; and by single line sections on the Marston Vale line.

Key stations: The key stations on the route include:

Station	Line	Footfall p.a. (2018/19) ORR data
London Euston	Fast	46.1 million
Watford Junction	Fast	8.5 million
Milton Keynes	Fast	7.0 million
Rugby	Fast	2.7 million

High Speed 2: In 2017, the Government passed the Hybrid Bill for Royal Assent to begin construction of High Speed Two (HS2). HS2 will provide increased capacity between London, the Midlands and the North. Phase 1 of the HS2 line will create a high speed link between London Euston and Birmingham, and is currently planned to open in 2029. When the HS2 line is opened, it will release capacity on this SRS for both passenger and freight services.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Euston to Armitage Junction (Exclusive) (in part) Hanslope Junction to Rugby (via Northampton)		
Section start	London Euston station		
Section end	Rugby station		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast lines (except Northampton loop)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 125 mph EPS on Fast lines Between 75 mph and 100 mph Permissible Speed on Slow lines Northampton loop predominantly 75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	A review of the WCML capacity and line speeds, as HS2 released capacity workstream
Electrification†	25kV OHL		
Level Crossings†	1 (Wolverton Works Siding)	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from London to:*	***Fast services:*** Watford Junction 14 minutes Milton Keynes Central 30 minutes Rugby 48 minutes ***Semi-fast services:*** Watford Junction 47 minutes Hemel Hempstead 24 minutes Berkhamsted 28 minutes Bletchley 36 minutes Milton Keynes Central 30 minutes Rugby 1 hr 22 minutes Northampton 51 minutes Milton Keynes/(Mitre Bridge Junction) to Croydon 40 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph) *from London to:*	***Long-distance high-speed:*** Manchester 3 tph Birmingham 3 tph (1 tph through to Scotland) Liverpool 1 tph Chester/North Wales 1 tph Scotland (Glasgow/Edinburgh alternate) 1 tph Crewe (via Trent Valley) 1 tph ***Regional urban:*** Birmingham 3 tph (via Northampton) Milton Keynes Central 2 tph Tring 4 tph Milton Keynes Central to East/South Croydon 1 tph ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

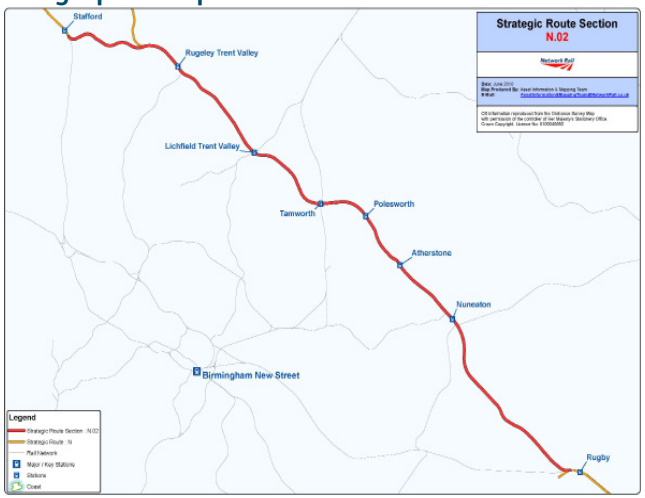
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Bushey Traction Supply Resilience	Enhancement to improve power supply reliability and performance	LEC1, NLL	2023	Installation of Autotransformer and alteration to neutral section resulting in improved power resilience	NR, DfT RNEP	In development
Watford North Junction Reinstatement	Reinstatement of currently out-of-use Watford North Junction	LEC1	2022	Reinstatement of four crossovers at Watford North, providing additional operational flexibility in the Watford area	NR (Alpha)	In delivery
Watford Fast-to-Fast Crossover	Provision of new crossover between fast lines at Watford Junction	LEC1	2022	New fast line crossover providing ability to turn back fast line services from the north at Watford Junction	NR (Alpha)	In delivrey
Euston Platform 16 re-provision	On Network Works / HS2 removal and re-provision of 16th platform at Euston	LEC1	2023 (removal) 2025 (reprovision)	Current platform 16 will be removed and re-provided at current specification and length in the space of the existing Euston Middle Sidings (which will be permanently removed)	HS2	In development
Redevelopment of Euston Conventional Station (RECS)	NR-led scheme to redevelop the conventional Euston station to improve passenger circulation and access with wider Euston campus	LEC1	2030s	Full output to be determined but will include redevelopment of the station concourse area, platforms and oversite campus area.	TBC	In development
Bletchley Station redevelopment (East West Rail)	Connecting to local developments in the station area (third party scheme)	LEC1	2024	Station scheme to improve connections to the local businesses in the area	Local Growth Fund and DfT	In development

SRS N.02 Rugby to Stafford

Geographic Map



Route specification description

The section between Rugby and Stafford is known as the Trent Valley Line and is served by a mix of traffic types serving a number of key markets.

Most of the stations along the route are served by long-distance services to and from London, the North West and Scotland; but these are limited in number. Services between key regions are served by semi-fast services on the slow lines, which operate hourly between Euston and Crewe. Connectivity is provided to the long-distance and commuter markets by good interchange opportunities at stations along the route: Rugby, Nuneaton, Tamworth, Lichfield Trent Valley and Rugeley Trent Valley. Passengers wishing to travel to Birmingham, Coventry, Bedworth, Walsall and the East Midlands, can do so by changing onto CrossCountry and West Midlands Trains services at these stations.

There is a mix of freight traffic operating over this section, transporting a variety of products to and from ports and domestic terminals.

The section is a 51-mile stretch of electrified track. It is predominantly a four track railway (two fast lines and two slow lines) between Rugby and Colwich Junction, with a seven-mile section of only three track railway between Brinklow Junction and Attleborough South Junction. The main line splits at Colwich Junction, with a two track railway continuing towards Stafford. This section includes a 710 metre long tunnel at Shugborough; the other line goes on to Stoke-on-Trent (SRS N.08). The line becomes a four track railway once again at Whitehouse Junction just south of Stafford.

Fast line speeds on this section range from 110 to 125 mph and the slow lines operate at speeds between 60 and 110 mph.

The key stations on this SRS are Nuneaton, Tamworth and Lichfield Trent Valley, which have annual footfall of between 1.1 and 1.4 million passengers each.

Constraints: Trent Valley Junction at Stafford is a key junction constraint, as this is where the line from Birmingham and Wolverhampton joins the WCML. The three-track section of railway between Brinklow Junction and Attleborough South Junction creates a capacity and planning constraint on this section. Colwich Junction is a capacity constraint on the route due to the number of low speed crossovers at this location, particularly for services operating to Stoke on Trent.

High Speed 2: The new HS2 line is planned to join this SRS at Handsacre Junction, just north of Lichfield Trent Valley, and is scheduled to operate high speed services over this section in 2029.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Euston to Armitage Junction (Exclusive) (in part) Armitage Junction (incl.) to Preston Fylde Junction (in part)		
Section start	Rugby station		
Section end	Stafford station		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 125 mph EPS on Fast lines Predominantly 75 mph Permissible Speed on Slow lines, with some sections between 75-110 mph through Tamworth and Lichfield	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Rugby to:*	Nuneaton 11 minutes Atherstone 18 minutes Tamworth 24 minutes Lichfield Trent Valley 30 minutes Rugeley Trent Valley 39 minutes Stafford 50 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph) *from London to:*	***Long-distance high-speed:*** Manchester 3 tph Liverpool 1 tph Chester/North Wales 1 tph Scotland 1 tph Crewe (via Trent Valley) 1 tph The Euston to Crewe hourly service provides connectivity between a number of regions along the Trent Valley. ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

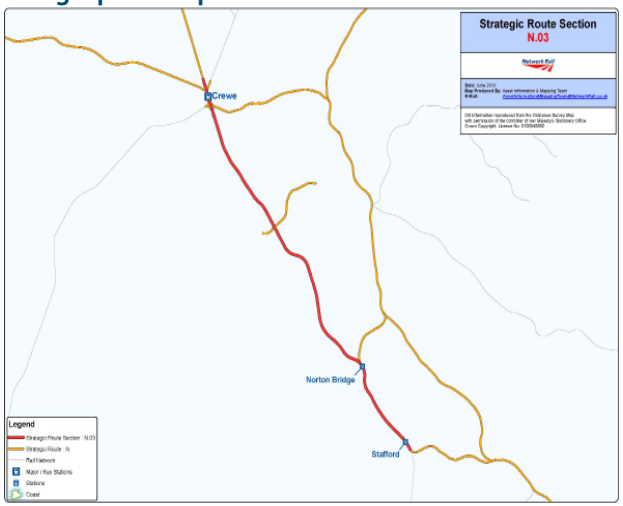
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Rugeley to Colwich Resignalling	CP6 Network Rail signalling renewal scheme	LEC2	2023	Like-for-like signals and S&C renewal Rugeley to Colwich Junction inclusive	NR Renewals	In development

SRS N.03 Stafford to Crewe

Geographic Map



Route specification description

This route section is a highly utilised section of the West Coast Main Line (WCML) and serves a number of key markets.

The long-distance market includes services to and from London, the North West, North Wales and Scotland. Regional urban services include CrossCountry services to Wolverhampton, services to Birmingham and Manchester and commuter services to Liverpool.

There is an important freight market operating on this key trunk route, serving a mix of traffic from Scotland, the North West, and the West Midlands; as well as services running between the north and south of the WCML.

There is a maintenance depot at Crewe Carriage Shed, as well as Crewe Basford Hall being a key hub for Network Rail's own infrastructure services. Basford Hall Yard is utilised by freight operators for marshalling and driver changeovers and acts as a key freight regulating point on the WCML.

There are good interchange opportunities at Stafford and Crewe stations, providing a range of services to the East and West Midlands, to Chester, and to a range of long-distance services. Stafford serves 2.5 million passengers annually and Crewe serves 3.3 million.

Capability: N.03 is a 25-mile electrified section of track consisting of four lines (two fast lines and two slow lines) between Stafford and Crewe. Fast line speeds on this section range from 110 to 125 mph and the slow lines operate at speeds up to 75 mph. Doxey Junction and Norton Bridge are key junctions along this section of route.

Crewe Station is constrained due to a large number of crossing moves north and south of the station, which limits both passenger and freight capacity and performance.

High Speed 2: A review of the long term strategy for Crewe has been undertaken by HS2, in conjunction with DfT and Network Rail. Options for an integrated solution catering for all markets are being developed, concentrating on the growing the economic region of Crewe and beyond.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Armitage Junction (incl.) to Preston Fylde Junction (in part)		
Section start	Stafford station		
Section end	Crewe station		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 125 mph EPS on Fast lines Predominantly 100 mph Permissible Speed on Slow lines from Stafford to Basford Hall Junction, dropping to 75 mph into Crewe.	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Stafford to Crewe*	***Fast services:*** 18 minutes ***Semi-fast services:*** Journey time between 19 and 43 minutes (depending upon stopping patterns and Operator)	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph) *from London to:*	***Long-distance high-speed:*** Manchester 3 tph Liverpool 1 tph Chester 1 tph Scotland 2 tph Crewe (via Trent Valley) 1 tph ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

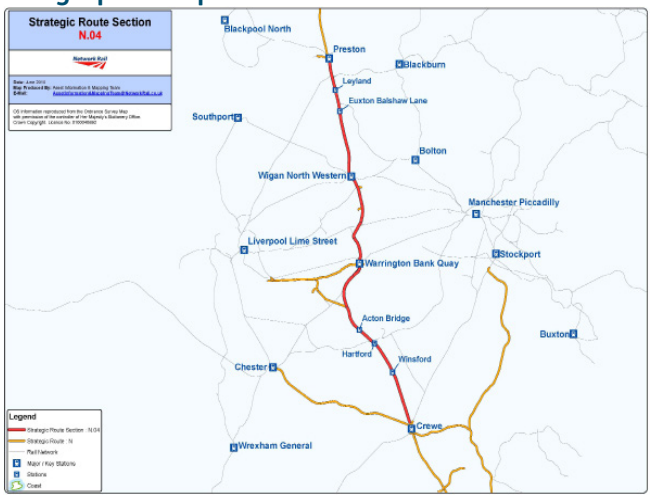
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.04 Crewe to Preston

Geographic Map



Route specification description

This SRS is a very busy section of the West Coast Main Line and serves a number of key passenger and freight markets.

The long-distance passenger market includes services to and from London, the North West, North Wales and Scotland. Regional urban services include the commuter markets to Manchester, Liverpool, and Birmingham; and the leisure markets to Lancaster and the Lake District. There are two sleeper trains that run from Euston to Glasgow and Edinburgh, Fort William, Aberdeen, and Inverness.

There are a number of freight services (container traffic and bulk services) operating to terminals across the country.

This 51-mile electrified section of route between Crewe and Preston is a mixture of two and four track lines. At Weaver Junction, the line diverges towards Runcorn and Liverpool (N.07). The line speed is predominantly 125 mph Enhanced Permissible Speed and 110 mph Permissible Speed on the Fast lines and 75 mph on the Slow lines. At Warrington, the route becomes four lines. Line speed reduces to 80 mph on the Fast lines and 60 mph on the Slow lines at different points north of Warrington Bank Quay. At Winwick Junction, there are only two tracks for three miles until Golborne Junction, where there are four lines until Wigan North Western station. The route is a two-track railway for another eight miles until Balshaw Lane Junction and is four track until Preston.

Key stations include Crewe, Warrington Bank Quay, Wigan North Western and Preston. There are interchange opportunities at Crewe with a wide range of services to the East Midlands, Wales and the North West; at Warrington for Chester and North Wales; and at Wigan North Western and Preston for local services in the North West such as Blackpool, Barrow-in-Furness and Manchester Airport. Warrington Bank Quay and Wigan North Western both serve around 1.6 million passengers annually.

Constraints: Capacity is constrained on the double track sections of route, particularly the two-track railway just north of Crewe between Winsford and Weaver Junction. There are a number of junctions on the route which also restrict capacity due to the mix of speed, rolling stock capability, and services.

High Speed 2: The HS2 project will extend the initial route from London to Birmingham further north with the creation of a 'Y' network. Building on Phase 1, Phase 2A intends to provide additional infrastructure allowing services to join the WCML south of Crewe in 2029 at the earliest. Phase 2B will later complete the 'Y' network, with the project extending the HS2 line further beyond Crewe to Manchester Piccadilly and to Golborne Junction, south of Wigan. These enhancements will provide significant journey time improvements and offer some released capacity to support other markets. The precise details of the Phase 2A and 2B service provision is still the subject of development.

At Preston, the station and local infrastructure has been identified as one of eleven stations on the rail network where interventions are required to be investigated to understand and address crowding at the station and track capacity into the station. Preston serves 4.6 million passengers annually. Preston will eventually be served by HS2 services, and an integrated plan is being developed by the industry.

A review of the long-term strategy for Crewe has been undertaken by HS2, in conjunction with DfT and Network Rail. Options for an integrated solution catering for all markets are being developed, concentrating on the growing the economy of the Crewe region and beyond.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Armitage Junction (incl.) to Preston Fylde Junction (in part) Acton Grange Junction to Warrington South Junction (Helsby Lines) Winwick Junction to Golborne Junction (via Earlestown)		
Section start	Crewe station		
Section end	Preston station		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 125 mph EPS on Fast lines, with some sections between 80-110 mph Predominantly 75 mph Permissible Speed on Slow lines	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	1 (bridleway)	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Crewe to:*	Winsford 7 minutes Hartford 10 minutes Acton Bridge 16 minutes Warrington Bank Quay 17 minutes Wigan North Western 28 minutes Preston 41 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance high-speed:*** London to Liverpool 1 tph London to Scotland 1 tph Birmingham to Scotland 1 tph Birmingham to Crewe 1 tph LIverpool to Scotland 3 trains per day ***Regional urban:*** Birmingham New Street to Liverpool 2 tph Manchester Airport to Scotland 1 tph Manchester Airport to Blackpool North 1 tph Manchester Airport to Preston 3 tph Manchester Airport to Lancaster 2 tph Preston to Barrow-in-Furness 10 trains per day Barrow-in-Furness to Preston 9 trains per day Windermere to Manchester Airport 1 train per day Windermere to Preston 3 trains per day Buxton/Hazel Grove/Manchester Piccadilly to Preston 2 tph ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

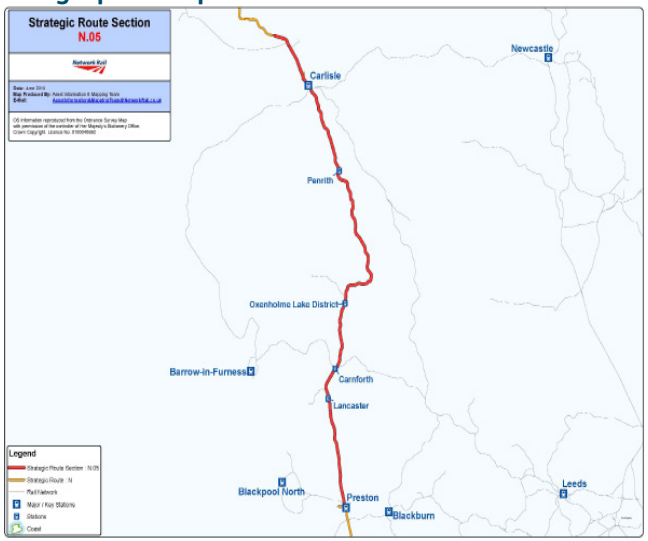
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Crewe Hub	Interventions to support the delivery of HS2		CP6-7			In development

SRS N.05 Preston to the Scottish Border (near Gretna Junction)

Geographic Map



Route specification description

This section of route is 101 miles long, electrified, and is predominantly a two-track railway. It passes through hilly terrain, which results in a winding and steeply graded railway, such as over Shap summit; and has a number of capacity constraints along the route.

The long-distance market includes services to and from London, the North West, the West Midlands and Scotland. Regional urban services include the markets between Preston, Lancaster, Barrow-in-Furness, Windermere, Oxenholme Lake District, Penrith and Carlisle. There are two sleeper trains that run from Euston to Glasgow and Edinburgh, Fort William, Aberdeen, and Inverness.

The route is also a key freight link between England and Scotland, with Carlisle Kingmoor Yard located on this section of route. This freight yard acts as a key Network Rail terminal for the use of railway infrastructure services, in addition to commercial freight.

There are opportunities for interchange at Preston, with local services to Liverpool, Blackpool, Manchester and the North West. Carlisle acts as a local interchange with services to the Cumbrian coast, the Settle and Carlisle Line, and services to Dumfries and Newcastle-upon-Tyne. The stations at Penrith and Oxenholme Lake District act as gateways to the Lake District National Park. Lancaster provides connections to Morecambe, Heysham, Barrow-in-Furness, the Cumbrian Coast Line, and Leeds.

Constraints: The different speeds of passenger services and slower freight trains constrain capacity. Use of diesel traction, instead of electric traction, restricts the speed of freight services and there are also limited passing loops, with many of the existing loops being shorter than current operations require.

The Carlisle station area is capacity limited by its restrictive layout and low line speeds. The two track section between Preston and Carlisle over Shap summit constrains capacity.

High Speed 2: It is recognised that the long-distance Anglo-Scottish market continues to grow and the capacity and capability of this SRS is critical to meeting this demand. HS2 Ltd is introducing new high speed services from 2029, and the industry is working together to develop a strategy to accommodate growth in passenger and freight markets.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Preston Ribble Junction to Cove LC		
Section start	Preston station		
Section end	North of Gretna Junction		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 125 mph EPS on Fast lines, with some sections of 80-110 mph 75 mph Permissible Speed on the Slow Lines	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	4	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Preston to:*	Lancaster 14-20 minutes Carnforth 24-30 minutes Oxenholme Lake District 27-30 minutes Penrith 48-56 minutes Carlisle 1 hr 4 to 1 hr 12 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance high-speed:*** London Euston to Scotland (Glasgow) 1 tph Birmingham/Wolverhampton to Scotland (Glasgow/Edinburgh) 1 tph ***Regional urban:*** Manchester Airport to Scotland (Edinburgh) via Preston 1 tph Manchester Airport to Blackpool North 1 tph Manchester Airport to Barrow-in-Furness 2 trains per day (3 trains per day in opposite direction) Preston to Manchester Airport 2 tph Preston to Barrow-in-Furness 2 hourly Preston to Windermere 1 train per day Liverpool to Blackpool 1 train per day ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

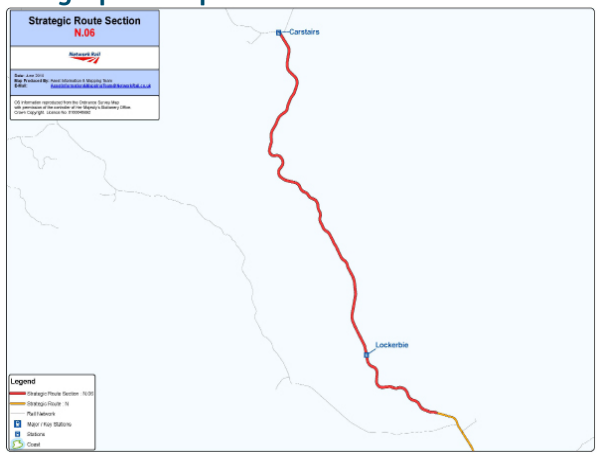
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.06 The Scottish Border to Carstairs South Junction

Geographic Map



Route specification description

This route section, between the border and Carstairs South Junction, is a 61-mile stretch of two track electrified railway. The terrain is hilly and is dominated by the steep gradient to Beattock summit.

The long-distance market includes services to and from London, the North West, the West Midlands and Scotland. Regional urban services include the markets between Lockerbie, Carstairs and north to Scotland. The route is used by Avanti and TransPennine Express for services to Manchester Airport. It is also used by the Caledonian Sleeper service. There is heavy freight use of this route for traffic to and from Mossend, Coatbridge and Grangemouth terminals.

There are a number of passing loops at Quintinshill, Lockerbie, Beattock Summit, Beattock and Abington, where freight services are regulated to ensure a robust timetable for passenger services. At Carstairs South Junction the line splits towards Glasgow, and Edinburgh.

The only passenger station on the route is Lockerbie, which has an infrequent service provision.

Constraints: The mix of high speed passenger services and slower freight traffic limits capacity on the route. The capability of the different rolling stock types and the double track formation also have significant impacts on capacity.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Gretna Junction to Glasgow Central (via Beattock) (in part)		
Section start	North of Gretna Junction		
Section end	Carstairs South Junction, south of Carstairs station		
Route availability†	RA10	RA10	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 90-100 mph Permissible Speed, 125 mph EPS	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	2	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Carlisle to Lockerbie 18 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance high-speed:*** London to Scotland 1 tph Birmingham to Scotland 1 tph ***Regional urban:*** Manchester Airport to Scotland (alternating Edinburgh and Glasgow) via Preston 1 tph ***Sleeper:*** Highland: Euston via Edinburgh to Fort William, Aberdeen, Inverness 1 train per day Lowland: Euston to Glasgow and Edinburgh 1 train per day	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

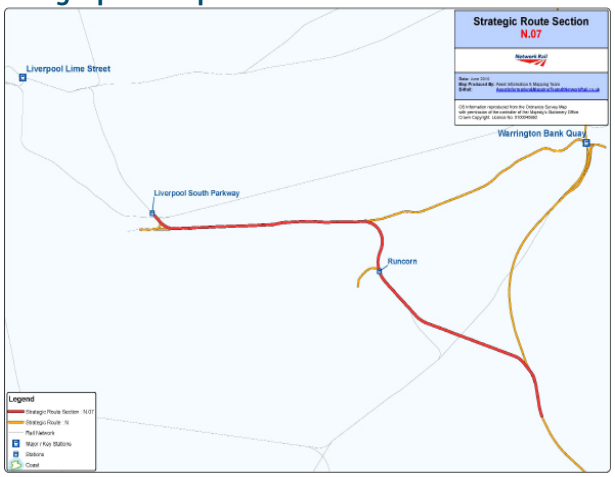
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Carstairs Junction remodelling	Carstairs area improvements: renewal of life-expired assets and requirements for HS2 services	WCM1 WCM2	2023	Improved capacity and linespeed on the route	Network Rail	In development

SRS N.07 Weaver Junction to Liverpool South Parkway

Geographic Map



Route specification description

SRS N.07 leaves the West Coast Main Line (WCML) at Weaver Junction, continuing to Liverpool South Parkway and, ultimately, Liverpool Lime Street.

The route supports the regional urban and commuter markets within the North West and Liverpool area, and the long-distance market to London. This route is a key freight corridor serving terminals at Ditton, the Halewood car plant, the Energy from Waste plant at Garston terminal, and the Port of Liverpool.

There are two stations on the SRS, Runcorn and Liverpool South Parkway. Runcorn is served by four trains per hour to Liverpool Lime Street, two trains per hour also serving Liverpool South Parkway, Crewe, and the West Midlands. Liverpool South Parkway station offers opportunities for connections into the well served local Merseyrail network and to the North West, as well as having a direct bus link to Liverpool John Lennon Airport.

This 13-mile electrified section of line is a two-track railway through Runcorn as far as Ditton East Junction, where it becomes four tracks to Liverpool South Parkway. The two-track railway passes Halton Junction, where the line from Frodsham joins, and then passes through Runcorn station before becoming four tracks to Liverpool South Parkway.

The Runcorn 'Folly Lane' non-electrified single line freight branch runs off this route section and is described in N.99. The Arpley Junction to Ditton line joins this section at Ditton East Junction.

Constraints: Line speeds on this SRS are generally lower than the core WCML speeds, predominantly 80 mph from Sutton Weaver into Liverpool South Parkway. On the Slow lines, the maximum permissible speed is 75 mph. Further capacity constraints exist either side of this section, between Crewe and Weaver Junction and between Edge Hill and Liverpool Lime Street. This impacts on the ability to increase capacity on the route.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Weaver Junction to Liverpool Lime Street (in part)		
Section start	Weaver Junction		
Section end	Liverpool South Parkway station		
Route availability†	RA8	RA8	
Gauge†	W10	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines)	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Prevailing linespeed 100 mph EPS on Fast lines up to Sutton Weaver, then 80 mph into Liverpool South Parkway. Up and Down Ditton Slow lines 75 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Crewe to Runcorn between 18 and 26 minutes Crewe to Liverpool South Parkway between 27 and 36 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance:*** London Euston to Liverpool Lime Street 1 tph ***Regional urban:*** Birmingham New Street to Liverpool Lime Street 2 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

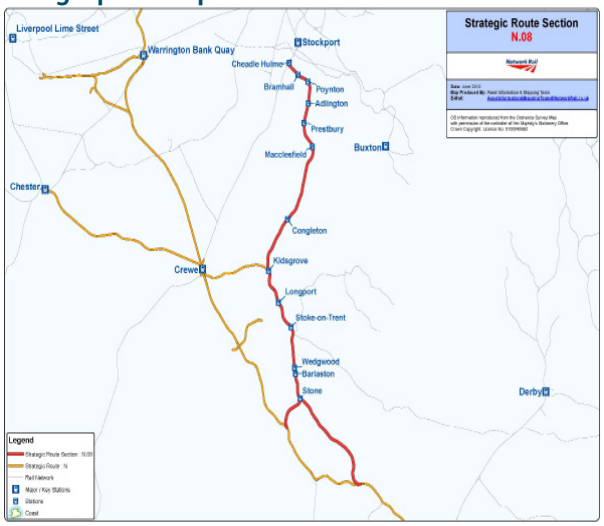
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Ditton Head Shunt extension	Extend the current headshunt at Ditton SIdings	WJL	2023	Increase in train length capability from 540m to 850m	DfT SOEF	

SRS N.08 Norton Bridge/ Colwich Junction to Cheadle Hulme

Geographic Map



Route specification description

This 45-mile electrified route is predominately a two track railway from Colwich Junction to Cheadle Hulme, with the 3.6 mile of two-track railway from Norton Bridge joining it at Stone Junction. From Norton Bridge, the line speed is 75 mph until approaching Stone station when it is reduced to 25 mph for the converging junction. From Colwich Junction the line speed is only 45 mph, and 50 mph leaving the West Coast Main Line. The speed then fluctuates along the route due to a number of level crossings. At Kidsgrove, the line towards Crewe (N.09) diverges. Immediately past Cheadle Hulme station (Route H), the line from Crewe joins, where there is a short section of two track railway (towards Stockport) until Adswood Road Junction. This short two track section acts as a constraint on this SRS.

Along the route between Stone and Stoke-on-Trent, there are two small stations (Wedgwood and Barlaston) which are currently not served by rail but are provided with a substitute bus service on which valid rail tickets are officially accepted.

High Speed 2: HS2 Ltd proposes to introduce services from Handsacre Junction to Manchester, with options for routeing via Stoke or Crewe.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Norton Bridge to Stone Junction Colwich Junction to Cheadle Hulme		
Section start	Little Bridgeford Junction at Norton Bridge / Colwich Junction		
Section end	Cheadle Hulme North Junction		
Route availability†	RA8	RA8	
Gauge†	W12	W12	
Signals†	Track Circuit Block TASS fitted on Fast Lines	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominant linespeed from Norton Bridge to Stone is 75 mph (Permissible Speed). From Colwich Junction to Stoke-on-Trent and from Kidsgrove to Cheadle Hulme 95-125 mph (Enhanced Permissible Speed). Low linespeeds around Stoke-on-Trent to Kidsgrove.	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	7 plus 1 on Norton Bridge East Chord	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Stafford to Stone 8 minutes Stafford to Stoke-on-Trent 15 to 20 minutes Stafford to Macclesfield 35 to 39 minutes Stoke-on-Trent to Kidsgrove 7 to 11 minutes Stoke-on-Trent to Congleton 14 minutes Stoke-on-Trent to Manchester 43 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance high-speed:*** London to Manchester 2 tph South West to Manchester 2 tph London Euston to Crewe (via Trent Valley) 1 tph ***Regional urban:*** Derby to Crewe 1 tph Stoke-on-Trent to Manchester 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

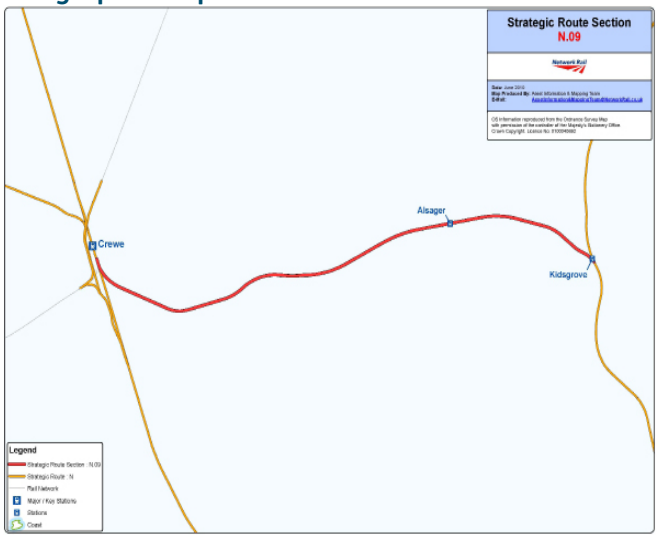
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.09 Crewe to Kidsgrove

Geographic Map



Route specification description

This SRS is a short connecting corridor between Crewe and Kidsgrove, serving Alsager along the route. Passengers can interchange at Crewe for a number of destinations, and at Kidsgrove the line diverges for services to Manchester Piccadilly and to Stoke-on-Trent. This route is supported by a high number of leisure passengers, as well a significant number of students accessing education in the area.

Freight services also operate on this route.

The route section is eight miles of electrified line - five miles of two-track railway and three miles on a single section at the Crewe end of the line between North Stafford Junction and Barthomley Junction. Whilst a short route, the electrification capability provides a vital diversionary route to the adjacent West Coast Main Line (WCML). The route is utilised in times of planned and unplanned disruption, particularly by long-distance services that normally operate on the core WCML.

A key constraint on this section is the short single line section near Crewe, which restricts capacity and operational flexibility.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Kidsgrove Junction to Crewe South Junction		
Section start	Crewe South Junction		
Section end	Kidsgrove station		
Route availability†	RA8	RA8	
Gauge†	W10	W10	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	70 mph Single line section at Crewe 60 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV OHL		
Level Crossings†	7	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Crewe to Alsager 9 minutes Crewe to Kidsgrove 14 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Birmingham to Crewe 1 tph Derby to Crewe 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

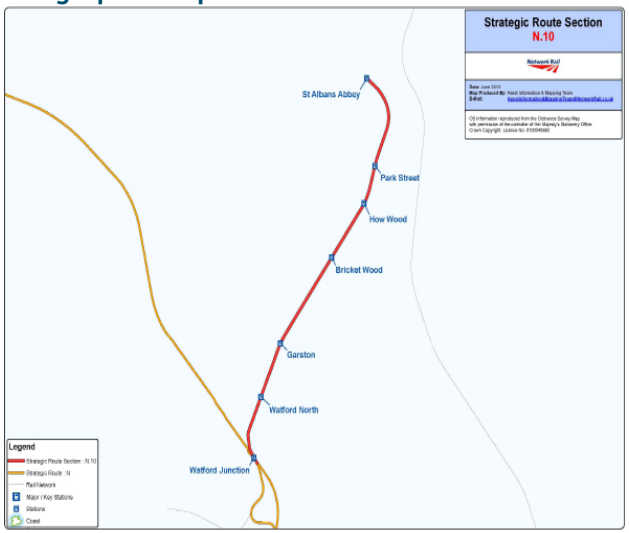
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
Alsager Resignalling	Signalling renewal and level crossing interventions between Kidsgrove and Crewe	KCS1	2025	Like-for-like signals renewals, signalling recontrol to Manchester ROC, and upgrade of Alsager and Radway Green level crossings to MCB-OD.	NR Renewals	In development

SRS N.10 Watford Junction to St Albans Abbey

Geographic Map



Route specification description

This SRS serves the commuter market at a number of small, local stations along the route. The key passenger flow is into Watford Junction station in the peak (for the Watford area), and for interchange opportunities onto the DC Lines into London or onto the core West Coast Main Line. The service is known locally as the 'Abbey Flyer'.

The line is electrified and is six and a half miles long. It is a single line, with only one train allowed to operate over it at any one time. There are no freight services operating on the route.

The St Albans Abbey line was designated a 'Community Rail Line' in 2005. This means it is supported by a Community Rail Partnership (a number of organisations and a collection of local groups), who actively promote train services and undertake initiatives like station adoption schemes. The CRP works towards increasing community involvement and revenue on the line, and highlights areas that could reduce the cost of running the service.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Watford Junction to St. Albans Abbey		
Section start	Watford Junction station		
Section end	St Albans Abbey station		
Route availability†	RA7	RA7	
Gauge†	W6a	W6a	
Signals†	One train working		
Predominant Linespeed†	50 mph		
Electrification†	25kV OHL		
Level Crossings†	3	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Watford Junction to:*	Watford North 2 minutes Garston 5 minutes Bricket Wood 8 minutes How Wood 10 minutes Park Street 12 minutes St Albans Abbey 16 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	One train working on single line (non-clockface) - approximately 2 trains every three hours	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

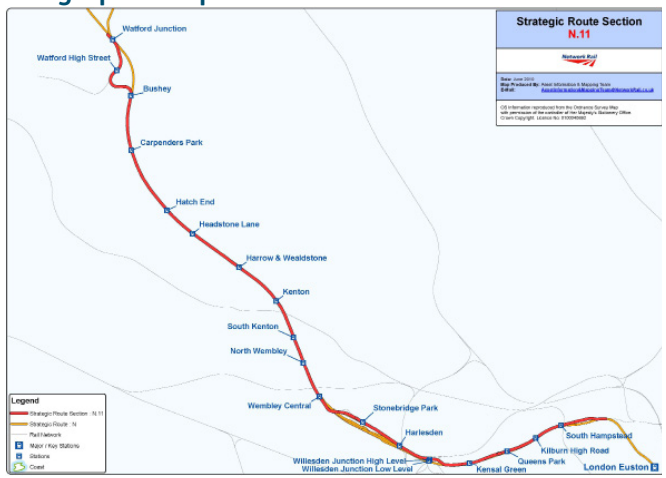
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.11 Euston to Watford Junction (DC Lines)

Geographic Map



Route specification description

This SRS is known as the DC (Direct Current) Lines which operate between London Euston and Watford Junction. The DC Lines is a London and South East commuter railway, providing high frequency London Underground and Overground services. This commuter line runs alongside the core West Coast Main Line for most of its length (17 miles) and is 750v DC electrified.

The route is operated by Arriva Rail London and London Underground Limited (LUL). Arriva Rail London provide an 'all stations' service on the DC Lines between London and Watford Junction running via Watford High Street. At Willesden Junction, Arriva Rail London services stop at the low-level platforms at the station, connecting with the North London Line which serves the high-level platforms. The London Underground services operate on the Bakerloo line, which links central London via Queen's Park to all stations to Harrow and Wealdstone. These services share the track with London Overground services as far as Queen's Park, before branching off onto dedicated track on the LUL, via the Bakerloo line.

There are no freight services that operate on the DC Lines.

Line speeds on this route are low (around 45 mph), but this does not act as a serious constraint due to the 'all stations' stopping pattern.

Trains on the DC lines have been lengthened from 4 to 5-car capability in order to accommodate increasing demand on this route.

Transport for London have long-term plans to upgrade the Bakerloo line and install a new signalling system and control centre on parts of the line by 2033. This may increase service frequencies and reduce journey times on the route.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Camden Junction to Watford Junction (DC Lines)		
Section start	Camden Junction		
Section end	Watford Junction		
Route availability†	RA8	RA8	
Gauge†	W6a	W6a	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	45 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	3rd rail DC 750V	3rd rail DC 750V electrification or 25kV AC OHL dependent on industry aspirations.	
Level Crossings†	There are no level crossings on this SRS.		
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *London Overground from London Euston to:*	South Hampstead 6 minutes Kilburn High Road 7 minutes Queens Park 9 minutes Kensal Green 11 minutes Willesden Junction 14 minutes Harlesden 16 minutes Stonebridge Park 18 minutes Wembley Central 21 minutes North Wembley 23 minutes South Kenton 25 minutes Kenton 27 minutes Harrow & Wealdstone 29 minutes Headstone Lane 32 minutes Hatch End 34 minutes Carpenders Park 37 minutes Bushey 40 minutes Watford High Street 43 minutes Watford Junction 47-52 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***London Overground:*** London Euston to Watford Junction 4 tph ***LUL Bakerloo line:*** DC Lines between Queens Park and Harrow & Wealdstone 12 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	*2020 : Bakerloo line upgrade planned:* * *new signalling system and control centre* * *increased capacity* * *reducing journey times across route*
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

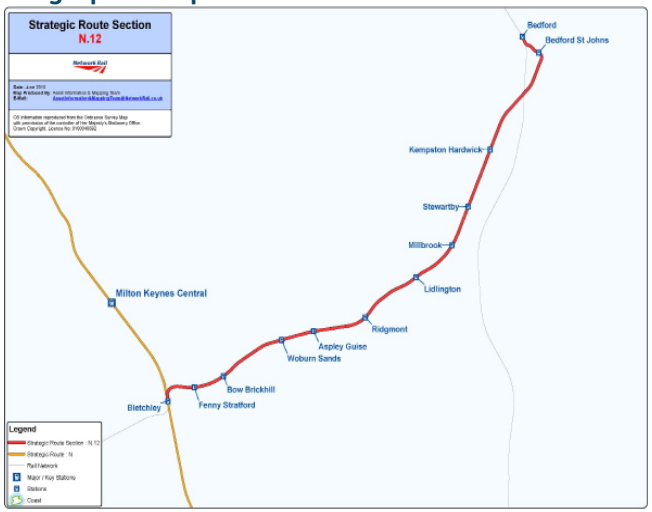
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.12 Bletchley to Bedford (Marston Vale Line)

Geographic Map



Route specification description

A shuttle service operates on this 15-mile section, serving commuters into Bletchley and Bedford town centres. Passengers for longer distance services can connect onto the Midland Main Line at Bedford for services to London St Pancras, and onto the West Coast Main Line at Bletchley for services to London Euston or to the north.

All of the ten local stations along the route, are served on an (approximate) hourly basis.

There are a number of freight services operating over the route.

The route is a non-electrified two-track railway with a line speed of 60 mph. The route is constrained by short single line sections at both ends of the line (one mile long at Bletchley and ¼ mile long at Bedford). Numerous level crossings are located on the route; these include CCTV, automatic half barrier and user-worked crossings. Forders sidings is located around the 12 mile post area.

There are plans for the re-introduction of passenger services from Oxford and Aylesbury to Milton Keynes and from Oxford to Bedford via Bletchley in the future, driven by the East West Rail Phase 2 project. The primary objectives of this project are to improve East-West connectivity and the creation of jobs and growth in the local areas. A re-opened railway will provide local transport links supporting regional growth and will ease traffic congestion hotspots in Oxford, Bletchley, Princes Risborough, Milton Keynes and Bedford. The EWR project will redevelop Bletchley station to cater for the growth in passenger numbers from the new EWR services and to provide integration and connectivity with the WCML.

There are a number of third party aspirations for strategic freight terminals at Apsley Guise and Ridgmont.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Bletchley to Bedford St. Johns (Inclusive) Bedford St. Johns (Exclusive) to Bedford Station		
Section start	Bletchley station		
Section end	Bedford station		
Route availability†	RA8	RA8	
Gauge†	W8	W12	
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	60 mph 25 mph on approach to Bletchley station	East West Rail phase 2 is planned to implement a 90 mph two track railway.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	15	As determined by Level Crossing Policy and East West Rail equirements.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time *from Bletchley to:*	Fenny Stratford 3 minutes Bow Brickhill 7 minutes Woburn Sands 11 minutes Aspley Guise 14 minutes Ridgmont 18 minutes Lidlington 21 minutes Millbrook 24 minutes Stewartby 28 minutes Kempston Hardwick 32 minutes Bedford St Johns 38 minutes Bedford 44 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	Bedford to Bletchley commuter service 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	East West Rail Phase 2 proposes to increase services on this route.
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

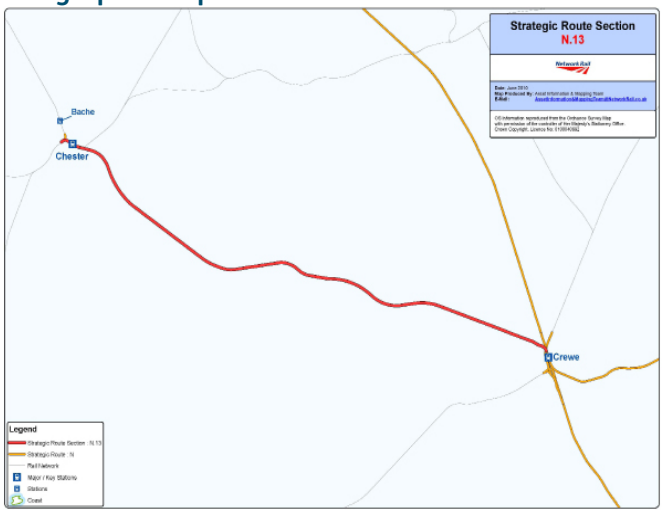
Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
East West Rail: Phase 2	Reinstatement of disused line between Oxford and Aylesbury to Bletchley and Milton Keynes	BBM	2024	Improve East - West connectivity by provision of new journey opportunities and increased service frequency	DfT	In development

SRS N.13 Crewe to Chester

Geographic Map



Route specification description

This SRS forms one section of the North Wales Line, which extends along the coast from Chester to Holyhead. It serves a number of key passenger markets and has a limited number of freight services operating over it. A key passenger market is the long-distance service which operates from Chester to London Euston, which is an hourly, fast direct service.

Regional urban services are provided by Transport for Wales (TfW) Rail Services, operating Holyhead to Crewe services, which serves commuters travelling to Chester and Crewe. Chester provides interchange opportunities for the Merseyrail network and to Warrington on the Mid Cheshire Line (SRS H.45). Crewe acts as a key interchange station providing journey opportunities to the West Midlands, the North and Scotland.

The route is a two-track non-electrified section of 21 miles in length. The line speed is predominantly 90 mph but constrained with short sections of 65mph and 75mph. Along the SRS is Christleton Tunnel, which is located around 177miles 52 chains and is 160 yards long. There are no other stations between Crewe and Chester although there is local interest in the potential for re-opening of a station at Beeston Castle and Tarporley.

Chester maintenance depot is located just to the north of the station.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Crewe North Junction to Holyhead (in part)		
Section start	Crewe North Junction		
Section end	Chester East Junction, before Chester station		
Route availability†	RA8	RA8	
Gauge†	W6a W7 from Crewe to Crewe Steelworks only	W10	
Signals†	Track Circuit Block Absolute Block on siding to Crewe Steelworks	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Predominantly 90 mph 65 mph on approaches to Chester station	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	Not electrified	25kV OHL dependent on industry aspirations.	
Level Crossings†	1	As determined by Level Crossing Policy.	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	Crewe to Chester 19-24 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	***Long-distance:*** London Euston to Chester 1 tph ***Commuter:*** Crewe to Chester 1 tph	Possible changes to service frequency in line with industry aspirations and market requirements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
No confirmed developments at time of publication.						

SRS N.99 Freight lines

Route specification description

There are a number of freight lines along the WCML Strategic Route. For ease of reference, the key information on freight issues have been grouped together in this SRS.

Freight markets

Key freight flows on the West Coast Main Line (WCML) are **intermodal**, both deep sea intermodal from the ports and domestic intermodal from inland terminals for onward distribution. There are also a number of flows which originate in Europe and use the Channel Tunnel. Other flows on the route include timber, construction, metals, automotive, Energy from Waste, and mail traffic.

Deep sea intermodal flows are container flows to and from ports. The main import locations into the UK are Southampton, Thames Gateway and Felixstowe. The major flow over the WCML is from Southampton to the Midlands terminals at Birch Coppice, Hams Hall, Lawley Street and Daventry; to the North West terminals at Garston, Trafford Park and Ditton; and to further destinations in Scotland.

The flows from Felixstowe to the Midlands and North West terminals operate via the North London Line joining the WCML at Willesden Junction or via Peterborough joining the WCML at Nuneaton.

Channel Tunnel intermodal traffic can come from Spain, Italy, France, Belgium, Germany and other EU countries. This traffic operates to single destinations in the UK such as Trafford Park, Daventry, Ditton, and other terminals. Traffic is limited to a current maximum of W9 loading gauge due to constraints in southern England.

Domestic intermodal traffic is the movement of containerised consumer goods within the UK. Daventry International Rail Freight Terminal is the national hub of Anglo-Scottish intermodal traffic. Key flows include time sensitive supermarket traffic which operates between Daventry and Mossend and Grangemouth and Coatbridge.

Mail traffic - Royal Mail trains run daily between Willesden and Shieldmuir in Scotland. These flows are operated by 100 mph rolling stock and are very time sensitive.

There are a number of **bulk flows** across the WCML. Bulk flows include biomass, Energy from Waste, aggregates and china clay.

Aggregate flows are highly dependent on the construction industry and demand tends to be project driven. Aggregate flows operate to terminals at Northampton, Bletchley, Watford and Willesden. At the north end of the route, aggregates are conveyed from Shap and Hardendale quarries to Teesside, Manchester and Sheffield.

There are a number of other flows that use the WCML: these include automotive flows from Halewood (Liverpool) to Southampton and Wembley, scrap metal from Mossend (Glasgow) to Liverpool and a depot at Willesden, timber from Carlisle to Chirk and waste flows to Folly Lane (Runcorn). Other traffic is located in Cumbria and operates via the WCML, as well as a daily Ministry of Defence spine service down the WCML from Scotland.

Freight expansions

There are planned expansions at various ports throughout the country which will have an effect on the WCML. These include developments at Liverpool, Felixstowe, Thames Gateway and Southampton. This will have a significant effect on freight services, particularly intermodal growth.

Third party proposals exist for freight expansion at Ditton and at Daventry terminals (DIRFT3), along with two Strategic Freight Interchanges on the Northampton loop.

Constraints

There are constraints on potential freight growth on the route, particularly around the Crewe Independent Lines and on the two-track section north of Preston. Across the route there are a number of loops: some of these are not long enough for current freight requirements, and are not always located in the most appropriate location for current traffic. Significant growth in both passenger and freight traffic will not be able to be accommodated north of Preston in the future. While long-distance passenger service levels remain unchanged, there will be some scope for freight traffic to grow in line with forecasts depending on the traction type, train length, tonnes hauled and time of day at which new freight paths are required.

The following is a list of freight only lines, trunk routes and other lines which support freight traffic flows across the north of the West Coast Main Line:

Crewe Independent Lines (see also next page)

- **Basford Hall Junction to Sandbach South Junction** (NW1009): This electrified line runs between Basford Hall Junction to the south of Crewe around a number of sidings before diving under the West Coast Main Line and joining the Crewe to Manchester line.
- **Gresty Lane to Salop Goods Junction** (NW1011)
- **Crewe Sorting Sidings North to Gresty Lane** (NW1013)
- **Salop Goods Junction to Crewe North Junction (Chester Independent Lines)** (NW1015): Runs towards Chester.
- **Salop Goods Junction to Crewe Coal Yard (Liverpool Independent Lines)** (NW1017): Runs between the West Coast Main Line to the north of Crewe, the up line dives under the WCML while the down line runs adjacent to the WCML and dives under the lines to Chester towards Salop Goods Junction.

- **Rugby, Trent Valley Junction to New Bilton (MD180):** This is a non-electrified section of line that is located to the north of Rugby and is currently used as sidings.
- **Midland Yard Junction to Canal Farm Junction** (MD233): Known as the Nuneaton North Chord, this is a single chord line that allows trains using the existing flyover from Nuneaton South Junction to directly access the West Coast Main Line to travel north. This allows freight trains to cross the West Coast Main Line without disrupting the four running lines, and benefits the Felixstowe to Manchester and Scotland freight services.
- **Bamfurlong Sidings Junction to Ince Moss Junction** (NW1025): Known as the Ince Moss Chord, this is a non-electrified single line curve just under a mile long joining the West Coast Main Line to the St Helens lines.
- **Preston South Junction to Strand Road** (NW1027): This non-electrified single line section of track is one mile long leading to Preston Docks.
- **Runcorn to Runcorn Dock Branch (Folly Lane)** (NW2003): This non electrified short branch line supports the operation of the Energy from Waste plant built in 2012.
- **Arpley Junction to Ditton East Junction** (NW2009): This eight-mile section of non-electrified double-track line leads from Warrington to Ditton East (in the Liverpool area). Several freight terminals are served by this route.
- **Skew Bridge Junction to Preston North Junction** (NW1001): Goods only lines between CGJ5 20m 41ch and CGJ6 0m 21ch. Line speeds on this section are between 20 and 35mph.
- **Carnforth South Junction to Carnforth North Junction** (NW4001): Goods only lines on CGJ7 from 5m 56ch to 6m 12ch. The line speed over this section is 15 mph.
- **Carlisle Goods Lines** (NW4001): There are a number of goods lines within the Carlisle area with line speeds of 20mph.
- **Caldew Junction – Kingmoor Junction – Mossband Junction** (NW4001): Goods only lines between Caldew Junction (north of Carlisle) and Mossband Junction (towards Gretna Green). These lines serve the Carlisle Kingmoor area complex. Line speeds on these goods lines are between 10mph and 25mph, which restrict the capability and capacity.

Crewe Independent Lines

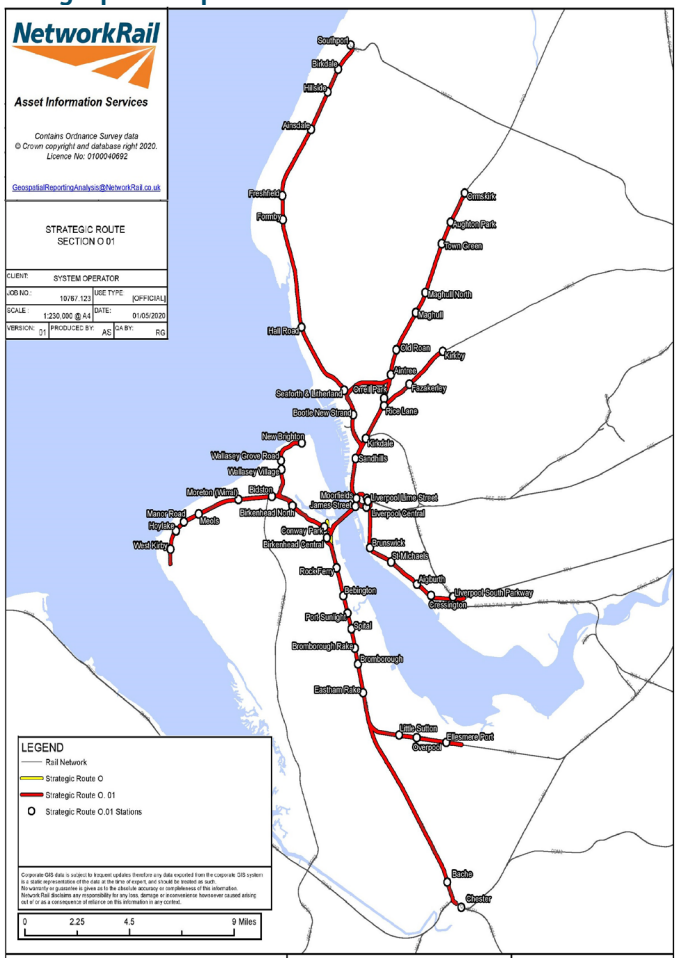
Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Basford Hall Junction to Sandbach South Junction (Independent Lines) Gresty Lane to Salop Goods Junction (Independent Lines) Crewe Sorting Sidings North to Gresty Lane Salop Goods Junction to Crewe North Junction (Chester Independent Lines) Salop Goods Junction to Crewe Coal Yard (Liverpool Independent Lines)		
Route availability†	RA8	RA8	
Gauge†	W10 except for the Salop Goods Junction to Crewe North Junction (Chester Independent Lines) which are W8		
Signals†	Track Circuit Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	10-15 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	25kV		
Level Crossings†	There are no level crossings on these SRS.		
Number of Freight trains per day	Significant number of daily freight trains serving all of the various yards at Crewe.	As per forecasts detailed within Freight Network Study.	
†See Sectional Appendix for further details.			

Arpley Junction to Ditton East Junction

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Arpley Junction to Ditton East Junction		
Route availability†	RA8	RA8	
Gauge†	W9, W10	W12	
Signals†	Track Circuit Block Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	20-40 mph	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock.	
Electrification†	None	25kV OHL dependent on industry aspirations.	
Level Crossings†	8	As determined by Level Crossing Policy.	
Number of Freight trains per day	Significant number of daily freight trains serving Arpley Yard, Fiddlers Ferry Power Station, Ditton and Widnes Yard	As per forecasts detailed within Freight Network Study.	
†See Sectional Appendix for further details.			

SRS O.01 Merseyrail

Geographic Map



Route specification description

The Merseyrail network is a third rail Direct Current (DC) electrified network spread over the Wirral, Merseyside, north Cheshire and south-west Lancashire. The network is split in two parts: the Wirral Line and the Northern Line.

There are four terminus stations on the Wirral Line: New Brighton, West Kirkby, Chester and Ellesmere Port. All stations on this route are connected to Hamilton Square in Birkenhead, and the central Liverpool stations of James Street, Moorfields, Liverpool Lime Street (Low Level) and Liverpool Central, which are served by a one-way, clockwise loop line underneath Liverpool city centre. Liverpool Lime Street Low Level forms an important link to the mainline Liverpool Lime Street station for interchange with services to a wide range of destinations.

The Northern Line operates from Hunts Cross in the south through Liverpool Central and Moorfields, with northerly branches serving Southport, Ormskirk and Kirkby. The Northern Line crosses the Liverpool to Manchester line (also known as the Cheshire Lines Committee) at Hunts Cross West Junction, on the approach to Hunts Cross station. Under normal operation, this is the only part of the network that directly interacts with the rest of the national network, although there are platforms in various stations that can serve both Merseyrail and national network trains. The route also serves Liverpool John Lennon Airport at Liverpool South Parkway and has connections to Manchester, the east, Crewe and the south.

There are 68 stations on the Merseyrail network of which the central four - Liverpool Lime Street (Low Level), Liverpool Central, Moorfields and James Street - are the busiest* in terms of passenger usage. Aside from these, other key stations include Chester, Southport, Liverpool South Parkway and Birkenhead Hamilton Square. Maghull station is one of the top 10 busiest* stations; following significant housing development in the area, Maghull North station was opened in 2018 to help reduce the demand on the existing station and support increased passenger levels in recent years.

Route capability overview

Table 1.0			
Information	**Current**	**2043**	**Notes**
Line of route description	Hunts Cross West Junction to Southport Paradise Junction to James Street/Mann Island Junction Sandhills Junction to Ormskirk Bootle Junction to Aintree Emergency Ground Frame (North Mersey Branch) Walton Junction to Kirkby Mann Island Junction to West Kirby (via Loop) Canning St Junction to Hooton South Junction Bidston East Junction to New Brighton Canning St North to Rock Ferry South (Canning St Lines) Chester West Junction to Hooton South Junction Hooton South Junction to Helsby Junction		
Northern Line terminal and city centre stations	Hunts Cross, Kirkby, Ormskirk, Southport, Moorfields, Liverpool Central.		
Wirral Line terminal and city centre stations	Chester, Ellesmere Port, West Kirby, New Brighton, Hamilton Square, James Street, Moorfields, Lime Street, Liverpool Central.		
Route availability†	RA6, RA7, RA8		
Gauge†	W6		
Signals†	Track Circuit Block, Absolute Block	Subject to the rollout programme of European Rail Traffic Management System (ERTMS).	
Predominant Linespeed†	Various speeds on the network: mostly 35-45 mph in central Liverpool with the rest of the network mostly 60mph with a 70mph section between Hooton and Chester.	Incremental linespeed improvements where possible in line with infrastructure characteristics and capability of rolling stock,	
Electrification†	750 volt DC third rail	Dependent on industry aspirations,	
Level Crossings†	25	As determined by Level Crossing Policy,	
†See Sectional Appendix for further details.			

Train service levels (trains per hour / day)

Table 2.0

	Current	2043	Notes
Typical passenger train journey time	*Liverpool Central to:* Chester 40 minutes Ellesmere Port 37 minutes West Kirby 32 minutes New Brighton 23 minutes Southport 44 minutes Hunts Cross 17 minutes Ormskirk 32 minutes Kirkby 18 minutes	Reduce journey time to lowest possible in line with linespeed improvements and changes in rolling stock.	All future service specifications to be shaped by Strategic Network Planning.
No. of passenger trains per hour (tph)	*Liverpool Central to:* Chester 4 tph Ellesmere Port 2 tph West Kirby 4 tph New Brighton 4 tph Southport 4 tph Hunts Cross 4 tph Ormskirk 4 tph Kirkby 4 tph	Possible changes to service frequency in line with industry aspirations and market requriements.	
No. of freight train paths per hour	See working timetable for up to date information.	As per forecasts detailed within Freight Network Study.	

Proposed infrastructure investment in Control Period 6 (2019 – 2024)

Table 3.0

Project	Project Description	ELR	Implementation Date	Output change	Funder	Status
New Rolling Stock Programme - Train Connectivity	Introduce a dedicated track to train wireless communications system allowing live streaming of CCTV images and voice/data communications	Merseyrail network	2021/2022	Track to train wireless communications	3rd Party	In development
Headbolt Lane new station	New station proposal, including an extension of the Merseyrail network beyond the current terminus at Kirkby	WKL2	2023	New station on an extended section of the Merseyrail network	3rd Party	In development
Liverpool Central Station Development	Project seeking to enhance capacity at Liverpool Central station	MIR1	2025	Redeveloped station at Liverpool Central	3rd Party	In development
Skelmersdale Rail Link	To create a rail link for Skelmersdale to Liverpool via Kirkby and to Manchester via Wigan Wallgate		2027/2028	New station and rail link at Skelmersdale	3rd Party	In development

Glossary

Term	Meaning
Absolute Block (AB)	A signalling system that allows only one train to be in a block section at the same time. The block indicator is used to indicate whether the line between adjacent signal boxes is clear or occupied.
AC	Alternating Current
Busiest*	Busiest station based on ORR figures for estimation of station usage 2018/19.
Control Period	A five year period where Network Rail receive funding from the government in order to upgrade and maintain the railway infrastructure.
Control Period 6 (CP6)	The 2019-2024 period
DC	Direct Current
DfT	Department for Transport
ELR	Engineer's Line Reference
European Rail Traffic Management System (ERTMS)	ERTMS is a traffic management system which is specified by Europe to provide a unified signalling and control system throughout the European area. A key component of ERTMS is the on-board signalling equipment (referred to as the European Train Control System or ETCS). A signalling system that uses in cab indications as opposed to external track borne signals.
FOC	Freight Operating Company
Gauge	Structure Gauge is the minimum height and width of tunnels and bridges as well as the minimum height and width of the doors that allow a rail siding access into a warehouse The loading gauge limits the size of passenger carriages, goods wagons (freight cars) and shipping containers that can be conveyed on a section of railway line, depending on the gauge of the line.
GRIP	Governance for Railway Investment Projects
HLOS	High Level Output Specification
HS1	High Speed 1 – the high speed link between St Pancras International and the Channel Tunnel
HS2	High Speed 2 – the proposed high speed link between London and Crewe and beyond to Leeds and Manchester
kV	A thousand volts
LTPP	Long Term Planning Process
LUL	London Underground Ltd, a subsidiary of Transport for London (TfL)
mph	Miles per Hour
National Electronic Sectional Appendix (NESA)	NESA is available at nesa.corp.ukrail.net/
Route Availability (RA)	The system by which the permanent way (track) and supporting works (bridges, embankments, etc.) of the network are graded. All routes are allocated an RA number between 1 and 10, all rolling stock is also given an RA number of 1-10 depending on its axle load. The train/rolling stock must have an RA of lower than or equal to that of the line to be allowed to use it.
OHL	Overhead Line Equipment
ORR	Office of Rail and Road (the regulator for the rail industry in Great Britain)
SRS	Strategic Route Section
TASS	Tilt Authorisation and Speed Supervision
TOC	Train Operating Company
Token Block	A signalling system whereby authority to occupy a block is provided by possession of a token that is obtained in such a way that only one train is in a section of track at a time.
Track Circuit Block (TCB)	A method of signalling trains in a section of line using track circuits or other means of automatic train absence detection and without using block instruments. A track circuit is an electrical device which uses the rails as an electrical circuit to detect the absence of a train or vehicle.
WCML	West Coast Main Line

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