Delivering a better railway for a better Britain

Route Specifications 2017

Scotland

Scotland

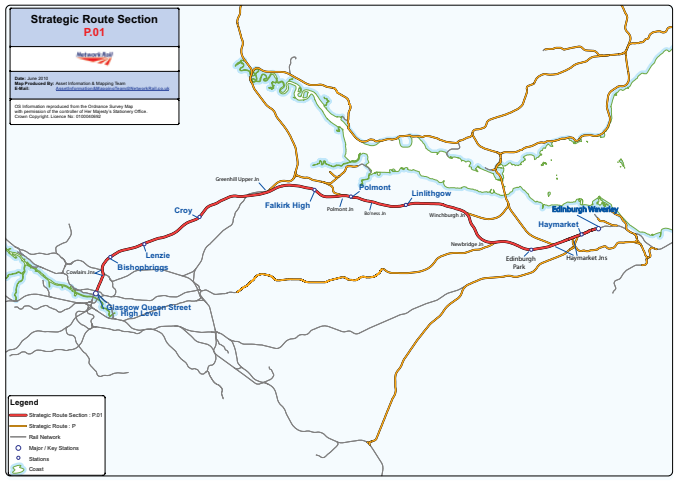
Route P: Scotland East

Route Q: Scotland West

Interface with other Routes

SRS P.01 Glasgow Queen Street to Edinburgh Waverley

Geographic Map



Route specification description

The route is two track throughout, starts at Glasgow Queen Street High Level, runs for 47 miles to Edinburgh Waverley via Falkirk High and is not electrified apart from the section between Newbridge Junction and Edinburgh Waverley. Glasgow Queen Street High Level has seven platforms all used by ScotRail for interurban services to Edinburgh, Aberdeen and Inverness, rural services to Oban, Fort William & Mallaig and local suburban services. The station area is accessed via a two track approach from the tunnel which extends to seven lines in the station area, none of which are electrified. Electrification is currently in construction.

Edinburgh Waverley has 18 platforms of which nine are through and nine are bay platforms and all are electrified. The expansive station area is accessed via a two track approach from the east via Abbeyhill Junction and a four track approach from the west via Haymarket. Although ScotRail uses the majority of the platforms for its interurban and local services, several platforms are shared by long distance high speed services operated by Virgin Trains East Coast to/from London King's Cross, by CrossCountry to the Midlands and Plymouth, by Virgin Trains to Birmingham New Street, by First TransPennine Express (FTPE) to Manchester Airport and by Serco for the Caledonian Sleeper services.

Works to lengthen Linlithgow, Polmont, Falkirk High and Croy Stations to accommodate 8-carriage length trains is currently underway. A Transport and Works Order (Scotland) application has been made to Scottish Ministers to authorise redevelopment of Queen Street Station. These works will include platform lengthening to accommodate 8-carriage length trains.

There are eight intermediate stations along the route – Bishopbriggs, Lenzie, Croy, Falkirk High, Polmont, Linlithgow, Edinburgh Park and Haymarket. ScotRail runs four trains per hour (tph) between Edinburgh Waverley and Glasgow Queen Street High Level between 07:00 – 19:30 as well as a number of local services on various sections of the route. It is predominantly a passenger route with only three freight trains per day using various sections. There are two ScotRail depots on the route, Eastfield cleaning and servicing depot in Glasgow and Haymarket maintenance depot in Edinburgh.

Haymarket East Junction leads from the main Edinburgh to Glasgow (E&G) line to Carstairs and beyond and is the main feeder line for West Coast Main Line (WCML) long distance high speed traffic to/from Edinburgh Waverley as well as ScotRail suburban traffic to Glasgow Central via Shotts and Carstairs.

Haymarket Central Junction leads from the main E&G line to Gorgie Junction and the Edinburgh Suburban line and is predominantly used by ScotRail for stock moves.

Haymarket West Junction leads from the main E&G line to Gorgie Junction and the Edinburgh Suburban line and is predominantly used by freight traffic bypassing Edinburgh Waverley station destined for terminals west and north of Edinburgh.

Newbridge Junction leads from the main E&G line to Bathgate and Helensburgh via Glasgow Queen Street Low Level station.

Winchburgh Junction leads from the main E&G line to Dalmeny, Fife and Aberdeen via the Forth Bridge.

Bo'ness Junction leads from the main line onto the private single track line of the Bo'ness & Kinneil Railway which is used for heritage services.

Polmont Junction leads from the main E&G line to Stirling and the north via Carmuirs East Junction and south to Mossend and beyond via Greenhill Lower Junction.

Greenhill Upper Junction leads from the main E&G line east to Falkirk Grahamston, Grangemouth freight terminals and beyond and north to Stirling, Inverness and Aberdeen.

Cowlairs East Junction leads from the main E&G line on to the Maryhill Branch and is used by occasional freight traffic.

Cowlairs West Junction leads from the main E&G line east to Springburn and beyond and west to the Maryhill Branch, Glasgow North Electrics and the West Highland Line (WHL).

Cowlairs South Junction leads from the main E&G line via the Cowlairs Chord to Springburn.

SRS P.01 Glasgow Queen Street to Edinburgh Waverley

Route capability overview

Table 1				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	Edinburgh Waverley to Glasgow Queen Street (via Falkirk High)			
Section Start	Edinburgh Waverley			
Section End	Glasgow Queen Street			
Route Availability (RA)	RA8 Glasgow Queen Street High Level to Cowlairs East Junction. RA10 Cowlairs East Junction to Edinburgh Waverley	RA8 Glasgow Queen Street High Level to Cowlairs East Junction. RA10 Cowlairs East Junction to Edinburgh Waverley	RA8 Glasgow Queen Street High Level to Cowlairs East Junction. RA10 Cowlairs East Junction to Edinburgh Waverley	
Gauge	W6 – 10	W6 – 12	W6 – 12	
Signals	3 aspect from Edinburgh IECC (excluding Greenhill Jn)	3 aspect controlled from Edinburgh IECC (including Greenhill Jn)	ERTMS	
Speed **See Sectional Appendix for detailed speed profiles**	80 – 100 mph	80 – 100 mph		
Electrification	Newbridge Junction to Edinburgh Waverley	Glasgow Queen Street to Edinburgh Waverley		

Passenger train service level (trains per hour/day)

Table 2				
Days Of Week	**Current**	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Journey	Glasgow Queen Street High Level to Edinburgh Waverley			
Average end to end Journey time	50 minutes	42 – 44 minutes based on current stopping pattern		
No. of trains per hour (tph)	4 end to end express (3/6-car) 2 express from Glasgow Queen Street towards Stirling 4 local trains from Glasgow Queen Street (2 each towards Anniesland (via Maryhill) and Stirling) 6 local trains from Edinburgh Waverley (4 towards Bathgate, 2 towards Stirling) 1 Glasgow Queen Street to Falkirk Grahamston via Cumbernauld	4 end to end express (4/8-car) 2 express from Glasgow Queen Street towards Stirling/Dundee/Aberdeen 1 express from Glasgow Queen Street towards Stirling/Inverness every other hour 2 local trains towards Stirling 2 local trains from Glasgow Queen Street to Anniesland (via Maryhill) 1 Glasgow Queen Street to Falkirk Grahamston via Cumbernauld 1 Glasgow Queen Street to Cumbernauld 6 local trains from Edinburgh Waverley (4 towards Bathgate, 2 towards Stirling)	Glasgow Queen Street to Aberdeen - 1 or 2 ott per hour (2 hr fastest journey time) Glasgow Queen Street to Perth/Dundee/Arbroath - 1 or 2 ott per hour Glasgow Queen Street to Inverness - 1 or 2 ott per hour (2hr 30 mins fastest journey time) Glasgow Queen Street to Edinburgh Waverley (via Falkirk High) - 4 to 6 ott per hour (30 min fastest journey time) Glasgow Queen Street to Larbert/Stirling/Alloa - 2 to 4 ott per hour Glasgow Queen Street to Falkirk Grahamston - 1 or 2 ott per hour Edinburgh Waverley to Falkirk Grahamston/Dunblane - 2 to 4 ott per hour (reduce fastest journey time by 15 mins) Edinburgh Waverley to Glasgow Queen Street (via Drumgelloch) - 4 to 6 ott per hour (1 hr fastest journey time)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS P.01 Glasgow Queen Street to Edinburgh Waverley

Waverley Station

Current freight trains (paths per day)

Table 3				
	Current	2019	2043	Notes
Route Section	Cowlairs West Junction to Edinburgh Waverley			
Daily paths in one direction (as per WTT)	3 over parts of the route	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this SRS.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 4

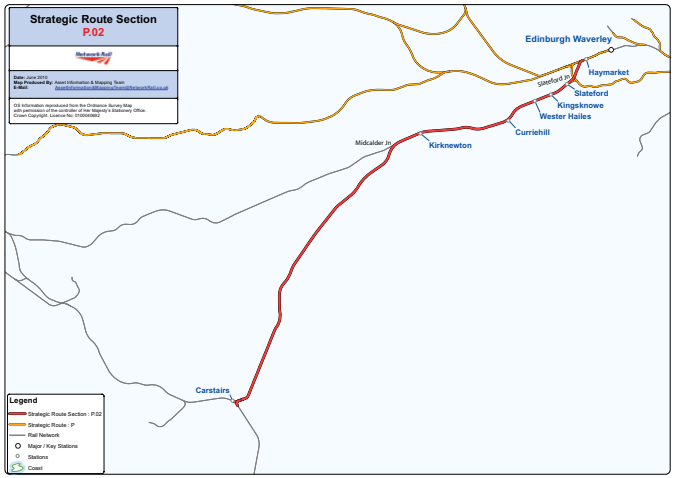
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Cowlairs South & West Junctions	S&C Renewal and Linespeed Increase	EGM1	2015/16	Asset renewal and capability enhancement		Complete
Edinburgh to Glasgow Improvement Programme Key Output 1	Glasgow Queen Street HL to Newbridge Junction (via Falkirk High) Electrification Cumbernauld to Greenhill Lower Junction Electrification - completed Glasgow Queen Street HL Station Capacity Platform Extensions at Croy, Falkirk High, Polmont & Linlithgow Edinburgh Waverley Station Capacity including platform extensions	EGM1	2017	Capacity and capability enhancement		In construction
IEP enabling works from Edinburgh Waverley to Polmont Junction	Infrastructure works to accommodate operation of IEP rolling stock	EGM1 EGM2	CP5	Ability to accommodate IEP services		In construction
Edinburgh to Glasgow Improvement Programme Key Outputs 3 & 4	Glasgow Queen Street HL Station : Capacity for 8-carriage length trains and station redevelopment Edinburgh to Glasgow linespeed improvements	EGM1	2019	Capacity and capability enhancement		In development
Greenhill Junction Grade Separation	Enhancing the infrastructure at this key location will provide a more flexible and better performing timetable which will improve journey times and enable more trains to operate.	EGM1 SCM3	TBA	Improve journey times and performance		In development
Edinburgh Waverley Western Approach Enhancements	This option will enhance a key location in order to remove constraints in the Winchburgh/ Newbridge /Haymarket to Inverkeithing corridors to robustly accommodate forecast passenger and freight demand.	ECN2 EGM3	TBA	Improve capacity to accommodate future passsenger and freight demand		In development

* In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.02 Carstairs to Edinburgh

Geographic Map



Route specification description

The route is electrified, two track throughout and runs from Carstairs Junctions via Midcalder to Edinburgh Haymarket. It is part of the Anglo Scottish passenger route from Glasgow Central via the East Coast Main Line (ECML) and Edinburgh Waverley via the West Coast Main Line (WCML). There are five intermediate stations; Kirknewton, Curriehill, Wester Hailes, Slateford and Haymarket served by the ScotRail Glasgow Central – Edinburgh Waverley via Shotts service. ScotRail also operates an approx two hourly service between Glasgow Central and Edinburgh Waverley via Carstairs. Other passenger operators on the route include First TransPennine Express (FTPE) which operates a two hourly service from Edinburgh Waverley to Manchester Airport, Virgin Trains which operates a two hourly long distance service between Edinburgh Waverley and Birmingham New Street (via Carlisle) and CrossCountry which operates a two hourly service from Glasgow Central to Plymouth/ Penzance via Edinburgh Waverley.

The section between Midcalder Junction and Slateford Junction is part of the main east – west arterial freight route conveying a mix of traffic including intermodal, cement and steel.

Slateford Junction leads from the main line on to the Edinburgh Suburban Line and conveys mostly freight traffic to Millerhill and the ECML.

Midcalder Junction leads from the main line to Shotts, the west of Scotland and beyond.

Carstairs East Junction leads from the main line north to Carstairs station, Motherwell and beyond.

Carstairs South Junction leads from the main line south via WCML to Carlisle and beyond.

Route capability overview

Table 5				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	Carstairs to Edinburgh			
Section Start	Carstairs Station and South Junctions			
Section End	Haymarket			
Route Availability (RA)	10			*STNC to RA8
Gauge	W12			
Signals	2, 3 & 4 aspect controlled from Motherwell & Edinburgh IECC	2, 3 & 4 aspect controlled from West of Scotland Signalling Centre (WSSC) & Edinburgh IECC	ERTMS	
Speed See Sectional Appendix for detailed speed profiles	70 - 95 mph			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 6				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	25 – 30 mins	25 – 30 mins		All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour (tph)	1 – 2 Long distance services per hour towards Glasgow Central / Carlisle 1 express service to Glasgow Central via Shotts 1 local service to Glasgow Central via Shotts 1 express service to Glasgow Central via Carstairs approx two hourly	2 – 3 Long distance services per hour towards Glasgow Central /Carlisle 1 express service to Glasgow Central via Shotts 1 local service to Glasgow Central via Shotts 1 express service to Glasgow Central via Carstairs approx two hourly	Edinburgh Waverley to Carstairs/Carlisle - 6 Long Distance High Speed ott per hour Edinburgh Waverley to Glasgow Central High Level (via Carstairs) - 1 or 2 ott per hour (45 minute fastest journey time) Edinburgh Waverley to Glasgow central High level (via Shotts) - 2 or 3 ott per hour (45 minute fastsest journey time)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Carstairs Station

Current freight trains (paths per day)

Table 7				
	Current	**2019**	**2043**	**Notes**
Route Section	Carstairs to Edinburgh			
Daily paths in one direction (as per WTT)	12	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 8				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	2 1 4**	2 * 1 4	As determined by Level Crossing policy	* MCB-OD is Supervised instead of Automatic ** footpath crossings

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 9

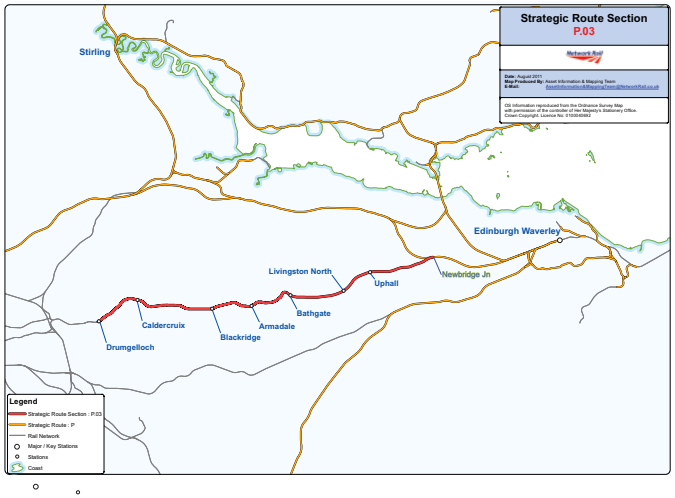
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
ECML (North) to WCML Gauge Enhancement	Gauge clear the route to W10 and W12	ECA2	2016	To accommodate the carriage of deep sea container traffic from East Coast Ports to Scotland (Mossend)		Completed
Kingsknowe Level Crossing Upgrade	The level crossing is being developed to upgrade to MCB-OD	ECA2	2016/17	Upgrade to MCB-OD crossing and increase capacity		Completed
Edinburgh Suburban Enhancements Programme: Slateford Jn Capacity Improvement	To increase capacity and capability	ECA2	CP6	To increase capacity capability		In development
Edinburgh Suburban Enhancements Programme: Currie Feeder Station	Upgrade of the existing Track Sectioning Location (TSL) to a new feeder station	ECA2	CP6	Supports current and forecast electrification needs		In development
Haymarket to Carstairs Linespeed Improvements	Strengthening of Linhouse Viaduct	ECA2	CP6	Capability enhancement		In development
Carstairs Junction Remodelling	Carstairs area enhancements in conjunction with renewal of life expired assets and requirements for HS2 services from 2026	WCM1 WCM2 ECA2	CP6	Optimise capacity and capability of assets in the Carstairs area		In development

* In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.03 Newbridge to Drumgelloch

Geographic Map



Route specification description

The route runs from Drumgelloch to Newbridge Junction where it joins the main Edinburgh – Glasgow (E&G) line to Edinburgh Waverley. It is two track and electrified throughout. There are seven stations along the route and all are served by the Helensburgh/Milngavie – Edinburgh Waverley via Bathgate service operated by ScotRail and running four trains per hour. There is a ScotRail traincare depot at Bathgate. There is currently no freight traffic timetabled over the route.

Route capability overview

Table 10

Information	Current	2019	2043	Notes
Line of Route Description	Drumgelloch to Newbridge Junction			
Section Start	Drumgelloch			
Section End	Newbridge Junction			
Route Availability (RA)	10			
Gauge	W10			
Signals	2 & 3 aspect controlled from Edinburgh IECC		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	90 mph maximum			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 11				
	Current	2019	2043 Opportunities to Travel (ott)	Notes
Typical Journey time	30 mins			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour (tph)	4 trains (2 limited stop services and 2 stopping services)	4 trains (2 limited stop services and 2 stopping services)	Edinburgh Waverley to Glasgow Queen Street (via Drumgelloch) - 4 to 6 ott per hour (1 hour fastest journey time)	

Current freight trains (paths per day)

There is no freight traffic on this route section

In times of perturbation, this can be used as a diversionary route.

Level Crossings on route

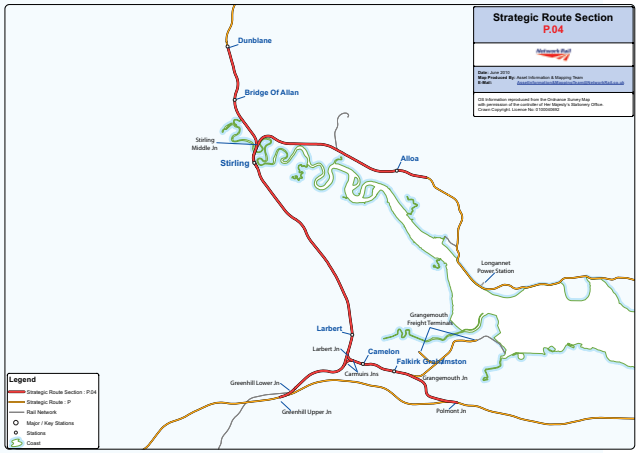
There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS P.04 Dunblane/Alloa to Polmont Junction/ Greenhill Upper Junction

Geographic Map



Route specification description

The route runs from Dunblane south to Greenhill Upper Junction with spurs to Alloa and to Polmont Junction via Falkirk Grahamston. It is not electrified and is double track throughout apart from the Alloa Branch which is single track with passing loops. The main passenger services operated by ScotRail are the Dunblane/Alloa to Edinburgh/Glasgow services and the route is also used by services to Aberdeen and Inverness/Stirling from Glasgow Queen Street. There are two Virgin Trains East Coast service per day to Inverness from London King's Cross and one Caledonian Sleeper service from London Euston to Inverness. The section is used by a variety of freight traffic, notably intermodal and cement to Inverness and Aberdeen , traffic to/from Georgemas and intermodal and petroleum traffic to the Grangemouth freight terminals.

Stirling Middle Junction leads from the main line to Alloa, Longannet Power Station and the freight artery into Fife.

Larbert Junction leads from the main line to Carmuirs East and West Junctions.

Carmuirs East Junction leads from the main line to Falkirk Grahamston and Polmont Junction.

Carmuirs West Junction leads from the main line to Greenhill Lower Junction.

Grangemouth Junction leads from the main line to the Grangemouth freight branch.

Polmont Junction leads on to the Edinburgh – Glasgow (E&G) main line.

Greenhill Lower Junction leads from the main line to Cumbernauld, Glasgow, Mossend and beyond.

Greenhill Upper Junction leads on to the E&G main line.

Route capability overview

Table 13				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	Dunblane/Alloa to Polmont Junction/Greenhill Upper Junction			
Section Start	Dunblane			
Section End	Greenhill Lower Junction/Polmont Junction			
Route Availability (RA)	10			
Gauge	W8 & W9	W10 & W12		Aspiration for W10 and W12 from electrification of the route between Greenhill Lower and Grangemouth
Signals	2 and 3 aspect controlled from manual signal boxes.	2 and 3 aspect controlled from Edinburgh IECC	ERTMS	ERTMS
Speed See Sectional Appendix for detailed speed profiles	95 mph max.	100 mph		Electrification of the route may permit higher linespeed
Electrification	No	Yes		

Passenger train service level (trains per hour/day)

Table 14				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	Dunblane to Greenhill Upper Junction = 22 minutes Alloa Branch = 10 minutes Carmuirs Junction to Polmont Junction = 11 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour (tph)	Alloa to Glasgow Queen Street = 1 tph Dunblane to Edinburgh Waverley = 2 tph Dunblane/Stirling to Glasgow Queen Street = 1 tph Glasgow Queen Street to Aberdeen = 1 tph Glasgow Queen Street to Perth/Dundee/ Inverness = up to 1 tph Falkirk Grahamston to Glasgow Queen Street = 1 tph Inverness to London Euston = 1 sleeper train per day Inverness to London King's Cross = 1 train per day Stirling to London King's Cross = 1 train per day	Alloa to Glasgow Queen Street = 1 tph Dunblane to Edinburgh Waverley = 2 tph Dunblane/Stirling to Glasgow Queen Street = 1 tph Glasgow Queen Street to Aberdeen = 1 tph Glasgow Queen Street to Arroath = 1 tph Glasgow Queen Street to Perth/Dundee/Inverness = up to 1 tph Falkirk Grahamston to Glasgow Queen Street = 1 tph Inverness to London Euston = 1 sleeper train per day Inverness to London King's Cross = 1 train per day Stirling to London King's Cross = 1 train per day	Glasgow Queen Street to Aberdeen - 1 or 2 ott per hour (2 hr fastest journey time) Glasgow Queen Street to Perth/Dundee/Arbroath - 1 or 2 ott per hour Glasgow Queen Street to Inverness - 1 or 2 ott per hour (2hr 30 mins fastest journey time) Glasgow Queen Street to Larbert/Stirling/Alloa - 2 to 4 ott per hour Glasgow Queen Street to Falkirk Grahamston - 1 or 2 ott per hour Edinburgh Waverley to Falkirk Grahamston/Dunblane - 2 to 4 ott per hour (reduce fastest journey time by 15 mins)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS P.04 Dunblane/Alloa to Polmont Junction/ Greenhill Upper Junction

Stirling Station

Current freight trains (paths per day)

Table 15				
	Current	2019	2043	Notes
Route Section	Dunblane/Alloa to Polmont Junction/Greenhill Upper Junction			
Daily paths in one direction (as per WTT)	Dunblane to Greenhill Upper Junction = 8 Alloa Branch = 0 Carmuirs Junction to Polmont Junction = 12	As per forecasts in the Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 16				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	3 1 2	As determined by Level Crossing policy	As determined by Level Crossing policy	Proposed closure of:- -St Ninians in 2017/18 -Cornton No.1 and No.2

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 17

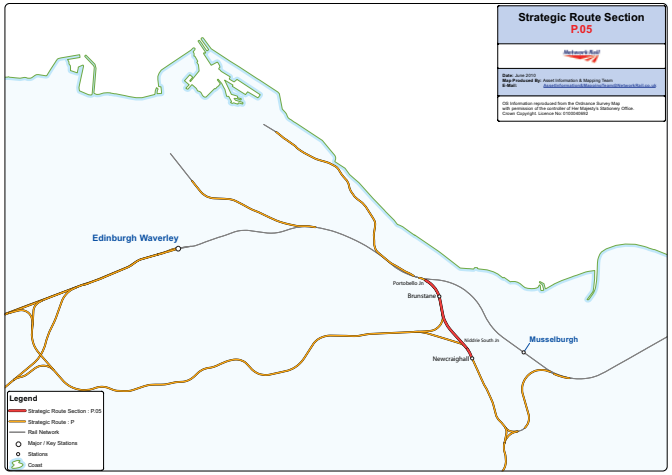
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Larbert North S&C renewal/ enhancement	S&C Remodel, provision of turnback facility and engineering sidings	SCM3	2016/17	Capacity and capability		Completed
IEP development/enabling works	Infrastructure works to accommodate operation of IEP rolling stock	SCM3 PMT	CP5	Ability to accommodate IEP services		In construction
St Ninians Level Crossing Closure	Level Crossing Closure	SCM3	2017/18	Safety risk reduction		In construction
Carmuirs West Jn Remodelling	Linespeed improvements	SCM3	2017/18	Capability		In construction
Electrification to Dunblane, Stirling and Alloa	Ongoing programme of electrification	SCM3 PMT SAA	December 2018	Capacity and capability enhancement		.In development
Scotland Accelerated National Operating Strategy	Centralise control of Greenhill, Grangemouth Jn, Carmuirs East & Larbert North signal boxes to Edinburgh Signalling Centre	SCM3	2018	Capability		In construction
Cornton No1 and No2 Public Level Crossing Closure	Level Crossing Closure	SCM3	CP5	Safety risk reduction		In development
Greenhill Upper to Larbert Linespeed improvement	To increase the linespeed of the route	SCM3	CP5/CP6	Capability improvement		In development
Greenhill Junction Grade Separation	Enhancing the infrastructure at this key location will provide a more flexible and better performing timetable which will improve journey times and enable more trains to operate.	SCM3	TBA	Capability		In development

* In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.05 Newcraighall to Portobello Junction

Geographic Map



Route specification description

The route runs from Newcraighall to Portobello Junction where it joins the East Coast Main Line (ECML). It is approx 1½ miles long, single track and electrified. There is a half hourly through Newcraighall – Edinburgh Waverley from Tweedbank operated by ScotRail which also serves Brunstane, the only intermediate station on the route. The route is lightly used by freight. A spur was installed from the main line at Newcraighall to connect to the new Borders Line which opened in 2015.

Niddrie South Junction leads from the Up Millerhill line on to the Edinburgh Suburban Line and towards Portobello Junction and ECML.

Route capability overview

Table 18

Information	Current	2019	2043	Notes
Line of Route Description	Newcraighall to Portobello Junction			
Section Start	Newcraighall			
Section End	Portobello Junction			
Route Availability (RA)	10			
Gauge	W9			
Signals	3/4 aspect controlled from Edinburgh IECC		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	30 mph			*30 mph Newcraighall – Portobello Junction Max 85 mph for Borders Line
Electrification	Yes			* Newcraighall – Portobello Junction only electrified

Passenger train service level (trains per hour/day)

Table 19				
	Current	2019	2043 Opportunities to Travel (ott)	Notes
Typical Journey time	5 minutes			
No. of trains per hour (tph)	Tweedbank/ Newcraighall to Edinburgh Waverley = 2 tph	Tweedbank/ Newcraighall to Edinburgh Waverley = 2 tph	Edinburgh Waverley to Tweedbank - 3 or 4 ott per hour (reduce fastest journey time by 20 minutes)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

Table 20				
	Current	2019	2043	Notes
Route Section	Newcraighall to Portobello Junction			
Daily paths in one direction (as per WTT)	2	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 21

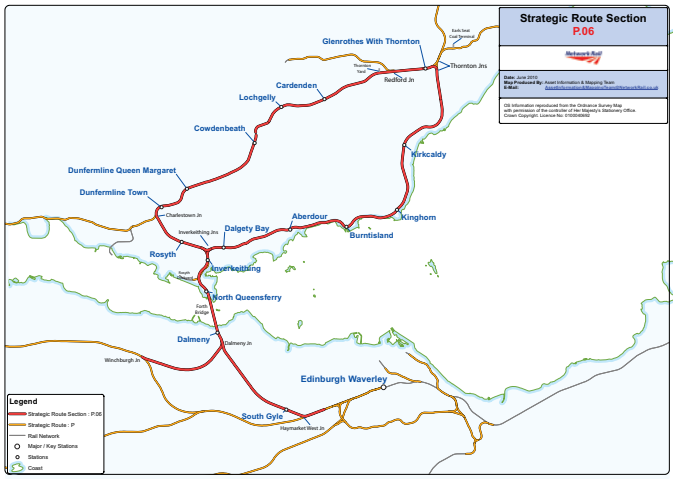
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Gauge enhancement to W10 and W12 gauge at Newcraighall and Edinburgh Suburban Line	W10 & W12 gauge enhancement	NDE1	2016	To accommodate the carriage of deep sea container traffic from East Coast ports to Scotland		Completed
Edinburgh to Glasgow Improvement Programme - Millerhill Stabling	Provide stabling facility for ScotRail	NDE1	2017	To increase stabling capacity and capability		In construction
Edinburgh Suburban Enhancements Programme: Portobello Junction doubling	Provide double junction with option for second platform at Brunstane.	NDE1 ECM8	CP5/CP6	To increase capacity and linespeed through the junction		In development
Edinburgh Suburban Enhancements Programme: Millerhill Yard Signalled Route	Provide fully signalled route from Monktonhall Junction to Niddrie South Junction.	NDE1 MHL2/3	CP6	To increase capacity		In development

* In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.06 Fife Circle

Geographic Map



Route specification description

The route runs from Thornton Junction via Cowdenbeath to Inverkeithing and via Kirkcaldy to Inverkeithing, south to Forth Bridge and splits at Dalmeny to Haymarket West Junction and to Winchburgh Junction. It is two track throughout and not electrified. ScotRail operates a half hourly Fife Circle service to Newcraighall via Edinburgh Waverley. There are also additional local services between Fife and Edinburgh and Inverness/Aberdeen/Dundee – Edinburgh Waverley services also use part of the route. CrossCountry operate Aberdeen/Dundee – Plymouth services over part of the route and Virgin Trains East Coast operate London King's Cross – Aberdeen services. Serco operate a daily sleeper service over part of the route. The route is also lightly used by freight with only three timetabled trains per day.

There is potential scope within this route section for some platform extensions to accommodate the new IEP trains.

Redford Junction leads from the main line to the east end of Thornton Yard and the currently out of use Westfield Branch.

Clunybridge Junction leads from the main line into the west end of Thornton Yard.

Charlestown Junction leads from the main line to Alloa and Dunfermline.

Inverkeithing North Junction leads from the main line via the north curve to Inverkeithing East Junction.

Inverkeithing East Junction leads from the main line via the north curve to Inverkeithing North Junction.

Inverkeithing Central Junction leads from the main line to Inverkeithing North and East Junctions.

Inverkeithing South Junction leads from the main line to Rosyth Dockyard.

Dalmeny Junction leads from the main line, west to Winchburgh Junction, Polmont and beyond and east to Haymarket and Edinburgh Waverley.

Route capability overview

Table 22				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	Fife Circle, Dalmeny to Winchburgh & Haymarket West Junctions			
Section Start	Thornton Junction			
Section End	Winchburgh Junction/Haymarket West Junction			
Route Availability(RA)	8			
Gauge	W7/8	W7/8	W7/8	Future aspiration for W12 from Dunfermline to Methil
Signals	2 and 3 aspect controlled from Edinburgh IECC		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	70 – 100 mph			
Electrification	No	No	Yes	

Passenger train service level (trains per hour/day)

Table 23				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	1 hour			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Edinburgh Waverley to Fife = 4 tph Edinburgh Waverley to Dundee/Aberdeen = 2 tph Edinburgh Waverley to Perth/Inverness = 1 tph London King's Cross/Leeds to Aberdeen = 4 trains per day Aberdeen/London Euston = 1 sleeper train per day Aberdeen/Dundee to Penzance/Plymouth = 2 trains per day	Edinburgh Waverley to Fife = 4 tph Edinburgh Waverley to Dundee/Aberdeen = 2 tph Edinburgh Waverley to Perth/Inverness = 1 tph London King's Cross/Leeds to Aberdeen = 4 trains per day Aberdeen/London Euston = 1 sleeper train per day Aberdeen/Dundee to Penzance/Plymouth = 2 trains per day	Edinburgh Waverley to Fife - 4 to 6 ott per hour Edinburgh Waverley to Aberdeen - 1 or 2 ott per hour (1hr 45 mins fastest journey time) Edinburgh Waverley to Dundee - 1 or 2 ott per hour Edinburgh Waverley to Inverness - 1 or 2 ott per hour (2 hr 45 mins fastest journey time) Edinburgh Waverley to Perth - 1 or 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

Table 24				
	Current	2019	2043	Notes
Route Section	Fife Circle, Dalmeny to Winchburgh & Haymarket West Junctions			
Daily paths in one direction (as per WTT)	3	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 25				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised	1	As determined by Level Crossing policy	As determined by Level Crossing policy	Aspiration to close Halbeath Level Crossing

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

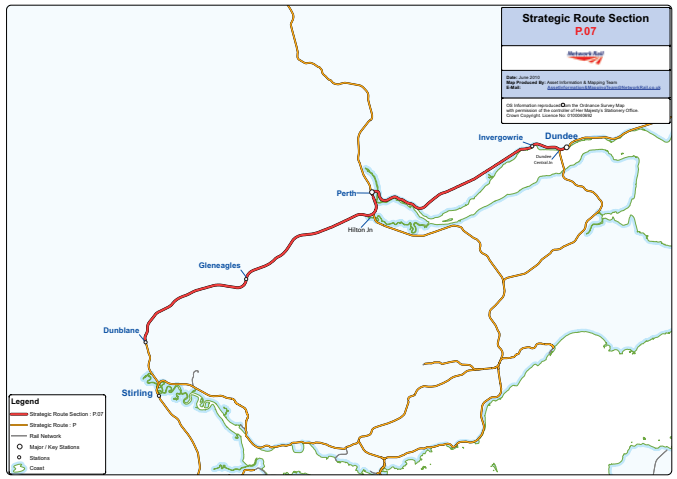
Table 26						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Edinburgh Gateway	EGIP Key Output 1 - New station	ECN2	2016	Capacity enhancement		Completed
IEP development/enabling works	Infrastructure works to accommodate operation of IEP rolling stock	ECN2	CP5	Ability to accommodate IEP services		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.07 Dundee to Dunblane

Geographic Map



Route specification description

The route runs from Dundee, south via Perth to Dunblane, is two track throughout apart from the single line section between Barnhill and Perth and is not electrified. ScotRail operates its Aberdeen/ Inverness/Dundee/Perth – Glasgow Queen Street services over the route and Virgin Trains East Coast runs one train (each way) per day between Inverness and London King's Cross. In addition Serco operate a daily sleeper service between Inverness and London Euston over part of the route. There are three intermediate stations at Invergowrie, Perth and Gleneagles. There are up to nine freight trains per day from the Central Belt to Aberdeen/Inverness.

Dundee Central Junction also runs from the main line via Tay Bridge south to Ladybank and beyond.

Hilton Junction runs from the main line to Ladybank and beyond.

The Highland Mainline to Inverness branches off at Perth.

Route capability overview

Table 27

Information	Current	2019	2043	Notes
Line of Route Description	**Dundee to Dunblane**			
Section Start	Dundee			
Section End	Dunblane			
Route Availability (RA)	RA10			
Gauge	W8S		W10 & W12	
Signals	Mixture of 2 aspect and semaphore controlled from small boxes along the route with isolated pockets of multiple aspect signalling		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	100 mph maximum			Electrification of the route may permit higher linespeed
Electrification	No	No*	Yes	*Electrification to Perth is proposed for CP6/7

Passenger train service level (trains per hour/day)

Table 28				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	50 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Queen Street – Aberdeen = 1 tph Glasgow Queen Street - Perth/Dundee/ Inverness - 1 tph Inverness – London King's Cross = 1 train per day Inverness – Euston = 1 sleeper train per day	Glasgow Queen Street – Aberdeen = 1 tph Glasgow Queen Street - Perth/Dundee/ Inverness - 1 tph Inverness – London King's Cross = 1 train per day Inverness – Euston = 1 sleeper train per day Glasgow Queen Street - Arbroath = 1tph	Glasgow Queen Street to Aberdeen - 1 or 2 ott per hour (2 hr fastest journey time) Glasgow Queen Street to Inverness - 1 or 2 ott per hour (2hr 30 mins fastest journey time) Glasgow Queen Street to Perth/ Dundee/Arbroath - 1 or 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day

Table 29				
	Current	**2019s**	**2043**	**Notes**
Route Section	Dundee to Dunblane			
Daily paths in one direction (as per WTT)	5 to Inverness 5 to Aberdeen	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 30				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	3 7 19	As determined by Level Crossing policy	As determined by Level Crossing policy	Proposed closure of : -Tofthill -Panholes

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 31

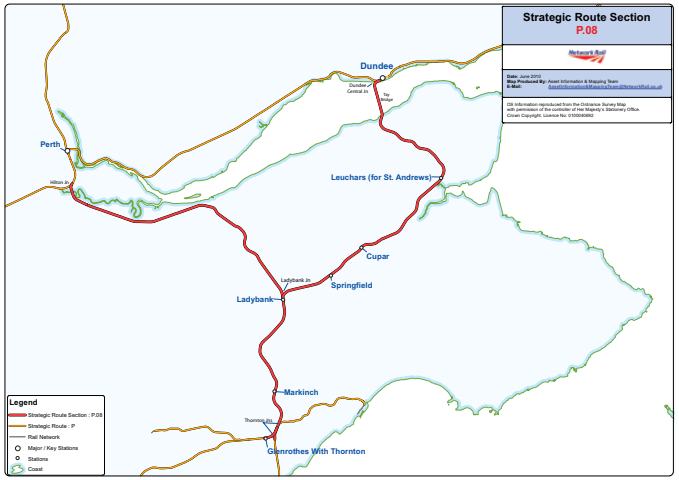
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Broadslap User Worked Crossing Closure	Level Crossing Closure	SCM4	2016/17	Safety Risk Reduction		Completed
Refurbishment of Dundee station	Refurbishment of Dundee station	HGL1 SCM5	2017/18	Refurbishment of Dundee station		In construction
Scotland Accelerated National Operating Strategy	Centralise control of Greenhill, Grangemouth Jn, Carmuirs East & Larbert North signal boxes to Edinburgh Signalling Centre	SCM5	2018	Capability		In construction
IEP development/enabling works between Dunblane & Perth	Infrastructure works to accommodate operation of IEP rolling stock	SCM4	CP5	Ability to accommodate IEP services		In construction
Tofthill User Worked Crossing Closure	Level Crossing Closure	SCM5	CP5	Safety Risk Reduction		In development
Panholes Level Crossing closure	Level Crossing Closure	SCM4	CP5	Safety Risk Reduction		In development
Murie Level Crossing upgrade and Linespeed Improvement	Level Crossing upgrade and linespeed improvement	SCM5	CP5	Safety Risk Reduction and Capability		In development
Freight Looping facility	Provision of longer looping facilities south of Perth Station	SCM4 SCM5	CP5/6	Capability and Capacity		In development
Perth Stabling	Stabling facility in the Perth area	SCM4 SCM5	CP6	New stabling and maintenance facility		In development
Blackford Freight Terminal	Private intermodal terminal	SCM4	CP5	Modal shift		In development
Dunblane to Perth Corridor Enhancement	Enhancements linked to asset renewals	SCM4	TBA	Capability and capacity		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable.

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.08 Dundee/Perth to Thornton Junctions

Geographic Map



Route specification description

The route runs from Dundee via the Tay Bridge and Ladybank to Thornton Junctions and from Perth via Hilton Junction and Newburgh to Ladybank. It is not electrified and is two track throughout apart from the single track Ladybank – Hilton Junction section. ScotRail operates its Inverness/Perth/Aberdeen/Dundee – Edinburgh services over the route. CrossCountry operates the Dundee – Plymouth services over part of the route as do Virgin Trains East Coast with the London King's Cross – Aberdeen service. There are intermediate stations at Leuchars, Cupar, Springfield, Ladybank and Markinch. There is potential scope within this route section for some platform extensions to accommodate the new IEP trains. Serco operate a daily sleeper service over the route. The route is also lightly used by freight with up to three trains per day; Aberdeen – Oxwellmains empty cement tanks and pipes to Raiths Farm.

Ladybank Junction leads from the main line to Hilton Junction and Perth.

Thornton North Junction leads from the main line on to the Methil Branch.

Thornton West Junction leads from the main line to Cowdenbeath and beyond.

Thornton South Junction leads from the main line south to Kirkcaldy and beyond.

Dundee Central Junction also leads from the main line to Perth via the Tay viaduct.

Tay Bridge

Route capability overview

Table 32				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Dundee/Perth to Thornton Junctions**			
Section Start	Dundee			
Section End	Thornton Junctions			
Route Availability (RA)	RA8			
Gauge	W7 – 8			Future aspiration for W12 from Dunfermline to Methil Future electrification may provide W12
Signals	2 and 3 aspect controlled from Edinburgh IECC/Dundee Signalling Centre with semaphore signalling between Tay Bridge and Cupar.		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	100 mph maximum			
Electrification	No		Yes	

Passenger train service level (trains per hour/day)

Table 33				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	30 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Edinburgh Waverley to Dundee/Aberdeen = 2 tph Edinburgh Waverley to Perth/Inverness = 1 tph London King's Cross/Leeds to Aberdeen = 4 trains per day Dundee – Plymouth = 1 train per day Aberdeen – Penzance = 1 train per day Aberdeen – London Euston = 1 sleeper train per day	Edinburgh Waverley to Dundee/Aberdeen = 2 tph Edinburgh Waverley to Perth/Inverness = 1 tph London King's Cross/Leeds to Aberdeen = 4 trains per day Dundee – Plymouth = 1 train per day Aberdeen – Penzance = 1 train per day Aberdeen – London Euston = 1 sleeper train per day	Edinburgh Waverley to Aberdeen - 1 or 2 ott per hour (1hr 45 mins fastest journey time) Edinburgh Waverley to Dundee - 1 or 2 ott per hour Edinburgh Waverley to Inverness - 1 or 2 ott per hour (2 hr 45 mins fastest journey time) Edinburgh Waverley to Perth - 1 or 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

Table 34				
	Current	2019	2043	Notes
Route Section	Dundee/Perth to Thornton Junctions			
Daily paths in one direction (as per WTT)	up to 3	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 35				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	0 1 11	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Scheme Beyond CP5

Table 36

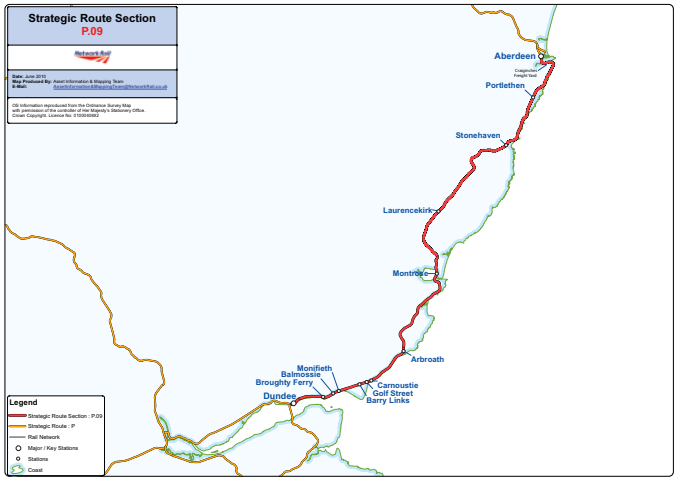
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Tay Bridge	Refurbishment	ECN2	2014-2017	Asset renewal		Completed
UB 090/135 Easter Ballomill Road	Structure deck renewal and painting	ECN3	2016/17	Asset renewal		Completed
UB 090/158 Edengrove Road	Structure deck renewal and strengthening works	ECN3	2016/17	Asset renewal		In construction
IEP development/enabling works to Dundee	Infrastructure works to accommodate operation of IEP rolling stock	ECN2	CP5	Ability to accommodate IEP services		In construction
Cupar	S&C renewal	ECN2	2018/19	Asset renewal		In development
Ladybank Junction Phase 3 improvements	Linespeed improvement	CDC1	CP6	Journey time improvement		In development

* In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.09 Dundee to Aberdeen

Geographic Map



Route specification description

The route runs from Dundee to Aberdeen, is not electrified and is two track throughout apart from a short single track section south of Montrose. ScotRail operates its Aberdeen – Glasgow Queen Street/Edinburgh Waverley services and Virgin Trains East Coast runs its Aberdeen – London King's Cross services over the route. In addition CrossCountry trains run one service per day from Aberdeen to Plymouth and Serco run a daily sleeper service from Aberdeen to London Euston. There are intermediate stations at Broughty Ferry, Balmossie, Monifieth, Barry Links, Golf Street, Carnoustie, Arbroath, Montrose, Laurencekirk, Stonehaven and Portlethen. There is potential scope within this route section for some platform extensions to accommodate the new IEP trains. There are up to four freight services per day over the route from Central Scotland to Craiginches, Aberdeen Waterloo and Raiths Farm terminals.

Route capability overview

Table 37				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Dundee to Aberdeen**			
Section Start	Dundee			
Section End	Aberdeen			
Route Availability (RA)	RA10			
Gauge	W7/W8S	W8S	W10 & W12	The route between Dundee – Aberdeen can accommodate certain vehicles outside the normal W7 gauge
Signals	2/3 aspect and semaphore signals controlled from boxes along the route.		ERTMS	
Speed **See Sectional Appendix for detailed speed profiles**	80 – 100 mph			
Electrification	No		Yes	

Passenger train service level (trains per hour/day)

Table 38				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	1 hour 15 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Edinburgh Waverley – Aberdeen = 1tph Glasgow Queen Street – Aberdeen = 1 tph London Kings' Cross – Aberdeen = 4 trains per day London Euston – Aberdeen = 1 sleeper train per day Penzance – Aberdeen = 1 train per day	Edinburgh Waverley – Aberdeen = 1 tph Glasgow Queen Street – Aberdeen = 1 tph London Kings' Cross – Aberdeen = 4 trains per day London Euston – Aberdeen = 1 sleeper train per day Penzance – Aberdeen = 1 train per day Glasgow Queen Street - Arbroath = 1 tph Montrose/Stonehaven to Aberdeen (Inverurie) = 1 to 4 tph (2 tph off-peak, 4 tph peak)	Glasgow Queen Street to Aberdeen - 1 or 2 ott per hour (2 hr fastest journey time) Glasgow Queen Street to Perth/Dundee/Arbroath - 1 or 2 ott per hour Edinburgh Waverley to Aberdeen - 1 or 2 ott per hour (1hr 45 mins fastest journey time) Dundee to Aberdeen 1 or 2 ott per hour Inverurie to Stonehaven - 1 ott per hour Inverurie to Montrose - 1 opportunity to travel per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS P.09 Dundee to Aberdeen

Stonehaven Station

Current freight trains (trains per day)

Table 39				
	Current	2019	2043	Notes
Route Section	Dundee to Aberdeen			
Daily paths in one direction (as per WTT)	4	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		Actual number of trains per day may vary

Level Crossings on route

Table 40				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	6 0 13	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 41

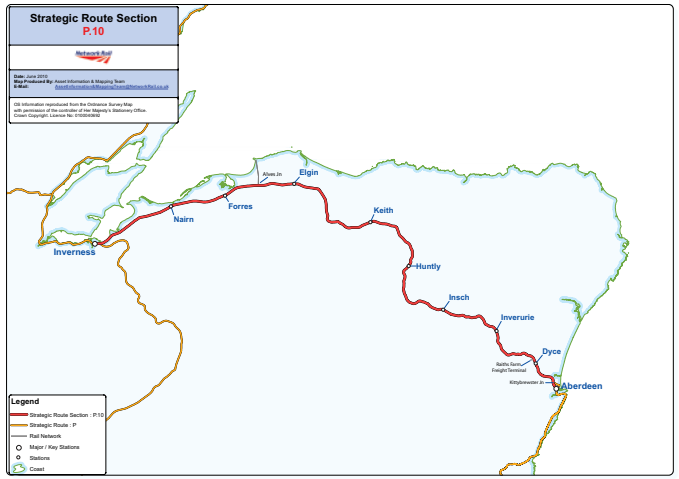
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
UB 133/359 Elsick Viaduct	Repainting of structural steelwork	ECN4	2015/16 2016/17	Asset renewal		Completed
IEP development/enabling works	Infrastructure works to accommodate operation of IEP rolling stock	ECN3 ECN4 ECN5	CP5	Ability to accommodate IEP services		In construction
UB 090/276 South Esk Viaduct	Steelwork Strengthening, repairs and repainting	ECN4	2017/18 2018/19	Asset renewal		In development
Carnoustie station	Provide infrastructure to enable 6-car operation on the Up platform	ECN3	CP5	Capability enhancement		In development
Aberdeen to Stonehaven Capacity	Capacity enhancement between Aberdeen and Stonehaven to provide 4 tph plus 1 freight path per hour	ECN5	CP5	Capacity enhancement		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.10 Aberdeen to Inverness

Geographic Map



Route specification description

The route runs from Aberdeen to Inverness, is not electrified and is predominantly single track apart from a double track section between Insch and Kennethmont. There are passing loops at Dyce, Inverurie, Huntly, Keith, Elgin, Forres and Nairn. ScotRail operates an approximately two hourly service between Aberdeen and Inverness and there are additional local services between Aberdeen, Dyce, Inverurie and between Inverness and Elgin. There are freight terminals at Raiths Farm near Dyce, Aberdeen Waterloo and Elgin.

Kittybrewster Junction leads from the main line onto the freight branch serving Waterloo terminal.

Alves Junction leads from the main line onto the out of use Roseisle branch. The branch is currently out of use.

Welsh's Bridge Junction links with the Highland Main Line from Perth.

Route capability overview

Table 42				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Aberdeen to Inverness**			
Section Start	Aberdeen			
Section End	Inverness			
Route Availability (RA)	10			
Gauge	W7/W8S	W8S	W9	The route between Aberdeen – Elgin can accommodate certain vehicles outside the normal W7 gauge
Signals	2/3 aspect and semaphore controlled from various boxes along the route	Conventional colour light signalling and semaphore controlled	ERTMS	
Speed See Sectional Appendix for detailed speed profiles	40 – 75 mph	40 – 90 mph		
Electrification	No			

Passenger train service level (trains per hour/day)

Table 43				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	2 hours 20 minutes	2 hours 20 minutes		All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Aberdeen – Inverness = Approx 2 hourly Dyce - Aberdeen = 2 trains per day Elgin – Inverness = 2 trains per day Huntly - Aberdeen = 1 train per day Inverurie – Aberdeen = 12 trains per day	Aberdeen – Inverness = Approx 2 hourly Nairn/Forres/Elgin - Inverness = 1 tph Inverurie - Aberdeen = 4 tph peak, 2 tph off-peak (Montrose)	Inverness to Aberdeen - 1 or 2 ott per hour Inverurie to Stonehaven - 1 ott per hour Inverurie to Montrose - 1 ott per hour Keith to Aberdeen - 1 or 2 ott per hour Elgin to Inverness - 1 or 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Nairn Station

Current freight trains (trains per day)

Table 44				
	Current	**2019**	**2043**	**Notes**
Route Section	**Aberdeen to Inverness**			
Daily paths in one direction (as per WTT)	1	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		Also diversionary Route for traffic to Inverness

Level Crossings on route

Table 45				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	4 8 48	As determined by Level Crossing policy	As determined by Level Crossing policy	Proposed closure of: Dalcross Level Crossing Waterford Road Fullerton Cairnhall Pitmedden

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 46

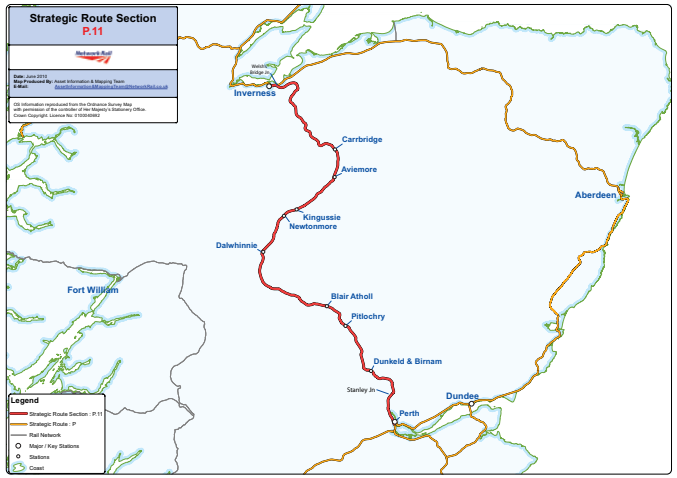
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Upgrade of Rosarie AOCR Level Crossing	Level Crossing Upgrade to AHB	ANI1	CP5	Level Crossing Risk Reduction		In development
Aberdeen to Inverness Improvements Phase 1	Infrastructure work to facilitate increased frequency of commuter services	ANI1 ANI2 ANI3	CP5/6	Increased capacity and capability		In development
Dalcross Level Crossing Closure	Level Crossing Closure	ANI3	CP5	Level Crossing Risk Reduction		In development
Dalcross New Station	New station	ANI3	CP5	New station		In development
Kintore New Station	New station	ANI1	CP5/6	New station		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.11 Perth to Inverness

Geographic Map



Route specification description

The route is not electrified and runs from Perth to Inverness and is single track with double track sections between Perth/Stanley Junction, Blair Atholl/Dalwhinnie and Culloden/Inverness. There are also intermediate passing loops along the route. ScotRail operates an approximately two hourly service between Inverness and Glasgow/Edinburgh. Serco operates a sleeper service between Inverness and London Euston. Virgin Trains East Coast operates one train in each direction from Inverness to London King's Cross. There are intermediate stations at Dunkeld, Pitlochry, Blair Atholl, Dalwhinnie, Newtonmore, Kingussie, Aviemore and Carrbridge. The route is lightly used by freight with up to five freight trains per day serving Inverness, Lairg and Georgemas.

The line runs through Cairngorms National Park and generates substantial seasonal tourist traffic.

There is a link from the main line at Aviemore station onto the private single track line of the Strathspey Railway Company which is used for heritage services.

Route capability overview

Table 47				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Perth to Inverness**			
Section Start	Perth			
Section End	Inverness			
Route Availability (RA)	Perth – Stanley Junction RA10 Stanley Junction – Inverness RA8			
Gauge	Perth – Pitlochry W7 Pitlochry – Inverness W8	W8	W12	Perth – Pitlochry W8S Pitlochry – Inverness W8 Gauge to be reviewed for any future enhancements
Signals	2/3 aspect and semaphore controlled from various boxes along the route.		ERTMS	
Speed **See Sectional Appendix for detailed speed profiles**	80 – 100 mph			
Electrification	No		Yes	

Passenger train service level (trains per hour/day)

Table 48				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	2 hours 15 minutes	2 hours 5 minutes		
No. of trains per hour	Edinburgh – Inverness = 5 trains per day Glasgow Queen Street – Inverness = 5 trains per day Inverness – London King's Cross = 1 train per day Inverness – London Euston = 1 sleeper train per day Perth - Inverness = 1 train per day	Perth – Inverness = 1 tph (alternatively to Glasgow Queen Street/Edinburgh Waverley) Inverness – London King's Cross = 1 train per day each way Inverness – London Euston = 1 sleeper train per day each way	Glasgow Queen Street to Inverness - 1 or 2 ott per hour (2hr 30 mins fastest journey time) Edinburgh Waverley to Inverness - 1 or 2 ott per hour (2 hr 45 mins fastest journey time) Perth to Inverness - 1 or 2 ott every 2 hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Dunkeld Station

Current freight trains (paths per day)

Table 49				
	Current	2019	2043	Notes
Route Section	Perth to Inverness			
Daily paths in one direction (as per WTT)	5	As forecast in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 50				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	2 1 55	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

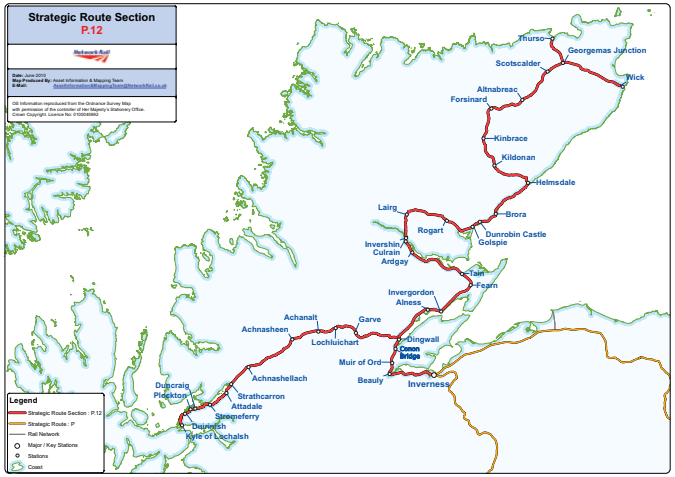
Table 51						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
IEP development/enabling works	Infrastructure and Gauge works to accommodate operation of IEP rolling stock	HGL1 HGL2	CP5	Ability to accommodate IEP services		In construction
Highland Main Line Phase 2	Hourly service to the central belt, around ten minute end to end journey time reduction and freight enhancements	HGL1 HGL2	2019	Capacity and capability enhancement		In development
Inverness Needlefield Yard enhancement	Enhancement of yard working between Direct Rail Services Ltd line and Network Rail infrastructure	RSW	CP5	Increased capability		In development
Perth Stabling	Stabling and servicing facility in the Perth area	SCM4 SCM5	CP6	New stabling and servicing facility		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.12 Far North & Kyle Lines

Geographic Map



Route specification description

The route runs from Inverness north to Wick and Thurso with a line to Kyle of Lochalsh branching off at Dingwall. It is not electrified, is single track throughout with intermediate passing loops and is controlled by Radio Electronic Token Block (RETB) from Inverness. ScotRail operates four trains per day to Wick and Kyle of Lochalsh along with intermediate services to Dingwall, Ardgay, Lairg and Tain. There is currently limited freight on the line with pipe and other traffic to Georgemas and oil to Lairg. At Georgemas Junction, the line splits and runs north to Thurso and east to Wick.

Route capability overview

Table 52				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Far North Line & Kyle**			
Section Start	Inverness			
Section End	Kyle/Thurso/Wick			
Route Availability (RA)	Inverness – Invergordon RA10 * Invergordon – Georgemas RA5 Georgemas – Wick RA3 Thurso and Kyle Branch RA5			* STNC between Inverness – Invergordon from RA10 to RA5
Gauge	Invergordon – Wick & Thurso W8 Kyle Branch W7			
Signals	RETB throughout			
Speed **See Sectional Appendix for detailed speed profiles**	40 – 75 mph			
Electrification	No			


Kyle of Lochalsh Station

Passenger train service level (trains per hour/day)

Table 53

	Current	2019	2043 Opportunities to Travel (ott)	Notes
Typical Journey time	4 hours 25 minutes to Wick 2 hours 30 minutes to Kyle			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Inverness – Wick = 4 trains per day Inverness – Kyle of Lochalsh = 4 trains per day Local services from Inverness to Dingwall, Invergordon, Ardgay & Tain = 5 trains per day	Inverness – Wick = 4 trains per day Inverness – Kyle of Lochalsh = 4 trains per day Local services from Inverness to Dingwall, Invergordon, Ardgay & Tain = 5 trains per day	Inverness to Wick/Thurso - 1 ott every other hour Inverness to Invergordon - 1 or 2 ott every hour Inverness to Kyle - 1 ott every 3 hours	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (trains per day)

Table 54

	Current	2019	2043	Notes
Route Section	**Inverness to Kyle/Thurso/Wick**			
Daily paths in one direction (as per WTT)	3	As forecast in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 55

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User Open	0 23 195 2	As determined by Level Crossing policy	As determined by Level Crossing policy	Delny Level Crossing Closure Planned for CP6

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 56

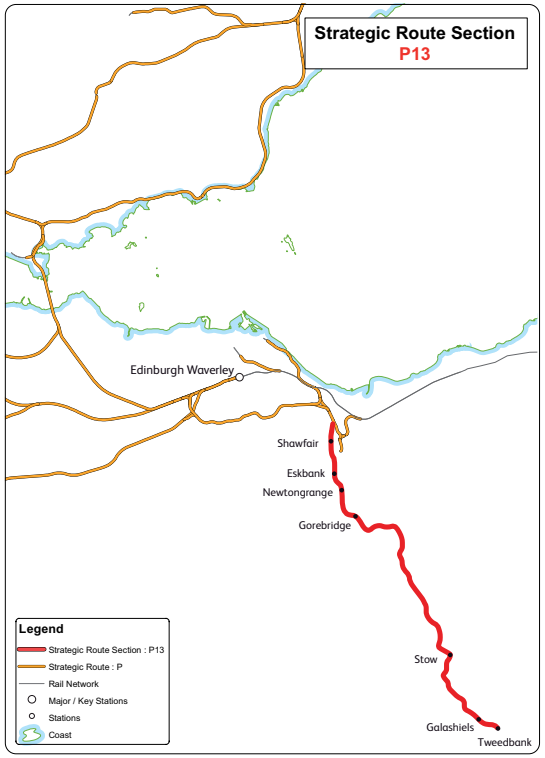
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
AOCL+B Programme	Upgrade level crossings	WCK	2014	Level Crossing Risk Reduction		Completed
RETB signalling	Renewal of signalling system	WCK KYL TSO	2016	Asset renewal		Completed
Far North Line Linespeed Improvements	Increase linespeed at Foulis, Lairg, Balnacra, Brora, Rovie and Georgemas	WCK	2017	Journey time reduction		In construction
Delny Level Crossing Upgrade	Level Crossing Upgrade from AOCL to ABCL	WCK	2017/18	Level Crossing Risk Reduction	If LC closure is progressed, ABCL equipment will be redeployed	In development
Dingwall No 1 Level Crossing	Upgrade level crossing	KYL	CP5	Level Crossing Risk Reduction		In development
Dingwall Middle Level Crossing	Upgrade level crossing	KYL	CP5	Level Crossing Risk Reduction		In development
Delny Level Crossing Closure	Level Crossing Closure	WCK	CP6	Level Crossing Risk Reduction		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders

SRS P.13 Borders Line

Geographic Map



Route specification description

The route runs from Newcraighall south to Tweedbank, has six intermediate stations at Shawfair, Eskbank, Newtongrange, Gorebridge, Stow and Galashiels. The route is single track throughout with intermediate passing loops and is controlled by Edinburgh IECC. It is not electrified. ScotRail operate two trains an hour between Edinburgh Waverley and Tweedbank.

Route capability overview

Table 52				
Information	Current	2019	2043	Notes
Line of Route Description	Borders Line			
Section Start	Newcraighall			
Section End	Tweedbank			
Route Availability (RA)	RA3			
Gauge	W6a			
Signals	2-aspect signalling			
Speed See Sectional Appendix for detailed speed profiles	Up to 90 mph			
Electrification	No*			*as per ongoing programme of electrification

Passenger train service level (trains per hour/day)

Table 53				
	Current	2019	2043 Opportunities to Travel (ott)	Notes
Typical Journey time	Tweedbank to Newcraighall - 45mins Tweedbank to Edinburgh Waverley - 55mins			
No. of trains per hour	2 tph Tweedbank to Edinburgh Waverley	2 tph Tweedbank to Edinburgh Waverley	Edinburgh Waverley to Tweedbank - 3 or 4 ott per hour (reduce fastest journey time by 20 minutes)	

Current freight trains (trains per day)

There is no freight traffic on this SRS.

Level Crossings on route

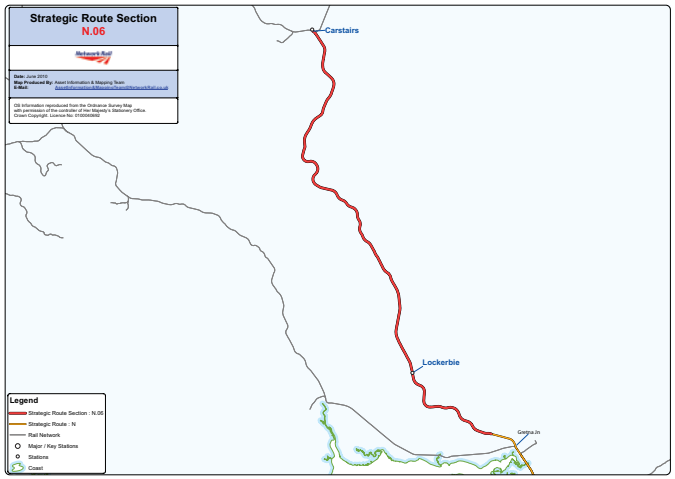
There are no level crossings on this SRS.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS N.06 Border (Near Gretna Junction) – Carstairs South Junction

Geographic Map



Route specification description

This 61 mile stretch of two track electrified railway is dominated by the steep gradient approaching Beattock Summit. The only passenger station on the route is Lockerbie.

There are loops at Lockerbie, Beattock Summit, Beattock and Abington.

The route is intensively used by Virgin Trains, First TransPennine Express (FTPE) and is also served by the Caledonian Sleeper. There is also significant freight use of this route, in particular for traffic to/from Mossend, Coatbridge and Grangemouth terminals.

At Carstairs South Junction the line splits and goes towards Glasgow and Edinburgh.

The mix of high speed passenger services and slower speed freight traffic limits capacity growth on the route.

Future aspirations

Higher linespeed through Carstairs station area is an industry aspiration which will be investigated for possible remodelling in CP6.

Operators have expressed a desire to be able to operate earlier services on the WCML on Sundays as published in the Scotland RUS Generation Two.

Aspirations for an improved service to Lockerbie were identified as part of the West Coast RUS. There is a desire for a suitable commuting service in both directions from Lockerbie to Glasgow Central and Edinburgh Waverley, along with an improved off-peak service frequency.

The UK Government has consulted on proposals for a 'Y-shaped' high speed rail network that would reduce journey times from London to Birmingham, Manchester and Leeds to around 80 minutes. This proposal is essential to providing additional capacity on the key corridors between the major economic centres of London, Birmingham, Manchester, and Leeds. In developing a strategy for the network it has been assumed that High Speed 2 Phase 1 from London to the West Midlands will start construction during CP5 with the line open for operation in 2026, with Phase 2 to Leeds and Manchester by 2030. Anglo Scottish services are expected to use the high speed line before continuing on the existing network for the remainder of their journey. However there are aspirations by the Scottish Government to bring forward future phases of High Speed Rail to Scotland. This is currently under consideration.

Route capability overview

Table 57				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Gretna Junction to Carstairs via Beattock**			
Section Start	North of Gretna Junction			
Section End	Carstairs South Junction			
Route Availability (RA)	RA10			
Gauge	W10		W12	All structures to be W12 when renewed
Signals	Colour light Track Circuit Block TASS fitted (Tilt Authorisation & Speed Supervision on fast lines)		Colour light Track Circuit Block TASS fitted (Tilt Authorisation & Speed Supervision on fast lines)	ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	Predominant linespeed 125mph Enhanced Permissible Speed (EPS) on fast lines, 110 mph Permissible Speed (PS) Controlled from Motherwell Signalling Centre	Raise linespeed to highest possible in line with infrastructure characteristics and capability of rolling stock Controlled from West of Scotland Signalling Centre		
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 58				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	Carlisle to Lockerbie - 18 minutes	Reduce journey times to lowest possible in line with linespeed improvements and changes in rolling stock		All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	to Scotland : London = 1tph London via Birmingham = 1tph Manchester Airport = 1tph London - 2 sleeper trains per day	to Scotland : London = 1tph London via Birmingham = 1tph Manchester Airport = 1tph London - 2 sleeper trains per day	1 x Birmingham High Speed to Glasgow or Edinburgh 2 x London High Speed (split/join Carstairs) 2 x Liverpool/Manchester to Glasgow or Edinburgh 1 x Birmingham to Glasgow or Edinburgh	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS N.06 Border (Near Gretna Junction) – Carstairs South Junction

Lockerbie Station

Current freight trains (paths per day)

Table 59				
	Current	**2019**	**2043**	**Notes**
Route Section	**Gretna Junction to Carstairs via Beattock**			
Daily paths in one direction (as per WTT)	Up to 32 paths per day in one direction.	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 60			
Type	Current No. of Level Crossings	2019 & 2043 No. of Level Crossings	Notes
Supervised Automatic User	1 0 1	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

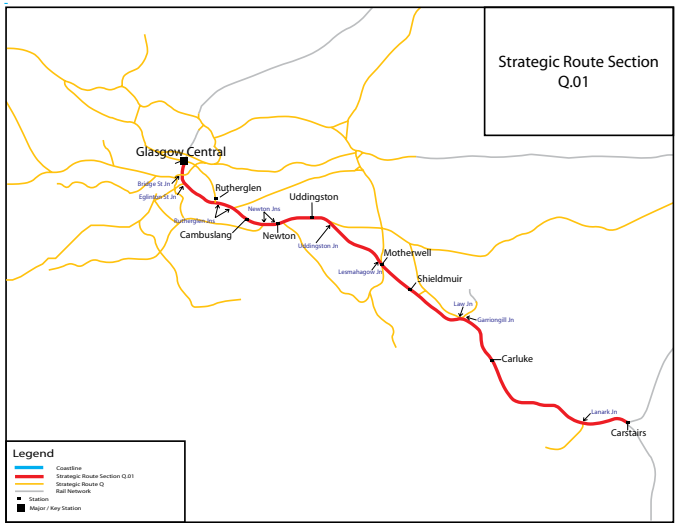
Table 61						
Project	**Project Description**	**ELR**	**Implementation date**	**Output change**	**Notes**	**Status**
Carstairs Junction Remodelling	Carstairs area enhancements in conjunction with renewal of life expired assets and requirements for HS2 services from 2026	WCM1	CP6	Optimise capacity and capability of assets in the Carstairs area		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.01 West Coast Main Line – Glasgow Central to Carstairs

Geographic Map



Route specification description

The route runs from Glasgow Central to Carstairs and is two track electrified throughout, apart from a four track section between Eglinton Street Junction and Rutherglen Central Junction. Signalling is controlled from West of Scotland Signalling Centre (WSSC) at Cowlairs and Motherwell Signalling Centre. The route is intensively used by Virgin Trains, Virgin Trains East Coast, First TransPennine Express (FTPE) , CrossCountry, Caledonian Sleeper as well as the ScotRail services to Motherwell, Lanark and Edinburgh. There are six intermediate stations on the route - Carluke, Shieldmuir, Motherwell, Uddingston, Newton and Cambuslang.

Route sections between Larkfield Junction and Rutherglen East Junction/Uddingston Junction are utilised by freight traffic. There is also heavy freight use of the Law Junction – Carstairs section for traffic, in particular, to/from Mossend, Coatbridge and Grangemouth.

Bridge Street Junction leads from the main line onto the line to Paisley/Inverclyde/Ayr and beyond.

Eglinton Street Junction leads from the main line onto Muirhouse Junctions/Neilston/Newton and beyond.

Larkfield Junction leads from the main line onto the line to Paisley/ Inverclyde/Ayr and beyond.

Rutherglen West Junction runs from the main line round the curve onto the Argyle line to Glasgow Central Low Level and beyond and is used for empty stock moves.

Rutherglen Central Junction runs from the main line onto the Argyle line to Glasgow Central Low Level and beyond and is heavily utilised by ScotRail.

Rutherglen East Junction runs from the main line onto the Rutherglen & Coatbridge (R&C) line to Coatbridge and beyond.

Newton West Junction runs from the main line onto the Hamilton Circle/Larkhall and Motherwell.

Newton East Junction runs from the main line onto the Kirkhill line and via Cathcart to Glasgow Central High Level.

Lesmahagow Junction runs from the main line at Motherwell south via the Hamilton Circle and north via Bellshill, Mossend and beyond.

Shieldmuir Junction leads from the West Coast Main Line (WCML) onto Wishaw connecting line.

Shieldmuir South Junction leads from the Royal Mail Terminal on to the WCML.

Law Junction runs from the main line via Wishaw to Holytown, Mossend and beyond.

Lanark Junction runs from the main line onto the branch to Lanark.

Route capability overview

Table 62				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Glasgow Central to Carstairs**			
Section Start	Glasgow Central			
Section End	Carstairs			
Route Availability (RA)	Glasgow Central – Larkfield Junction = RA8 Larkfield Junction – Rutherglen East Junction = RA10 Rutherglen East Junction – Motherwell = RA8 * Motherwell – Carstairs = RA10			* STNC from RA10 to RA8
Gauge	Glasgow Central – Eglinton Street Junction = W7 Eglinton Street Junction – Larkfield Junction = W8 Larkfield Junction – Carstairs = W10	Glasgow Central – Eglinton Street Junction = W7 Eglinton Street Junction – Larkfield Junction = W8 Larkfield Junction – Carstairs = W10 Carstairs - Motherwell = W12*	W12 Rutherglen East Junction – Motherwell	*by 2024
Signals	4 aspect controlled from West of Scotland Signalling Centre & Motherwell Signalling Centre	4 aspect controlled from West of Scotland Signalling Centre		ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	105 mph max	120 mph max (tilt)/105 mph max (non tilt)		
Electrification	Yes			

Current passenger train service level (trains per hour/day)

Table 63

	Current	2019	2043 Opportunities to Travel (ott)	Notes
Average end to end Journey time	45 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	2 Long distance services per hour Glasgow Central to England via Carlisle 1 express service to Edinburgh Waverley via Shotts 1 local service to Edinburgh Waverley via Shotts 1 service to Edinburgh Waverley via Carstairs approx two hourly 1 long distance service to the ECML via Edinburgh Waverley - 2 hourly 2 services from Glasgow Central to Lanark 2 Argyle line to Motherwell/Cumbernauld via Hamilton 2 Argyle line to Larkhall via Hamilton 2 Argyle line to Whifflet /Motherwell	2 – 3 Long distance services per hour towards Glasgow Central to England via Carlisle 1 express service to Edinburgh Waverley via Shotts 1 local service to Edinburgh Waverley via Shotts 1 service to Edinburgh Waverley via Carstairs approx two hourly 1 long distance service to the ECML via Edinburgh Waverley - 2 hourly 2 services from Glasgow Central to Lanark 2Argyle line to Motherwell/ Cumbernauld via Hamilton 2 Argyle line to Larkhall via Hamilton 2 Argyle line to Whifflet /Motherwell	1 express service to Edinburgh Waverley via Shotts 1 local service to Edinburgh Waverley via Shotts Edinburgh Waverley via Carstairs - 1 or 2 ott per hour 1 long distance service to the ECML via Edinburgh Waverley - 2 ott per hour 2 services from Glasgow Central to Lanark 2Argyle line to Motherwell/Cumbernauld via Hamilton 2 Argyle line to Larkhall via Hamilton 2 Argyle line to Whifflet /Motherwell Birmingham High Speed - 1 ott every other hour London High Speed - 2 ott per hour Liverpool/Manchester - 1 ott per hour Birmingham - 1 ott every other hour South of England via ECML - 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Glasgow Central Station

Current freight trains (trains per day)

Table 64

	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	32	As forecast in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 65

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	2 0 0	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 66

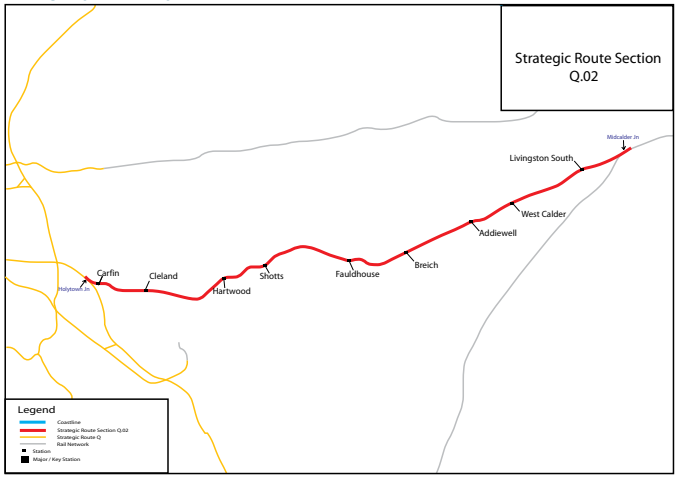
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Motherwell North Resignalling	Motherwell North (WCML) Relay Room renewals and transfer to WSSC	WCM1 WCM2	2018/19	Improved performance and reliability		In construction
Polmadie & Rutherglen Renewals (including Rutherglen S&C Remodel)	Polmadie to Glasgow Central bi-directional working on Up Slow Line and Rutherglen Linespeed Increase	WCM1	2018/19	Performance and capability improvements		In construction
Carstairs Junction Remodelling	Carstairs area enhancements in conjunction with renewal of life expired assets and requirements for HS2 services from 2026	WCM1 WCM2	CP6	Optimise capacity and capability of assets in the Carstairs area		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.02 Midcalder Junction to Holytown Junction

Geographic Map



Route specification description

The route runs from Midcalder Junction in the east via Shotts to Holytown Junction in the west, is two track throughout and is not electrified. The main passenger traffic flow is the Glasgow Central – Edinburgh Waverley ScotRail service (two trains per hour). There are nine stations along the route including Livingston South, West Calder, Addiewell, Breich, Fauldhouse, Shotts, Hartwood, Cleland and Carfin. It is also the main east – west arterial route for freight traffic conveying a mix of commodities including cement and steel.

Future Aspirations

Increased capacity and speeds on the line following the installation of additional signalling and electrification.

Route capability overview

Table 67				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Midcalder Junction to Holytown Junction**			
Section Start	Midcalder Junction			
Section End	Holytown Junction			
Route Availability (RA)	RA10*			* STNC to RA8
Gauge	W6*	W10/W12		* STNC from W9 to W6
Signals	2 aspect controlled from Motherwell & Edinburgh Signalling Centres	3 aspect signalling and controlled from West of Scotland Signalling Centre & Edinburgh IECC		ERTMS
Speed See Sectional Appendix for detailed speed profiles	70 mph max	80 mph max		Aspiration for linespeed up to 80 mph between Holytown & Midcalder
Electrification	No	Yes		

Passenger train service level (trains per hour/day)

Table 68				
	Current	**2019**	**2043 opportunities to Travel (ott)**	**Notes**
Typical Journey time	40 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	1 tph express service from Edinburgh Waverley to Glasgow Central via Shotts 1 tph local service from Edinburgh Waverley to Glasgow Central via Shotts	1 tph express service from Edinburgh Waverley to Glasgow Central via Shotts 1 tph local service from Edinburgh Waverley to Glasgow Central via Shotts	Glasgow Central to Edinburgh (via Shotts) - 2 or 3 opportunities to travel per hour (45 minute fastest journey time)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Shotts Station

Current freight trains (paths per day)

Table 69				
	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	6	As forecast in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

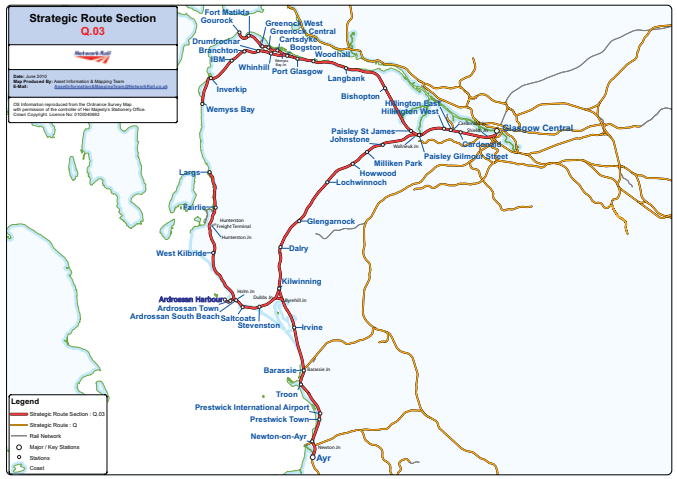
Table 70						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Motherwell North Resignalling	3-aspect signalling between Holytown and Midcalder	EGS2	2018/19	Increase in capacity		In construction
Ongoing Programme of Electrification: Shotts	Electrification of the route between Holytown and Midcalder	EGS2	2018/19	Increased capability		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.03 Glasgow Central to Ayr, Largs & Inverclyde

Geographic Map



Route Specification Description

The route runs from Glasgow Central to Ayr with branches at Paisley Gilmour Street to Gourock and Wemyss Bay and at Kilwinning to Largs. There is also a short branch to Ardrossan Harbour (single track). The route is predominantly two track throughout apart from a three/four track section between Shields Junction & Paisley Gilmour Street and a single track section between Ardrossan South Beach & Largs. It is electrified throughout with the exception of the freight line between Hunterston and Ardrossan. The Shields – Paisley – Kilwinning corridor is utilised by freight traffic from terminals at Irvine UPM, Prestwick, and Elderslie. There are 11 ScotRail passenger services per hour. There is a maintenance facility, Shields Electric Traction Depot, situated to the west of Shields Junction.

Smithy Lye Junction leads from the main Ayr line onto the Paisley Canal line avoiding the busy Shields Junction.

Shields Junction leads from the main Ayr line onto the City Union line, the Clydesdale line & the Paisley Canal line.

Cardonald Junction leads from the main Ayr line onto the branch which serves the Deanside Freight Terminal.

Wallneuk Junction leads from the main Ayr line onto Gourock line.

Wemyss Bay Junction leads from the main Gourock line to Wemyss Bay.

Kilwinning Junction leads from the main Ayr line to Ardrossan Harbour and Largs.

Dubbs Junction leads from the main Largs line to Byrehill Junction and Ayr.

Byrehill Junction leads from the main Ayr line to Dubbs Junction and the Largs Branch.

Holm Junction leads from the main Largs line onto the Ardrossan Harbour branch.

Hunterston Junction leads from the main Largs line into the Hunterston Freight Terminal.

Barassie Junction leads from the main Ayr line onto the branch to Kilmarnock.

Newton Junction leads from the main Ayr line onto the branch to Mauchline and the Glasgow and South West line.

Route capability overview

Table 71				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Glasgow Central – Ayr, Largs & Inverclyde**			
Section Start	Glasgow Central			
Section End	Ayr, Largs, Ardrossan Harbour, Gourock & Wemyss Bay			
Route Availability (RA)	RA8 Bridge St Junction – Shields Junction RA10 Shields Junction – Newton Junction RA8 Newton Junction – Ayr RA5 Largs (from Fairlie) & Wemyss Bay Branches RA10 Kilwinning Jn - Fairlie RA7 Gourock Branch			Paisley – Bishopton STNC from RA10 – RA7 Bishopton – Gourock STNC from RA7 – RA5
Gauge	W8 & 9*			*Wemyss Bay & Gourock Branches W7 Ardrossan Harbour Branch W6
Signals	2, 3 & 4 aspect controlled from West of Scotland Signalling Centre		ERTMS	
Speed **See Sectional Appendix for detailed speed profiles**	75 – 90 mph		75-100mph	Aspiration for 100 mph running where feasible for Class 380 trains.
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 72				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	Glasgow Central – Ayr = 52 mins Glasgow Central – Largs = 1 hour Glasgow Central – Gourock = 52 mins			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Ayr = 4 tph Glasgow Central– Gourock = 4 tph Glasgow Central– Wemyss Bay = 1 tph Glasgow Central – Largs = 1 tph Glasgow Central – Ardrossan Harbour = 1 tph Kilmarnock - Ayr = 2 hourly	Glasgow Central – Ayr = 4 tph Glasgow Central– Gourock = 4 tph Glasgow Central– Wemyss Bay = 1 tph Glasgow Central – Largs = 1 tph Glasgow Central – Ardrossan Harbour = 1 tph Kilmarnock - Ayr = 2 hourly	Glasgow Central to Ayr/Kilwinning/Ardrossan Harbour - up to 6 ott per hour Glasgow Central to Gourock - retain existing frequency Glasgow Central to Wemyss Bay - retain existing frequency Glasgow Central to Largs - 1 or 2 ott per hour Glasgow Central to Kilmarnock / Ayr / New Cumnock / Carlisle - 1 or 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Wemyss Bay Station

Current freight trains (paths per day)

Table 73				
	Current	2019	2043	Notes
Route Section	Glasgow Central – Ayr, Largs & Inverclyde			
Daily paths in one direction (as per WTT)	8	As forecast in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 74				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	1 3 0	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 75

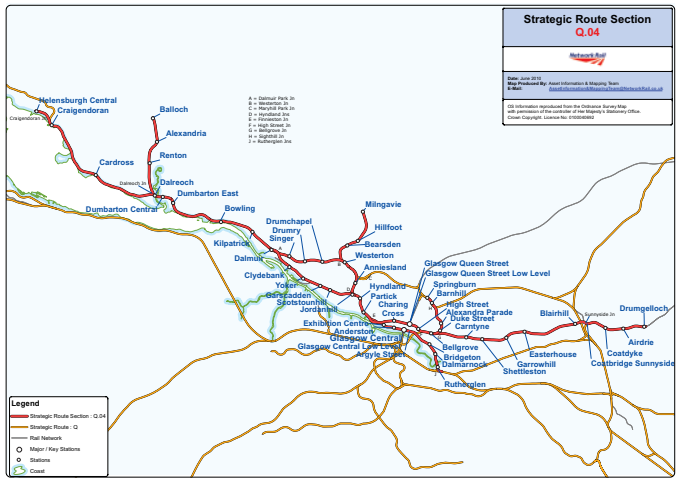
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Wemyss Bay Station	Renewal of main canopy	WYS	2015/16	Asset Renewal		Completed
Inverclyde Signalling Renewals	Bi-directional signalling between Greenock Central and Wemyss Bay Jn	GOU2	2016/17	Capability increase		Completed
King Street UB 161/005	Main girder strengthening, steelwork repairs and paint.	AYR3	2016/17	Asset renewal		Completed

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.04 Glasgow North Electric Routes

Geographic Map



Route specification description

The route runs from Drumgelloch/Rutherglen in the east and traverses north Glasgow to Helensburgh Central in the west with spurs to Balloch, Milngavie, and Springburn. It is electrified throughout and two track apart from the Craigendorn/Helensburgh and Balloch and Milngavie branches which are single track with passing loops. There is also a connection at Anniesland onto the Maryhill Line. It is predominantly a passenger route with West Highland freight on the Westerton – Craigendoran section. The section of track between Partick and Hyndland is one of the busiest within the Scotland Route.

Sunnyside Junction leads from the main Airdrie line onto the Sunnyside branch to Whifflet and Motherwell.

Bellgrove Junction leads from the main Airdrie line onto the Springburn branch.

Sighthill East Junction leads from the Springburn Branch onto the Stepps line.

High Street Junction leads from the main Airdrie line onto the City Union branch and Shields Junction.

Finnieston Junction leads from the main Airdrie line to Glasgow Central Low Level and the Argyle line.

Rutherglen North Junction leads from the main Argyle line round the curve to Rutherglen West Junction.

Hyndland East Junction leads from the main line onto the Yoker and Singer lines.

Hyndland North Junction leads from the main Singer line round the curve to Hyndland West Junction.

Hyndland West Junction leads from the main Yoker line round the curve to Hyndland North Junction.

Westerton Junction leads from the main Singer line onto the Milngavie branch.

Dalmuir Park Junction leads from the main Singer line onto the Yoker line.

Dalreoch Junction leads from the main Helensburgh line onto the Balloch branch.

Craigendoran Junction leads from the main Helensburgh line onto the West Highland line

Knightswood South Junction (at Anniesland) leads from main line onto the Maryhill line

Route capability overview

Table 76				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Glasgow North Electric Routes**			
Section Start	Drumgelloch/Rutherglen			
Section End	Helensburgh Central			
Route Availability (RA)	Drumgelloch – High Street Junction = RA10 High Street Junction – Finnieston Junction = RA5 Finnieston Junction – Rutherglen Central Junction = RA10 Finnieston Junction – Hyndland North Junction = RA10 * Hyndland North Junction – Dalmuir Park Junction = RA10 + Dalmuir Park Junction – Dunglass Junction = RA10 Dunglass Junction – Helensburgh Central = RA10++ Balloch RA6, Milngavie RA5			*STNC RA10 to RA7 +STNC RA10 to RA8 ++STNC RA10 to RA5
Gauge	W6 – 8			
Signals	2, 3 & 4 aspect and controlled from Yoker Integrated Electronic Control Centre.		2, 3 & 4 aspect and controlled from West of Scotland Signalling Centre. ERTMS	Recontrol to West of Scotland Signalling Centre planned for CP6.
Speed **See Sectional Appendix for detailed speed profiles**	75 mph max			
Electrification	Yes			

Craigendoran Station

Passenger train service level (trains per hour/day)

Table 77

	Current	2019	2043 Opportunities to Travel (ott)	Notes
Typical Journey time	Drumgelloch – Helensburgh Central = 1 hour 20 minutes			
No. of trains per hour	To/from Helensburgh Central = 2 tph To/from Balloch = 2 tph To/from Milngavie = 4 tph To/from Cumbernauld via Springburn = 2 tph To/from Drumgelloch = 4 tph Argyle Line = 6 tph To/from West Highland Line = 6 trains per day To/from Airdrie = 2 tph To/from Dalmuir = 4tph To/from Dumbarton Central = 2tph	To/from Helensburgh Central = 2 tph To/from Balloch = 2 tph To/from Milngavie = 4 tph To/from Cumbernauld via Springburn = 2 tph To/from Drumgelloch = 4 tph Argyle Line = 6 tph To/from West Highland Line = 6 trains per day To/from Airdrie = 2 tph To/from Dalmuir = 4tph To/from Dumbarton Central = 2tph	All Glasgow to Helensburgh - retain existing frequency Glasgow to Balloch - retain existing frequency Glasgow to Milngavie - retain existing frequency Glasgow Queen Street/Anniesland/Glasgow Queen Street/Springburgh/Anniesland - 2 ott per hour Glasgow to Drumgelloch/Airdrie -retain existing frequency Glasgow to Dalmuir - retain existing frequency Glasgow to Oban - one ott every 2 to 3 hours Glasgow to Mallaig - one ott every 2 to 3 hours	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

Table 78

	Current	2019	2043	Notes
Route Section	**Glasgow North Electric Routes**			
Daily paths in one direction (as per WTT)	2	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 79

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	2 2 4	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 80

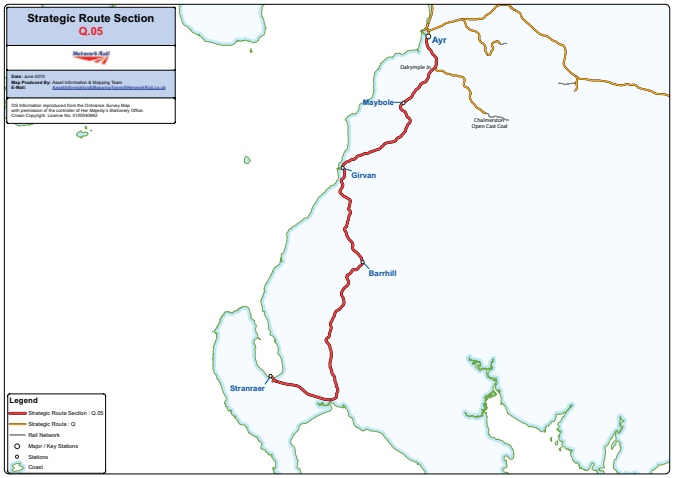
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Polmadie & Rutherglen Renewals (including Rutherglen S&C Remodel)	Rutherglen Junction remodel and linespeed increase	ARG1	2018/19	Performance and capability improvements		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.05 Stranraer to Ayr

Geographic Map



Route specification description

The route runs from Stranraer to Ayr and is single track throughout with passing loops, apart from the short double track section between Ayr and Dalrymple Junction. It is not electrified and is primarily a passenger only route. There are three intermediate stations, Maybole, Girvan and Barrhill, between Ayr and Stranraer.

Dalrymple Junction leads from the main Girvan line onto the Chalmerston branch which serves the currently out of use Chalmerston Open Cast coal site.

Route capability overview

Table 81				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Stranraer to Ayr**			
Section Start	Stranraer			
Section End	Ayr			
Route Availability (RA)	Ayr – Dalrymple Junction = RA8 Dalrymple Junction – Stranraer = RA8 *			*STNC reducing route to RA5
Gauge	W8 (Chalmerston Branch = W6)			
Signals	Manual Signal Boxes		ERTMS	
Speed **See Sectional Appendix for detailed speed profiles**	75 mph max			
Electrification	No			

Passenger train service level (trains per hour/day)

Table 82				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	1 hour 20 minutes			
No. of trains per hour	Ayr - Girvan = 8 tpd Ayr - Stranraer = 1 tpd Glasgow Central - Girvan = 1 tpd Glasgow Central - Stranraer = 4 tpd Kilmarnock - Girvan = 2 tpd Kilmarnock - Stranraer = 3 tpd	Ayr - Girvan = 8 tpd Ayr - Stranraer = 1 tpd Glasgow Central - Girvan = 1 tpd Glasgow Central - Stranraer = 4 tpd Kilmarnock - Girvan = 2 tpd Kilmarnock - Stranraer = 3 tpd	Ayr to Girvan -1 ott every hour Girvan to Stranraer - 1 ott every other hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Stranraer Station

Current freight trains (paths per day)

There is no freight traffic on this SRS.

Level Crossings on route

Table 83

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	3 0 16	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 84

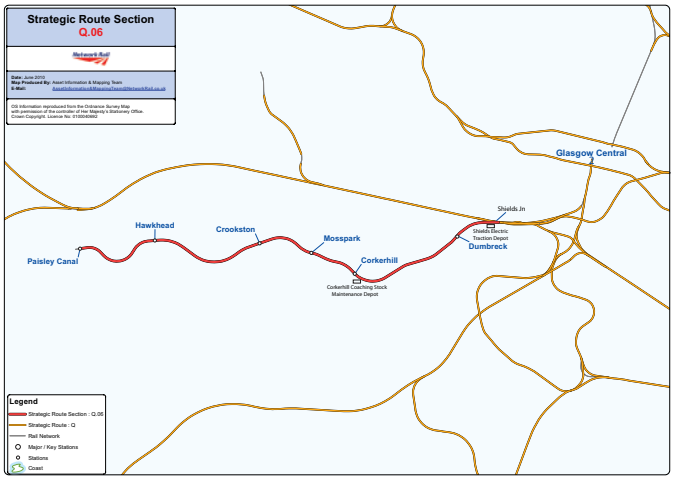
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
UB 163/043 Ligg Viaduct	Grid blast and paint steelwork. Carry out condition led repairs	STR2	2016/17	Asset renewal		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.06 Paisley Canal Branch

Geographic Map



Route specification description

The route is electrified throughout and double track from Shields Junction to Corkerhill Depot Junction where it becomes single track. The route has six stations, five of which are single platform stations with a passing loop at Crookston. The ground frame and sidings at Hawkhead Oil Terminal are currently declared as out of use. The branch line also contains two of the main ScotRail depots, Corkerhill which services diesel and electric units in the west, and Shields which maintains ScotRail's electric vehicles. The current passenger service runs every 30 minutes.

Route capability overview

Table 85				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Shields Junction to Paisley Canal**		**Shields Junction to Elderslie**	
Section Start	Shields Junction			
Section End	Paisley Canal		Elderslie	
Route Availability (RA)	10			
Gauge	W7			
Signals	3 aspect (2 aspect beyond Corkerhill) and controlled from West of Scotland Signalling Centre		ERTMS	
Speed See Sectional Appendix for detailed speed profiles	Overarching speed 50 mph (Loop 40 mph) and end section of line 30mph	Overarching speed 50 mph (Loop 50 mph)	Overarching speed 70 mph	Reopening through to Elderslie would require the route to be double track
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 86				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	18 – 20 minutes	18 minut es		All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Paisley Canal = 2 tph	Glasgow Central – Paisley Canal = 2 tph	Glasgow Central to Paisley Canal - retain existing frequency	

Paisley Canal Station

Current freight trains (paths per day)

There is no freight traffic on this SRS.

Level Crossings on route

There are no level crossings on this SRS

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 87

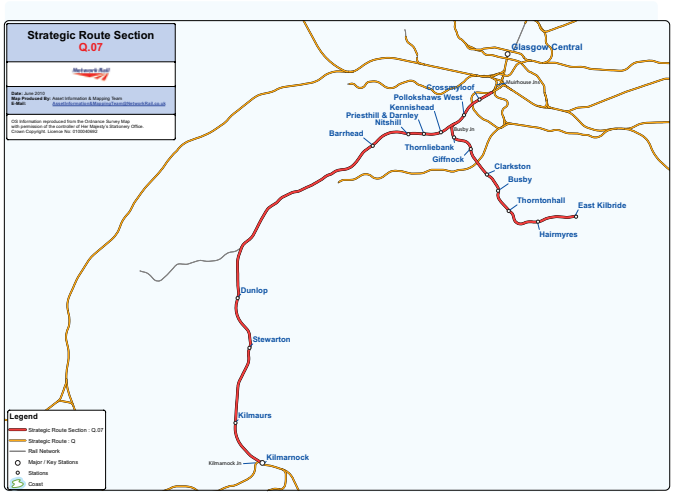
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Nithsdale Road Overbridge 220/006	Steelwork repairs, clean and paint	CNL	CP6	Asset renewal		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.07 Muirhouse Junction to East Kilbride/ Kilmarnock

Geographic Map



Route specification description

The route runs from Muirhouse Junction to Kilmarnock with a spur at Busby Junction to East Kilbride. It is not electrified and two track apart from a single track section between Busby Station – East Kilbride with a passing loop at Hairmyres, and Barrhead – Kilmarnock with a dynamic loop between Lugton and Stewarton. It is predominantly a passenger route with ScotRail operating two trains per hour to Barrhead, Kilmarnock and East Kilbride. There is one freight train (in each direction) per week to/from the Riccarton Oil Terminal in Kilmarnock.

Busby Junction leads from the main Barrhead line onto the East Kilbride branch.

Kilmarnock Junction leads from the main line onto the single line branch to Barassie Junction.

Future Aspirations

By 2019 there will be some services operating from Kilmarnock with load factors over 100 per cent. The crowding will be focussed on the high-peak fast services from Barrhead. At this time a further lengthening of services should be considered.

Electrification of the East Kilbride and Kilmarnock Lines - The characteristics of the new electric traction will deliver improved journey times to/from Glasgow.

SRS Q.07 Muirhouse Junction to East Kilbride/ Kilmarnock

Route capability overview

Table 88

Information	Current	2019	2043	Notes
Line of Route Description	**Muirhouse Junction to Kilmarnock/East Kilbride**			
Section Start	Muirhouse Junction			
Section End	Kilmarnock/East Kilbride			
Route Availability (RA)	Muirhouse – Kilmarnock = RA10 East Kilbride Branch = RA5			
Gauge	Muirhouse – Kilmarnock = W7 East Kilbride Branch = W6		Muirhouse - Kilmarnock = W10/W12 East Kilbride Branch = W6	
Signals	2 and 3 aspect controlled from WSSC, Barrhead & Kilmarnock	2 and 3 aspect controlled from WSSC		ERTMS
Speed See Sectional Appendix for detailed speed profiles	75 mph max			
Electrification	No	No*	Yes	* East Kilbride / Barrhead may form part of the Ongoing Programme of Electrification in CP6

Passenger train service level (trains per hour/day)

Table 89

	Current	2019	2043 Opportunites to Travel (ott)	Notes
Typical Journey time	Glasgow Central – East Kilbride = 32 minutes Glasgow Central – Barrhead = 22 minutes Glasgow Central – Kilmarnock = 39 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Barrhead = 2 tph Glasgow Central – East Kilbride = 2 tph Glasgow Central – Kilmarnock = 2 tph	Glasgow Central – Barrhead = 2 tph Glasgow Central – East Kilbride = 2 tph (4 tph in the peak) Glasgow Central – Kilmarnock = 2 tph	Glasgow Central to Kilmarnock/Ayr/New cumnock/ Carlisle - 1 or 2 ott per hour Glasgow Central to Barrhead - retain existing frequency Glasgow Central to East Kilbride - 3 or 4 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS Q.07 Muirhouse Junction to East Kilbride/ Kilmarnock

Kilmarnock Station

Current freight trains (paths per day)

Table 90				
Route Section	**Current**	**2019**	**2043**	**Notes**
Muirhouse Junction – Kilmarnock				
Daily paths in one direction (as per WTT)	1 per week	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings on this SRS

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

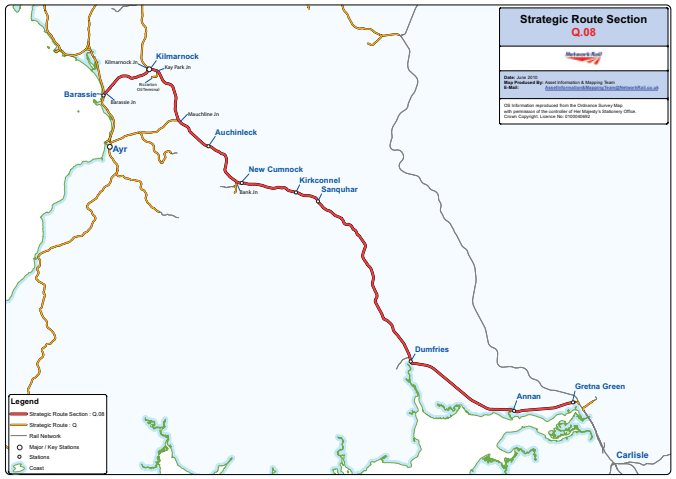
Table 91						
Project	**Project Description**	**ELR**	**Implementation date**	**Output change**	**Notes**	**Status**
Kilmarnock station Access for All	Provide step free access at the station	GSW	CP5	Capability		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.08 Gretna Green to Barassie Junction

Geographic Map



Route specification description

The route runs from Gretna Green via Dumfries and Kilmarnock to Barassie Junction. It is not electrified and is two track throughout, apart from the single track section between Kilmarnock and Barassie Junction. The predominant passenger flow is the Glasgow Central to Carlisle ScotRail service which runs approximately two hourly. The line is also the main arterial freight route for the remaining Anglo Scottish coal traffic between Ayrshire and English power stations. There are freight terminals at Greenburn, New Cumnock and UPM Kymeme at Irvine.

Bank Junction leads from the main line into the Greenburn coal terminal.

Mauchline Junction leads from the main line onto the single line Annbank branch to Newton Junction.

Kay Park Junction leads from the main line onto the single line branch to the Riccarton oil terminal.

Kilmarnock Junction leads from the main line onto the single line branch to Barassie Junction.

Future Aspirations

Electrified diversionary route from Ayr to Kilmarnock via Barassie Junction.

Improved junction layouts at Kilmarnock to facilitate improved operational flexibility, reduce ongoing asset costs, and increased linespeed through the station.

Route capability overview

Table 92				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Gretna Green to Barassie Junction**			
Section Start	Gretna Green			
Section End	Barassie Junction			
Route Availability (RA)	10			
Gauge	Gretna Green – Kilmarnock = W8 Kilmarnock – Barassie Junction = W9		Aspiration for W12 by 2043	
Signals	2 aspect controlled by manual signal boxes along the route		ERTMS	ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	80 mph maximum			
Electrification	No	*	Yes	*Electrification Kilmarnock to Barassie possibly CP7

Passenger train service level (trains per hour/day)

Table 93				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	1 hour 45 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Carlisle = Approx 2 hourly Dumfries – Carlisle (Local) = 4 trains per day Kilmarnock - Ayr = 10 trains per day	Glasgow Central – Carlisle = Approx 2 hourly Dumfries – Carlisle (Local) = 4 trains per day Kilmarnock - Ayr = 10 trains per day	Glasgow Central to Kilmarnock/Ayr/New Cumnock/Carlisle - 1 or 2 ott per hour Dumfries to Carlisle - 2 ott per hour Kilmarnock to Dumfries - 1 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Dumfries Station

Current freight trains (paths per day)

Table 94				
	Current	2019	2043	Notes
Route Section	Gretna Green – Barassie Junction			
Daily paths in one direction (as per WTT)	10	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 95				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	1 1 14	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

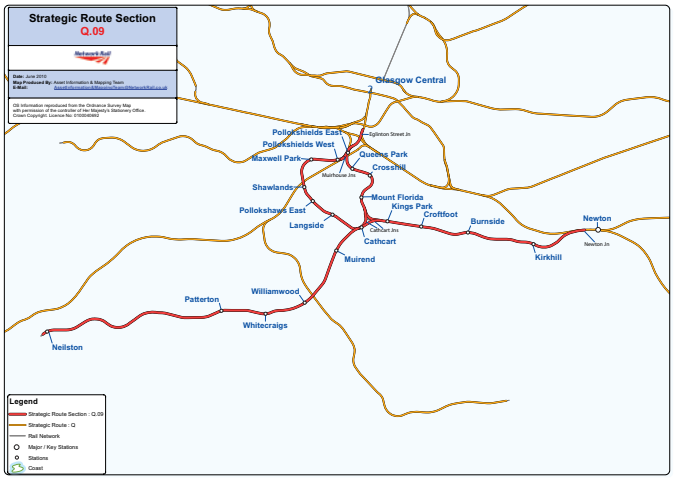
Table 96						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Kilmarnock station Access for All	Provide step free access at the station	GSW	CP5	Capability		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.09 Eglinton Street Junction to Neilston, Newton & Cathcart Circle

Geographic Map



Route specification description

The route runs from Eglinton Street Junction to Neilston/Newton via the Cathcart Circle and is two track and electrified throughout. It is passenger only and ScotRail operates a minimum half hourly service from Glasgow Central over all sections of the route.

Muirhouse North Junction leads from the main line to Mount Florida and Cathcart.

Muirhouse Central Junction leads from the main line to Barrhead

Cathcart North Junction leads from the main line to Cathcart East Junction and Kirkhill.

Cathcart East Junction leads from the main line onto the Kirkhill branch and Neilston.

Cathcart West Junction leads from the main line west to Maxwell Park and east to Cathcart East Junction.

Future Aspirations

East Renfrewshire Council have an aspiration to open a station at Barrhead South to serve the proposed housing development and Country Park.

Route capability overview

Table 97				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Eglinton Street Junction to Neilston/Newton via the Cathcart Circle**			
Section Start	Eglinton Street			
Section End	Neilston/Newton			
Route Availability (RA)	Cathcart via Maxwell Park = RA3 Cathcart via Crosshill = RA7 Cathcart – Newton = RA7 Cathcart – Neilston = RA5			
Gauge	W7			
Signals	2/3/4 aspect controlled by West of Scotland Signalling Centre			ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	55 mph max			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 98				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	30 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Neilston = 2 tph Glasgow Central – Newton = 2 tph Cathcart Circle = 2 tph	Glasgow Central – Neilston = 2 tph Glasgow Central – Newton = 2 tph Cathcart Circle = 2 tph	Glasgow Central to Newton - 3 or 4 ott per hour Glasgow Central to Neilston - 3 or 4 ott per hour Glasgow Central via Cathcart Circle - retain existing frequency	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Maxwell Park Station

Current freight trains (paths per day)

There is currently no freight traffic on this SRS.

Level Crossings on route

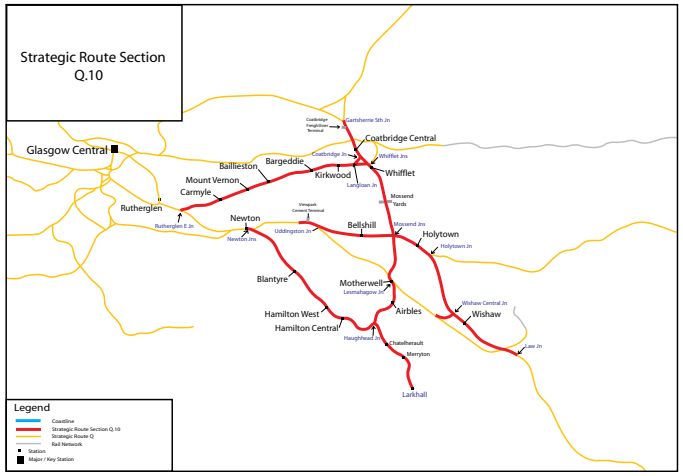
There are no level crossings on this SRS

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no proposed infrastructure investments on this SRS

SRS Q.10 Newton to Gartsherrie South/ Rutherglen East Junction

Geographic Map



Route specification description

The route runs from Gartsherrie South Junction to Motherwell and also incorporates the Hamilton Circle/Larkhall Branch, the Rutherglen and Coatbridge (R&C) Line from Rutherglen East Junction to Whifflet and the Uddingston Junction/Bellshill/Wishaw/ Law Junction section including the Wishaw Deviation Line. It has a mix of traffic flows with the predominant ScotRail passenger services to Whifflet, Lanark, Motherwell and Edinburgh via Shotts. The R&C is on the main arterial freight route for Ayrshire freight traffic and there is significant freight traffic to/from Mossend via Holytown and Law Junction.

Freight terminals connect to the route section at Coatbridge and Mossend on the Coatbridge line and at Viewpark on the Holytown line east of Uddingston Junction. There is a wagon repair terminal at Hamilton Earnock.

Coatbridge Junction leads from the main line to Langloan Junction and the R&C line.

Langloan Junction leads from the main Carmyle line to Coatbridge Junction.

Whifflet North Junction leads from the main Coatbridge line to Langloan Junction on the R&C line.

Whifflet South Junction leads from the main Coatbridge line onto the branch towards Sunnyside Junction.

Mossend North Junction leads from the main Coatbridge line onto the Holytown line at Mossend East Junction.

Mossend West Junction leads from the main Holytown line to Mossend South Junction.

Mossend South Junction leads from the main Coatbridge line to Mossend West and Mossend East Junction.

Mossend East Junction leads from the main Holytown line north to Mossend North Junction.

Holytown Junction leads from the main line onto the Shotts line.

Wishaw Central Junction leads from the main Holytown line onto the Wishaw Connecting Line and West Coast Main Line (WCML) at Shieldmuir.

Law Junction leads from the main Holytown line onto WCML.

Lesmahagow Junction runs from the WCML at Motherwell south via the Hamilton Circle and north via Bellshill, Mossend and beyond.

Uddingston Junction runs from the WCML onto the Holytown line and Bellshill.

Haughead Junction leads from the Hamilton Circle line onto the Larkhall branch.

Future Aspirations

Possible new station at Ravenscraig with improved turnback at Wishaw.

SRS Q.10 Newton to Gartsherrie South/Rutherglen East Junction

Route capability overview

Table 98				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Newton to Gartsherrie South/Rutherglen East Junction**			
Section Start	Gartsherrie South Junction			
Section End	Newton			
Route Availability (RA)	7 – 10 *			*Law Junction – Holytown Junction STNC from RA10 to RA8
Gauge	W6 – 10	W6 – 12*		Aspiration of W12 gauge clearance between Carstairs and Grangemouth (via Mossend)
Signals	2, 3 & 4 aspect controlled by Motherwell Signalling Centre	Controlled by WSSC		ERTMS
Speed See Sectional Appendix for detailed speed profiles	75 mph max			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 99				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	25 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Argyle line - Motherwell/Cumbernauld via Hamilton = 2tph Argyle line - Larkhall via Hamilton = 2 tph Argyle line - Whifflet/Motherwell = 2 tph Glasgow Central - Lanark = 2 tph Glasgow Central - Shotts - Edinburgh Waverlery = 2 tph	Argyle line - Motherwell/Cumbernauld via Hamilton = 2tph Argyle line - Larkhall via Hamilton = 2 tph Argyle line - Whifflet/Motherwell = 2 tph Glasgow Central - Lanark = 2 tph Glasgow Central - Shotts - Edinburgh Waverlery = 2 tph	Glasgow Central to Edinburgh (via Shotts) - 2 or 3 ott per hour (45 minute fastest journey time) Glasgow Central to Lanark - retain existing frequency (reduce fastest journey time by 10 minutes) Glasgow Central to Whifflet/Wishaw - retain existing frequency Glasgow Central to Glasgow Central (via Newton/ Motherwell/Carmyle) - retain existing frequency Glasgow Central to Larkhall - retain existing frequency	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

SRS Q.10 Newton to Gartsherrie South/Rutherglen East Junction

Motherwell Station

Current freight trains (paths per day)

Table 100				
	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	Gartsherrie – Coatbridge = 15 Rutherglen & Coatbridge = 10 Law Junction – Holytown Junction = 32	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

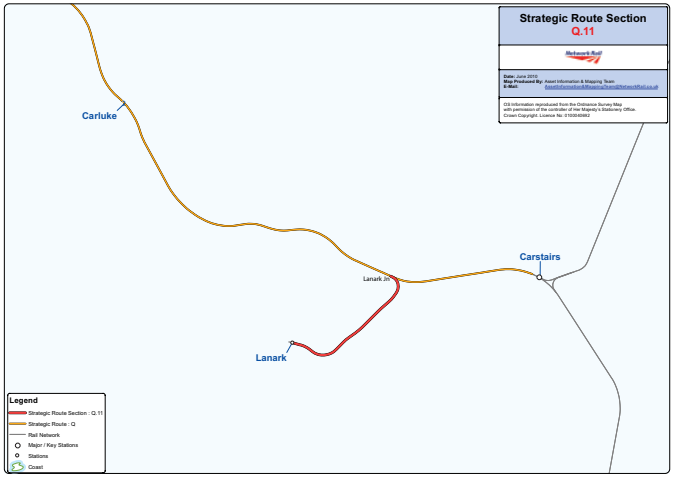
Table 101						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Motherwell North Resignalling	Includes 3 aspect signalling of the R&C line and improved turnback at Wishaw	SCM1	2017/18	Performance and capacity improvements		In construction
Mossend Freight Capacity	Improve signalling capability to accommodate longer freight trains at Mossend Yard.	SCM1	2017/18	Performance and capacity improvements		In construction
Polmadie & Rutherglen Renewals (including Rutherglen S&C Remodel)	Linespeed increase	WCM2	2018/19	Linespeed increase		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.11 Lanark Branch

Geographic Map



Route specification description

The route runs from Lanark Junction, on the West Coast Main Line, for approx two miles to Lanark and is electrified and single track throughout. It is a passenger only route and ScotRail operates a half hourly service from Lanark to Glasgow Central.

Future Aspirations

South Lanarkshire Council has an aspiration for a south connection to the branch to permit trains to run directly to Edinburgh.

Route capability overview

Table 102				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Lanark Branch**			
Section Start	Lanark Junction			
Section End	Lanark			
Route Availability (RA)	RA5			
Gauge	W6			
Signals	2, 3 & 4 aspect controlled by Motherwell Signalling Centre	2, 3 & 4 aspect controlled by West of Scotland Signalling Centre		ERTMS
Speed See Sectional Appendix for detailed speed profiles	75 mph max			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 103				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	4 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	2 tph to Glasgow Central	2 tph to Glasgow Central	Glasgow Central to Lanark - retain existing frequency (reduce fastest journey time by 10 minutes)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

There is currently no freight traffic on this route section.

Level Crossings on route

There are no level crossings on this route section

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 104

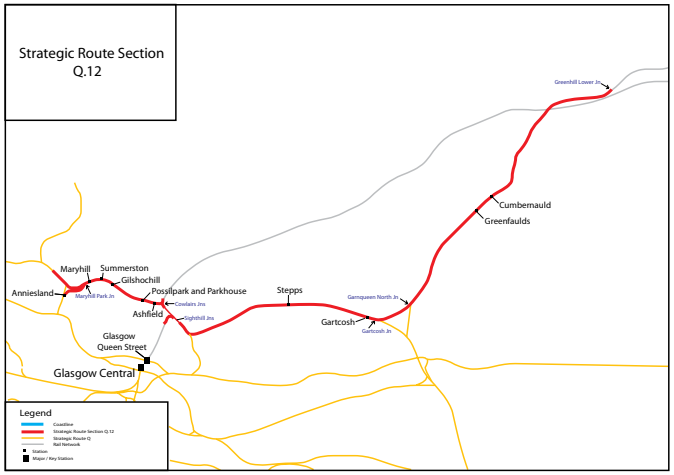
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Motherwell South Recontrol	Recontrol to WSSC	WCM1 LNK	2018/19	Improved performance and reliability		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.12 Anniesland to Greenhill Lower Junction

Geographic Map



Route specification description

The route runs from Knightswood South Junction (Anniesland) via Dawsholm Junction, Kelvindale, Maryhill, Springburn, Stepps and Cumbernauld to Greenhill Lower Junction. ScotRail operates a half hourly service on the Maryhill Branch between Anniesland/Cowlairs Junction and an hourly service on the Cowlairs via Springburn and Stepps to Cumbernauld/Falkirk Grahamston line. ScotRail also operate three/four trains per day to the West Highlands over the Cowlairs – Westerton Junction section of the route as well as the London Euston to Fort William sleeper and a half hourly electric Dalmuir – Cumbernauld service via Glasgow Queen Street Low Level. The Garnqueen North Junction – Greenhill Lower Junction section has significant volumes of freight traffic including traffic from Coatbridge and Mossend to Grangemouth and Inverness/ Aberdeen. There is fuel and Alcan traffic to Fort William that runs via the Gartcosh Junction and Westerton section.

Maryhill Park Junction leads from the main Maryhill line onto the Anniesland branch to Dawsholm Junction.

Knightswood Junction leads from the Maryhill line onto the Singer line.

Cowlairs North Junction leads from the main Maryhill line onto the curve to Cowlairs East Junction.

Cowlairs West Junction leads from the Maryhill line onto the E&G main line and the Springburn branch.

Sighthill West Junction leads from the Springburn line via the Cowlairs Chord onto the main E&G line at Cowlairs South Junction.

Sighthill East Junction leads from the main Springburn line onto the Stepps line and Springburn traincare depot.

Gartcosh Junction leads from the Stepps line north to Garnqueen North Junction and south to Gartsherrie South Junction.

Garnqueen North Junction leads from the Stepps line onto main Perth line.

Future Aspirations :

Stakeholder aspirations exist for a new station at Robroyston.

Possible aspiration for electrification of the Maryhill Branch.

Route capability overview

Table 105				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Anniesland to Greenhill Lower Junction**			
Section Start	Anniesland (Knightswood South Junction)			
Section End	Greenhill Lower Junction			
Route Availability (RA)	Knightswood North – Maryhill Park Junction = RA8 Maryhill Park Junction – Cowlairs West Junction = RA10 Anniesland Branch = RA5 Cowlairs West Junction – Greenhill Lower Junction = RA10			
Gauge	W6 – 9		W12	
Signals	2, 3 & 4 aspect controlled by Edinburgh IECC	2, 3 & 4 aspect controlled by Edinburgh IECC		ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	75 mph max			
Electrification	No*	Yes**	Yes	*Springburn – Stepps –Cumbernauld electrified in 2014 **Cumbernauld - Greenhill Lower electrified

Passenger train service level (trains per hour/day)

Table 106				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	32 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Queen Street High Level – Anniesland = 2 tph Falkirk Grahamston – Glasgow Queen Street High Level (via Cumbernauld) = 1 tph Dumbarton Central to Cumbernauld (via Queen Street Low Level) = 2 tph Dalmuir/Milngavie - Cumbernauld (via Glasgow Central LL) = 1 tph	Glasgow Queen Street High Level – Anniesland = 2 tph Falkirk Grahamston – Glasgow Queen Street High Level (via Cumbernauld) = 1 tph Dumbarton Central to Cumbernauld (via Queen Street Low Level) = 2 tph Dalmuir/Milngavie - Cumbernauld (via Glasgow Central LL) = 1 tph	Carlisle to Carstairs/Coatbridge/Stirling - 1 ott per hour Glasgow Central to Cumbernauld - 1 or 2 ott per hour Glasgow Queen Street to Cumbernauld - retain existing frequency Glasgow Queen Street to Anniesland/Glasgow Queen Street/Springburn/Anniesland - 2 ottper hour Glasgow Queen Street to Falkirk Grahamston - 1 or 2 ottper hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Cumbernauld Station

Current freight trains (paths per day)

Table 107				
	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	12	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 108				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	1 0 1	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

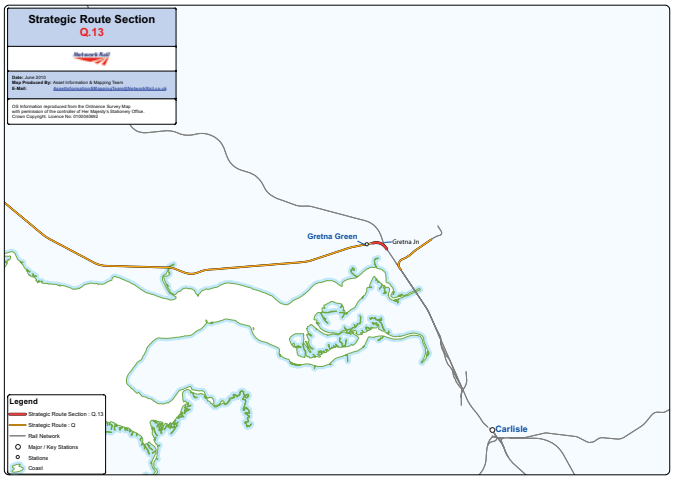
Table 109						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Electrification of Cumbernauld – Greenhill Lower	EGIP Key Output 1	SCM3 CBD1 CBD2	2017	Increase in capability		In construction

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS Q.13 Gretna Green to Gretna Junction

Geographic Map



Route specification description

The route runs from Gretna Green to Gretna Junction for approximately one mile and is two track until the single lead junction at Gretna Junction.

Route capability overview

Table 110				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Gretna Green to Gretna Junction**			
Section Start	Gretna Green			
Section End	Gretna Junction			
Route Availability (RA)	RA8			
Gauge	W8			
Signals	Controlled by Carlisle Power Signal Box			ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	80 mph max			
Electrification	No			

Passenger train service level (trains per hour/day)

Table 111				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	1 minute			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Central – Carlisle = Approx 2 hourly Dumfries – Carlisle (Local) = 4 trains per day	Glasgow Central – Carlisle = Approx 2 hourly Dumfries – Carlisle (Local) = 4 trains per day	Dumfries to Carlisle - 2 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

Table 112

	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	10	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

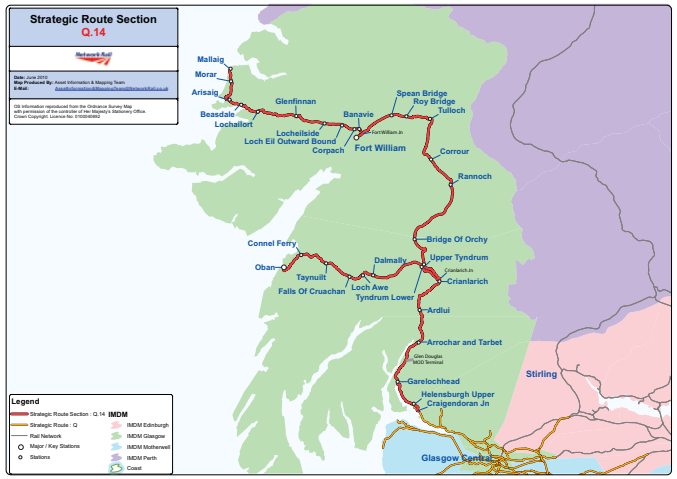
There are no level crossings on this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned infrastructure investments in Control Period 5.

SRS Q.14 West Highland Line

Geographic Map



Route specification description

The West Highland Line (WHL) route runs from Craigendoran Junction to Glen Douglas, Fort William and Mallaig with a branch to Oban from Crianlarich. It is not electrified and is single track throughout with passing loops. It has a mix of ScotRail passenger traffic, the Caledonian Sleeper and freight traffic to Fort William. The route is Radio Electric Token Block (RETB) controlled from Banavie Signal Box.

Crianlarich Junction leads from the main WHL onto the Oban branch.

Fort William Junction leads from the main WHL onto the Mallaig branch.

Future Aspirations

Removal of jointed rail sections, facilitating higher linespeeds and improved journey times.

Aspiration to redevelop Oban station.

Route capability overview

Table 113				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**West Highland Line**			
Section Start	Craigendoran Junction			
Section End	Mallaig/Oban			
Route Availability (RA)	RA5			
Gauge	Craigendoran Junction – Corpach = W8 Corpach – Mallaig = W7 Oban Branch = W7			
Signals	RETB		Fort William signal box to WSSC by 2025 Banavie signal box to WSSC by 2040 ERTMS	ERTMS
Speed **See Sectional Appendix for detailed speed profiles**	70 mph max			
Electrification	No			

Passenger train service level (trains per hour/day)

Table 114				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	Glasgow Queen Street High Level to : Oban = 3 hours 6 mins Fort William = 3 hours 35 mins Mallaig = 5 hours			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	Glasgow Queen Street High Level – Oban = 6 trains per day Glasgow Queen Street High Level – Fort William/ Mallaig = 3 trains per day London Euston – Fort William sleeper = 1 train per day Fort William – Mallaig Jacobite = 1 – 2 trains per day (summer) Fort William - Mallaig = 1 train per day	Glasgow Queen Street High Level – Oban = 6 trains per day Glasgow Queen Street High Level – Fort William/ Mallaig = 3 trains per day London Euston – Fort William sleeper = 1 train per day Fort William – Mallaig Jacobite = 1 – 2 trains per day (summer) Fort William - Mallaig = 1 train per day	Glasgow Queen Street to Mallaig - 1 ott every 2 to 3 hours Glasgow Queen Street to Oban - 1 ott every 2 to 3 hours	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process


Glenfinnan Viaduct

Current freight trains (paths per day)

Table 115				
	Current	2019	2043	Notes
Route Section	West Highland Line			
Daily paths in one direction (as per WTT)	2	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level crossings on route

Table 116				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	3 2 67	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

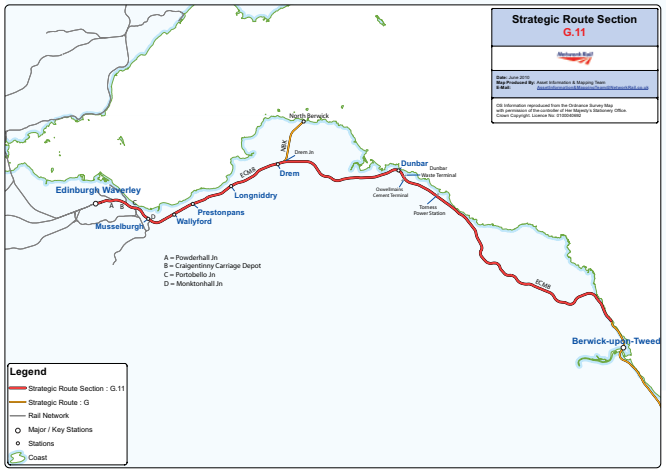
Table 117						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
RETB Re-Banding	Renewal of base station, charger, and antennas throughout route.	WHL	2015/16	Asset renewal		Completed

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS G.11 Border – Edinburgh

Geographic Map



Route specification description

This section of the East Coast Main Line (ECML) consists of 54 miles of predominantly two track railway extending from the interface with SRS G.10 to the east and to P.01 to the west of Edinburgh Waverley station. It is electrified throughout on the 25kV Overhead Line Electrification (OHL) system. A branch line runs from Drem to North Berwick , which is currently cleared for passenger traffic only. The route includes Up and Down loops at Grantshouse and Drem, a Down/Up loop at Dunbar and an Up loop at Prestonpans. At the southern end, the line is largely a basic two track railway but the layout becomes more complex on its approach to Edinburgh, reflecting the greater concentration of population and industry. There is a Traction Maintenance Depot operated by Virgin Trains East Coast at Craigentinny. There are private freight sidings at Torness power station, Oxwellmains cement terminal, Dunbar waste terminal, Leith Yard and the Powderhall compaction plant.

There are six intermediate stations at Dunbar, Drem, Longniddry, Prestonpans, Wallyford and Musselburgh. All consist of two through platforms, with the exception of Dunbar which is a single platform accessed from the Up line onto the Down/Up passenger loop. Dunbar is additionally served by Long Distance High Speed (LDHS) trains, the remainder being served only by local ScotRail services. The single platform arrangement at Dunbar can at times be a source of congestion and delay in the event of service perturbation. A second platform is being progressed in CP5/6.

Portobello is a single lead junction which leads from the ECML to Newcraighall for passenger traffic, and freight to Millerhill Yard and Central Scotland. Portobello Junction also provides a route to the Edinburgh Suburban Line which is used for empty coaching stock (ECS) and freight movements. Portobello Junction provides access to Leith Yard and Powderhall Junction provides access to the now closed Powderhall waste compaction facility.

Monktonhall Junction provides a route from the ECML to Millerhill Yard and the Edinburgh Suburban Line for freight traffic.

Prestonpans Up passenger loop provided freight access to the former Cockenzie power station.

Drem Junction on the ECML provides access to the North Berwick branch for passenger traffic.

Virgin Trains East Coast and CrossCountry operate the long distance high speed services (LDHS) over the route with ScotRail providing the local services between Drem and Edinburgh and between Dunbar and Edinburgh

Future Aspirations

To provide the infrastructure to meet the 2043 Indicative Train Service Specification: e.g. Edinburgh Suburban Enhancement Programme, Prestonpans to Drem Four Tracking, Edinburgh Waverley Eastern Approach Enhancements and Dynamic Loops South of Drem.

To provide a new Down platform at Dunbar Station which would improve performance and flexibility on the East Coast Main Line.

Stakeholder aspiration to deliver new stations at East Linton and Reston.

Route capability overview

Table 118				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Border to Edinburgh**			
Section Start	Scottish Border (ECM7, 69m 67ch)			
Section End	Edinburgh Waverley Station			
Route Availability (RA)	Border to Edinburgh = RA10	RA10		
Gauge	W9 - W12*			*W12 from the Border to Monktonhall Jn
Signals	Track Circuit Block controlled from Edinburgh Integrated Electronic Control Centre (IECC)			ERTMS
Speed See Sectional Appendix for detailed speed profiles	Varies from 75 mph to 125 mph		Raise linespeed to highest possible in line with infrastructure characteristics and capability of rolling stock	
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 119				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	Berwick-upon-Tweed to Edinburgh Waverley = 44 minutes	Introduction of Intercity Express Programme (IEP) coupled with implementation of infrastructure interventions can be expected to provide some improvement		All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	1–2 tph London King's Cross to Scotland 1 tph Penzance/Plymouth/to Edinburgh Waverley 1 tph North Berwick to Edinburgh Waverley 5 trains per day Edinburgh Waverley to Dunbar 2 tph Tweedbank to Edinburgh Waverley	Introduction of the 2018 timetable 2 tph London Kings Cross to Scotland 1 tph Penzance/Plymouth/to Edinburgh Waverley 1-2tph North Berwick to Edinburgh Waverley 2 tph Tweedbank to Edinburgh Waverley	South of England to Glasgow Central (via ECML) - 2 ott per hour South of England to Aberdeen (via ECML) - 1 ott per hour Newcastle/Berwick-upon-Tweed to Edinburgh Waverley - 1 ott per hour Dunbar to Edinburgh Waverley - 1 ott per hour North Berwick to Edinburgh Waverley - 1 ott per hour Edinburgh Waverley to Tweedbank - 3 or 4 ott per hour (reduce fastest journey time by 20 minutes)	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Dunbar Station

Current freight trains (paths per day)

Table 120				
	Current	2019	2043	Notes
Route Section				
Daily paths in one direction (as per WTT)	12	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 121`				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	1 1 0	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 122

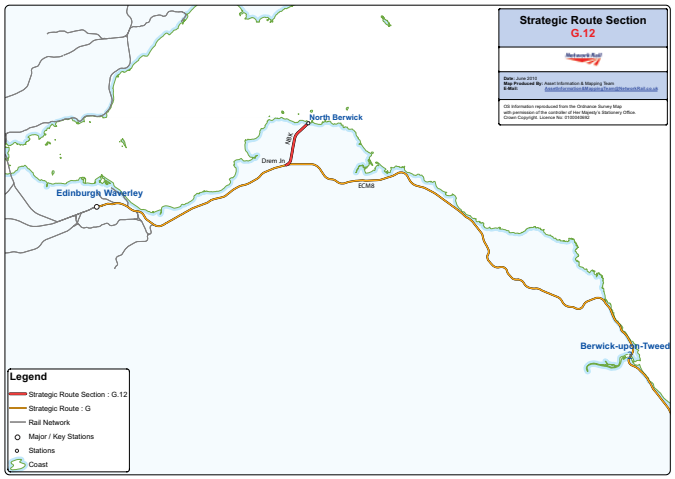
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
ECML (North) to WCML Gauge Enhancement	Gauge clear the route to W12	ECA2	2016	To accommodate the carriage of deep sea container traffic from East Coast Ports to Scotland		Completed
UB 001/120 Grantshouse Water	Superstructure renewal	ECM8	2016/17	Asset renewal		Completed
Track Renewals	High Output Ballast Cleaner and Track Relaying System	ECM8	2016 – 2019	Asset renewal		In construction
IEP enabling works	Infrastructure works to accommodate operation of IEP rolling stock	ECM8	CP5	Ability to accommodate IEP services		In construction
New Dn Platform at Dunbar	Construction of a new Down Platform	ECM8	CP5	Capacity and Capability		In development
Edinburgh Suburban Enhancements Programme	This option will provide increased capacity and resilience for passenger and freight services helping to improve performance across the central belt and cross-border.	ECM8, SUB1, SUB2, NDE1, CKT	TBA	Increased capacity and improved performance		In development
Edinburgh Waverley Eastern Approach Enhancements	This option will maximise platform capacity and availability at a congested part of the network improving performance at a key location as part of the ECML corridor enhancements.	ECM8	TBA	Platform capacity and improved performance		In development
Prestonpans to Drem Four Tracking	This option contributes towards additional local services providing more seats at busy times, increases local connectivity and performance. It is also a step towards more cross-border passenger and freight services longer term.	ECM8	TBA	Longer term capacity, journey time and connectivity aspirations		In development
Dynamic Loops south of Drem	This option is proposed to be delivered after the Prestonpans to Drem Four Tracking to optimise the benefits of phasing ECML corridor enhancements.	ECM8	TBA	Provide more capacity and operational flexibility		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS G.12 North Berwick Branch

Geographic Map



Route specification description

This single track four mile branch line extends from Drem on the ECML to North Berwick station and it is electrified. There are no intermediate stations and no passing loops or sidings on the branch.

It forms the eastern terminal of most ScotRail suburban stopping services to the east of Edinburgh Waverley and is adequate for the level of service provided which is basically hourly with a half hourly frequency at peak times and on Saturdays.

North Berwick station consists of a single platform of six-car length.

Route capability overview

Table 123				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**North Berwick to Drem**			
Section Start	North Berwick			
Section End	Drem Junction			
Route Availability (RA)	RA5			
Gauge	W7			
Signals	One Train Working controlled from Edinburgh IECC			ERTMS
Speed See Sectional Appendix for detailed speed profiles	Predominantly 50 mph			
Electrification	Yes			

Passenger train service level (trains per hour/day)

Table 124				
	Current	**2019**	**2043 Opportunities to Travel (ott)**	**Notes**
Typical Journey time	North Berwick to Drem = 9 minutes			All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process
No. of trains per hour	1 tph North Berwick to Edinburgh Waverley (Mon-Fri) 2 tph North Berwick to Edinburgh Waverley (Sat)	1 tph North Berwick to Edinburgh Waverley (Mon-Fri) 2 tph North Berwick to Edinburgh Waverley (Sat)	North Berwick to Edinburgh Waverley - 1 ott per hour	All future service specifications to be shaped by Market and Route Studies as part of the Long Term Planning Process

Current freight trains (paths per day)

This is a passenger only branch with no freight forecast to run

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 125						
Project	**Project Description**	**ELR**	**Implementation date**	**Output change**	**Notes**	**Status**
North Berwick Platform Extension	Extend platform to accommodate 6-car x 23m length carriages	NBK	2015	Enhance capacity		Completed

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.98 Other Freight Lines (Secondary)

Edinburgh Suburban Line

Geographic Map

Route specification description

The Edinburgh Suburban Line is predominately not electrified and runs from Haymarket West Junction to Monktonhall Junction via Gorgie Junction and incorporates the lines to Haymarket Central Junction, Slateford Junction via Craiglockhart Junction, Niddrie West Junction to Portobello Junction and Millerhill Yard. The section from Monktonhall Junction via Millerhill to Portobello Junction is electrified.

Future Aspiration

Electrification of Edinburgh Suburban Line

Improve signalling capacity on the Edinburgh Suburban Line.

Route capability overview

Table 126

Information	Current	2019	2043	Notes
Line of Route Description	Edinburgh Suburban line			
Section Start	Portobello Junction			
Section End	Haymarket West Junction			
Route Availability (RA)	RA10			
Gauge	W9*/W12	W12		*Craiglockhart-Haymarket West & Gorgie Jn
Signals	Controlled from Edinburgh Integrated Electronic Control Centre (IECC)			ERTMS
Speed See Sectional Appendix for detailed speed profiles	40 mph			
Electrification	No	No*	Yes	*Proposed for CP6

SRS P.98 Other Freight Lines (Secondary)

Edinburgh Suburban Line

Current freight trains (paths per day)

Table 127				
	Current	**2019**	**2043**	**Notes**
Route section	*Edinburgh Suburban Line*			
Daily paths in one direction (as per WTT)	12	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 128						
Project	**Project Description**	**ELR**	**Implementation date**	**Output change**	**Notes**	**Status**
ECML (North) to WCML Gauge Enhancement	Gauge clear the route to W10 and W12	SUB1 SUB2	2016	Enhanced capability		Completed
Edinburgh to Glasgow Improvement Programme KO1	Millerhill Stabling and Servicing	MHL2 MHL3	2016	Enhanced capability		In construction
Edinburgh Suburban Enhancement Programme: Millerhill Yard Signalled Route	Fully signalled route from Monktonhall Junction to Niddrie South Junction	NDE MHL1	CP5/6	Increase capacity		In development
Edinburgh Suburban Enhancement Programme: Edinburgh Suburban line Electrification	Electrification of the Edinburgh Suburban line	SUB1 SUB2	CP6	Enhanced capability		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

**The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.99 Other Freight Lines (Secondary)

Longannet Branch

Route specification description

The Longannet Branch runs from Alloa Station to Charlestown Junction via Longannet power station. The branch is freight only, is single line throughout with a passing loop at Alloa and is not electrified. With the closure of Longannet in March 2016 the Longannet branch currently sees sporadic traffic.

Route capability overview

Table 129

Information	Current	2019	2043	Notes
Line of Route Description	**Longannet Branch**			
Section Start	Alloa			
Section End	Charlestown Junction			
Route Availability (RA)	Alloa – Longannet = RA10 Longannet – Charlestown Junction = RA8			
Gauge	Alloa – Kincardine = W9 Kincardine – Charlestown Junction = W6	W9		
Signals	Alloa – Kincardine section controlled from Stirling Middle signal box Kincardine – Charlestown Junction controlled from Longannet signal box			ERTMS
Speed See Sectional Appendix for detailed speed profiles	Charlestown Junction – Longannet = 35 mph max Longannet – Alloa = 40 – 75 mph			
Electrification	No			

SRS P.99 Other Freight Lines (Secondary)

Longannet Branch

Current freight trains (paths per day)

Table 130				
	Current	2019	2043	Notes
Route section	Longannet Branch			
Daily paths in one direction (as per WTT)	1	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 131				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised Automatic User	3 0 9	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are major track renewal requirements for delivery in Control Period 5.

SRS P.99 Other Freight Lines (Secondary) Powderhall Branch

Route specification description

The branch is accessed from the East Coast Main Line at Powderhall Junction and runs for two miles to the Edinburgh District Council Refuse Compaction Plant at Powderhall.

Route capability overview

Table 132

Information	Current	2019	2043	Notes
Line of Route Description	Powderhall Branch			Unlikely to be part of the operational railway in 5 years
Section Start	Powderhall Junction			
Section End	Powderhall Compaction Plant			
Route Availability (RA)	RA10			
Gauge	W7			
Signals	Controlled by Edinburgh IECC			
Speed See Sectional Appendix for detailed speed profiles	5 – 30 mph			
Electrification	No			

Current freight trains (paths per day)

Table 133

	Current	2019	2043	Notes
Daily paths in one direction (as per WTT)	1	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS P.99 Other Freight Lines (Secondary)Aberdeen Waterloo Branch

Route specification description

The Waterloo Branch is accessed at Kittybrewster Junction on the Aberdeen – Inverness line.

The branch is approximately 1.3 miles long, leading to two private terminals (Omya and Aberdeen Harbour), is single line with a rounding loop and is not electrified.

Route capability overview

Table 135

Information	Current	2019	2043	Notes
Line of Route Description	Aberdeen Waterloo Branch			
Section Start	Kittybrewster Junction			
Section End	Waterloo Terminal			
Route Availability (RA)	RA8	RA10		
Gauge	W8	W8	W10	
Signals	One train working. Branch access controlled by ground frame at Kittybrewster			
Speed See Sectional Appendix for detailed speed profiles	5 – 35 mph			
Electrification	No			

Current freight trains (paths per day)

Table 136

	Current	2019	2043	Notes
Route section	Aberdeen Waterloo Branch			
Daily paths in one direction (as per WTT)	1	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 137

Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Aberdeen Waterloo Branch increase to RA10	Raise RA from RA8 to RA10	WRO	CP5	Encourage growth in rail freight		In development
Aberdeen Waterloo Branch removal of one train working operation restriction	Increase capacity	WRO	CP5	Encourage growth in rail freight		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.99 Other Freight Lines (Secondary) Grangemouth Branch

Route specification description

The branch is accessed from the Up Grahamston main line at the single lead Grangemouth Junction and runs for approximately four miles. It is not electrified and is two track until Fouldubs Junction where there are two loops and "yard working" applies. The lines then divide to serve the Forth Ports terminal at Grangemouth Docks and the Ineos Grangemouth oil terminal. There are also a further two private terminals on the freight line owned by WH Malcolm and DB Schenker.

Route capability overview

Table 138

Information	Current	2019	2043	Notes
Line of Route Description	**Grangemouth Branch**			
Section Start	Grangemouth Junction			
Section End	Grangemouth Oil Terminal			
Route Availability (RA)	RA10			
Gauge	W9	W12		
Signals	Branch controlled by Grangemouth Junction Signal Box and Fouldubs Signal Box	Controlled from Edinburgh IECC		
Speed See Sectional Appendix for detailed speed profiles	5 – 40 mph			
Electrification	No	Yes		

Grangemouth Branch

Current freight trains (paths per day)

Table 139				
	Current	2019	2043	Notes
Route section	Grangemouth Branch			
Daily paths in one direction (as per WTT)	7	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.*

* 3 level crossings on private infrastructure.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)* and Pipeline of Schemes Beyond CP5

Table 140						
Project	Project Description	ELR	Implementation date	Output change	Notes	Status
Grangemouth Branch Electrification	Electrification of the Grangemouth Branch	GMH	2018	Enhanced capability		In development

*In addition to the proposed enhancement programme, this table includes third party schemes, renewals and potential pipeline schemes where applicable

** The precise timing and scope of renewals will remain subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

SRS P.99 Other Freight Lines (Secondary)

Leith Branch

Route specification description

The branch is accessed from the East Coast Main Line at Portobello Junction and runs for two miles to a freight yard serving the docks at Leith. It is a single line with a rounding loop and is not electrified.

Route capability overview

Table 141				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Leith Branch**			
Section Start	Portobello Junction			
Section End	Seafield Level Crossing			
Route Availability (RA)	RA10			
Gauge	W8			
Signals	Controlled by Edinburgh IECC			ERTMS
Speed See Sectional Appendix for detailed speed profiles	5 – 20 mph			
Electrification	No			

Current freight trains (paths per day)

Table 142				
	Current	2019	2043	Notes
Route section	Leith Branch			
Daily paths in one direction (as per WTT)	0	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 143				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised	1	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS P.99 Other Freight Lines (Secondary) Methil Branch

Route specification description

The Methil Branch is accessed from the Up Fife main line at Thornton North Junction and runs for approximately six miles to Kirkland East. It is not electrified and is single line with a rounding loop. A coal terminal, which was opened in 2012, is now closed and the branch is currently temporarily out of use.

Route capability overview

Table 144				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Methil Branch**			
Section Start	Thornton North Junction			
Section End	Kirkland East			
Route Availability (RA)	RA8			
Gauge	W6		W10 & W12	Future aspiration for W12 from Dunfermline to Methil
Signals	Edinburgh IECC			
Speed See Sectional Appendix for detailed speed profiles	10 mph			
Electrification	No			

Current freight trains (paths per day)

Table 145				
	Current	**2019**	**2043**	**Notes**
Route section	**Methil Branch**			
Daily paths in one direction (as per WTT)	0	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 146				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
User	5*	As determined by Level Crossing policy	As determined by Level Crossing policy	*4 level crossings on private infrastructure

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS P.99 Other Freight Lines (Secondary) Rosyth Branch

Route specification description

The Rosyth Branch is accessed from the East Coast North main line and runs to Rosyth Dockyard. The line is currently out of use.

Route capability overview

Table 147				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Rosyth Branch**			
Section Start	Inverkeithing South Junction			
Section End	Rosyth Dockyard			
Route Availability (RA)	RA8			
Gauge	W8			
Signals	Edinburgh IECC and local Operations staff			ERTMS
Speed See Sectional Appendix for detailed speed profiles	20 mph			
Electrification	No			

Current freight trains (paths per day)

Table 148				
	Current	**2019**	**2043**	**Notes**
Route section	**Rosyth Branch**			
Daily paths in one direction (as per WTT)	0	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 149				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised	1*	As determined by Level Crossing policy	As determined by Level Crossing policy	*4 level crossings on private infrastructure

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.98 Other Freight Lines (Secondary) City Union Line

Route specification description

The City Union line is accessed off the North Electric main line at Glasgow High Street Junction and runs for approximately 2 1/2 miles to Shields Junction where it joins the Ayr main line. It is double line throughout apart from the High Street Junction connection which is single lead. The route is not electrified and it is primarily used for moving Empty Coaching Stock (ECS). In addition, occasional freight and engineering trains use the route.

Route capability overview

Table 150				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**City Union Line**			
Section Start	High Street Junction			
Section End	Shields Junction			
Route Availability (RA)	8			
Gauge	W8			
Signals	Controlled by both Yoker Signalling Centre and WSSC		Controlled from WSSC	
Speed See Sectional Appendix for detailed speed profiles	15 mph			
Electrification	No*			* as per ongoing programme of electrification

Current freight trains (paths per day)

Table 151				
	Current	**2019**	**2043**	**Notes**
Route section	**City Union Line**			
Daily paths in one direction (as per WTT)	1	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		The route is used for passenger ECS

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.98 Other Freight Lines (Secondary) Clydesdale Line

Route specification description

The Clydesdale line is accessed off the WCML at Larkfield Jn and runs for approximately 1 3/4 miles to Shields Jn. It is double line throughout apart from the Shields Jn single lead. The route is electrified and is primarily used for freight traffic. The Larkfield Curve is accessed off the Clydesdale lines and links with the Barrhead line at Muirhouse South Jn. In addition, the Burma Road is accessed from Shields West Junction and connects to the Clydesdale line at Clydesdale Tunnel.

Route capability overview

Table 152

Information	Current	2019	2043	Notes
Line of Route Description	**Clydesdale line**			
Section Start	Larkfield Junction			
Section End	Shields Junction			
Route Availability (RA)	10			
Gauge	W9			
Signals	Controlled by WSSC			
Speed See Sectional Appendix for detailed speed profiles	0 – 30 mph			
Electrification	Yes			

Current freight trains (paths per day)

Table 153

	Current	2019	2043	Notes
Route section	**Clydesdale line**			
Daily paths in one direction (as per WTT)	6	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Annbank Branch

Route specification description

The Annbank Branch is accessed off the Down Ayr main line at Newton Junction and runs for approx 11 miles to Mauchline Junction where it joins the Glasgow & South Western (G&SW) main line. It is single line throughout with a passing loop at Mauchline and is a main arterial freight route for Anglo Scottish coal traffic. The Killoch Branch connects to the Annbank Branch at Annbank Junction.

Route capability overview

Table 155

Information	Current	2019	2043	Notes
Line of Route Description	Annbank Branch			
Section Start	Newton Junction			
Section End	Mauchline Junction			
Route Availability (RA)	10			
Gauge	W7			
Signals	Controlled from Mauchline Signal Box			ERTMS
Speed See Sectional Appendix for detailed speed profiles	45 mph			
Electrification	No			

Current freight trains (paths per day)

Table 156

	Current	2019	2043	Notes
Route section	Annbank Branch			
Daily paths in one direction (as per WTT)	10	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary)

Ayr Harbour Branch

Route specification description

The Ayr Harbour Branch is accessed from the Up Ayr main line at Newton Junction and runs for a half mile down to the Ayr Harbour terminal owned by Associated British Ports.

Route capability overview

Table 157				
Information	Current	2019	2043	Notes
Line of Route Description	Ayr Harbour Branch			
Section Start	Newton Junction			
Section End	Ayr Harbour			
Route Availability (RA)	10			
Gauge	W7			
Signals	Controlled from WSSC and by a ground frame at the harbour			
Speed See Sectional Appendix for detailed speed profiles	15 mph			
Electrification	No			

Current freight trains (paths per day)

Table 158				
	Current	2019	2043	Notes
Route section	Ayr Harbour Branch			
Daily paths in one direction (as per WTT)	As required	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Chalmerston Branch

Route specification description

The Chalmerston Branch is accessed from the Girvan main line at Dalrymple Junction, is a single line, not electrified, runs for ten miles to the Scottish Coal loading site at Chalmerston. The branch is currently out of use.

Route capability overview

Table 159				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Chalmerston Branch**			
Section Start	Dalrymple Junction			
Section End	Chalmerston open cast loading point			
Route Availability (RA)	RA8			
Gauge	W6			
Signals	Controlled from WSSC			
Speed See Sectional Appendix for detailed speed profiles	20 mph			
Electrification	No			

Current freight trains (paths per day)

Table 160				
	Current	**2019**	**2043**	**Notes**
Route section	**Chalmerston Branch**			
Daily paths in one direction (as per WTT)	0	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 161				
Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised	5	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Deanside Branch

Route specification description

The Deanside Branch is accessed from the Glasgow Central to Paisley main line at Cardonald Junction, is a single line, with a rounding loop, not electrified and runs for approximately two miles to the Russell Group freight terminal at Hillington. The branch is currently out of use.

Route capability overview

Table 162				
Information	**Current**	**2019**	**2043**	**Notes**
Line of Route Description	**Deanside Branch**			
Section Start	Cardonald Junction			
Section End	Deanside Terminal			
Route Availability (RA)	RA9			
Gauge	W9			
Signals	Controlled from WSSC			
Speed See Sectional Appendix for detailed speed profiles	20 mph maximum			
Electrification	No			

Current freight trains (paths per day)

Table 163				
	Current	**2019**	**2043**	**Notes**
Route section	**Deanside Branch**			
Daily paths in one direction (as per WTT)	As required	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Killoch Branch

Route specification description

The Killoch Branch is accessed from the Annbank Branch at Annbank Junction, is a single line, not electrified and runs for seven miles to the Hargreaves terminal at Killoch.

Route capability overview

Table 164

Information	Current	2019	2043	Notes
Line of Route Description	Killoch Branch			
Section Start	Annbank Junction			
Section End	Killoch Coal Terminal			
Route Availability (RA)	RA10			
Gauge	W6			
Signals	Controlled by train staff from ground frame at Annbank Junction			
Speed See Sectional Appendix for detailed speed profiles	20 mph			
Electrification	No			

Current freight trains (paths per day)

Table 165

	Current	2019	2043	Notes
Route section	Killoch Branch			
Daily paths in one direction (as per WTT)	3	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 166

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
User	1	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Riccarton Branch

Route specification description

The Riccarton Branch is accessed from the Down G&SW main line at Kay Park Junction, is not electrified, and is a single line with a rounding loop and runs for two miles to the oil terminal at Riccarton.

Route capability overview

Table 167

Information	Current	2019	2043	Notes
Line of Route Description	Riccarton Branch			
Section Start	Kay Park Junction			
Section End	Riccarton Oil Terminal			
Route Availability (RA)	RA10			
Gauge	W6			
Signals	Controlled from Kilmarnock Signal Box	Controlled from WSSC by 2023		
Speed See Sectional Appendix for detailed speed profiles	5 mph			
Electrification	No			

Current freight trains (paths per day)

Table 168

	Current	2019	2043	Notes
Route section	Riccarton Branch			
Daily paths in one direction (as per WTT)	1 train per week	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

There are no level crossings in this route section.

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

SRS Q.99 Other Freight Lines (Secondary) Greenburn Branch

Route specification description

The Greenburn Branch is accessed off the G&SW main line at Bank Junction, is a single line, not electrified and runs for a mile before it connects to a private siding to the Kier Group opencast coal loading point at Greenburn.

Route capability overview

Table 169

Information	Current	2019	2043	Notes
Line of Route Description	Greenburn Branch			
Section Start	Bank Junction			
Section End	Greenburn Open Cast loading point			
Route Availability (RA)	RA10			
Gauge	W6			
Signals	Controlled from New Cumnock signal box	Controlled from WSSC by 2023		
Speed See Sectional Appendix for detailed speed profiles	20 mph			
Electrification	No			

Current freight trains (paths per day)

Table 170

	Current	2019	2043	Notes
Route section	Greenburn Branch			
Daily paths in one direction (as per WTT)	2	As per forecasts in the Freight Market Study (2013) & Scotland Route Study (2016)		

Level Crossings on route

Table 166

Type	Current No. of Level Crossings	2019 No. of Level Crossings	2043 No. of Level Crossings	Notes
Supervised	1	As determined by Level Crossing policy	As determined by Level Crossing policy	

Proposed infrastructure investment in Control Period 5 (2014 – 2019)*

There are no planned schemes in Control Period 5.

Glossary

Term	Meaning
ASC	Area Signalling Centre
Control Period 4 (CP4)	Control Period 4 (2009-2014)
Control Period 5 (CP5)	The 2014 – 2019 period
Control Period 6 (CP6)	The 2019 – 2024 period
Down line	Usually the line away from London
ECML	East Coast Main Line
ELR	Engineers Line Reference, three letter code designating the line of route
ERTMS	European Rail Traffic Management System
Fast line	Predominantly used by trains with limited stops on the line
FOC	Freight Operating Company
GRIP	Governance for Railway Investment Projects
HLOS	High Level Output Specification
HS2	Proposed high speed link between London and Birmingham beyond to Leeds and Manchester
IECC	Integrated Electronic Control Centre
Jn	Junction
LTPP	Long Term Planning Process
MPH	Miles Per Hour
NRDF	Network Rail Discretionary Fund
ORR	Office of Rail Regulation (the regulator for the rail industry in Great Britain)
RA	Route Availability
ROC	Rail Operations Centre
RUS	Route Utilisation Strategy
Slow line	Predominantly used by trains serving stations on the line
SRS	Strategic Route Section
TfL	Transport for London
TPD	Trains Per Day
TPH	Trains Per Hour
TOC	Train Operating Company
TPH	Trains Per Hour
TS	Transport Scotland
Up line	Usually the line towards London
WCML	West Coast Main Line
WTT	Working Timetable

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