Track to the Future

reform scotland

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Reform Scotland is independent of political parties and any other organisations. It is funded by donations from private individuals, charitable trusts and corporate organisations. Its Director is Geoff Mawdsley and Alison Payne is the Research Director. Both work closely with the Advisory Board, chaired by Alan McFarlane, which meets regularly to review the research and policy programme.

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Contents

i. Executive summary

Objective

This report considers the current rail network in Scotland, highlighting problems such as connectivity and journey times as well as looking at how the situation in Scotland compares with that in England. It looks at current improvement projects and asks whether current plans to improve rail services by the 2020s and 2030s are ambitious enough.

Findings

Although funding and managing of the railways in Scotland is devolved, the body responsible for managing the rail network on behalf of the Scottish Government, Network Rail, is ultimately answerable to the UK Government and the Secretary of State is the sole member of Network Rail Limited.

The system for managing and running the rail network in Scotland is a complicated one bringing together many different players. As a result, it is often the case that when something goes wrong, for example a train is late or cancelled, it is not simply the fault of one of those players. Upgrading rail lines while trying to continue using them is complex. Inclement weather can easily disrupt and extend such operations, which can in turn cause problems for a train trying to access a section of track. This can then cause delays and cancellations elsewhere in the timetable, particularly as so many routes have large single track sections with limited passing places. It will, of course, be the case that sometimes a Train Operating Company (TOC), or Network Rail or the Scottish Government is directly responsible for service failures, but more often than not a combination of their different responsibilities will have contributed. Network Rail's Delay Split[1] for the 365 days until 12 November 2016 suggested that 54% of ScotRail delays over three minutes were as a result of faults attributed to Network Rail, while 38% were down to ScotRail itself. As a result, there should be a greater degree of honesty that simply nationalising ScotRail won't suddenly make the trains run on time.

Journey times within Scotland compare badly with journeys of a similar length in England, a problem that is even worse the further away from the Central Belt that you look. For example, Edinburgh to Aberdeen is a distance of roughly 125 miles. The fastest journey time on our ScotRail search took 2 hours 17 minutes. London to Birmingham is roughly the same distance, with the quickest journey time taking 1 hour 22minutes. London to Liverpool is almost 100 miles more than Edinburgh to Aberdeen, yet with a quickest journey time of 2 hours 14 minutes, takes less time.

[1] http://www.networkrail.co.uk/about/performance/#Delay-split

Away from journeys to and from the capital, Glasgow to Dundee is 80 miles and takes 1 hour 43 minutes. Birmingham to Manchester is 96 miles and takes 1 hour 28 minutes. Perth to Inverness is 112 miles and, despite being on the main East Coast line, takes 2 hours.

Policy Recommendations

The Scottish Government deserves credit for having in place a rolling programme of much-needed investment to upgrade our railways. Electrification brings many benefits, though those plans are limited to certain areas.

However, it is also important to recognise that upgrading railway lines is far from straightforward and it will always be difficult to try and fix or improve something when you want to use it at the same time.

Partly for this reason, rail infrastructure projects seem to require a great deal of time and planning. Already there are route designs looking at how to extend HS2 to Scotland, despite the fact that HS2 won't be complete until 2033.

The National Records of Scotland has projected that Scotland's population will increase by 9 per cent by 2037.[2] However, that growth will not be evenly spread across the country. Edinburgh (+28%), Aberdeen, (+28) and Perth & Kinross (+24%) have the highest projected population increases, yet two of these areas have some of the poorest rail links. Even under current proposals, there would be no electrified rail links in these areas of high population growth.

However, improved rail infrastructure can also bring economic benefits and attract people to an area. Highland council area is expected to see a 2 per cent decline by 2037 in its working age population.

Future proofing

Given the difficulties that upgrading and electrifying lines can cause, future proofing new projects is vitally important. It is, therefore, disappointing that the potential for expanding the Borders Railway is limited by the fact that it is not electrified and largely single track, to the extent that new bridges were built to only accommodate single track. [3] As a result, any expansion or upgrade will be more difficult, and the potential benefit of linking the service up to Carlisle will be harder to realise. We would call on the Scottish Government to ensure that all new rail work is future proofed so that, where possible, it is double track and electrified. If, for cost reasons it cannot all be double track at the time of

[2] http://www.nrscotland.gov.uk/news/2014/population-projections-for-scottish-areas
[3] http://www.scotsman.com/news/transport/it-s-slow-speed-ahead-for-borders-rail-commuters-1-3754627

building, space, particularly under bridges etc, should be accommodated so that it can easily be expanded in the future.

Network Rail Scotland

Although the Scottish Government is responsible for providing the strategic direction and funding for the Scottish rail network, ultimately Network Rail is a UK body answerable to the UK Government. The Shaw report highlighted a "lack of local flexibility and autonomy" with regard to Network Rail. While the report may have gone on to focus on greater devolution within the other route areas outside Scotland, Reform Scotland believes that changes should also be made within the Scottish Route. Rather than having a single organisation, Reform Scotland believes that responsibility for the Scottish route should transfer to a new body directly responsible to, and answerable to, the Scottish Government. That body would, of course, have to work with Network Rail on cross-border rail, but the change would mean a far clearer, and more transparent, line of accountability. The Scottish Government already has responsibility for the Scottish network, therefore it makes sense that the body tasked with managing that route is ultimately answerable to a Scottish Government minister, as opposed to the UK Secretary of State.

Open Access

The Competition and Markets Authority's report in March 2016 examined the benefits of open access operators and expansion of on-rail competition. It concluded that its report did not mark the end of its engagement on the issue and that it wanted to work with policymakers to discuss the benefits of on-rail competition. Reform Scotland would call on the Scottish Government to work with the CMA to explore how open access could bring increased benefits through competition to Scotland.

Scottish Rail Infrastructure Commission

Network Rail's Scotland route study looks at Scotland's rail network over the next thirty years. As well as considering what needs to be done to simply meet existing and growing demand, is that enough? Or should we at least consider what ambitious transformational projects could mean for the Scottish economy?

In thirty years' time, do we want to be in a situation where it could take less time to reach London by rail from Edinburgh than it does to reach Inverness?

In thirty years' time should there be a direct link between Dumfries and Edinburgh?

Or what about Glasgow Crossrail, or Edinburgh and Glasgow airport rail links?

Obviously there are limits on expenditure, though innovative ways of raising income to pay for infrastructure could be considered. However, there is also expected to be an additional £800 million coming to Scotland by 2021 through Barnett consequentials as a result of Chancellor Philip Hammond's Autumn Statement.[4]

Reform Scotland is not saying that the Scottish Government should definitely create a new high speed line to the north, or improve links to major towns in the Borders, or introduce other new lines. But we are calling on the Scottish Government to look at these options as part of a wide-ranging commission, to examine what is possible, what the costs would be and what benefits they may bring. And while rail links to London are important, so too are links within Scotland, links which are sadly lacking at present. Such a report should look at links to city regions, local networks and rural and scenic areas. The commission should also consider what impact improving the links could have on regional economies. The working age population of the Highlands Council area is expected to see a 2% decline over the next 25 years. Could improved connectivity to our more rural areas help stop that decline?

The commission should also set out a land register of who owns the land either side of our railway lines – this information is crucial if expansion and upgrading of our existing network is to be carried out efficiently.

The following is an extract from the introduction to the High Speed North report:

"*It takes longer to get from Liverpool to Hull by train than to travel twice the distance from London to Paris. Manchester and Leeds are less than 40 miles apart and yet on the congested M62 this often takes more than two hours by car*."[5]

This report, from the National Infrastructure Commission, highlighted a connectivity problem and looked to find innovative solutions. A similar commission is needed for Scotland. Both the Scottish and UK Governments have looked at what may be possible in terms of extending HS2 once it is completed in nearly 20 years' time. With rail infrastructure, ideas and discussions need to start early. There are ideas, regardless of whether they actually happen, about significantly cutting journey times from the Central Belt to London. Shouldn't that ambition be reflected within Scotland too?

[4] https://www.gov.uk/government/news/800-million-boost-to-scottish-governments-capital-budgets-in-autumn-statement
[5] National Infrastructure Commission, High Speed North, March 2016

1. Introduction.

Recent Reform Scotland papers have tended to focus on what we believe the Scottish Government should be doing now, within the current parliamentary session or in the short to medium term. However, Reform Scotland also looks to the longer term, trying to stimulate and add to the debate to identify issues that need to be addressed. For example, with social security we set out how we thought a Basic Income Guarantee could be introduced either in Scotland, or across the UK as a whole. Similarly, to deal with our shrinking workforce and ageing population, we set out an alternative way to provide pensions.

And now with our railways we are once again looking to provoke debate and get people thinking about whether the plans for our rail network are ambitious enough.

Railways have always been a vital part of our infrastructure in this country helping our economy thrive and bringing communities closer together. However, in recent years the focus across the UK as a whole seems to have been not on bringing different areas together, but bringing everywhere closer to London. The High Speed 2 project is about shortening journey times from London to Birmingham, then Leeds and Manchester, and perhaps Scotland. While all roads may have led to Rome, the track seems destined for London. Should this be the priority? While London is undoubtedly an important economic centre, should getting there a little bit faster be the priority for so much infrastructure expenditure?

Part of the reason for this paper looking at the longer term is that rail projects all take a great deal of time, planning and investment. The Scottish Government has a programme of electrification and improvement for our rail network which can be welcomed, but perhaps lacks the ambition to deliver long-term transformational change. Such is the complicated nature of planning rail projects that a great deal of investment and work is needed simply to meet increasing demand and, if we're lucky, shave some minutes off journey times.

Network Rail's Scotland Route Study sets out certain infrastructure projects that would need to be done over the next thirty years to implement the Scottish Government's current proposals and meet forecast demand. It is an eye-opening read which details the complicated and intricate nature of planning for rail improvements.

While it is necessary to plan for, and ensure we can meet, future demand as well as make incremental improvements in services, Reform Scotland's view is that we also need to think about the bigger picture.

What we need to ask is whether it is enough for our railways to simply do what they are doing now, or can we aspire to something greater? Can we even consider or think about bigger ideas?

It is disappointing to realise that under existing proposals, people could be able to travel to London by rail from the Central Belt in about the same time that they could to Inverness. High Speed rail could bring London to Edinburgh in 3 hours or under. Scottish Government Infrastructure Secretary Keith Brown said in March 2016 "*I now have a firm commitment that development work will begin during the current control period towards getting journey times between Scotland and London down to 3 hours or less*". [6] Upgrading of the Highland Main Line will see average journey times between Edinburgh and Inverness of three hours.[7] Yet, despite similar proposed journey times, the fact is that Edinburgh to London is roughly 400 miles, yet Edinburgh to Inverness is only about 160 miles. And while there are alternative means of travelling between the Central Belt and London, there is no real alternative to Inverness with road taking roughly 3 hours 20 minutes.

So while this paper does look at issues such as open access, in order to consider what can be done in the shorter term to make our railways more efficient, it also looks at whether we should be more ambitious.

What is clear from rail projects such as the Borders Railway and HS2, is that they can take a great deal of time, planning and investment. So Reform Scotland is calling on the Scottish Government to set up a Scottish Rail Infrastructure Commission, examining the state of our railways and consider projects which could make a transformational change, not just to our railways, but our economy. For example, is a new high speed, or even considerably-faster-than-current speed, line to the Highlands from the Central Belt worth considering? What impact could be achieved by properly opening up an efficient route to the Highlands?

The other benefit of developing a new line is that it doesn't affect the use of current lines.

What about a direct link between Edinburgh and Dumfries? Or rail links to our airports? Not everything is possible, or necessarily desirable, but if we want to make any ambitious change we need to start thinking now about the sort of connectivity we want over the next 30 years. Surely, this is at least worth investigating!

[6] https://www.gov.uk/government/news/three-hour-scotland-to-london-rail-journeys-on-track
[7] http://www.transport.gov.scot/project/highland-main-line

Politicians at Westminster from both sides have spoken about the need to increase infrastructure investment, which could in turn lead to Barnett Consequentials for Scotland. There are also alternative ways of paying for infrastructure from borrowing to levies on developers who would benefit.

In March 2016 the National Infrastructure Commission published High Speed North, which identified poor connectivity links in the North of England and mapped out potential transformative changes. A similar commission is needed for Scotland.

Whether Scotland becomes independent or not within the next 30 years, we need to look at ways of helping boost our economy and encouraging investment. Our railways are a vital component of our economy and it is certainly worth considering what, if anything, can be done. Are we happy standing still, or can Scotland be ambitious and transform its rail network?

2. Background

2.1 Statistics

Rail travel in Scotland has grown considerably over the past two decades, increasing by 96% to 96.1 million journeys in 2014/15.[8] Passenger demand for rail travel exceeded forecasts during CP4 (Control Period 4, the five years to 2014). Current forecasts suggest a further 24-48% growth by the end of CP6 Control Period 6, 2019-2024).[9]

In 2012-13, 8.4 million tonnes of freight was lifted in Scotland by rail, 15% less than the previous year, and 41% less than the 2005-06 peak. However, while minerals and coal have fallen by 63% over that period other goods have increased by 25%.[10]

According to a study by Oxera for Transport Scotland,[11] the rail sector GVA in Scotland is £668m per year, made up of £462m direct GVA from the sector itself and £206m indirect GVA. The study also highlighted that the rail sector helps employ 12,800 people (9,200 direct employees and 3,600 indirect employees). The sector contributes an estimated £292m in tax.

As well as direct economic benefits, there are wider economic, social and environmental benefits. The Oxera study reported that rail use saves up to 524,337 tonnes of CO_2 emissions per year.[12]

In other words, the railways are an integral and valuable part of our way of life and our economy.

Table 1 below highlights the number of passenger journeys to and from the 50 busiest stations in Scotland in 2014/15[13]

[8] Network Rail, "Scotland route study", July 2016

[9] http://www.networkrail.co.uk/browse%20documents/strategicbusinessplan/cp5/supporting%20documents/our%20activity%20and%20expenditure%20plans/route%20plans/scotland%20route%20plan.pdf Page 5

[10] Scottish Government, "Scottish Transport Statistics 2015", February 2016

[11] Oxera for Transport Scotland, "What is the economic contribution of rail in Scotland?', March 2016

[12] The study found it saved between 52,434 and 524,337 tonnes. An average passenger journey by car will lead to twice the CO_2 rate than rail, while the same journey by air would be nearly three times the amount. Oxera for Transport Scotland, "What is the economic contribution of rail in Scotland?', March 2016

[13] Scottish Government, "Scottish Transport Statistics 2015", February 2016

Table 1: Scotland's busiest train stations

Rank		*thousands*		Rank		*thousands*
1	Glasgow Central	28,965		26	Airdrie	1,104
2	Edinburgh	21,107		27	Mount Florida	1,097
3	Glasgow Queen Street	16,959		28	Perth	1,078
4	Paisley Gilmour Street	4,091		29	Rutherglen	1,074
5	Aberdeen	3,743		30	Milngavie	998
6	Partick	2,788		31	Kilwinning	989
7	Haymarket	2,449		32	Irvine	955
8	Stirling	2,416		33	Hamilton West	946
9	Charing Cross (Glasgow)	1,968		34	Falkirk High	901
10	Dundee	1,836		35	Dalmuir	900
11	Hyndland	1,714		36	Edinburgh Park	894
12	Exhibition Centre Glasgow	1,640		37	Bellshill	861
13	Ayr	1,572		38	Hamilton Central	848
14	Argyle Street	1,438		39	Lenzie	848
15	Croy	1,342		40	Helensburgh Central	843
16	Johnstone	1,309		41	Bishopbriggs	836
17	Inverness	1,304		42	Dyce	824
18	Inverkeithing	1,275		43	Larbert	823
19	Motherwell	1,226		44	Uddingston	820
20	Linlithgow	1,198		45	Westerton	784
21	Bathgate	1,177		46	Cambuslang	750
22	East Kilbride	1,154		47	Polmont	748
23	Anniesland	1,133		48	Dumbarton Central	742
24	Livingston North	1,125		49	Hairmyres	727
25	Kirkcaldy	1,114		50	Falkirk Grahamston	713

Most rail journeys within Scotland are short commuter journeys. According to the Scottish Government's Transport Statistics, 91% of passenger journeys were solely within Scotland. In 2009/10 (the latest year covered by the 2016 Scottish Transport Statistics) nearly 90% of all train journeys to Glasgow were under 50km, 48% were under 10km.[14]

2.2 Devolution and responsibility

Unlike education or health, which are fully devolved, or defence and foreign affairs, which are fully reserved, the railways are a bit of a mixed bag, with some responsibilities at Holyrood, and others at Westminster. Part of this is down to the way the rail network across Great Britain is organised and regulated.

The Scottish Government is responsible for the letting and management of the ScotRail and Caledonian Sleeper franchises. It is also responsible for providing the strategic direction and funding for maintenance, renewal and expansion of the rail infrastructure in Scotland. The Scottish Parliament can also legislate for the construction of new railway lines which are entirely within Scotland, such as the Borders Railway.[15] The UK Government is responsible for other rail franchises, including the majority of cross-border services.

[14] http://www.transport.gov.scot/statistics/j357783-10.htm#tb7_5
[15] Rehfisch. A, 'Transport in Scotland', SPICe, June 2016

Both the Scottish Government (through Transport Scotland) and the UK Government (through the Department for Transport) fund Network Rail, a public body, which acts as the owner and manager of the UK's rail network.

Network Rail owns, operates and maintains the rail infrastructure, including signalling, bridges, tunnels and stations. There are over 4,331 bridges and 80 tunnels, some of which are over 100 years old.[16] It is also responsible for development of the national rail timetable and long-term planning for the network.

Although Transport Scotland funds Network Rail's work in Scotland and works with the organisation to deliver the Scottish Government's objectives, ultimately, Network Rail is a UK body, answerable to the UK Government. The UK Secretary of State for Transport, currently Chris Grayling, is the sole member of Network Rail Limited.[17]

The Office of Rail and Road is the industry regulator. It is an independent body which works with both the UK and Scottish Governments (as well as governing bodies in the UK). Its rail regulation role is funded by the rail industry and its board members are appointed by the UK Secretary of State for Transport.

It is inconsistent that while the Scottish Government is responsible for strategic policy and funding of the rail network in Scotland, the body that is charged with carrying out that management is ultimately answerable to the UK Government. The Shaw Report from March 2016, which examined the future shape of Network Rail, highlighted that the conditions under which Network Rail was created led to a highly centralised organisation. The report comments that there is a lack of local flexibility and autonomy. As a result, the report recommends that there should be greater route devolution, with separate route-based accounts and regulatory settlements. (Network Rail is currently split into eight regional 'routes', one of which is Scotland.) While the recommendation may have been aimed more at the other routes due to the existing degree of separation of the Scottish route, Reform Scotland believes the arguments still apply. There is a problem with centralised control ultimately answerable to Westminster. It would make more sense for a separate organisation, perhaps Network Rail Scotland, to cover the Scottish route and be directly answerable to Scottish Ministers, working with the UK body where appropriate.

2.3 Franchising

Rail franchising was created by the Railways Act 1993 and is the process of contracting out passenger rail services to Train Operating Companies (TOCs).

[16] Network Rail, "Scotland route study", July 2016
[17] http://www.networkrail.co.uk/aspx/721.aspx

Under the Act, UK state-owned companies cannot bid for franchises. However, the SNP gave a commitment in its 2016 manifesto to enable public sector operators to bid for future rail franchises.

TOCs tend not to own the trains directly, but lease them from Rolling Stock Leasing Companies. (ROSCOs).

The Scottish Government is responsible for two franchises, ScotRail and the Caledonian Sleeper.

ScotRail:
The ScotRail franchise operates over 2,270 train services each day, delivering 86 million passenger journeys per year and is worth a total value of over £7 billion over 10 years[18].

The franchise was awarded to Abellio in October 2014, with operations beginning in April 2015. The contract is for up to ten years, with a review after five years, which decides whether the contract will last seven or ten years. The following is a summary of the franchise specification[19]:

- *The new ScotRail Franchise will be for a term of up to 10 years with a review and a decision by the end of the fifth year to decide whether the franchise will terminate at the end of year 7 or 10.*
- *There will be a detailed minimum service level specification which bidders will be required to meet.*
- *Bidders will be required to offer proposals on how they will stimulate and achieve growth of off-peak patronage leading to better overall utilisation of the rail services.*
- *There will be a regulated fares framework for peak and off-peak services, with freedom to set fares for 'commercial' ticket types, e.g. First Class and promotions.*
- *Transport Scotland anticipates a collaborative working relationship in order to achieve maximum mutual benefits with the successful franchisee from capital investment in the Edinburgh Glasgow Improvement Project (EGIP), further extensions of the electrified network and the Borders Railway Project.*
- *Bidders will be offered quality incentives based on the existing SQUIRE regime, augmented by incentives based on the National Passenger Satisfaction survey.*
- *Bidders will be required to achieve a minimum performance of 92% ppm increasing to 92.5% by year 4 of the franchise.*
- *Bidders will be required to purchase or lease suitable rolling stock for each of the Service Groups, which will deliver the specified levels of passenger environment and facilities. The condition shall be maintained by phased updates and refurbishment. Bidders will also be responsible for procuring the Rolling Stock for the EGIP Electrification Programme.*
- *Bidders will be required to expand, fully develop and exploit the smartcard infrastructure already being installed in Scotland.*
- *Bidders will be required to provide wi-fi capability on all trains.*
- *Bidders will be encouraged to engage with Network Rail to consider the benefits of an Alliance or other collaborative working relationships, though this will not be a mandatory requirement.*
- *Bidders will be required to achieve a minimum specification of transport integration with other modes and play a key role in securing further integration over the term.*
- *Bidders will be asked to provide financial security of a size that is commensurate with the scale of the franchise and its importance to Scotland.*

[18] http://www.transport.gov.scot/rail/scotrail-franchise/scotrail-franchise
[19] http://www.transport.gov.scot/rail/scotrail-franchise/scotrail-franchise-renewal-programme

Caledonian Sleeper:

The Caledonian Sleeper operates overnight passenger services between London Euston and Scotland. Scottish Ministers had decided to separate the Caledonian Sleeper franchise from ScotRail and the new contract was awarded to Serco Caledonian Sleepers Limited (SCSL) in May 2014, with the company beginning operation in March 2015. The contract is for 15 years. The following is a summary of the contract specification:[20]

- *The new Caledonian Sleeper Franchise will be for a term of 15 years.*
- *There will be a high-level output specification to enable bidders to offer innovative proposals to transform, market and deliver the services.*
- *Bidders will be required to propose a clear marketing strategy, improved information, booking and ticket sales methods.*
- *The requirement will be for two sleepers (times and intermediate stopping points between Scotland and London to be proposed by bidders) to serve routes to Inverness, Aberdeen, Fort William, Glasgow city Centre and Edinburgh City Centre to / from London Euston.*
- *Bidders will be given freedom to propose fares, and will be expected to carry the revenue and cost risks for delivering the services, subject to profit and risk sharing arrangements.*
- *Transport Scotland anticipates a partnering relationship with the future franchisee, in order to achieve a profit share.*
- *Bidders will be required to offer guaranteed on time departures and arrivals with a sliding scale of fare reimbursement to passengers if they are not achieved or if specified on-board facilities are not available for use.*
- *Bidders will be required to purchase or lease suitable rolling stock which will deliver the required levels of passenger environment and facilities, maintaining it in good condition and periodically refreshing and updating over the term of the franchise.*
- *Transport Scotland will require rights to step-in to the rolling stock lease or vest title of the rolling stock, at their discretion, at the end of the franchise term.*
- *Bidders will be asked to provide financial security of a scale that is commensurate with the scale of the sleeper business.*

2.4 ScotRail crisis 2016

A petition was handed to the Transport Minister Humza Yousaf calling for Abellio to be stripped of the contract in October 2016[21] due to concerns over delays and cancellations. However, the company has said that this was in part due to the programme of modernisation.

While there may be ideological arguments over whether the company that runs the ScotRail franchise should be state run or not, there needs to be a greater degree of honesty about the impact any change would have on the train service people experience. If delays are caused by work being carried out on the track, or damage to the track, or track failures, the responsibility for this lies with Network Rail, which is already state owned. In other words, nationalising ScotRail on its own won't suddenly make the trains run on time.

The ScotRail Alliance is a formal agreement between Abellio ScotRail and Network Rail, with the intention of making the industry more responsive to customers, though both remain separate companies. In October ScotRail

[20] http://www.transport.gov.scot/rail/caledonian-sleeper-franchise
[21] http://www.bbc.co.uk/news/uk-scotland-scotland-business-37700975

Alliance published an improvement plan, including upgrades to trains and key parts of the network.[22]

In Humza Yousaf's ministerial statement to parliament on 23 November, he commented:
"But clearly this Alliance could do more. Network Rail is a body whose activities in Scotland are fully funded by the Scottish Government. Yet it's formal accountability remains to UK Government.

"To fully realise the potential of the Alliance and enable it to deliver the modern railway that passengers expect we need further devolution of rail powers and responsibilities."

As mentioned earlier in this report, Reform Scotland would agree that Network Rail needs to be fully devolved to Scotland.

The following tables from Network Rail outline Scotrail's performance data,[23] and the reasons for any delays.

Table 3: Train punctuality by train operator.
The measure of train punctuality also known as PPM (public performance measure) means trains arriving at their terminating station within five minutes for commuter services and within 10 minutes for long distance services. Period 8 = 16 October -12 November

Train Operating Company	PPM % period 8, 2015/16	PPM % period 8, 2016/17	PPM Moving annual average (MAA)
Abellio Greater Anglia	86.0	86.8	89.2
Arriva Trains Wales	90.1	88.6	91.7
c2c Rail	96.5	93.3	95.0
Caledonian Sleeper	83.2	87.4	86.2
Chiltern	92.8	93.2	93.1
Crosscountry	85.1	86.5	89.6
East Midlands Trains	89.5	87.5	92.2
First Hull Trains	78.3	82.4	83.2
Transpennine Express	75.0	88.1	87.6
Govia Thameslink Railway	74.2	69.9	75.6
Grand Central	83.3	85.9	84.7
Great Western Railway	85.0	85.0	89.1
Heathrow Express	90.1	90.6	90.9
London Midland	83.6	85.7	89.1
London Overground	92.5	94.8	94.7
Merseyrail	93.4	94.5	95.3
Northern	84.3	88.5	91.2
ScotRail	**83.3**	**87.0**	**89.8**
Southeastern	82.3	84.4	86.3
Stagecoach South West Trains	86.8	85.5	88.3
TfL Rail	94.8	94.9	94.2
Virgin Trains East Coast	80.3	80.9	82.7
Virgin Trains West Coast	86.4	90.5	87.1

[22] http://www.networkrailmediacentre.co.uk/news/scotrail-alliance-publishes-performance-improvement-plan
[23] http://www.networkrail.co.uk/about/performance/#Delay-split

Table 4: Delay Split for Period 8 (16 Oct to 12 Nov 2016)

The table shows which organisations were responsible for passenger train delays of 3 minutes of more.

Operator	Attributed to Network Rail				Train operator caused to self	Caused by other passenger train operators	Caused by freight train operators
	Infrastructure	Operations & Other	External (inc. weather, fatalities etc.)	Total			
Abellio Greater Anglia	30%	15%	14%	59%	33%	4%	4%
Arriva Trains Wales	16%	14%	19%	50%	39%	5%	6%
c2c Rail	61%	5%	4%	70%	30%	0%	0%
Chiltern	18%	15%	10%	44%	37%	8%	11%
Crosscountry	21%	18%	16%	55%	12%	21%	12%
East Midlands Trains	36%	17%	14%	66%	18%	11%	5%
First Hull Trains	31%	13%	12%	56%	15%	25%	3%
Transpennine Express	21%	17%	18%	56%	16%	24%	4%
Govia Thameslink Railway	14%	38%	14%	66%	30%	2%	1%
Grand Central	34%	13%	12%	59%	10%	27%	4%
Great Western Railway	30%	17%	18%	65%	21%	7%	7%
Heathrow Express	35%	20%	10%	65%	10%	21%	5%
London Midland	16%	17%	13%	46%	31%	13%	10%
London Overground	17%	35%	11%	62%	17%	16%	4%
Merseyrail	12%	35%	11%	58%	39%	3%	0%
Northern	18%	16%	18%	52%	34%	11%	3%
ScotRail	**18%**	**14%**	**23%**	**54%**	**37%**	**6%**	**3%**
Southeastern	29%	24%	18%	71%	24%	1%	4%
Stagecoach South West Trains	21%	36%	13%	71%	25%	2%	2%
TfL Rail	23%	18%	20%	61%	29%	6%	3%
Virgin Trains East Coast	33%	10%	16%	60%	24%	13%	3%
Virgin Trains West Coast	31%	14%	19%	64%	15%	14%	7%

Table 4: Delay Split for 365 days to 12 Nov 2016

The table shows which organisations were responsible for passenger train delays of 3 minutes of more.

Operator	Attributed to Network Rail				Train operator caused to self	Caused by other passenger train operators	Caused by freight train operators
	Infrastructure	Operations & Other	External (inc. weather, fatalities etc.)	NR Total			
Abellio Greater Anglia	29%	13%	20%	63%	29%	4%	5%
Arriva Trains Wales	18%	15%	17%	50%	41%	5%	3%
c2c Rail	26%	10%	17%	52%	45%	1%	2%
Chiltern	19%	16%	13%	48%	42%	6%	4%
Crosscountry	28%	16%	20%	64%	10%	19%	7%
East Midlands Trains	30%	15%	20%	64%	19%	11%	5%
First Hull Trains	32%	12%	26%	70%	12%	17%	2%
Transpennine Express	25%	14%	20%	60%	16%	20%	4%
Govia Thameslink Railway	17%	29%	12%	58%	38%	2%	1%
Grand Central	33%	12%	20%	65%	11%	22%	3%
Great Western Railway	27%	20%	16%	62%	26%	6%	6%
Heathrow Express	34%	25%	10%	69%	10%	16%	4%
London Midland	23%	16%	17%	56%	28%	11%	5%
London Overground	20%	26%	13%	59%	19%	17%	6%
Merseyrail	14%	32%	13%	59%	38%	3%	0%
Northern	22%	14%	19%	55%	33%	9%	3%
ScotRail	**21%**	**16%**	**16%**	**54%**	**38%**	**5%**	**3%**
Southeastern	28%	24%	18%	70%	26%	2%	2%
Stagecoach South West Trains	27%	20%	22%	70%	26%	3%	2%
TfL Rail	19%	21%	22%	62%	26%	9%	3%
Virgin Trains East Coast	29%	11%	28%	68%	20%	9%	3%
Virgin Trains West Coast	31%	15%	27%	73%	13%	9%	5%

It is clear from Network Rail's data that over half of all delays to ScotRail trains are due to issues which are the responsibility of Network Rail. This report does not look at the merits of whether train operating companies should be in the private or state sector. However, we would stress that this data shows that more than 50% of delays are the responsibility of Network Rail which is already a public sector body. Therefore, there needs to be a greater degree of honesty

about whether simply changing the operating company will make the trains run on time.

2.5 Freight

Discussions and debates about the future of the railways can sometimes end up focusing on passenger rail with little attention paid to freight. Scottish Transport Statistics 2015 highlighted that there were 8.43 million tonnes of freight lifted by rail in 2012/13. While the overall total has fallen in recent years, the amount of non-mineral and coal freight has increased by 25% since 2004/5.[24] Other commodities accounted for 53% of the total freight in 2012/13.

Unlike passenger services, which are franchises awarded by government, freight services are independent companies which have a licence to provide freight services in the UK. To run trains on Network Rail's track, freight companies must negotiate a track access contract with Network Rail which will include track access charges. The contract is subject to industry consultation and ratification by the Office of Rail and Road. [25]

[24] Scottish Government, "Scottish Transport Statistics 2015", February 2016
[25] http://www.networkrail.co.uk/aspx/10525.aspx

3. State of the railways

3.1 Journey times

The following grids highlight journey times and distances between 16 places within Scotland, and 16 places within England. This data shows how train journeys within England (both including and not including journeys to the capital) take less time than journeys of a similar length within Scotland.

For example:
Edinburgh to Aberdeen is a distance of roughly 125 miles. The fastest journey time on our ScotRail search took 2 hours 17 minutes. London to Birmingham is roughly the same distance, with the quickest journey time taking 1 hour 22minutes. Further, London to Liverpool is almost 100 miles more than Edinburgh to Aberdeen, yet with a quickest journey time of 2 hours 14minutes, takes less time.

Away from journeys to and from the capital, Glasgow to Dundee is 80 miles and takes 1 hour 43 minutes. Birmingham to Manchester is 96 miles and takes 1 hour 28 minutes.

Connectivity and journey times get even worse the further north within Scotland you go. For example, Perth to Inverness is 112 miles and despite being on the main East Coast line, takes 2 hours. Carlisle to Manchester is 1 hour 49 minutes over a distance of 119 miles. Aberdeen to Inverness is 103 miles yet takes 2 hours 9 minutes.

Journeys outside the central belt in Scotland were particularly poor. For example, Dumfries to Stranraer is only 74 miles, yet takes 2 hours 59 minutes with a change of train. Oban to Fort William is a distance of only 46 miles, yet takes 3 hours 47 minutes by train with a change. Whilst on paper driving some of these distances would make far more sense, having such poor rail connectivity harms potential tourism.

Table 2: Scotland Journey times by train (fastest seen for travel on a Thursday in June according to ScotRail ticket search from and to any station in the area) (X) indicates number of changes

	50 miles or less between stations		51-100 miles		101-150 miles		151-200 miles		201 miles +

	Edinburgh (W)	Livingston	Falkirk	Glenrothes	Stirling	Glasgow (any)	Perth	Dundee	Dumfries	Ayr	Oban	Aviemore	Aberdeen	Stranraer	Fort William	Inverness
Edinburgh (W)		21min	32min	56min	52min	*	1hr 12min	1hr 10min	2hr 3min (1)	2hr 21min (1)	4hr 22min (1)	2hr 43min	2hr 17min	3hr 28min (2)	5hr 18min (1)	3hr 18 min
Livingston	21min		42min	1hr 15min (1)	1 hr 2 min (1)	46min	1hr 26min (1)	1hr 28min (1)	2hr 57min(1)	1hr 58min (1)	3hr 59min (1)	3hr 13min (1)	2hr 38min (1)	3hr 38min (2)	4hr 53min (1)	3hr 47min (1)
Falkirk	32min	42min		1hr 31min(1)	14min	30min	49min	1hr 30min (1)	2hr 48min (2)	2hr (2 inc bus)	4hr 6min (1)	2hr 1min	2hr 42min (1)	3hr 35min (3inc bus)	4hr 44min (1)	2hr 51min
Glenrothes	56min	1hr 15min (1)	1hr 31min(1)		1hr 57min (1)	2hr 4min (1)	^	54min (1)	4hr 13min (2)	3hrs (1)	5hr 40min (2)	^	2hr 12min (1)	4hr 52min (2)	6hr 33min (2)	3hr 12min (2)
Stirling	52min	1 hr 2 min (1)	14min	1hr 57min (1)		53min	32min	49min	3hr 13min (1)	2hr 8min (1)	4hr 20min (2)	2hr 2min	2hr 1min	3hr 37min(2)	^	2hr 34min
Glasgow (any)	*	46min	30min	2hr 4min (1)	53min		1hr 20min	1hr 43min	1hr 43min	47min	3hr 6min	3hr 2min	2hr 58min	2hr 19min(1)	3hr 45min	3hr 39min (1)
Perth	1hr 12min	1hr 26min (1)	49min	^	32min	1hr 20min		20min	3hr 42min (1)	2hr 36min (1)	5hr 2min (2)	1hr 26min	1hr 32min	4hr 12 min(2)	6hr (2)	2hr
Dundee	1hr 10min	1hr 28min (1)	1hr 30min (1)	54min (1)	49min	1hr 43min	20min		3hr 20min (2)	2hr 56min (1)	5hr 39min (2)	2hr 11min (1)	1hr 8min	4hr 37min (2)	6hr 23min (2)	2hr 56min (1)
Dumfries	2hr 3min (1)	2hr 57min(1)	2hr 48min (2)	4hr 13min (2)	3hr 13min (1)	1hr 43min	3hr 42min (1)	3hr 20min (2)		1hr 33min (1)	5hr 46min (2)	5hr 25min (2)	4hr 48min (2)	2hr 59min(1)	6hr 17min (2)	6hr 1min (2)
Ayr	2hr 21min (1)	1hr 58min (1)	2hr (2 inc bus)	3hrs (1)	2hr 8min (1)	47min	2hr 36min (1)	2hr 56min (1)	1 hr 33min (1)		4hr 32min (2)	4hr 18min (2)	4hr 9min (1)	1hr 22min	5hr 10 min (2)	4hr 50min(1)
Oban	4hr 22min (1)	3hr 59min (1)	4hr 6min (1)	5hr 40min (2)	4hr 20min(2)	3hr 6min	5hr 2min (2)	5hr 39min (2)	5hr 46min (2)	4hr 32min (2)		^	6hr 52min (2)	5hr57min (3)	2hr 57min (1)	^
Aviemore	2hr 43min	3hr 13min (1)	2hr 1min	^	2hr 2min	3hr 2min	1hr 26min	2hr 11min(1)	5hr 25min (2)	4hr 18min (2)	^		3hr 4min (1)	6hr 23min (2)	^	34min
Aberdeen	2hr 17min	2hr 38min (1)	2hr 42min (1)	2hr 12min (1)	2hr 1min	2hr 58min	1hr 32min	1hr 8min	4hr 48min (2)	4hr 9min (1)	6hr 52min (2)	3hr 4min (1)		6hr 9min (2)	7hr 36min (2)	2hr 9min
Stranraer	3hr 28min (2)	3hr 38min (2)	3hr 35min (3inc bus)	4hr 52min (2)	3hr 37min(2)	2hr 19min (1)	4hr 12 min(2)	4hr 37min (2)	2hr 59min(1)	1hr 22min	5hr 57min (3)	6hr 23min (2)	6hr 9min (2)		7hr 9min (3)	6hr 59min (3)
Fort William	5hr 18min (1)	4hr 53min (1)	4hr 44min (1)	6hr 33min (2)	^	3hr 45min	6hr (2)	6hr 23min (2)	6hr 17min (2)	5hr 10min (2)	3hr 47min (1)	^	7hr 36min (2)	7hr 9min (3)		^
Inverness	3hr 18 min	3hr 47min (1)	2hr 51min	3hr 12min (2)	2hr 34min	3hr 39min (1)	2hr	2hr 56min (1)	6hr 1min (2)	4hr 50min(1)	^	34min	2hr 9min	6hr 59min (3)	^	

^ The ScotRail journey search could not compute this journey

* The Glasgow/ Edinburgh journey time is not included as it is currently longer than normal due to EGRIP

Table 3: England Journey times by train (fastest seen for travel on a Thursday in June according to Trainline.com from and to any station in the area)
(X) Indicates number of changes

	50 miles or less between stations		51-100 miles		101-150 miles		151-200 miles		201 - 300 miles		301miles+					

	London	Leicester	Bournemouth	Coventry	Norwich	Bristol	Birmingham	Sheffield	Leeds	Bradford	York	Manchester	Liverpool	Plymouth	Newcastle	Carlisle
London		1hr 2min	1hr 45min	59min	1hr 50min	1hr 40min	1hr 22 min	2 hr	2hr 9min	2hr 49min (1)	1hr 50 min	2hr 7min	2hr 14min	2hr 59min	2hr 49 min	3hr 14min
Leicester	1hr 2min		3hr 47min (3)	48min (1)	2hr 53min (1)	2hr 47min (1)	50min	57min	2hr (1)	2hr 38min (2)	2hr 9min (1)	2 hr 1 min (1)	2hr 52min(1)	4hr 50min (1)	3hr 13min (1)	4hr 6min (2)
Bournemouth	1hr 45min	3hr 47min (3)		2hr 40min	4hr 49min (2)	2hr 26min (1)	3hr 3min	4hr 32min (1)	5hr 3min (3)	5hr 54min(2)	4hr 47min (3)	4hr 49min (2)	4hr 57min(1)	4hr 20min(1)	5hr 50min (2)	6hr 1min (3)
Coventry	59min	48min (1)	2hr 40min		3hr 39min (2)	2hr 3min (1)	21min	1hr 50min (1)	2hr 34min (1)	3hr 7min (2)	2hr 49min (1)	2hr 8min	2hr 15min (1)	4hr 8min(1)	3hr 53min(1)	3hr 17min
Norwich	1hr 50min	2hr 53min (1)	4hr 49min (2)	3hr 39min (2)		4hr 33min (2)	3hr 41min (1)	3hr 22min (2)	3hr 19min (1)	3hr 56min (3)	2hr 55min (1)	4hr 35min (2)	4hr 35min (2)	6hr 5min (2)	3hr 53min (1)	5hr 57min (2)
Bristol	1hr 40min	2hr 47min (1)	2hr 26min (1)	2hr 3min (1)	4hr 33min (2)		1hr 23min(1)	2hr 47min (1)	3hr 31min	4hr 9min (1)	4hr	2hr 59min	3hr 10min (1)	1hr 58min	4hr 59min	4hr 29min 9(1)
Birmingham	1hr 22 min	50min	3hr 3min	21min	3hr 41min (1)	1hr 23min (1)		1hr 14min	1hr 58min	2hr 31min (1)	2hr 9min	1hr 28min	1hr 35min	3hr 21min	3hr 15min	2hr 44min
Sheffield	2 hr	57min	4hr 32min (1)	1hr 50min (1)	3hr 22min (2)	2hr 47min (1)	1hr 14min		39min	1hr 13min (1)	52min	51min	1hr 51min	4hr 44min	1hr 53min	2hr 54min (1)
Leeds	2hr 9min	2hr (1)	5hr 3min (3)	2hr 34min(1)	3hr 19min (1)	3hr 31min	1hr 58min	39min		19min	23min	49min	1hr 24min	5hr 27min	1hr 22min	2hr 52min(1)
Bradford	2hr 49min (1)	2hr 38min (2)	5hr 54min(2)	3hr 7min (2)	3hr 56min (3)	4hr 9min (1)	2hr 31min (1)	1hr 13min (1)	19min		55min (1)	59min	1hr 54min(1)	6hr (1)	1hr 54min(1)	2hr 39min (1)
York	1hr 50 min	2hr 9min (1)	4hr 47min (3)	2hr 49min (1)	2hr 55min (1)	4hr	2hr 9min	52min	23min	55min (1)		1hr 18min	1hr 53min	5hr 55min	56min	2hr 38min(1)
Manchester	2hr 7min	2 hr 1 min (1)	4hr 49min (2)	2hr 8min	4hr 35min (2)	2hr 59min	1hr 28min	51min	49min	59min	1hr 18min		33min	5hrd 11min (1)	2hrs 23min	1hr 49min
Liverpool	2hr 14min	2hr 52min(1)	4hr 57min(1)	2hr 15min (1)	4hr 350min (2)	3hr 10min (1)	1hr 35min	1hr 51min	1hr 24min	1hr 54min(1)	1hr 53min	33min		5hr 34min (1)	3hr 2min	2hrs 2min
Plymouth	2hr 59min	4hr 50min (1)	4hr 20min(1)	4hr 8min(1)	6hr 5min (2)	1hr 58min	3hr 21min	4hr 44min	5hr 27min	6hr (1)	5hr 55min	5hr 11min (1)	5hr 34min (1)		7hr 3min	6hr 34min (1)
Newcastle	2hr 49 min	3hr 13min (1)	5hr 50min (2)	3hr 53min(1)	3hr 53min (1)	4hr 59min	3hr 15min	1hr 53min	1hr 22min	1hr 54min(1)	56min	2hrs 23min	3hr 2min	7hr 3min		1hr 22min
Carlisle	3hr 14min	4hr 6min (2)	6hr 1min (3)	3hr 17min	5hr 57min (2)	4hr 29min (1)	2hr 44min	2hr 54min (1)	2hr 52min (1)	2hr 39min (1)	2hr 38min (1)	1hr 49min	2hrs 2min	6hr 34min (1)	1hr 22min	

The following are a number of European examples of train journey times and distances according to thetrainline-europe.com:

- Oslo to Lillehammer ,115miles, 2hrs 8mins
- Stockholm to Gothenburg, 290miles, 2hrs 50 min
- Stockholm to Malmo, 381 miles, 4hrs 26 mins
- Helsinki to Turku, 105 miles, 1hr 53mins
- Helsinki to Tampere, 110 miles, 1 hr 29mins
- Copenhagen to Odense, 102 miles, 1hr 26mins
- Kolding to Aalborg, 129miles, 2 hours 26 mins
- Amsterdam to Groningen, 114miles, 2 hrs 2mins
- Amsterdam to Eindhoven, 77miles, 1hr 11mins
- Hamburg to Bremen, 78miles, 55mins

- Hamburg to Frankfurt, 306 miles, 3 hrs 20mins
- Munich to Frankfurt, 244 miles, 3 hrs 9 mins
- Munich to Stuttgart, 144 miles, 2hrs 15mins
- Paris to Lyon, 244 miles, 2 hrs
- Toulouse to Bordeaux, 150 miles, 2 hrs 5mins

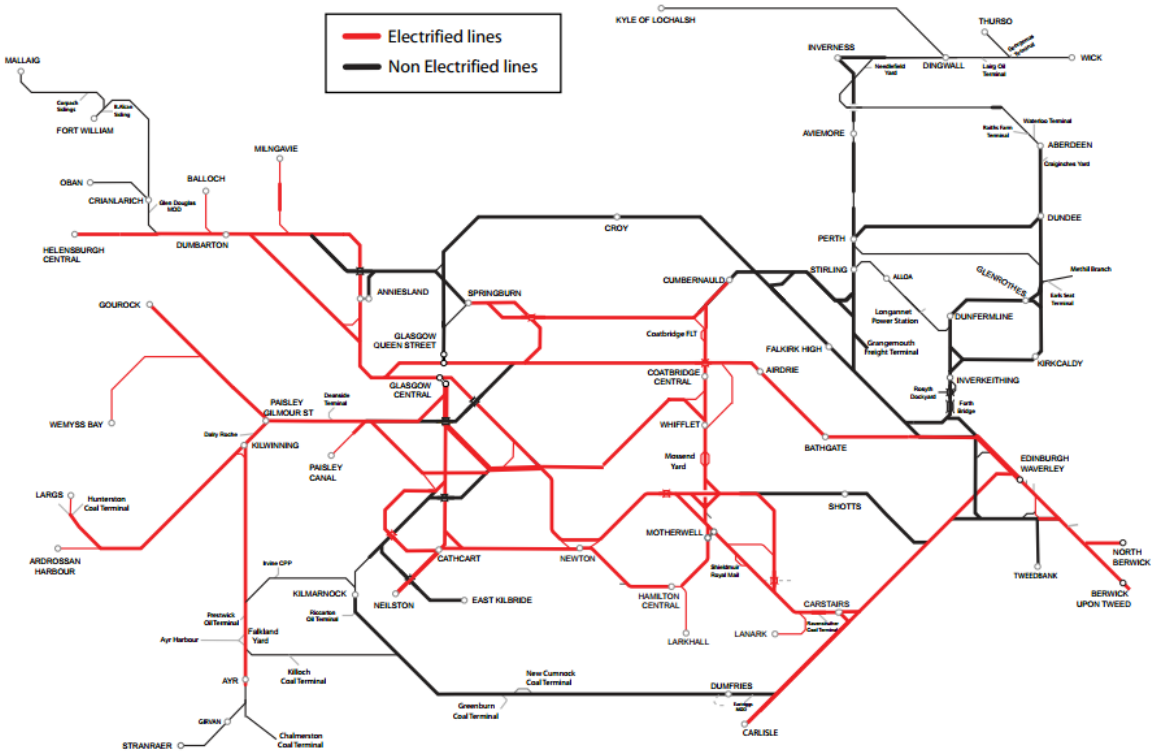
3.2 Electrification

Electrification of the railways brings many benefits.[26]

- Electric trains have more seats than diesel ones of the same length.
- Electric trains can be faster due to their superior performance.
- Electric trains cause 20-35% lower carbon emissions than diesels with no emissions at the point of use. This can improve air quality in city centres.
- Electric trains are quieter.
- Electric trains are more reliable and require less maintenance.
- Electric trains are lighter and cause less wear to the track

However, only about 711 km of Scotland's 2,776 km of rail track is electrified.[27]

This map highlights where lines have been electrified.[28]

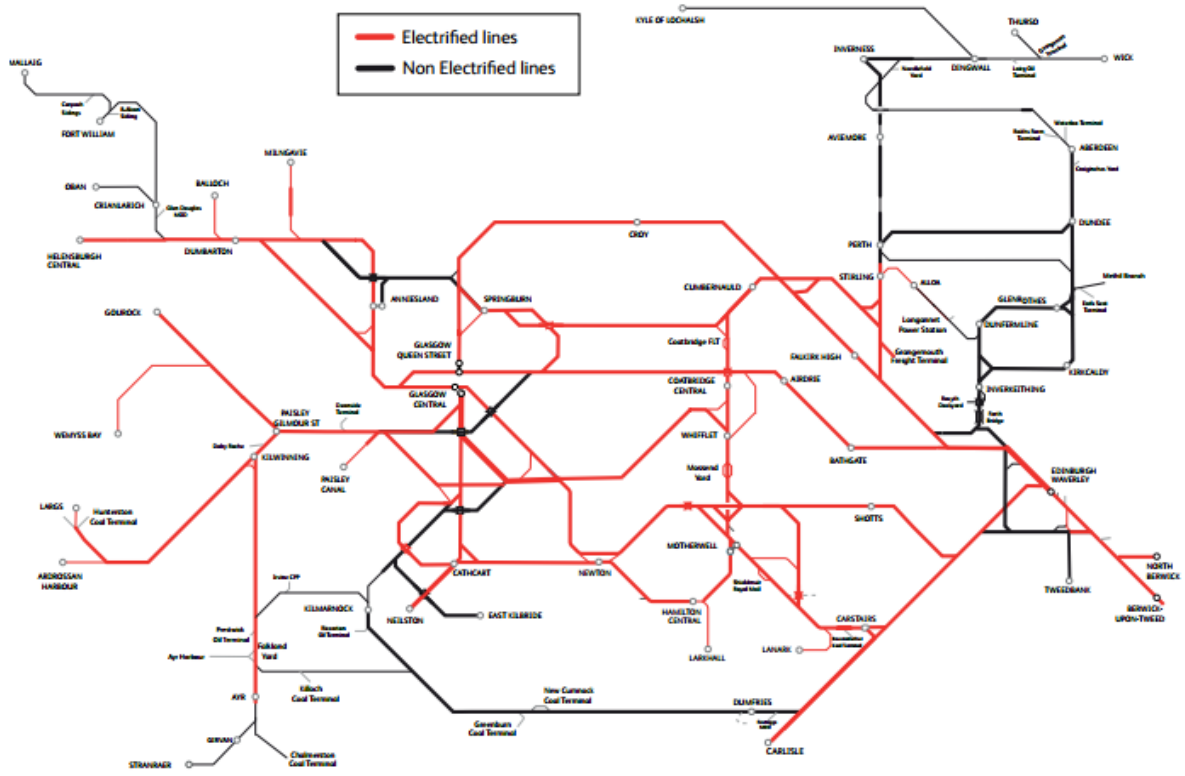


[26] http://www.networkrail.co.uk/aspx/12273.aspx
[27] http://www.transport.gov.scot/project/electrification-programme
[28] Network Rail, 'Delivering a better railway for a better Britain: Network Specification 2015 Scotland', April 2015

Electrified lines are centred around the Glasgow commuter routes, the West and East Coast Main Lines and west of Edinburgh. There are no electrified lines around Inverness, Aberdeen, Dundee or Fife.

However, electrifying railway lines is not straightforward. As well as upfront costs, lines tend to have to be temporarily closed for work to take place. Where there are obstacles, such as bridges or single track, this can further complicate the process. In order that lines are not shut down altogether, the process can take a long time.

While the previous map is not altogether optimistic, the Scottish Government has an ongoing programme of electrification, which includes the Edinburgh to Glasgow via Falkirk line; and the Stirling/Alloa/Dunblane lines. By the end of Control Period 5, (which runs from April 2014 to March 2019), the rail map should look like this[29]:



Given the difficulties that upgrading and electrifying lines can cause, future proofing new projects is vitally important. It is, therefore, disappointing that the potential for expanding the Borders Railway is limited by the fact that it is not electrified and largely single track, to the extent that new bridges were built to only accommodate single track. [30] As a result, any expansion or upgrade will be

[29] Network Rail, "Scotland route study", July 2016
[30] http://www.scotsman.com/news/transport/it-s-slow-speed-ahead-for-borders-rail-commuters-1-3754627

more difficult, and the potential benefit of linking the service up to Carlisle will be harder to realise.

3.3 Single Track

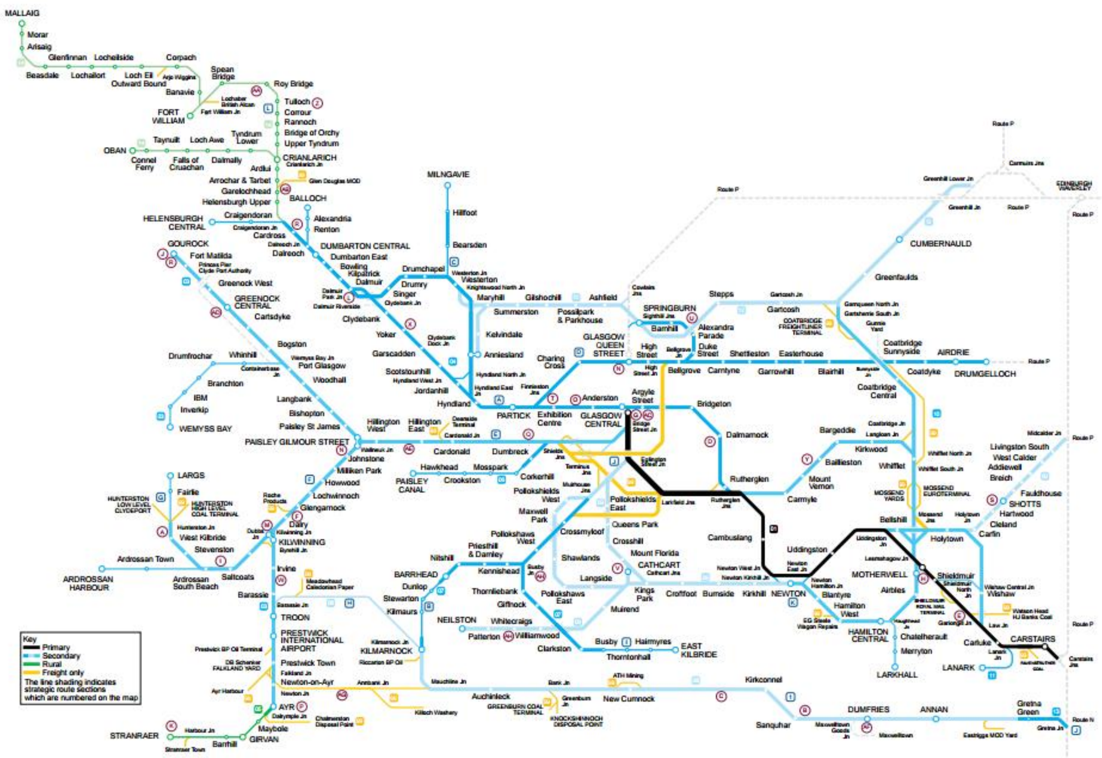
One of the biggest problems facing the expansion of railway use in some parts of Scotland is the use of single track lines. This severely limits the frequency of trains and can also cause delays as trains have to wait at passing loops.

The main Aberdeen to Inverness line is primarily single track with passing loops. As is Perth to Inverness; as is the Borders' Railway; as is Dingwall to Wick; as is Dingwall to Kyle of Lochalsh; as is Ayr to Stranraer; as are the lines from Helensburgh to Oban, Fort William and Mallaig.

While some of these lines are more rural, others such as Perth to Inverness and Aberdeen to Inverness are key connections, while the Borders Railway is turning into a key commuter link.

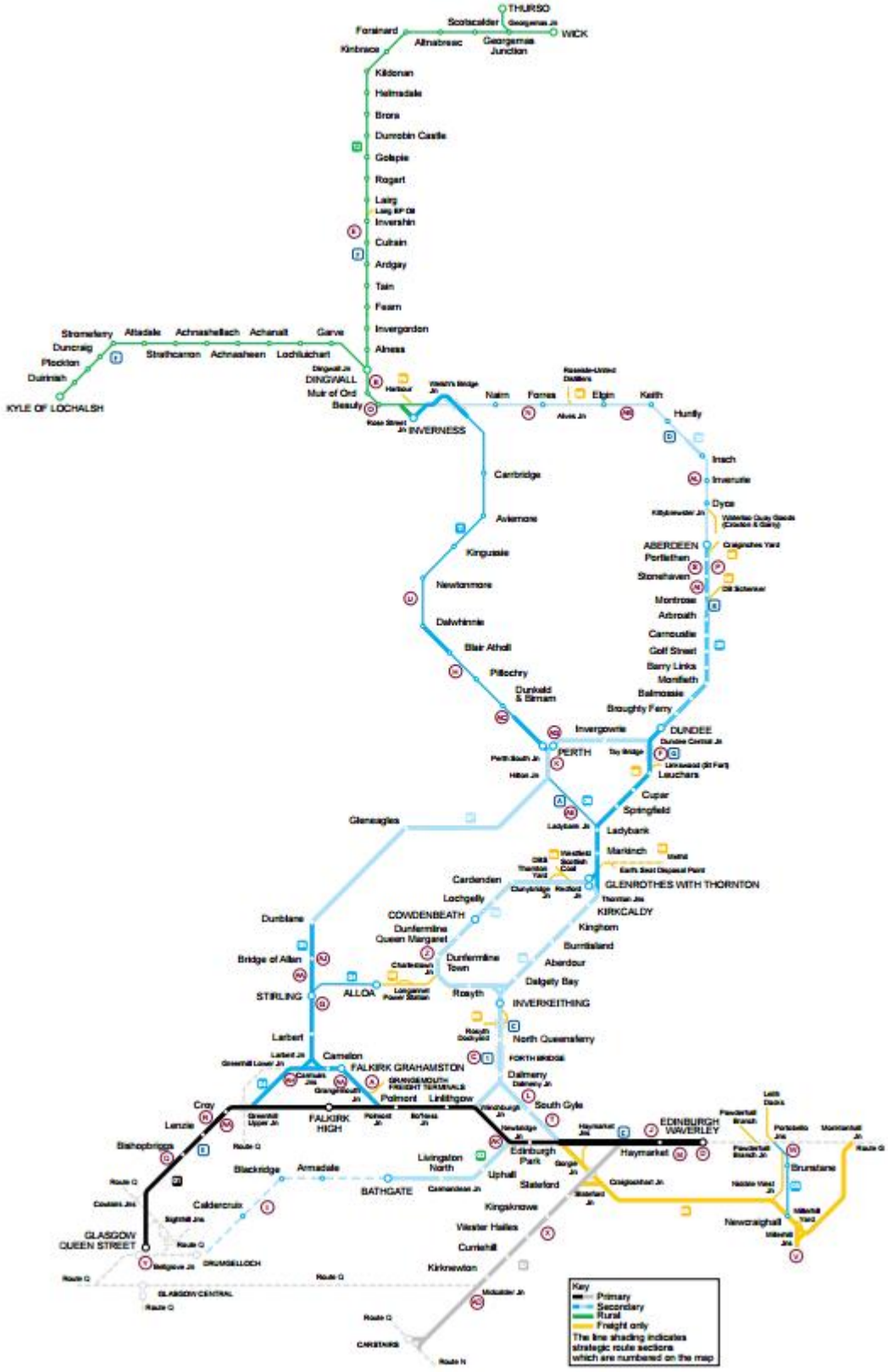
The full breakdown of single, double and multiple track lines are displayed in the next two maps, taken from Network Rail[31]. These are from 2010, so don't include the Borders' Railway, but illustrate that outside the Central Belt, Scotland's rail network is largely single track.

Map 1: Scotland Route Plan West (2010)

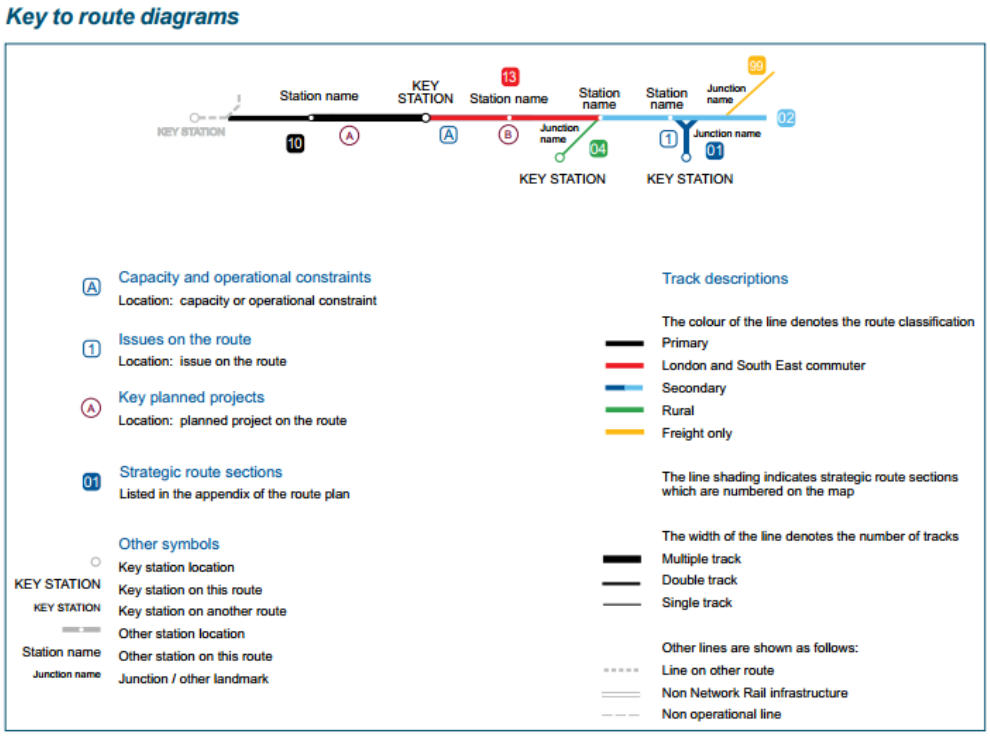


[31] Network Rail, Route Plans 2010, Plan P Scotland East, Plan Q Scotland West

Map 2: Scotland Route Plan East (2010)



Legend:



3.4 Scottish Government Proposals

The Scottish Government has a number of other upgrade projects planned in addition to the rolling electrification programme.

Aberdeen to Inverness:

The current average passenger journey time between Aberdeen and Inverness is about 2 hours 25 minutes, with irregular service.[32] The line is primarily single track incorporating passing loops. The aim of the project is to see a 2 hour end to end journey time with an hourly service and enhanced commuter services into each station.

There are a number of phases to the proposed upgrade, with the aim of delivering the whole project by 2030.

Highland Main Line:

The Highland Main Line runs between Perth and Inverness and is largely single track, incorporating a number of crossing loops to allow passing. Improvements and upgrading of the line aim to see an hourly service between Inverness and the Central Belt, reduced journey times by 10 minutes and more efficient freight operations by 2019.[33] By 2025 it is hoped that the project will

[32] http://www.transport.gov.scot/project/aberdeen-inverness-rail-improvements
[33] http://www.transport.gov.scot/project/highland-main-line

see an average journey time of 3 hours and a fastest journey time of 2 hours 45 minutes.

Edinburgh Glasgow Rail Improvement Programme (EGRIP):
This is a comprehensive package of improvements to Scotland's railway infrastructure which includes modernisation and upgrades to key junctions and infrastructure as well as widespread electrification. By 2018 the quickest journey time between the two stations should be 42 minutes, with completion of the redeveloped Glasgow Queen Street in 2019.[34]

3.5 High Speed Rail

HS1:
HS1 started operating along its entire length from 2007. It is 109 km of railway between St Pancras in London and the Channel Tunnel. High-speed domestic trains also use the railway, providing a commuter service between London and Kent. The railway is also capable of carrying freight traffic. It allows for maximum speeds of up to 300kph for international services and 230 kph for domestic services.[35]

HS2:
HS2 is a proposed high speed 'Y', with phase one linking London to Birmingham, and phase 2 linking up to both Leeds and Manchester.

The project currently has a budget of £55.7bn and is supposed to begin construction in 2017. Phase 1 to the West Midlands is then supposed to be completed by 2026, the link on to Crewe by 2027 and the full network to Manchester and Leeds open by 2033.[36]

Despite the fact that HS2 is not set to be fully operational for 17 years, the National Audit Office's report of June 2016 suggested that as well as facing rising costs, the project has too ambitious a schedule.[37]

HS2 is clearly only within England, however the Scottish Government supports the expansion of HS2 to the North of England and Scotland. In March 2016 HS2 Ltd published 'Broad Options for upgraded and high speed railways to the North of England and Scotland'. The report looked at options for delivering a journey time of three hours or less to London from both Glasgow and

[34] http://www.egip.info/
[35] http://highspeed1.co.uk/about-us
[36] National Audit Office, 'Progress with preparations for High Speed Rail 2', June 2016
[37] National Audit Office, 'Progress with preparations for High Speed Rail 2', June 2016

Edinburgh. The report suggests a route to Carlisle and splitting up to Edinburgh and Glasgow may be an easier route option, though does highlight a number of obstacles. That route would include about 194 miles of new high speed rail at a cost of about £25bn. That does not include high speed rail between Glasgow and Edinburgh. However, the report looks at potential route design and there are no definitive plans yet. As the Network Rail Route Study highlights, there would also need to be a number of high speed enabling projects, which would vary depending on the design of the final scheme. For example, the length of high speed trains may have an impact:

"*The current published HS2 business case also assumes that from 2026 HS2 trains will be 200 metres in length. From 2033 they will be 400 metres in length and it is proposed to split and join them in the vicinity of Carstairs Junction. This will allow a 200 metre long train to operate to Edinburgh Waverley and a further 200 metre long train to Glasgow Central. If splitting and joining does not take place at Carstairs, or any other location, then Edinburgh Waverley and Glasgow Central would have to accommodate 400 metre long trains. There would be a significant impact on capacity for both stations and would necessitate major investment, with consideration of options including a new station in Glasgow and the implications for redevelopment of Edinburgh Waverley*"[38]

<u>HS3/ High Speed North:</u>
HS3 is an idea for an additional high speed rail line, linking Manchester and Leeds.

In June 2014, then Chancellor George Osborne suggested a new high speed rail link between Manchester and Leeds as part of his plans to create a Northern Powerhouse.[39]

In March 2016 the National Infrastructure Committee, chaired by Lord Adonis, published High Speed North.[40] The report highlighted problems with connectivity in both rail and road infrastructure between cities in the North of England and called for a "transformation" in connectivity. The report's central finding was:

"*that the North needs immediate and very significant investment for action now and a plan for longer-term transformation to reduce journey times, increase capacity and improve reliability. On rail, this means kick-starting HS3,*

[38] Network Rail, "Scotland route study", July 2016
[39] http://www.bbc.co.uk/news/uk-27969885
[40] National Infrastructure Commission, High Speed North, March 2016

integrating it with HS2 and planning for the redevelopment of the North's gateway stations"

With the recommendation:

"funding be provided to further develop the long-term plan for HS3, which should be conceived as a high capacity rail network, rather than a single piece of entirely new infrastructure. This plan must be fully integrated with proposals for maximising the benefits from currently planned investments."

4. Open Access

The passenger rail network in Scotland is currently served by five train operating companies (TOCs). Franchise operators contract with the government to provide specified services for a certain number of years. (ScotRail and Caledonian Sleeper contract with the Scottish Government, while the other companies which operate in Scotland and across the Border contract with the UK Government). Train companies bid for franchises on the basis of the amount of funding they would require, or premium they would be prepared to pay to run the service. As it is a franchise, the winning company becomes in effect a state-chosen monopoly service and does not face competition for passengers from other operators.

In England, however, some "open access" operators have grown. Open access rail companies are commercial companies which do not contract with government or receive a subsidy. Instead, they seek an opportunity to operate a service not otherwise on offer and apply to the Office of Rail Regulation for the track access right and to Network Rail for train paths in the timetable, paying an access charge based on the type and number of vehicles they operate. Although they do not cover exactly the same start to finish journey as a franchise, there will be overlaps and, as a result, a degree of competition and choice available to passengers. More importantly, they are doing this at no cost to the taxpayer.

This is an extract from Grand Central's website:[41]

> "Grand Central is an open-access passenger train operator, which means we do not receive subsidy from, or pay any premium to the Department for Transport. We carry passengers from London Kings Cross to York and the North East and to Doncaster and West Yorkshire.
>
> "Grand Central reaches the parts of the country other services don't – directly linking large cities in Yorkshire and the North East with London, often for the first time in years.
>
> "Grand Central's first route was launched in December 2007 and linked London Kings Cross with York, Thirsk, Northallerton, Eaglescliffe, Hartlepool and Sunderland. In May 2010, a new service calling at Bradford, Halifax, Brighouse, Wakefield, Pontefract and Doncaster linked West Yorkshire with London Kings Cross. On 11 December 2011, Grand Central began calling at Mirfield on the West Riding route."

[41] https://www.grandcentralrail.com/about-us/about-grand-central/

While this is an extract from Hull Trains' website:[42]

> "Hull Trains is an award winning, open-access operator running 90 direct services a week from Hull and the Humber region direct to the capital. Our people are what set us apart and through their efforts, alongside a new commercial focus, we have become one of the most innovative, enterprising and dynamic long-distance train operating companies in the UK.
>
> "We're proud to be the UK's leading rail operator for passenger satisfaction. For the past two years, we've topped the National Rail Passenger Survey. In January we announced a record-breaking satisfaction rate of 97% - this is the highest score ever achieved by a long-distance train operator – a full 10% higher than the average score for operators of this nature.
>
> "In 2015, we celebrated our 15-year anniversary and new route innovations that saw us introduce direct train services from Beverley to London for the very first time. In our first year, we ran three daily services and carried 80,000 passengers. This year, we will carry over a million passengers.
>
> "Our growth in recent years has been exceptional and during January 2016 we will mark our 12th millionth passenger journey. With plans to make multi-million investments in improved high-speed bi-mode units, Hull Trains will bring the benefits of electrification to the region more quickly with a proposed track access agreement to 2029."

It should be noted that although both these operators are open access operators, the companies are owned by larger organisations which own other franchise operating companies in the UK.

These two companies saw that there was demand that wasn't being met by the existing franchises and sought to meet it. According to a study by the think tank the Centre for Policy Studies[43], the competition provided by these open access operators has led to lower average fares, less crowding, innovation in ticketing and service and a choice of suppliers for the passengers. The study also suggested that revenue and passenger numbers increased faster for the franchise operator where they faced competition, than where they had no competition.

In March 2016, the Competition and Markets Authority published the report "Passenger Rail Services: competition policy project". This report followed its 2015 discussion document where it stated "*material increase in on-rail competition would result in benefits for passengers and improve efficiency in the sector."*

The report highlights that decisions on allowing open access operators rest with the Office of Rail and Road (ORR) and its assessment criteria. It notes that the ORR is aware of concern that open access operators could pose a risk to the revenue streams of the franchisees, which could impact on future bids.

[42] http://www.hulltrains.co.uk/about-us/
[43] Lodge. T "Rail's second chance: Putting competition back on track" Centre for Policy Studies

However, the report argues that increasing competition for passenger rail services would bring many benefits

"We recognise that it is not possible to test comprehensively the effects of introducing a significantly increased degree of on-rail competition in passenger train services. There are, inevitably, material differences between different transport sectors, and between different operators. However, making due allowances for differences between the structure of the rail sector in Great Britain and other countries, and between transport sectors, we consider that these examples illustrate the significant benefits that could be obtained from greater on-rail competition in addition to the benefits delivered by competition 'for' the market. Potential efficiency gains

"We considered the potential for greater on-rail competition to deliver efficiency gains at both the retail level, where passenger train operators compete, and at the 'upstream' level of infrastructure operations/management.

"Expanding the role of open access has the potential to deliver greater efficiencies as operators would benefit from greater economies of scale and density, although the overall cost impact depends on the extent to which the incumbent loses economies of scale and density, and is route-specific."

The report concludes that there should be a significantly bigger role for open access operators between cities.

However, it also recognises some of the obstacles to this goal. One of which is that on many parts of the rail network in Great Britain, there is very limited spare capacity available, particularly at peak times. In turn, this may limit the opportunity for new entrants to run services in competition with existing franchised train operating companies. This is likely to be the case in Scotland. We have a relatively small rail network and in some areas, even on major lines, there can be single track sections. So while there are benefits from competition, scope for this may be limited.

However, there is perhaps potential benefit to Scotland in this area for travel between cities in Scotland and England. For example, Renaissance Trains had previously considered applying for open access to run direct trains between Glasgow and Liverpool. While it did not in the end apply due to the financial crash, the potential for creating a new direct route between these cities remains.[44]

Ultimately, decisions about allowing open access operators rests with the ORR, which is a UK body. However, despite the small scale and size of the network within Scotland, it offers some potential benefits and should remain an option for companies to explore.

[44] http://www.renaissancetrains.com/about-renaissance-trains.html

The Competition and Markets Authority concluded that its report did not mark the end of its engagement on the issue and that it wanted to work with policymakers to discuss the benefits of on-rail competition.

The Scottish Government's white paper on independence, Scotland's Future, expressed a desire to consider different ownership models for the rail network.[45] While Scotland is not currently independent, there is an opportunity to consider open access and Reform Scotland would call on the Scottish Government to work with the CMA to explore how open access could bring increased benefits through competition to Scotland.

[45] "We will be able to consider options such as different ownership models for the rail network" P125, Scotland's Future,

5. Policy Recommendations

Policy Recommendations

The Scottish Government deserves credit for having in place a rolling programme of much-needed investment to upgrade our railways. Electrification brings many benefits, though those plans are limited to certain areas.

However, it is also important to recognise that upgrading railway lines is far from straightforward and it will always be difficult to try and fix or improve something when you want to use it at the same time.

Partly for this reason, rail infrastructure projects seem to require a great deal of time and planning. Already there are route designs looking at how to extend HS2 to Scotland, despite the fact that HS2 won't be complete until 2033.

The National Records of Scotland has projected that Scotland's population will increase by 9 per cent by 2037.[46] However, that growth will not be evenly spread across the country. Edinburgh (+28%), Aberdeen, (+28) and Perth & Kinross (+24%) have the highest projected population increases, yet two of these areas have some of the poorest rail links. Even under current proposals, there would be no electrified rail links in these areas of high population growth.

However, improved rail infrastructure can also bring economic benefits and attract people to an area. Highland council area is expected to see a 2 per cent decline by 2037 in its working age population.

Future proofing

Given the difficulties that upgrading and electrifying lines can cause, future proofing new projects is vitally important. It is, therefore, disappointing that the potential for expanding the Borders Railway is limited by the fact that it is not electrified and largely single track, to the extent that new bridges were built to only accommodate single track. [47] As a result, any expansion or upgrade will be more difficult, and the potential benefit of linking the service up to Carlisle will be harder to realise. We would call on the Scottish Government to ensure that all new rail work is future proofed so that, where possible, it is double track and electrified. If, for cost reasons it cannot all be double track at the time of building, space, particularly under bridges etc, should be accommodated so that it can easily be expanded in the future.

[46] http://www.nrscotland.gov.uk/news/2014/population-projections-for-scottish-areas
[47] http://www.scotsman.com/news/transport/it-s-slow-speed-ahead-for-borders-rail-commuters-1-3754627

Network Rail Scotland

Although the Scottish Government is responsible for providing the strategic direction and funding for the Scottish rail network, ultimately Network Rail is a UK body answerable to the UK Government. The Shaw report highlighted a "lack of local flexibility and autonomy" with regard to Network Rail. While the report may have gone on to focus on greater devolution within the other route areas outside Scotland, Reform Scotland believes that changes should also be made within the Scottish Route. Rather than having a single organisation, Reform Scotland believes that responsibility for the Scottish route should transfer to a new body directly responsible to, and answerable to, the Scottish Government. That body would, of course, have to work with Network Rail on cross-border rail, but the change would mean a far clearer, and more transparent, line of accountability. The Scottish Government already has responsibility for the Scottish network, therefore it makes sense that the body tasked with managing that route is ultimately answerable to a Scottish Government minister, as opposed to the UK Secretary of State.

Open Access

The Competition and Markets Authority's report in March 2016 examined the benefits of open access operators and expansion of on-rail competition. It concluded that its report did not mark the end of its engagement on the issue and that it wanted to work with policymakers to discuss the benefits of on-rail competition. Reform Scotland would call on the Scottish Government to work with the CMA to explore how open access could bring increased benefits through competition to Scotland.

Scottish Rail Infrastructure Commission

Network Rail's Scotland route study looks at Scotland's rail network over the next thirty years. As well as considering what needs to be done to simply meet existing and growing demand, is that enough? Or should we at least consider what ambitious transformational projects could mean for the Scottish economy?

In thirty years' time, do we want to be in a situation where it could take less time to reach London by rail from Edinburgh than it does to reach Inverness?

In thirty years' time should there be a direct link between Dumfries and Edinburgh?

Or what about Glasgow Crossrail, or Edinburgh and Glasgow airport rail links?

Obviously there are limits on expenditure, though innovative ways of raising income to pay for infrastructure could be considered. However, there is also expected to be an additional £800 million coming to Scotland by 2021 through

Barnett consequentials as a result of Chancellor Philip Hammond's Autumn Statement.[48]

Reform Scotland is not saying that the Scottish Government should definitely create a new high speed line to the north, or improve links to major towns in the Borders, or introduce other new lines. But we are calling on the Scottish Government to look at these options as part of a wide-ranging commission, to examine what is possible, what the costs would be and what benefits they may bring. And while rail links to London are important, so too are links within Scotland, links which are sadly lacking at present. Such a report should look at links to city regions, local networks and rural and scenic areas. The commission should also consider what impact improving the links could have on regional economies. The working age population of the Highlands Council area is expected to see a 2% decline over the next 25 years. Could improved connectivity to our more rural areas help stop that decline?

The commission should also set out a land register of who owns the land either side of our railway lines – this information is crucial if expansion and upgrading of our existing network is to be carried out efficiently.

The following is an extract from the introduction to the High Speed North report:

"*It takes longer to get from Liverpool to Hull by train than to travel twice the distance from London to Paris. Manchester and Leeds are less than 40 miles apart and yet on the congested M62 this often takes more than two hours by car*."[49]

This report, from the National Infrastructure Commission, highlighted a connectivity problem and looked to find innovative solutions. A similar commission is needed for Scotland. Both the Scottish and UK Governments have looked at what may be possible in terms of extending HS2 once it is completed in nearly 20 years' time. With rail infrastructure, ideas and discussions need to start early. There are ideas, regardless of whether they actually happen, about significantly cutting journey times from the Central Belt to London. Shouldn't that ambition be reflected within Scotland too?

[48] https://www.gov.uk/government/news/800-million-boost-to-scottish-governments-capital-budgets-in-autumn-statement
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