



OFFICE OF RAIL AND ROAD

# Network Rail Monitor Scotland

Quarters 3-4 of Year 1 of CP5  
12 October 2014 to 31 March 2015

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# Executive summary



This Monitor provides ORR's assessment of Network Rail's performance in Scotland over Quarters 3-4 of 2014-15, the first year of [Control Period 5 \(CP5\)](#).

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## Safety



Network Rail Scotland Route has seen no notable train incidents and no significant injuries to passengers on trains. Significant reductions have been made in level crossing risk. But more needs to be done to improve workforce safety and the company needs to strengthen existing arrangements for ensuring that track is properly inspected.

## Performance and punctuality



Train performance in Scotland at the end of 2014-2015 was below the regulatory target. This was in part due to the impact of the Commonwealth Games, but even taking this into account train performance has declined and we are investigating whether Network Rail has done everything reasonably practicable to achieve its regulatory target.

## Asset management



Network Rail has generally delivered less than the planned level of renewal work. We are reviewing the company's plans for the remainder of the control period to understand whether this under-delivery will be recovered and whether there is any impact on the sustainability of the network.

## Enhancements



Network Rail is responsible for completing over £1bn of enhancement projects in Scotland in CP5. 2014-15 has seen good progress on some projects but also some missed regulatory milestones.

## Expenditure and finance



Network Rail's financial performance in Scotland is around £2m better than its own budget, mostly due to lower Schedule 4 (planned disruption) costs.

However, we currently expect the company to underperform the regulatory financial performance measure by around £8m for Scotland.

## Data quality



Our evidence shows that the quality of data that Network Rail relies upon to plan and manage works on Britain's railways does not meet the required standards in some areas. ORR has written to Network Rail requiring a proposal from the company to address this.

# Overview



Network Rail in Scotland has a good recent record of passenger and public safety with no significant injuries to passengers on trains in Scotland. However, further improvement is required to track quality in some areas and also to systems that support an appropriate track inspection regime. Significant reductions have been made in level crossing risk through equipment upgrades and closures. Greater focus on reducing the risk to passengers and staff through slip, trip and fall incidents will further improve safety at larger stations.

On workforce safety, Network Rail is working to improve its understanding and control of generic health and safety risks among employees and contractors. This will require a sustained behavioural change across the organisation working with its contractors to deliver the necessary cultural change.

Train performance in Scotland at the end of 2014-2015 was below the regulatory target. This was in part due to the impact of the Commonwealth Games and Ryder Cup when a positive decision was made to manage the network to most effectively meet the needs of increased passenger demand, albeit at the expense of punctuality. However, even taking this into account train performance has declined and we are investigating whether Network Rail has done everything reasonably practicable to achieve its regulatory target.

Network Rail has generally delivered less than its planned level of renewals work. We are reviewing the company's plans for the remainder of the control period to understand whether this under-delivery will be recovered and whether there is any impact on the sustainability of the network.

Good progress has been made on significant enhancement projects that will provide tangible improvements to passengers and freight customers. In particular, the Rutherglen to Coatbridge electrification project enabled electric passenger services to commence in December 2014 despite problems with the timing and quality of the necessary safety authorisations. The Borders Railway project has progressed well and is due to be commissioned in June this year with passenger services commencing in September.

Network Rail's financial performance in Scotland is around £2m better than its own budget. We expect Network Rail to underperform the regulatory financial performance measure by around £8m for Scotland in 2014-15. The measure takes into account the variances between actual performance. It also measures financial assumptions in our CP5 Final Determination and also the financial effect of under-delivery of the regulatory outputs for train performance.

Network Rail is updating its CP5 business plans to reflect its latest views on when outputs will be delivered and revised cost information. This process has taken longer than expected and we are currently reviewing the draft plans. We are also working with Network Rail to increase the level of ownership of finance issues within the Scotland business as part of our quarterly hold to account meetings. This should help drive better forecasting of the financial impacts of decisions related to the management of the network in Scotland.

# Health and safety



ORR inspects, investigates and where necessary, takes enforcement action to ensure compliance by Network Rail, train operating companies (TOCs) and freight operating companies (FOCs) with health and safety law. Network Rail sets key performance indicators as part of its health and safety management system

## Infrastructure safety

### Track

Track condition in Scotland allows safe operation of the network. Track geometry has improved over the past 12 months and Network Rail Scotland Route's approach to the management of risk associated with track geometry appears to have been effective. Network Rail needs to continue to implement its 24- point plan to improve track risk management and reduce the number of repeat [twist faults](#). The action plan was developed after we issued an [Improvement Notice](#) in 2013 citing particular problems in the far north of Scotland, but applicable throughout the country. We are undertaking further inspections to monitor the effectiveness of the plan. Our focus is on the far north which, although it constitutes less than 10% of the overall network in Scotland does present significant challenges. These include: underlying asset condition, asset policy, supervision, inspection regime, labour resources, geography and previous maintenance interventions. Network

Rail has increased the frequency at which track recording equipment is operated in the far north. This appears to have had a positive effect and in the latter half of the year the number of [track geometry](#) faults in the far north has been declining.

During the course of the year, ORR inspections have revealed instances where [Basic Visual Inspections](#) (BVI) of track infrastructure were not carried out properly. We note that where the BVIs fell short of what was expected, this was not evident from examination of Network Rail's own records of the BVIs. We have asked the Network Rail to identify why its safety management system is not ensuring that the track BVI regime is consistently and reliably implemented and to produce a plan to address the shortcomings identified.

### Level crossings

Network Rail has continued to contribute to initiatives rolling out changes within the company's strategic framework. These include, completing the main phase of half-barrier installation at automatic open crossings, closing public and private crossings and improving crossing risk assessments, and acting on the findings.

More work is required to reduce the level of risk at [User Worked Crossings](#). For example, we expect to see the company delivering on its strategy to install equipment at high

risk crossings that provides users with a clear indication of when it is safe to cross.

## Worker health and safety

Workforce safety performance in Scotland has declined since 2013-14 and at the end of [Period 13](#) the workforce and contractor [Fatality and Weighted Injuries](#) (FWI) was 0.22, significantly above that of last year.

In total there have been thirteen [RIDDOR](#) specified injuries in 2014-15. We believe Network Rail needs to improve its understanding and control of generic health and safety risks among its employees and its contractors. We are undertaking a series of inspections at maintenance depots to establish root causes for these trends and promote the changed behaviours and standards needed to bring about lasting improvement.

## Public safety

Control of public safety risk has been good. Such risk is dominated by relatively minor incidents (including slips, trips and falls) at stations. These are concentrated at the major stations of Edinburgh Waverley and Glasgow Central, largely because of the sheer number of users. Risk to customers from moving vehicles has been reduced significantly at Edinburgh Waverley as a consequence of Network Rail's decision to remove access for private road vehicles and taxis for security reasons. There were no accidental deaths or injuries at level crossings in Scotland during the period covered by this monitor.

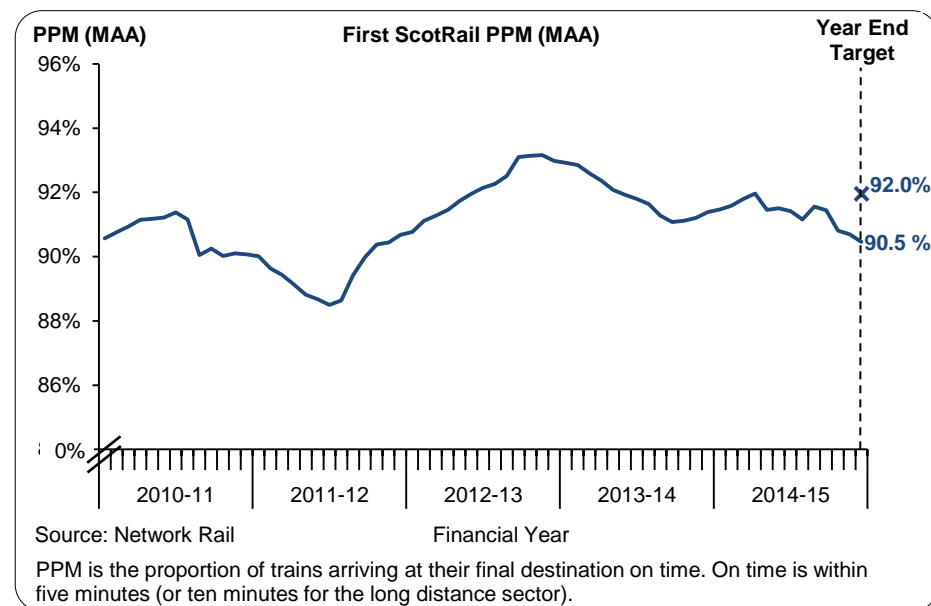
The number of Signals Passed at Danger (SPADs) in the most serious category has remained steady. However, in common with a national trend, Network Rail Scotland Route has experienced an increase in overall numbers of SPADs. There has been a reduction in the number of [failed to calls](#) and [stop short incidents](#) although station overruns and Train Protection and Warning System (TPWS) activations have increased.

# Train Service Performance



## Scotland level performance

ScotRail's year end public performance measure (PPM) moving annual average (MAA) fell short of the regulatory target. It achieved a PPM of 90.5%, 1.5 percentage points (pp) below the regulatory target and 0.9 pp below the level it achieved at the end of CP4 (see graph below). We have agreed with Network Rail and Transport Scotland that the impact of the Commonwealth Games was 0.6 pp. The decision was taken to manage the network to most effectively meet the increased levels of demand albeit at the expense of punctuality. We consider that this was the correct approach.



We are investigating the reasons for the shortfall and whether there is evidence of any systemic performance issues. We will report our findings to ORR's Board in the summer. The Board will determine whether Network Rail has done everything reasonably practicable to achieve its regulatory target.

As part of the quarterly updates it provides to ORR on delivery of its CP5 Performance Plan, Network Rail has stated that a number of milestones for performance initiatives in Scotland have been delivered late or are forecast to be delivered later than planned. The table below shows the degree of adjustment, slippage and delivery for Scotland in 2014-15:

	On time (complete)	Early (complete)	Late (complete)	On time (forecast)	Late (forecast)	On hold	Abandoned	TOTAL
Q1		1		14	11			26
Q2	3		10	11	3			27
Q3	4		10	12	6			32
Q4	5		12	11	4		2	34

At the end of Quarter 4, 12 of the 17 milestones delivered in 2014-15 were delivered later than the targeted delivery date by an average of 53 days. The milestones completed late were targeting improvements in the delay categories covering Specification, Primary Seasonality, Extreme Days and severe weather.

The average delay for the four milestones forecast to be delivered late is 306 days. The milestones are spread across the primary, reactionary and seasonality causation groups.

We wrote to Network Rail on 18 December 2014 advising that we would *'expect to see evidence of the Performance Plan being adjusted if performance in Scotland continues to decline'* beyond the levels seen at the end of Quarter 2. At the end of that quarter, PPM (MAA) in Scotland was 91.4%, 0.2 pp below target in comparison to the end of Quarter 4 when the figure was 90.5%, 1.5 pp below target. As stated above, we are investigating the reasons for this shortfall.

## Delay minutes

Network Rail caused approximately 477,500 delay minutes to the end of Period 13. This represents around a 7% increase on the total for 2013-14.

## Freight performance

The regulatory performance measure for freight is the Freight Delivery Metric (FDM). This measures the percentage of freight trains arriving at their destination within 15 minutes of scheduled time. FDM covers delays for which Network Rail is responsible i.e. not those caused by other train operators. FDM MAA at the end of Period 13 stands at 94.5%, 2.0 pp ahead of the annual target of 92.5%.

# Customer service



## Passenger satisfaction

Transport Focus published the results of its autumn 2014 National Rail Passengers' Satisfaction survey (NRPS) on 27 January 2015.

The overall satisfaction of ScotRail passengers and their satisfaction with punctuality and reliability had not changed significantly since the autumn 2013 survey. 88% of ScotRail passengers were satisfied overall, 1.0 pp above the autumn 2013 result. Similarly, 82% of ScotRail passengers were satisfied with punctuality and reliability, also 1.0 pp up on autumn 2013.

# Asset management



## Maintenance and renewals volumes

Maintaining and renewing the network is fundamental to Network Rail's responsibilities. Regular maintenance counters the effects of wear and ageing to keep the assets safe and performing as intended. But eventually it becomes uneconomical or impractical to maintain them any longer and they have to be renewed.

Network Rail has set out in its asset policies its approach to maintaining and renewing the network sustainably and at least cost. The volume of work required during CP5 in accordance with these policies was set out by Network Rail in its 2014 delivery plan (DP14). We accepted the delivery plan in March (except for operational property, which Network Rail is reviewing), and we are now monitoring whether the company delivers the volume of maintenance and renewals it said was necessary. So far Network Rail has reported delivering less work than it planned to do, in both renewals and maintenance.

Delivery of plain line track renewals improved over the second half of the year but was still 46% behind plan at year end. For switches and crossing ([S&C](#)) delivery at the end of the year was 31% behind plan due to a deferral of medium refurbishment across the network. Although absolute numbers were small, signalling renewals were 51% behind plan. Work

on civils also fell behind plan, with a 14% shortfall for underbridges but a 69% over-delivery for earthworks.

This significant underdelivery raises questions of sustainability if Network Rail cannot catch up in the rest of the control period. Some of the shortfalls reflect migration to new supply chain arrangements for CP5. The position should improve as these new arrangements "bed in", and there is evidence that this is now happening in track and civils. The delays to signalling renewals in part reflect limited supply chain capacity – Network Rail had planned to deliver twice the volume of work in CP5 as was achieved in CP4.

We are reviewing Network Rail's renewals plans for the remainder of CP5, to understand whether it will recover the underdelivery from 2014-15, and to assess whether there is any impact on sustainability.

Overall expenditure on renewals in Scotland is 16% below plan, reflecting the shortfall in volumes and work in progress that has not yet been completed, but the underspend would have been higher had the completed work not cost 2% more than expected. If Network Rail spends more on delivering its plan than we funded in our determination, the excess cost is financial under-performance.

For CP5 we asked Network Rail to provide more detailed reporting on the volume of maintenance delivered, so we could see how each route is performing by maintenance activity. We have found shortcomings in the data reporting during the year and asked Network Rail to improve the quality of its reporting. The situation is also complicated in some areas where maintenance activities are delivered in the course of renewals or an enhancement project and not captured as maintenance within Ellipse, Network Rail's work reporting system. Overall it appears there has been a mix of both over and under-delivery of maintenance across the network, in part reflecting shortcomings in the DP14 maintenance plans. We will continue to press Network Rail for greater transparency in this area.

## Track

There has been a continuing reduction in the numbers of broken rails and serious rail defects. After a weak mid-year period, [poor track geometry](#) has improved and the position at the end of March was better than at the beginning of 2014-15. Progress continues to be made in reducing the number of track geometry faults, but service affecting track failures are worse than target having been on a worsening trend since Period 9.

During the year we issued one health and safety Improvement Notice in Scotland on repeat level 2 track twist defects, as mentioned in the health and safety section.

## Drainage

Earthworks and track both rely on the condition of drainage. Poor drainage can cause [wet beds](#) and eventually problems with vertical alignment of track or sudden failures in embankments or cutting slopes. There were a number of earthworks failures during the wet weather last winter, which were partly attributable to historic problems with drainage. Drainage maintenance is behind plan, and we remain concerned whether Network Rail is doing enough in this area. We issued an Improvement Notice on 18 February 2015 covering the management of critical drainage system components. This was a network wide notice.

## Station buildings and operational property

Earlier in the year a backlog in operational property assessments was identified. These assessments determine whether a structure is capable of carrying the maximum load it might be expected to carry, such as passenger loading on a footbridge or wind loading on a canopy. Network Rail has established mitigation measures and is rechecking their effectiveness. A recovery plan has been developed and delivery started in the last quarter. Progress is slow at present but we are continuing to monitor delivery closely and to press Network Rail to accelerate the program which extends into 2017-18.

## Structures and earthworks

In 2014-15, Network Rail Scotland reported only 11 service-affecting earthworks failures, with all but one of these occurring between periods 7 and 11 (September 2014 to January 2015).

However, during the year we noted an increased backlog of structures examinations, and in Quarter 3 Scotland had a greater backlog than a number of other routes. By the end of the year, the backlog level in Scotland had been reduced although its position relative to other routes had only marginally improved. We will continue to monitor examination backlog levels.

# Developing the network



Network Rail is responsible for completing over £1bn of enhancement projects in Scotland in CP5. 2014-15 has seen good progress on some projects but also some missed regulatory milestones for which we are holding the company to account.

## Enhancement project progress

The **Borders Railway** project has progressed well; the last track was laid in March this year and the line is due to commission in June this year, with passenger services commencing from September. As the longest new line in Scotland in over a century, this project has a high media profile and is seen as a success story for the rail industry.

We granted the **Rutherglen and Coatbridge Electrification** authorisation for the running of electric passenger services in December 2014, following completion of the project. However, our approval was put at risk by Network Rail's late and incomplete submission of technical information. The company carried out an in-depth lessons learnt exercise to identify and remedy these issues.

The **Motherwell Area stabling** project is currently under review. Abellio, the new Scotrail operator, is assessing whether the planned stabling at Motherwell is the best option and is considering if additional stabling at Perth would be preferable.

If a change is confirmed, Network Rail will reflect this by changing its obligations in the Enhancements Delivery plan.

Following the decision to run **High Speed Trains** on the Aberdeen to Inverness line and Highland Mainline, Network Rail has carried out a timetabling exercise to determine the interventions necessary to deliver the required capacity and journey time improvements. This has delayed some milestones but with no impact on the project end date of March 2019. The company is now working with Abellio and Transport Scotland to agree the scope for the projects.

Major works continue within the **Edinburgh – Glasgow Improvement Programme** (EGIP). The project is progressing broadly to schedule and key advance route clearance works to remove lineside vegetation and prepare sites for construction, are now complete. The project redeveloping the Buchanan Galleries shopping centre interfaces closely with EGIP works at the Glasgow Queen Street site. This has created a risk to the Network Rail timescales if the Buchanan Galleries works are delayed.

Working with an independent reporter, we will assess whether Network Rail's estimate for the **upgrade of Glasgow Queen Street station** is efficient later in the summer 2015.

# Efficiency and expenditure



## Overall financial performance

Network Rail's financial performance in Scotland is around £2m better than its own budget, mostly due to lower Schedule 4 (planned disruption) costs.

We currently expect Network Rail to underperform the regulatory financial performance measure by around £8m for Scotland in 2014-15. This takes into account the variances between: actual performance and its own budget (£2m better), the financial assumptions in our PR13 determination for CP5 and Network Rail's own budget (£5m adverse) and also Network Rail's estimate of the financial effect of the under-delivery of the regulatory outputs for train performance (£5m adverse).

We have increased the extent of financial reporting required from Network Rail within the quarterly "holding to account" meetings. This is to increase the level of ownership of finance issues within the Network Rail Scotland business and drive better forecasting of the financial impacts of decisions related to management and enhancement of the Scotland network.

Detailed monitoring arrangements have been put in place for scrutinising the Scottish Ringfenced Funds. An internal review of three funded schemes delivered in the first year of CP5 is currently underway to establish efficient expenditure and adherence to governance.

## Network Rail's total financial performance

### Comparison of income and expenditure

£m	2014-15		
	Budget	Actual	Variance
Turnover	96	97	1
Schedule 4	-22	-11	11
Schedule 8	-1	-3	-2
Operations, support & maintenance	-208	-201	7
Capex - Renewals	-324	-272	52
Capex - Enhancements	-296	-326	-30
<b>Total</b>	<b>-755</b>	<b>-716</b>	<b>39</b>

### Total regulatory financial performance

£m	Financial Performance
Income less expenditure	39
Variances that do not count for financial out/underperformance (1)	-41
Capex performance adjustment (2)	4
Financial performance compared to Network Rail budget	2
Network Rail budget compared to PR13 (3)	-5
Adjustments for missed regulatory outputs (4)	-5
<b>Total financial performance measure</b>	<b>-8</b>

## Notes

1. Variances that do not count for financial out/underperformance include items such as renewals that have been deferred to later in the control period.
2. The Capex performance adjustment is a deduction from the value of renewals and enhancements variances so that 25% is recognised as under or over performance. This aligns with Network Rail's financial reward/penalty for renewals and enhancements expenditure through the RAB roll forward mechanism.
3. Network Rail started CP5 in a worse position than we assumed because it achieved lower efficiency savings in the final year of CP4 than we assumed in our PR13 determination. This meant that Network Rail has more work to do in CP5 to deliver the efficiency challenge set out in our PR13 determination.
4. The adjustment for missed regulatory outputs represents Network Rail's estimate of the value of an anticipated ORR adjustment for not meeting the train performance target in 2014-15 based on our work last year and the adjustment for not delivering some of the enhancements milestones. We will review this and other issues and adjust for missed regulatory outputs in our annual finance and efficiency assessment, so the final number may be different.
5. In both tables a positive variance is favourable and a negative variance unfavourable.
6. This analysis is based on information in Network Rail's management accounts (period end 31 March 2015). We will publish our annual finance and efficiency assessment in September based on Network Rail's regulatory accounts for 2014-15.

**We publish the Network Rail Monitor every six months, focusing on Network Rail's delivery of its obligations to its customers and funders, for which it is mainly accountable under its network licence.**

**We welcome your feedback on this publication. Please send your comments or queries to:**

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