

Connecting local communities

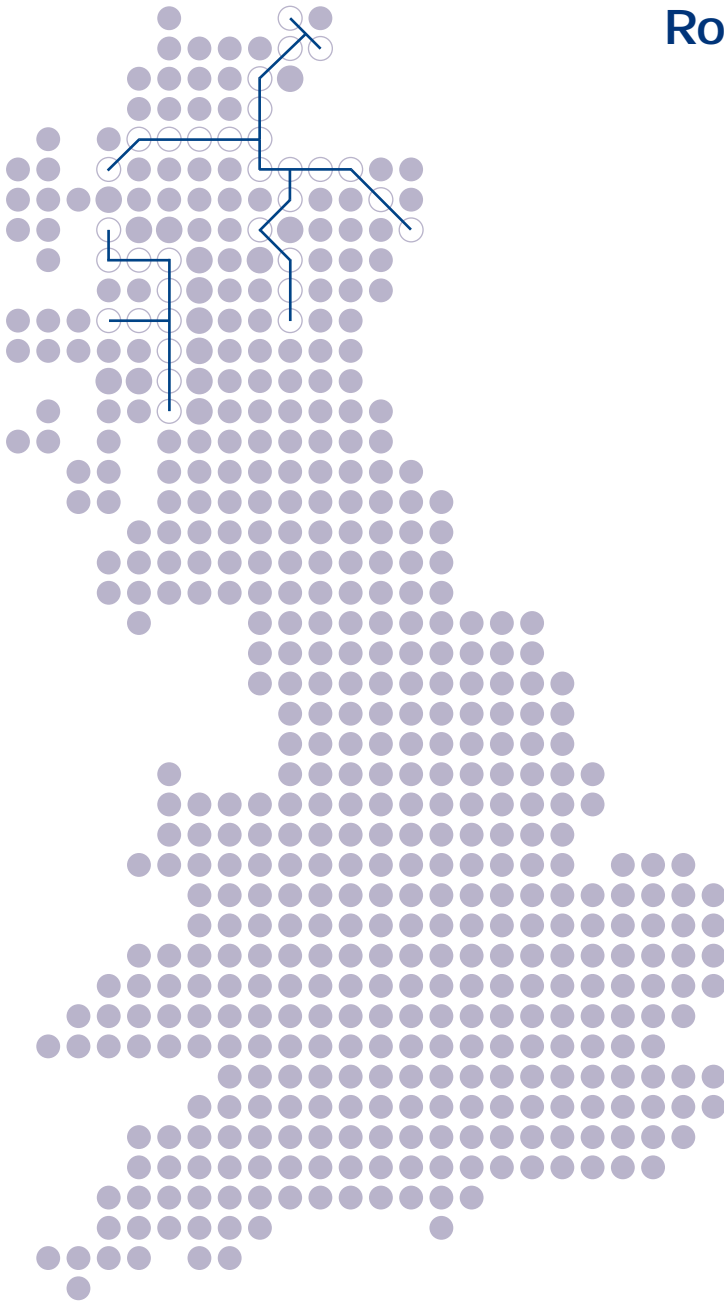


Network Rail helps bring Britain together. We own, operate and maintain the rail network, delivering improved standards of safety, reliability and efficiency.

Our investment programme to enhance and modernise the network is the most ambitious it has ever been. Delivering a 21st century railway for our customers and society at large.

Every day. Everywhere.

Route 25 Highlands



Section 1: Today's railway

Route context

The Highlands Route serves a large number of rural communities across the North of Scotland, providing access to the social and commercial facilities of the major towns of Inverness, Wick, Thurso, Oban and Fort William. These towns also serve as significant transport interchanges with buses and, in some cases, shipping services to the Scottish island communities. Tourism plays a major role in the Highland economy, and these scenic rail lines are well patronised in the summer months by domestic and foreign tourists.

The route also serves a number of freight terminals.

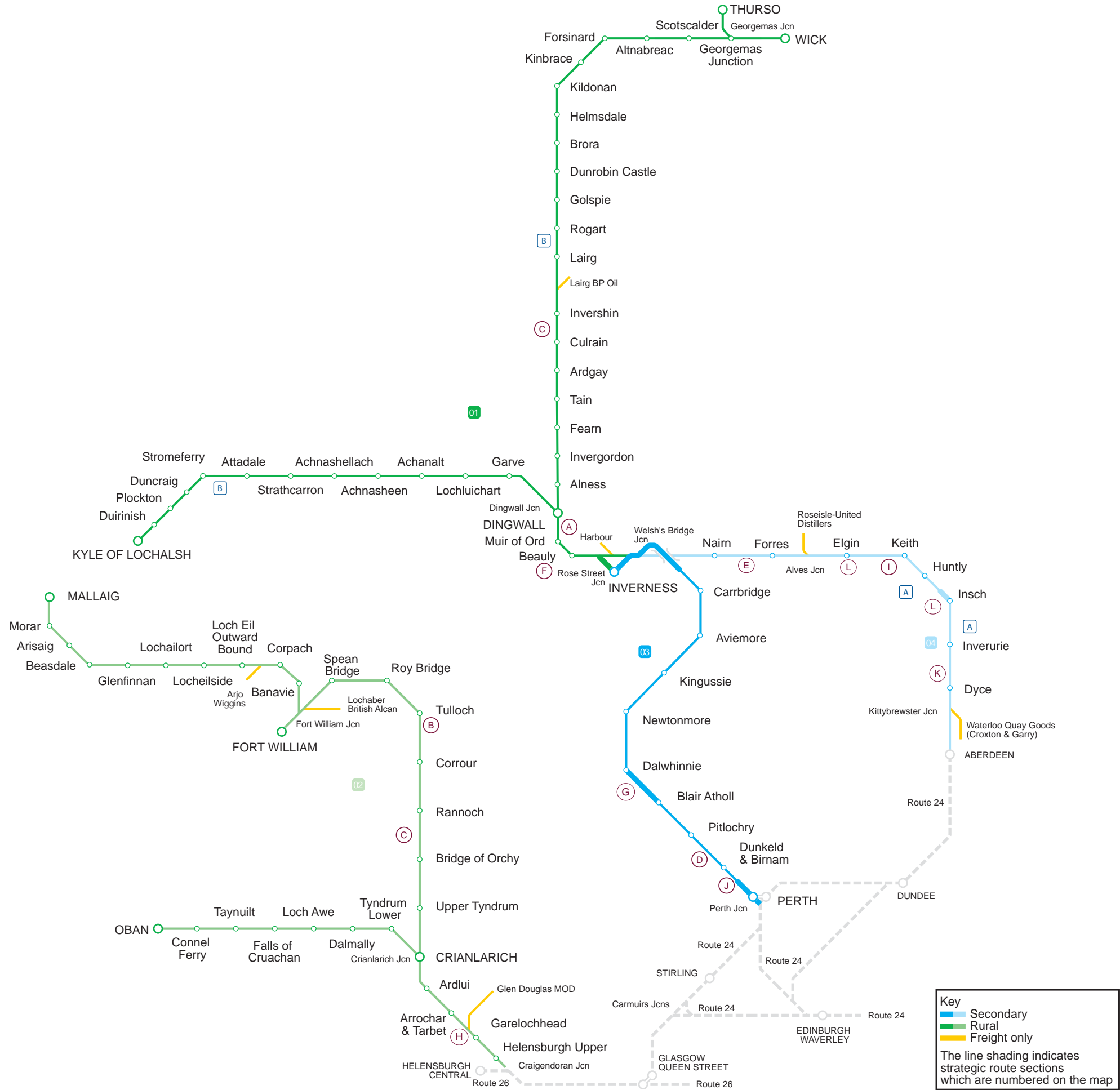
Transport Scotland commissioned its Scottish Planning Assessment (SPA), as one of the inputs to the development of their strategy for rail in Scotland, and Network Rail published the Route Utilisation Strategy (RUS) for Scotland in March 2007. Both of these pieces of work have informed the High Level Output Specification (HLOS), which was published by Scottish Ministers in July 2007. This strategy details Network Rail's response to the outputs detailed in the HLOS.

Today's route

The principal elements of the Highlands Route are described below. The relevant Strategic Route Section is shown in brackets:

- the line between Perth and Inverness (25.03);
- the line between Aberdeen and Inverness (25.04);
- the North Highland Line from Inverness to Wick and Thurso and the branch from Dingwall to Kyle of Lochalsh (25.01); and
- the West Highland Line from Craignendran (on Route 26) to Fort William and the branches from Crianlarich to Oban and Fort William to Mallaig (25.02).

Route 25 Highlands



Current passenger and freight demand

The major population centres on the route have experienced modest population growth in recent years, with the exception of Inverness where significant growth has occurred. This has been assisted by the relocation of several public bodies, principally Scottish Natural Heritage and Forest Enterprise Scotland. However this growth has been achieved in many cases at the expense of the hinterlands where there has been a steady structural trend of de-population from the rural areas in the Highlands.

An enhanced service on the lines radiating from Inverness (referred to as 'Invernet') was introduced from December 2005. This is aimed at providing peak hour services on corridors where they were not previously provided and closing some of the significant timetable gaps at other times. Additional Aberdeen – Inverness, Aberdeen – Inverurie and Blair Atholl – Edinburgh services were also introduced in 2008 together with further improvements north of Inverness.

The Scottish Planning Assessment (SPA) reported on current daily passenger numbers on a number of geographically aggregated sectors. The daily trip data for the sectors on this route, updated based on the most recently available data, are detailed in Figure 1.

In addition, further analysis was carried out as part of our development of the Scotland Route Utilisation Strategy (RUS). For further information see www.networkrail.co.uk.

There are wide seasonal variances in traffic volumes on the West and North Highland lines.

This is addressed by strengthening of train formations in the peak summer months.

The section of the route from Inverness to Perth continues to see healthy levels of freight, and the freight industry has plans to increase rail borne freight between Inverness and the central belt of Scotland making use of the freight terminal recently opened in Inverness.

With the exception of sections on the Aberdeen to Inverness line, current peak utilisation is within the practical capacity available on all parts of the route.

Current services

Figure 2 shows the current train service levels on the route during the busiest hour on each line.

The Highland Route carries mixed traffic between Perth, Inverness and Georgemas and between Craigendoran and Fort William. The remainder of the route carries mainly passenger services with occasional charters and freight services. As the route is predominantly single track, certain sections have relatively high utilisation imposing constraints on the timetable.

First ScotRail operates the majority of passenger services on this route, including an overnight sleeper service from London Euston to Fort William and Inverness which forms part of the Caledonian Sleeper network. National Express East Coast (NEXC) operates a daily service between London Kings Cross and Inverness via the East Coast Main Line (ECML). A summer only steam tourist service is operated by The West Coast Railway Company between Fort William and Mallaig.

Figure 1 Current passenger numbers

Sector	Daily Trips
To/From Inverness	2,500
West Highland Lines	750

Figure 2 Current train service level (peak trains per hour)

Route section	Number of trains
Inverness – Dingwall*	4
Inverness – Kingussie*	3
Craigendoran – Crianlarich*	2
Inverness – Elgin*	2
Aberdeen – Inverurie*	4

* Trains in both directions over single line

Freight services operated by DB Schenker include alumina and fuel to Fort William, with Freightliner Heavy Haul providing a service for cement products from Dunbar to Inverness via Perth. DRS operate a service of supermarket traffic from Grangemouth to the new freight terminal in Inverness

Figure 3 shows the total annual tonnage levels on this route.

Traffic volumes are summarised in Figure 4.

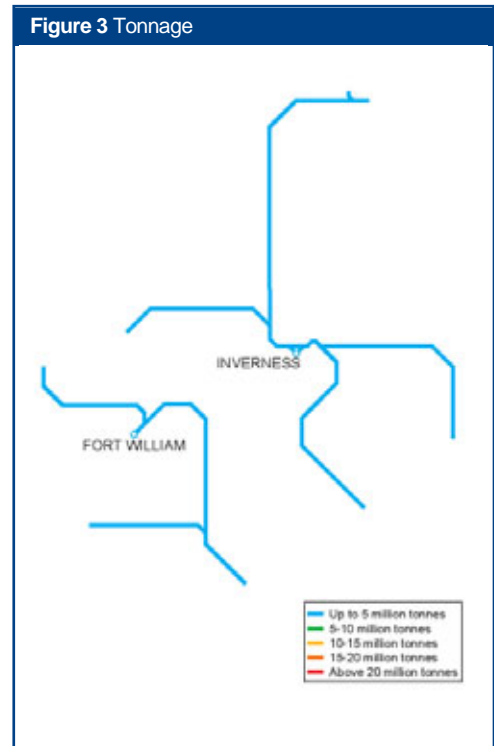


Figure 4 Current use

	Passenger	Freight	Total
Train km per year (millions)	5	0	5
Train tonne km per year (millions)	672	118	790

Current infrastructure capability

The following maps set out the capability of the current network.

Figure 5 Linespeed

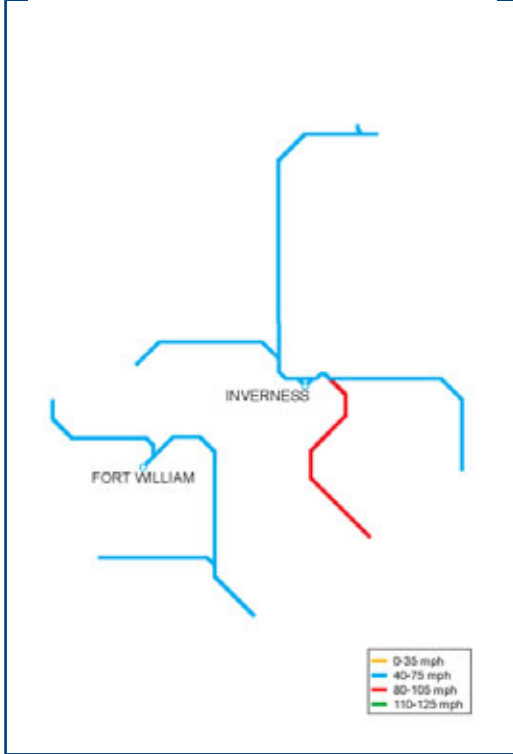


Figure 6 Electrification

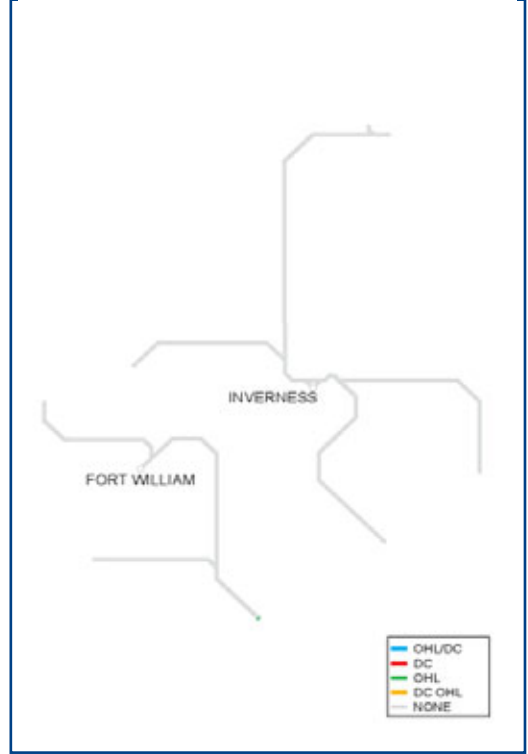


Figure 7 Route availability

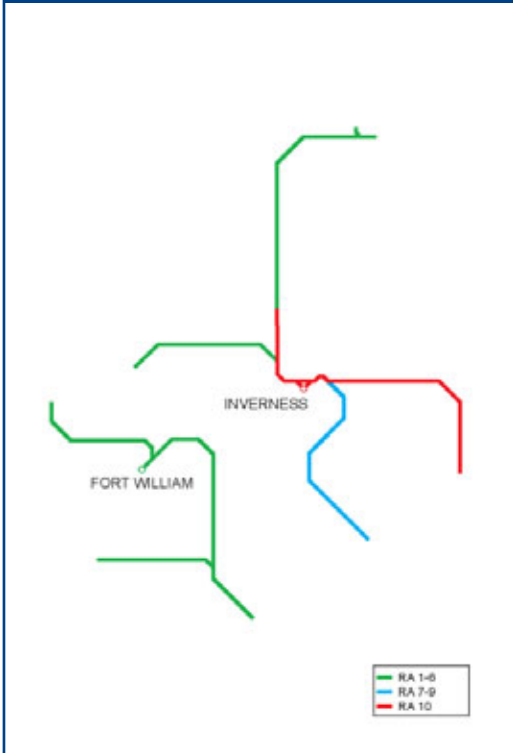


Figure 8 Gauge

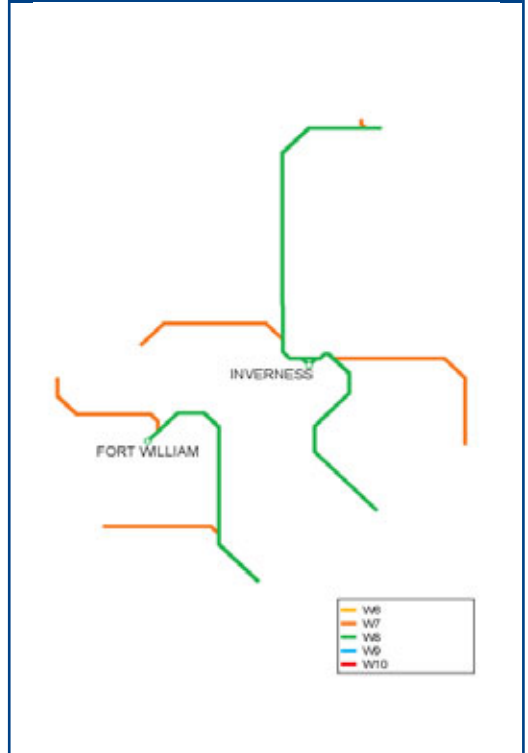


Figure 9 2008/09 PPM

TOC	Forecast MAA	As at period
First ScotRail	90.7%	10
National Express East Coast	86.5%	10

Current capacity

The baselining work carried out as part of our Scotland Route Utilisation Strategy (RUS) work has confirmed that the current network can cope with present service levels, although there are several capacity constraints which could restrict growth in the future. The most significant of these are the Keith/Elgin, Dunkeld/Pitlochry and Dalwhinnie/Kingussie single line sections. Further information on these is included in the Future Capacity section below.

Current performance

Figure 9 shows the forecast 2008/09 PPM for Period 10 for the main Train Operating Companies (TOCs) running along the route.

Performance across Scotland has improved dramatically over the last four years with a circa 35 percent reduction in delay minutes leading to an improvement in First ScotRail's PPM from 83.1 percent to over 90 percent today. To achieve this, the focus has been on attention to detail particularly the reliability of strategic points and signalling equipment at key nodes.

Traditionally the Autumn period has resulted in a significant dip in performance. Weather conditions during 2008 have contributed to a worsenment in performance during Autumn 2008. Despite this, improvements in other aspects of performance have meant that overall performance is still better than the same period in 2007.

The route consists mostly of long single line sections with passing loops. On such routes any perturbations can have a significant impact.

Despite that, performance on the route remains generally satisfactory. Recent timetable revisions have taken account of performance risks to ensure delivery of a robust timetable.

The Network Rail and First ScotRail controls are co-located within the same office in Glasgow to enable prompt and effective response to any incidents in order to mitigate subsequent delays. We have recently completed the integration of the maintenance and operations controls in Scotland. We will continue to work with First ScotRail, the principal train operator in Scotland to provide rapid decision making during perturbed working to enable a return to normal working as quickly as possible.

The control centre delivers effective real time management of planned and un-planned disruptive events, to minimise the impact on passengers.

A number of initiatives are being progressed on this route to effect performance improvements. Examples of these are:

- life extension works to the West and North Highland RETB systems (25.02/25.01);
- renewal and rationalisation of signal cables on the Highland Main Line (25.03);
- targeted track renewals at remote locations;
- introduction of new operating instructions for managing animals on the line; and
- enhanced vegetation management regimes.

Section 2: Tomorrow's railway: requirements

Future demand in CP4

The Scotland RUS predicted an annual growth rate across Scotland of three percent per annum and this has been reflected in the Scotland HLOS.

Demand has increased significantly over recent years on the inter-urban routes to Inverness, following the recent growth of the city. Growth, albeit at a lower level, has also been experienced on the new suburban services around the city.

Network Rail is working with Transport Scotland to improve frequency and increase journey times on the Highland Main Line based on the 'Room for Growth' study.

Future freight demand on the route will be affected by factors such as the increased use of rail on trunk flows within the logistics chain, the national recycling strategy involving the movement of waste by rail from new waste transfer stations and the availability of grants towards the creation of new freight terminals. We have published a national Freight Route Utilisation Strategy (RUS) that has provided a robust forecast for future freight growth on the route.

Future demand beyond CP4

Future freight demand on the route beyond CP4 will be affected by any initiatives arising from the proposed development of the Inner Moray Firth.

Sustainability is at the heart of the improvements we are delivering between now and 2014, and it is integral to the Government's long-term rail strategy. Sustainability demands a broader look at priorities for the railway alongside other modes, to find the best balance between the needs of the economy, society and the environment. Our ambitions are for a railway that:

- contributes to the economic success of the nation by enabling more people and freight to travel in a way that minimises the environmental impact;
- is flexible enough to adapt and respond to social changes, protecting the network and improving its ability to operate for longer in the day and more consistently over the working week;
- is easy and accessible to use.

Transport Scotland published the Strategic Transport Projects Review (STPR) in December 2008 considering options for improvement to the Transport infrastructure in Scotland beyond 2012. The proposals include 11 major packages of work targeted at improvements in rail infrastructure. Of the 11 projects, two fall within Route 25 – they are:

- capacity and speed improvements on the Inverness to Perth line
- capacity and speed improvements on the Inverness to Aberdeen line

Network Rail and Transport Scotland will continue to work together to develop these options to increase capacity and improve capability on the network.

Section 3: Tomorrow's railway: strategy

Figure 10 summarises the key milestones during CP4 in delivering the proposed strategy for the route.

Further explanation of the key service changes and infrastructure enhancements are set out in the following sections.

Figure 10 Summary of proposed strategy milestones			
Implementation date	Service enhancement	Infrastructure Enhancement	Expected output change
Dec 10/11	Revised West Highland timetable	None	Revised timetable proposed in Hitrans study (subject to rolling stock provision)
Dec 2012	Hourly Inverness/Central Belt	Infrastructure enhancements between Perth and Inverness	Hourly service between Inverness and Perth going forward to Edinburgh or Glasgow
2016	Additional local services between Inverness and Elgin serving new station at Dalcross	Additional loop and new station at Dalcross.	Additional local services
2016	Additional local services between Aberdeen and Inverurie serving new station at Kintore	Additional loops at Kittybrewster and Kintore and new station at Kintore	Additional local services
2016	Hourly Inverness/Aberdeen	Infrastructure enhancements between Aberdeen and Inverness	Hourly service between Inverness and Aberdeen

Strategic direction

Improved use of the rail network is a central element of Scottish Ministers' plans for effective delivery of its rail objectives. Scottish Ministers published Scotland's Railways in December 2006, which promotes sustainable economic growth and sets the context for the development of sustainable transport solutions for Scotland over the next 20-25 years. This strategy promotes connectivity between major towns and cities, supports faster journey times on key routes and aims to improve quality, accessibility and affordability of Scotland's railways as well as reducing emissions.

From this strategy Scottish Ministers' published a High Level Output Specification (HLOS) in July 2007. The HLOS details Scottish Ministers' aspirations for the rail network between March 2009-2014 which include:

- the delivery of services that minimise the impact on the environment and make sure that rail is a real alternative to road and air travel for passenger and freight travel and environmentally superior both within Scotland and for cross-border journeys;
- partnership working between Network Rail, First ScotRail, Transport Scotland, Regional Transport Partnerships, local authorities and other key stakeholders;
- the promotion of integrated, innovative and efficient working practices both in respect of current operations and network planning;
- the promotion of integration between transport modes and the provision of effective, secure interchange facilities;
- a reduction in the time taken to progress projects from feasibility to delivery; and
- continued improvements to operational and financial performance, including improved resilience.

The HLOS specifies outputs in three 'Tiers'. Tier 1 requires the existing network to be retained with the ability to cope with known growth and performance improved. Tier 2 specifies major projects for development and delivery while Tier 3 includes the development of further enhancements. Tier 1 includes a Small Projects Fund to support growth through measures to improve capacity or capability or performance. Table 18 includes schemes currently identified which fit within this category. Tables 17 and 18 indicate within which tier each project falls.

Within Route 25 these options predominately focus on additional infrastructure to facilitate increased line capacity and reduced journey time between Aberdeen and Inverness. In addition, the RUS

incorporated the option to enhance the infrastructure between Perth and Inverness to permit an increased frequency and reduced journey time. This option was originally developed for the Room for Growth Study published by Highlands and Islands Enterprise and Network Rail has now been commissioned by Transport Scotland to develop this proposal further. It is primarily focussed on journey time reductions and frequency improvements through level crossing upgrades, line speed enhancements and redoubling of sections of track. A Rolling Stock Strategy is also being developed for this route.

Highland Council is promoting the construction of a deep water port facility in the Inner Moray Firth area. This would provide a UK link into the proposed 'northern maritime corridor' with feeder shipping services from the proposed international container port at Scapa on Orkney. If implemented, it could result in a significant increase in rail freight traffic on the Perth to Inverness and Inverness to Invergordon lines.

Contributions from the discretionary fund, which was established in CP3, allowed enhancements to be progressed subject to a suitable industry business case.

In CP4 the discretionary fund will be known as the Small Projects Fund (SPF)

Project Development Fund

This fund will be available in CP4 with the primary purpose being the initial development of projects as detailed within the Strategic Transport Projects Review (STPR). Other industry partners can also suggest projects but these will only be progressed if endorsed as appropriate by Transport Scotland.

Level Crossings

The term level crossing (LC) describes an intersection at the same elevation of a road, footpath or bridleway and one or more rail tracks. The Office of Rail Regulation (ORR) classify LCs as either active or passive, depending on whether warning is given of a train's approach. There are over seven thousand crossings on Network Rail infrastructure and 17 different classification types, ranging from full road width barriers to footpath. There are 463 level crossings of various types on Route 25, the breakdown and locations being listed below. Our general policy is to close level crossings where practicable to enhance safety, but a secondary benefit of this is that it may assist in our ability to increase line speeds thereby reducing journey times. The type of level crossing will reflect the traffic on a particular route.

There are planned innovative warning light trial sites at Lower Cullernie near Nairn (25.03) and Haugh of Tullymet near Pitlochry (25.04) under the Enhanced User – Worked Crossings (EUWC) initiative.

Network Rail is about to undertake a User Worked Crossing (UWC) National Closure Programme with the objective of having 150 UWCs across the network closed and removed by March 2010. There are 63 UWCs identified in Route 25 associated with this closure programme.

Network Rail is also involved in raising awareness of the dangers of level crossings particularly in rural areas by making regular safety presentations at the Royal Highland Show. Where there is a substantial increase in frequency or speed over a level crossing the risk assessment will have to be revisited and some crossings may require to be upgraded.

Listed below is a breakdown of the level crossings on Route 25 detailing the types and where they appear on the route.

Figure 11 Level crossings on Route

Description	Number
Automatic Half Barriers	9
Automatic Barrier Crossing, Locally Monitored	3
Automatic Open Crossing, Locally Monitored	21
Automatic Open Crossing, Remotely Monitored	1
Manually Controlled Gates or Barriers	8
Manually Controlled Barriers Monitored by CCTV	2
Miniature Warning Lights or Stop Lights	3
Open Crossing	2
Pedestrian only Crossing (Public)	46
User Worked Crossing (Private)	360
Station Crossing	8

Figure 12 Level crossings by Strategic route sections

	SRS	Number
Alves – Burghead	25.01	11
Dingwall – Kyle of Lochalsh	25.01	46
Georgemas Jct – Thurso	25.01	17
Inverness – Wick	25.01	187
Craigendoran Jct. – Ft. William	25.02	19
Crianlarich – Oban	25.02	25
Ft. William Jct. – Mallaig	25.02	35
Perth – Inverness	25.03	56
Aberdeen – Inverness	25.04	67

Future train service proposals

Figure 13 indicates the forecast percentage change in tonnage to 2018.

Reduced journey times, with the development of a new rolling stock strategy are key elements for both funders and operators in Scotland. Within Route 25, reduced journey times and increased frequency between the Central Belt – Inverness and Inverness – Aberdeen are key aspirations for Scottish Ministers.

On both lines the requirement is for an hourly service although in the short term the focus on the Aberdeen/Inverness line will be on enhancing the busier sections of the line nearer these two main cities. Additional services between Aberdeen – Inverurie were introduced in 2008.

With the opening of the Raiths Farm freight facility near Dyce in October 2009, it is anticipated that there will be new mixed-traffic freight flows on the line between Aberdeen and Dyce.

Future capability

The Mossend to Elgin gauge enhancement project has recently been completed. This work was funded by Transport Scotland and will allow rail to achieve a higher market share of traffic conveyed in the latest size of maritime containers, principally distillery products from the North East of Scotland.

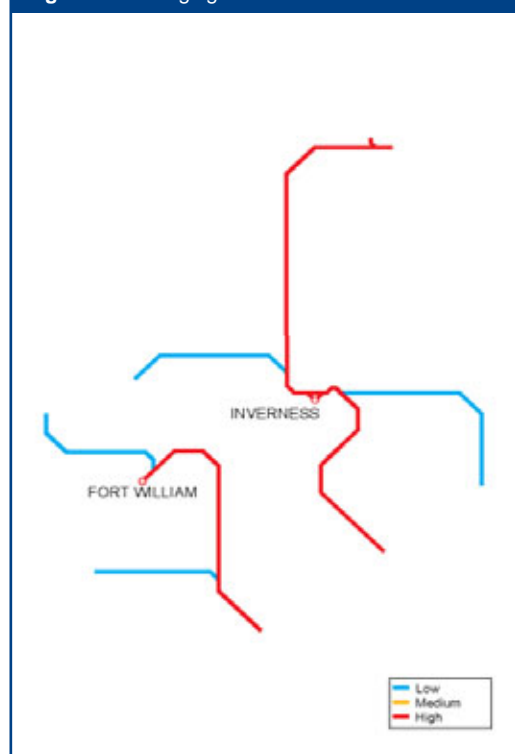
Future capabilities of the network will be designed in-line with Scottish Ministers' aspirations to reduce journey time and increase capacity between the major conurbations.

Future capacity

On the Aberdeen to Inverness (25.04) and Perth to Inverness (25.03) lines there are stakeholder aspirations for regular hourly passenger services with reduced journey time. These could only be accommodated with the provision of additional and improved infrastructure as a result of the following constraints:

- the single line sections on the Aberdeen to Inverness line, the most significant of which are the 18 mile section between Keith and Elgin and the 15 miles section between Inverness and Nairn (25.04) and;
- the single line sections on the Perth to Inverness line, the most significant of which are the 13 mile sections between Dunkeld and Pitlochry and Dalwhinnie and Kingussie (25.03).

Figure 13 Tonnage growth



Freight operators have an aspiration to operate longer trains between Perth and Inverness which would require extensions to passing loops.

On the Aberdeen/Inverness line there has been significant growth in commuting flows to both cities from intermediate towns. To improve the service offered for this and to cope with likely growth associated with the proposed housing developments particularly along the western end of the A96 corridor, further local commuter services are being considered together with new stations at Kintore and Dalcross. Both of these would also require additional passing loops. The delivery of regular hourly end-to-end passenger services on this route is a longer term aspiration.

On the Far North lines (25.01), the finite capacity of the Radio Electric Token Block (RETB) equipment limits the number of additional trains that could be handled on this part of the network but it is unlikely that this can be improved significantly before the system is replaced around 2015. It is anticipated that some minor improvements may be feasible following the completion of the life extension work at the end of 2009.

The Room for Growth Study considered how current constraints could be eased and performance enhanced through timetable restructuring particularly on the Far North (25.01) and West Highland (25.02) lines. Some

Figure 14 Forecast PPM MAA – CP4 plan

	2009/10	2010/11	2011/12	2012/13	2013/14
National Express East Coast	86.6%	88.2%	89.5%	90.5%	91.1%
First ScotRail	90.9%	91.3%	91.7%	91.9%	92.0%

improvements were introduced in Dec 2008 on the Far North and the Kyle of Lochalsh lines.

Traffic levels on the remainder of the route can generally be accommodated without recourse to the provision of additional infrastructure.

Future performance

Figure 14 sets out the planned PPM for each train operator. The steps we are taking to achieve these performance improvements are described in the Performance section of the Delivery Plan. Specific enhancements to improve performance on this route are included in the project list below.

There have been a number of severe weather events over the last few years. It appears these '1 in 100 year' events are becoming more frequent and we are examining options to further protect the network particularly against flooding. In the longer term we need to work with stakeholders and funders to determine the value of this increased resilience particularly on key strategic route sections. This might include, for example, the area where the River Tay regularly floods at Dalguise between Dunkeld and Pitlochry where any protection is likely to be very expensive or the section of the Kyle line west of Strathcarron where there have been a number of rockfalls in recent years following severe weather.

First ScotRail

The performance of the First ScotRail franchise is currently 90.7 percent PPM and this is expected to fall to 90.5 percent by the end of March 2009 as an outcome of the 2008/09 J-PIP which is supported by the local delivery groups.

The key performance issues and opportunities for the TOC have been identified as:

- requirement to have a continued joint focus on the day to day performance risk, including a focus on the delivery of right time performance;
- understanding and mitigating the impact of climate change;
- minimising the disruption and capturing the benefit of planned renewal and enhancement work throughout the Scottish network;
- reducing the level of unexplained delay through 'S' class messaging which will allow signal aspects to be displayed;
- focussing on improving asset reliability with particular focus on preventing repetitive failures; and
- improvements in TOC/FOC on TOC delays.

The Long Term Performance plan is being developed around these key points and performance by 2013/14 will reach 92.0 percent (the Scottish HLOS requirement). This includes an allowance for traffic growth. This figure was reached through working with the TOC and although the initial expiry date of the First ScotRail franchise is prior to April 2014 the PPM figure is in line with the operator aspirations. First ScotRail has an aspiration for PPM to be above this figure by April 2014.

Further work is required in Scotland to assess the potential impact of tier 3 enhancement schemes and no account of these has been included within this plan to date.

The other operator on this route is NXEC. The future performance section for NXEC can be found in the plan for Route 8.

Network availability

Engineering access on the route can largely be accommodated overnight with most lines having lengthy periods with no trains particularly at weekends.

A number of extended blockades are planned on this route over the next few years. These will allow major earthworks and track renewal works to be undertaken in the most efficient manner.

As has been the practice in recent years, these blockades will take place during the early spring and autumn periods when traffic levels are significantly lower. Details of these are being discussed with the affected train operators.

Long term opportunities and challenges

The future passenger growth and capacity requirements on this route can largely be met without further significant infrastructure investment, other than the Perth/Aberdeen to Inverness schemes already mentioned.

On the Far North Line (25.01) however further traffic growth will be limited by the capacity of the existing Radio Electronic Token Block (RETB) signalling system. It is anticipated that additional capacity will be created when the signalling system is replaced around 2015. The train operated points provided at all crossing loops would be reviewed at the same time to provide an increased line speed.

Infrastructure investment in CP4

Figure 15 Infrastructure investment in CP4

Implementation date	Project	Project description	Output change	Funding	GRIP stage
2009	(A) Conon Bridge Station	New Station	Additional local services	Third Party	0
2009/10	(B) Tulloch Viaduct (Over River Spean) Re-Painting, Waterproofing and Steelwork Repairs	Waterproofing & Re-Painting	Re-painting and Waterproofing	NR	4
2009/10	(B) Tulloch Viaduct (Over River Spean) Timber Deck Renewal	Timber Deck Renewal	Renewal	NR	4
2010	(C) RETB Control Rack	Control Rack	Renewal	NR	4
2010/11	(D) Dalguise Embankment Protection	Dalguise flood plain protection works	Embankment Protection	NR	3
2010/12	(E) Findhorn Viaduct, Forres – Repainting	Repainting	Repainting	NR	5
2010/12	(E) Findhorn Viaduct, Forres – Steelwork Repairs	Steelwork Repairs	Strengthening and Repairs	NR	5
2010/11	(F) Beaully Viaduct – Painting	Full blast and repaint of superstructure. In conjunction with other strengthening and repairs	Strengthening, Repairs and Re-Painting	NR	3
2010/11	(F) Beaully Viaduct Strengthening	Strengthening of main lattice girders and associated steelwork repairs (In conjunction with viaduct painting)	Strengthening and Repairs and Re-Painting	NR	3
2011	(C) RETB Base Station Renewal	Base Station Renewal	Renewal	NR	3

Figure 15 Infrastructure investment in CP4

Implementation date	Project	Project description	Output change	Funding	GRIP stage
2012	Ⓒ Improvements between Perth and Inverness (Tier 3)	Infrastructure works to facilitate increased frequency and reduced journey time between Perth and Inverness including reinstating loops at Ballinluig and Newtonmore.	Increases service frequency and performance improvements.	Transport Scotland	3
2011/12	Ⓓ Finnart Viaduct Re-painting & Waterproofing	Waterproofing (in combination with deck renewal work)	Re-Painting and Waterproofing	NR	3
2011/12	Ⓓ Finnart Viaduct Timber Deck Renewal	Timber deck renewal and cross-girder strengthening (in combination with the waterproofing work)	Timber deck renewal and crossgirder strengthening	NR	3
2016	Ⓔ Improvements between Aberdeen and Inverness (Phase 1)	Infrastructure works to facilitate increased frequency and reduced journey time between Aberdeen and Inverurie and Elgin and Inverness including potential new stations (with loops) at Kintore and Dalcross. A new loop is also proposed at Kittybrewster plus a rebuilt loop and station at Forres.	Additional local services	Transport Scotland / Third Party	0
2016	Ⓕ Improvements between Aberdeen and Inverness (Phase 2)	Infrastructure works to facilitate increased frequency and reduced journey time between Aberdeen and Inverness, including a new dynamic loop between Elgin and Keith and speed enhancements between Elgin and Inverurie.	Increases service frequency and journey time reductions.	Transport Scotland	0
2009	Ⓖ Stanley Junction remodelling	Resiting/resignalling of Stanley Junction in connection with the S & C renewal	Higher line speed	Small Projects Fund	2

Small Projects Fund (SPF) Tier 1 candidate schemes in CP4

Figure 16 Candidate SPF Tier 1 schemes in CP4 (<£5m)

Implementation date	Project	Project description	Output change	Funding	GRIP stage
2010	(K) Aberdeen/Inverness Linespeed review	Introduction of differential linespeeds to permit light weight stock to operate at higher speeds	Journey time reductions	Small Projects Fund	0
2012	(L) Insch/Elgin Platform Extensions	Extension of platforms to permit six-car operation of trains including DDA compliance. (Subject to review)	Capacity improvements and DDA compliance	Small Projects Fund	1

Renewals activity

Figure 17 shows the estimated renewals costs and activity volumes.

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

It should be noted that in order to manage the deliverability of our Civils, Signalling & Electrification plans we have included an element of over planning in our work banks. As a consequence the sum of our route plans exceeds our plan for the network as a whole. It is likely that a small proportion of the activities in these areas will slip to subsequent years.

There are some significant engineering blockades during 2009/10, including Glenfinnan/Mallaig, Crianlarich/Oban and Crianlarich/Fort William on WHL and Strathcarron/Kyle on the Kyle of Lochalsh branch.

Figure 17 Summary of estimated renewals costs and activity volumes

£m (2009/10 prices)	2009/10	2010/11	2011/12	2012/13	2013/14	CP4 total
Renewals						
Track	0	4	2	3	1	10
Signalling	2	4	3	4	3	17
Civils	15	17	17	17	15	81
Operational property	3	2	2	4	3	15
Electrification	0	0	0	0	0	0
Telecoms	2	2	1	2	1	8
Plant and machinery	0	0	0	0	0	1
Total	23	29	26	30	23	132
Renewals volumes						
Track						
Rail (km)	5					
Sleeper (km)	14					
Ballast (km)	7					
S&C (equivalent units)	0					
Signalling						
SEUs (conventional)	0	0	0	0	0	0
SEUs (ERTMS)	0	0	0	0	0	0
Level crossings (no.)	0	2	0	1	0	1

Appendix

Figure 18 Strategic route sections

Predominant aspect recorded (secondary aspects recorded in brackets). ELR is Engineers Line Reference, RA is Route Availability.

SRS	SRS Name	ELR	Classification	Funding	Community Rail	Freight Gauge	RA	Speed	Electrification	Signalling Type	Signalling Headway (mins)	No of Tracks
25.01	Far North plus Kyle Line	WCK (KYL)	Rural	Transport Scotland	No	W8 (W7)	10(5)	75(60)	none	RETB	15	1
25.02	West Highland Line	WHL (MLG)	Rural	Transport Scotland	No	W8 (W7)	5	70(55)	none	RETB	15 (30)	1
25.03	Perth – Inverness	HGL	Secondary	Transport Scotland	No	W8	8	80	none	TB(AB)	15	1(2)
25.04	Aberdeen – Inverness	ANI	Secondary	Transport Scotland	No	W7	10	75	none	TB(AB)	20	1(2)

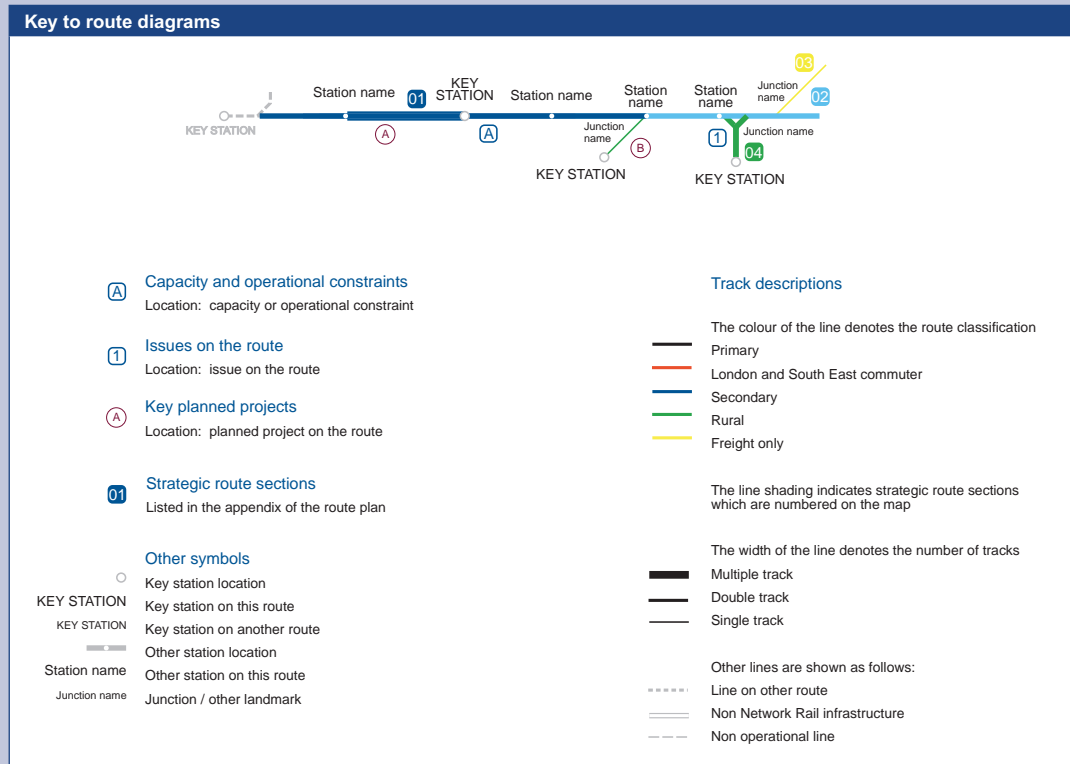
Capacity and operational constraints

- Aberdeen – Inverness: single line close to capacity
- Inverness – Wick/Kyle: RETB signalling approaching capacity

Note

This Route Plan forms part of the Control Period 4 (CP4) Delivery Plan and supersedes the version published in April 2008.

Other documents in the Delivery Plan can be found on the Network Rail website www.networkrail.co.uk



GRIP stages

- 1 Output definition
- 2 Pre-feasibility
- 3 Option selection
- 4 Single option selection
- 5 Detailed design
- 6 Construction, test and commission
- 7 Scheme hand back
- 8 Project close out

Cover printed on box board which is both FSC and TCF. Text pages printed on Greencoat Velvet which is produced from pulp containing 80% recycled fibre. The remaining 20% virgin pulp is 10% totally chlorine free and 10% elemental chlorine free. Greencoat has been awarded both the National Association of Paper Merchants and the Eugropa recycled marks, two of the most prestigious and recognisable recycled certificates available.

**This Route Plan is part of a set.
To view or download the others
visit www.networkrail.co.uk**

Network Rail
Kings Place
90 York Way
London N1 9AG
Tel: 020 3356 9595