Network Rail monitor

Quarter 2 of Year 2 of CP4, 25 July 2010 – 16 October 2010

OFFICE OF **RAIL REGULATION**

Great Britain summary

This Network Rail monitor gives our assessment of Network Rail's performance up to the second quarter of 2010-11, ending on16 October.

Customer service

We imposed a £3m penalty on Network Rail for breaching its licence in the way it implemented the new **Integrated Train Planning System** (ITPS). We found that the problems reflected a failure by Network Rail to consider fully the risk that its actions might have a detrimental impact on its customers[1]. We commend the efforts of Network Rail and operator staff to mitigate the ITPS problems, which minimised the impact on passengers. Network Rail must resolve residual problems which are still affecting parts of the timetabling process and we are pressing it to do this urgently.

Y

We accept that Network Rail is committed to improving service to customers. In many areas it has done so. Even in the case of ITPS, Network Rail believed that it was helping its customers in ring-fencing the project so that it would not affect other companies' systems. But other critical decisions did not have a customer focus, and the company still has some way to go to embed a true customer service culture consistently across its activities.

We are monitoring how the industry is embedding new processes to improve **information to passengers during disruption**. This is covered in more detail in the ORR Review[2]. We have arranged for the independent reporters Arup to assess how well these are followed when disruption occurs, to monitor their effectiveness and to enable any lessons to be learned and fed back to deliver further improvements.

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[1] See http://www.rail-reg.gov.uk/server/show/nav.1362
[2] See http://www.rail-reg.gov.uk/upload/pdf/orr_review_issue3.pdf

The monitor focuses on issues of Network Rail's delivery for which it is accountable under its network licence. We have used colour flags to show at a glance our current level of concern with an issue:

G Network Rail delivery is satisfactory or good.

Y Network Rail delivery is currently unsatisfactory and/or we have some concerns about future delivery. We have raised the issue with Network Rail at a working level.

YR The issue is subject to special scrutiny, with intensive investigation and enhanced monitoring. We may have discussed potential licence concerns with Network Rail Directors.

R We have major concerns about current and/or future delivery. We are considering, or have already decided to take formal enforcement action.

We welcome feedback on the content and format of this publication. Please address your comments or queries as follows:

Customer service:
 Nigel Fisher on 020 7282 2112 or Nigel.Fisher@orr.gsi.gov.uk

Train service performance:
 Paul Hadley on 020 7282 2039 or Paul.Hadley@orr.gsi.gov.uk

Developing the network:
 Graham Richards on 020 7282 3943 or Graham.Richards@orr.gsi.gov.uk

Asset management:
 Jim Bostock on 020 7282 2113 or Jim.Bostock@orr.gsi.gov.uk

Statistics in this publication:
 Jay Lindop on 0207 282 3978 or Jay.Lindop@orr.gsi.gov.uk

Network Rail is now delivering against agreed customer service standards in providing **gauging information** to operators and those who buy and build rolling stock. It is also important that it meets reasonable third party needs for information about **power supply capability**. Network Rail has gathered stakeholders' views and is following up with a workshop. We expect to see significant progress; we will monitor and report this in future editions.

Operators spend over £200m each year on **electricity for traction.** The industry needs to understand more about system transmission losses and how to reduce these to improve efficiency. We commissioned the independent reporter AMCL to review this area; it recommends Network Rail set up a forum to work with its customers to identify and progress ways to reduce losses; we will monitor progress and will consider options for incentivising Network Rail to reduce losses as part of PR13.

Recommendations from the industry review of **access planning** suggest a need for Network Rail to take a more strategic view of access planning across the network, as well as responding to the needs of operators as they arise. We are proposing, with industry support, a new timetable development process to make it easier to plan new services. We are working with Network Rail to decide what further changes to the access planning process are necessary.

We have refused to approve access rights sought by Southern Railway for extra **Brighton-Victoria services**[3]. We considered that there was likely to be an unacceptable risk to operational performance and that it would not be consistent with our public interest statutory duties to approve these changes. We are discussing the reasons for our rejection with Network Rail and Southern Railway.

3 See http://www.rail-reg.gov.uk/upload/pdf/s22-southern-1sa-decision-letter-241110.pdf

Train service performance

At the end of period 7, **PPM MAA** was 91.5%, ahead of both last year (91.3%) and the expected trajectory at this stage (91.4%). All four sector figures were ahead of Network Rail's own Q2 targets.

However provisional data now available for period 8 shows that the industry has not performed well since the end of Q2 and that Network Rail substantially missed its own targets for passenger and freight delay minutes and cancellations and significant lateness (CaSL). There now seems to be a material risk that Network Rail may not meet the 2010-11 performance requirements we set. We have asked what its plans are to get these measures back on track.

PPM for **East Coast** services remains disappointing and the MAA has continued to fall. A range of causes need to be addressed both by Network Rail and by the operator. We have reviewed the control, performance planning and management arrangements for the services and have seen good joint efforts to improve performance, but it will take time for these to deliver their full benefit. Performance in period 7 was encouraging, the best for nine periods. We are continuing to monitor the position closely.

Performance has been deteriorating for **First Great Western** since period 3. The operator has formally asked Network Rail for a remedial plan as provided for by the network code. At this stage our involvement is therefore confined to monitoring the situation.

Performance of **Virgin Trains** on the West Coast main line continued to be better than plan and is generally not causing concern. We are mindful that the high frequency timetable has yet to be proved during a winter and we will therefore continue to monitor progress closely.

The MAT for Network Rail **delay minutes to passenger services** has continued to rise gradually despite generally benign weather

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conditions. The biggest individual causes of delay are now fatalities & trespass and vandalism & theft (largely of signalling cables). Of those causes more completely within Network Rail's control, track faults and train planning errors have also increased, the latter largely as a consequence of the problems following introduction of ITPS.

Freight delay minutes remain worse than target. The effect of a new network management protocol (under which freight trains about to set out towards areas of known current disruption are subject to pro-active re-scheduling) has yet to be proved. Performance has been better in terms of the new Freight Performance Measure (FPM). At present there is no regulatory requirement for this measure. We have asked Network Rail to ensure that it is on course to deliver its obligations and to meet its customers' requirements, and to provide us with evidence of this.

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The PDI-P and PDI-F measures of **disruption caused by planned engineering work** remain better than target.

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Developing the network

Network Rail continues to make progress delivering its **programme of enhancements** for CP4. The shared service yard and plant room at King's Cross were completed on time. Honeybourne Bridge on the Cotswolds line was successfully replaced in October. During the 52 hour possession, the opportunity was taken to carry out extra work elsewhere on the line. Network Rail has been working hard with the local community and the operator to minimise disruption.

The Secretary of State has recently announced the way forward on Thameslink, electrification projects and new or redeployed rolling stock as a result of decisions taken in the spending review. Network Rail should review its current enhancement delivery plan in the light of this announcement and propose any relevant changes to us through the change control mechanism. A final decision on IEP and

further Great Western electrification is expected in the new year. In addition to changing its delivery plan, Network Rail should start to reassess its capability to deliver the overall CP4 programme and confirm that it can meet its obligations. After the new year announcement we will remit the independent reporters Nichols to review this in the context of its previous assessments.

The Industry Steering Group has presented its views to us on changes to improve efficient delivery of **cross industry projects**. It identified scope for improved behaviours (e.g. earlier involvement of operators by Network Rail, and increased commitment of effort by operators in the early stages of project development) and enablers to improve incentives to achieve this. The group committed to review alternative contractual arrangements in the light of findings from the McNulty study. We welcome this initiative and will work with the industry to make sure the proposed changes are effective.

Network Rail is projecting a two month delay to work to integrate **Waterloo International** station and provide infrastructure for 10-car trains. We are looking into the reason for this and whether it will affect passengers. This is not yet clear as there is some uncertainty about when longer trains will be available.

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In the last monitor we raised concerns about delays to the delivery of the **East Coast main line overhead line renewal project.** We now accept Network Rail's reasons for deferral and the affected operators have accepted the revised plans.

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The third party funding contribution has now been secured for the **Gatwick Airport remodelling** and Network Rail is working up a revised programme.

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Network Rail continues to make progress reaching agreements with operators on cab fitment for **GSM-R**; the network change process is also nearly complete. GSM-R is now working well in four areas and

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operators report that the fitment process is better than expected. It is essential that progress continues if the project is to deliver on time.

On 28 October **ERTMS** finally went live for passenger services between Pwllheli - Harlech, its first use on the GB network. There remain further challenges before it can be commissioned on the rest of the Cambrian route, under full European interoperability procedures. We will remit the independent reporters to undertake a 'lessons learned' review to inform future ERTMS development plans.

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Network Rail will undertake a complex programme of work around **Reading** and on the lines to Paddington over Christmas and the New Year. This will include trackwork for Crossrail, new signalling and work on several bridges. Network Rail has carried out extensive and thorough planning and risk assessment, and has worked with a cross industry group to ensure that the unavoidable disruption to rail users is kept to a minimum.

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Network Rail has successfully completed work on the new **Airdrie to Bathgate** route to allow driver training to take place. This represents a major addition to the rail network in Scotland and will open up significant new services for passengers from later this month. Although the due date to have the route available for driver training was missed and training started a week late, we believe the company did all it reasonably could to meet the deadline and that the delay was at least in part a consequence of hold-ups during the severe 2009-10 winter.

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Our **investment framework** is designed to encourage and facilitate investment on the rail network. It constitutes policy and guidelines for investment by parties other than central government, and by government where this arises between periodic reviews (which are conducted under the HLOS/SOFA process). Following consultation

we have now published consolidated guidance to make the process as clear and simple to follow as possible[4].

In 2009 we consulted stakeholders about Network Rail's engagement with **third party investment**. Concerns expressed fell into two areas; a perception that Network Rail could be slow or bureaucratic, and a belief that it was too risk averse or unresponsive and reactive in overcoming problems. Network Rail responded positively with 22 improvement initiatives such as streamlining its approvals processes, producing better template contracts and a twice-yearly stakeholder conference. We remitted the independent reporter Halcrow to review the effectiveness of these initiatives. Initial results show that good progress has been made on the most significant ones. The study is moving on to assess experience on a sample of schemes. It will identify any remaining areas of concern and examples where actions have been effective in improving customers' experience.

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Asset management

We continue to await Network Rail's final response to AMCL's Spring 2010 **Asset Management Roadmap**, which sets out proposed trajectories for achieving best practice. A senior level workshop has been arranged with the aim of agreeing challenging but achievable trajectories. An important consequence should be that Network Rail will be able to make high quality submissions to the PR13 process. We expect these to be supported by whole life cost analyses; Network Rail has agreed to progress the recommendations of the Arup report on unit costing.

We have seen the independent reporter Arup's initial findings on Network Rail's management of **civil structures**. Positive messages are that there is a strong engineering led focus in route teams and the route asset stewards meet regularly to share information.

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[4] See http://www.rail-reg.gov.uk/server/show/nav.190

Network Rail is also starting to implement risk based inspection frequencies. However, though it undertakes significant collaborative research, at present Network Rail is focused on short-term planning rather than long-term requirements. Comprehensive asset management plans are only in place for tunnels and some major structures. The linkage between the structures condition index and deterioration, risk and failure is unclear. The implications for performance cannot be clearly derived and no leading indicators are available for bridge structures. Arup's final report is due in early 2011.

We see **Risk Based/Reliability Centred maintenance** as a key part of efficient and effective asset management. ROSE, Network Rail's project to introduce this on signalling equipment, has been running for several years and despite delivering substantial benefits is only 50% complete. We have remitted the independent reporter AMCL to review the scope for and timing of further roll-out to signalling and other asset groups.

We monitor delivery of asset renewals against the plans Network Rail submitted to us for CP4, and which we have agreed represent sustainable asset management. After Q2 there are slight variances to plan for plain line track and S&C delivery. Delivery of conventional signalling is on plan. Network Rail has corrected the reporting of renewals to distinguish these properly from enhancements. We expect this will explain variances in telecoms, electrification and structures renewals. A detailed assessment of delivery will be reported in the Q4 monitor.

Infrastructure caused delays account for just over 50% of the delays for which Network Rail is held accountable. Year-on-year these have decreased by 3.1%, a welcome reduction but falling short of Network Rail's plans.

Delays due to **track** are 3.4% up. Several track quality measures are not meeting Network Rail's internal target; there has been a 16 period decline in track geometry. Network Rail has briefed us and presented a credible action plan. Whilst we are satisfied Network Rail is addressing management issues following its reorganisation, we are concerned that improvement may not be evident for some time. We will continue to monitor track delays and the effectiveness of Network Rail's action plans.

Delays due to **overhead line equipment and third rail** have also increased by 6.9% (although these only make up 3% of total Network Rail caused delays). Network Rail has completed a detailed assessment of its strategy for managing electrification assets and producing route strategies. We are reviewing these. The number of incidents caused by **signalling systems & power supply failures and cable faults** has increased, as has the resulting delay.

Network Rail has modernised and improved the **radio electronic token block** (RETB) systems in the Scottish Highlands. This has significantly extended the reliability and the lifespan of this equipment. Delay minutes due to RETB are now almost zero.

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Customer service

ORR
OFFICE OF **RAIL REGULATION**

New timetabling system

We have imposed a penalty of £3m on Network Rail for breaching its licence over the way it implemented the new **Integrated Train Planning System** (ITPS). We found that the problems reflected a failure by Network Rail to consider fully the risk that its actions might have a detrimental impact on its customers[5].

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We commend the efforts Network Rail and operator staff at all levels made to mitigate and address the ITPS problems quickly, so that the impact on passengers was minimised. Network Rail is once more meeting the required T-12 timescales for confirming changes to timetables, however it has yet to resolve some residual problems which are still affecting other parts of the timetable planning process and we are pressing it to do this urgently.

We believe that Network Rail is committed, at the highest levels, to improving how it provides service to customers. There is a key 'service culture' component in its transformation programme, and chair Rick Haythornthwaite has confirmed that he wants to see this change. In many areas the company has improved customer service over the last few years. Virgin Trains is now complimentary about how Network Rail works with the operator to improve performance on the West Coast main line, and DfT is positive about Network Rail's work developing the Thameslink programme.

Even in the case of ITPS, Network Rail believed that it was helping its customers in ring-fencing the project so that it would not affect other companies' systems. But other critical ITPS decisions did not have a customer focus, and the company still has some way to go to embed a true customer service culture consistently across its activities.

Information for passengers during disruption

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We are watching closely how the industry is embedding new processes to improve the information it provides to passengers during serious disruption. This topic is covered in more detail in the ORR Review published alongside this monitor[6]. The industry is now operating to new procedures and a code of practice. We have arranged for the independent reporters Arup to assess how well these are followed should such disruption occur in the coming months, to monitor their effectiveness and to enable any lessons to be learned and fed back to deliver further improvements. We will publish the findings on our website.

Capability information for stakeholders

Network Rail has made good progress improving the **gauging information** available to train operators and those who buy and build rolling stock. It is now delivering against agreed customer service standards.

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It is also important that Network Rail can meet reasonable third party needs for information about the network's **power supply capability**. Network Rail has gathered stakeholders' views and is following up with a workshop. We expect to see significant progress; we will monitor and report this in future editions.

Network Rail must maintain the **capability of the network** as defined in its sectional appendices and other publications, subject to any changes made using industry procedures. It is making progress to close out the final discrepancies between actual and published capability for gauge and route availability which it has identified over the last few years. While some delay has been due to Network Rail seeking the views of freight operators before making changes, it is

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[5] See http://www.rail-reg.gov.uk/server/show/nav.1362

[6] See http://www.rail-reg.gov.uk/upload/pdf/orr_review_issue3.pdf

important these discrepancies are finally closed out; we expect this to happen before the end of this year.

Electrical energy efficiency

Operators spend between £200m and £250m each year on electricity for traction, including the cost of system transmission losses; the industry does not yet understand enough about how these can be reduced to improve efficiency.

We commissioned the independent reporter AMCL to review this, looking at London Underground and European comparators. The key recommendation from this work is for Network Rail to set up a forum to work closely with its customers to identify and progress ways to reduce system losses, ensuring full transparency of cost-benefit analyses and relevant technical, economic and risk factors. AMCL identify two options for incentivising Network Rail to reduce system losses; we will consider these as part of PR13. We will monitor progress at a monthly cross industry group.

On-train metering

Virgin Trains is the first operator to seek to introduce on-train metering and use it as a basis for charging. We encourage this initiative and we are reviewing Virgin's application, which Network Rail has supported including setting up systems to enable on-train metering and billing. However Network Rail has yet to provide a sound methodology for estimating transmission losses in this case, which is needed before we can complete our review; we are working with them to resolve this issue.

Investment at stations

We have been following up the recommendations from the recent independent reporter review by Nichols into the comparison of

costs and barriers to investment at stations[7]. The recommendations fall into three areas: those relating to asset protection agreements, issues around operator franchises and issues relating to the contractual nature of station responsibilities.

We are discussing the recommendations around asset protection agreements in more detail with Network Rail as part of our ongoing work monitoring the investment framework.

Earlier this year DfT consulted on its franchising policy. It is expected to announce its conclusions on franchise reform in December. Our response to the consultation noted that longer franchises could facilitate train operators taking more responsibility for investing in and maintaining stations through full repairing leases. We are continuing to work with DfT and the industry to explore how this might work in practice and the effect it would have on Network Rail's obligations.

Network Rail has also set up the Stations Contract Reform Task Group, including ATOC and several operators. This group has been looking at issues relating to station change, clarifying third party roles when investing at stations and maintenance/repair issues. It has written to us proposing ways to simplify the station change process by tailoring it to reflect better the nature of the changes proposed. We welcome these proposals and are now seeking to understand their detailed effect before we agree a formal change.

Strategic timetable development

Over the last year the industry has reviewed the access planning process for new services, from planning and development to inclusion in access rights before becoming newly timetabled services. This was to address our concern that industry processes do not make it easy

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[7] See http://www.rail-reg.gov.uk/upload/pdf/nichols-enhancement-costs-240610.pdf

for service proposals to be translated into timetables which make the best use of network capacity. That concern was strengthened by recent experience with new service proposals for the East Coast main line; we re-examined that experience to identify possible improvements in the process. Several recommendations from that review suggested a need for Network Rail to take a more strategic view of access planning across the network, as well as responding to the needs of individual operators as they arise. We have taken action by promoting, with the industry's support, a new timetable development process in the network code which will make it easier for new services to be planned and developed. We are now working with Network Rail to decide what further changes to the access planning process are necessary.

Proposed new services on the Brighton main line

In November we refused to approve access rights sought by Southern Railway to run its proposed extra Brighton-Victoria services[8]. When we are asked to approve rights for new services we consider a number of issues, including the potential effect of the proposals on performance. In our assessment this proposal, which had Network Rail's agreement, failed to allay concerns that performance on the Brighton main line would be adversely affected. We considered that there was indeed likely to be an unacceptable risk to operational performance (which is currently poor, although this was not a key consideration) and decided that it would not be consistent with our public interest statutory duties to approve these changes. We were surprised that Network Rail was prepared to agree to the proposals, and we are discussing the reasons for our rejection of them with Network Rail and Southern Railway.

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[8] See http://www.rail-reg.gov.uk/upload/pdf/s22-southern-1sa-decision-letter-241110.pdf
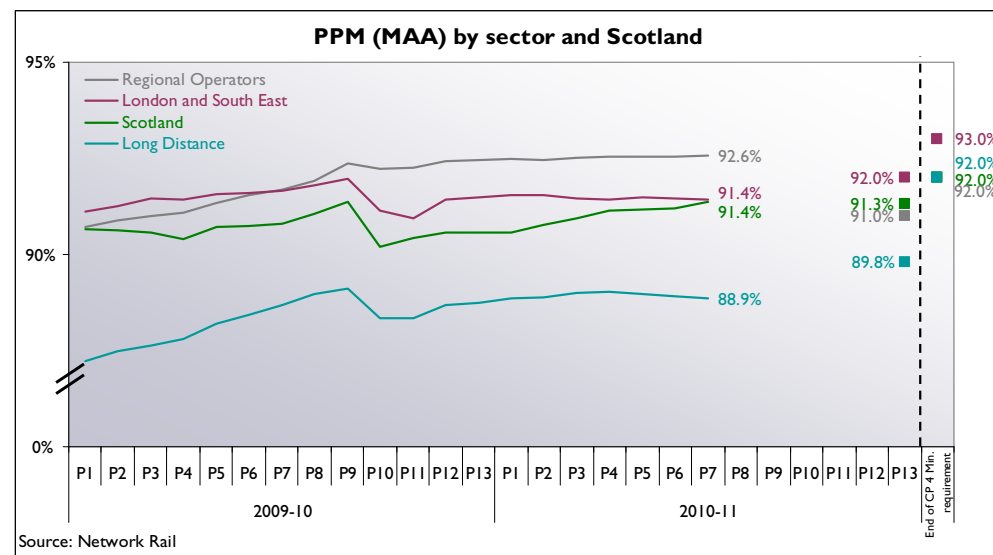
Train service performance

Overview

At the end of period 7, PPM MAA was 91.5%, ahead of both last year (91.3%) and the expected trajectory at this stage (91.4%).

However provisional data for period 8, not generally included in this monitor, shows that the industry has not performed well since the end of Q2 and that Network Rail substantially missed its own targets for passenger and freight delay minutes and cancellations and significant lateness (CaSL). There now seems to be a material risk that Network Rail may not meet all of the 2010-11 performance requirements we set. We have therefore asked Network Rail what its plans are to get these measures back on track.

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Public Performance Measure (PPM)

PPM (MAA) Great Britain

No requirements set

MAA

91.5%

Source: Network Rail
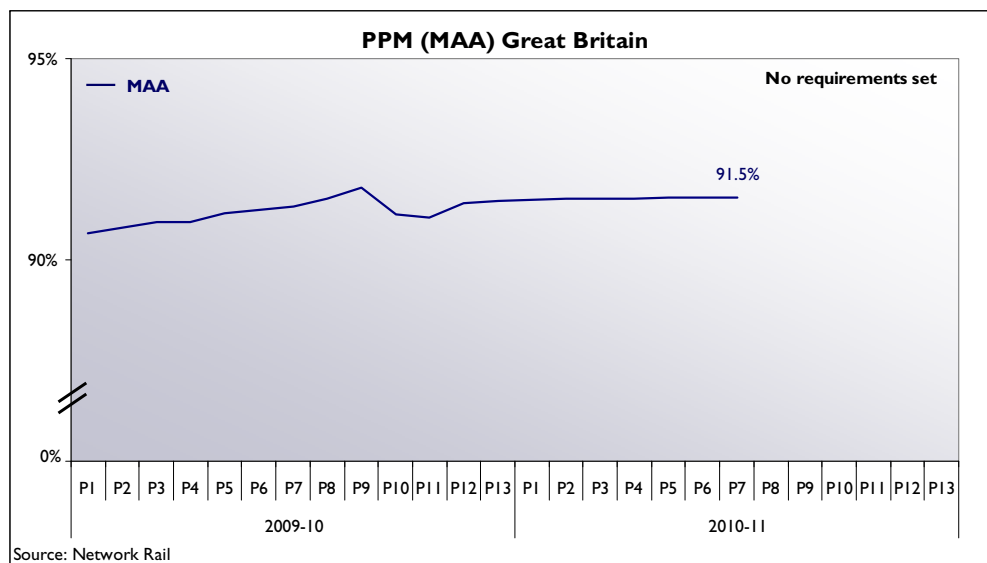
All four sector PPM MAA scores were ahead of Network Rail's internal targets for the quarter. The London & South East and Long Distance sectors have some way to go to meet the year end requirements but the figures should improve when last year's poor performance in periods 9 to 11, caused by the exceptional weather conditions, fall out of the moving annual averages.

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PPM (MAA) by sector and Scotland

Regional Operators
London and South East
Scotland
Long Distance

92.6%

93.0%
92.0%
92.0%
92.0%

91.4%
91.4%

92.0%
91.3%
91.0%

89.8%

88.9%

2009-10   2010-11

End of CP 4 Min. requirement

Source: Network Rail

Train service performance

PPM (MAA) long-distance sector by TOC

Source: Network Rail

Legend:
- First TransPennine
- Cross Country
- Virgin Trains
- First Great Western (HSS only)
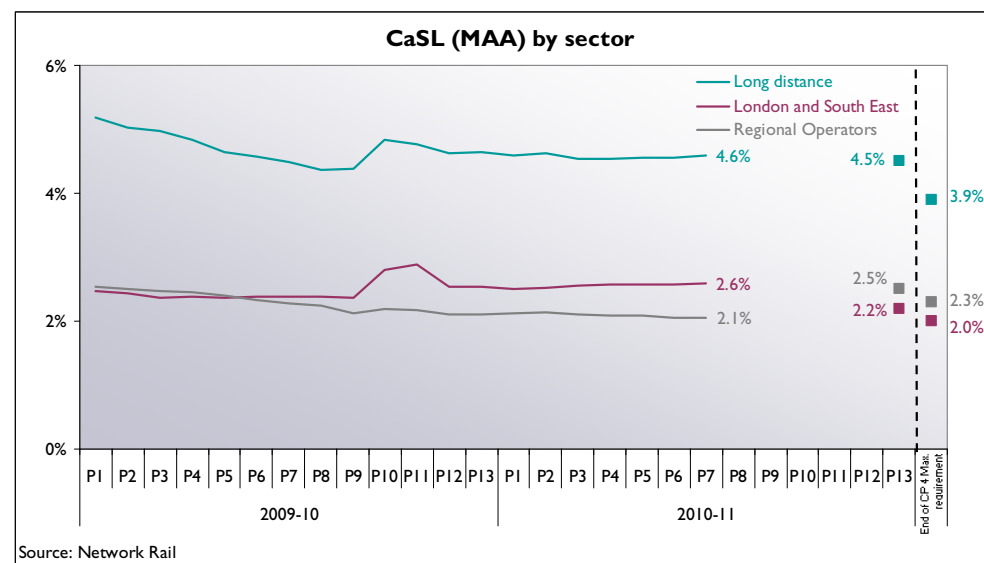- East Coast trains

West Coast performance

Performance was ahead of plan in both Q1 and Q2 and is generally not causing concern. However we are mindful that the high frequency timetable has yet to be proved during a winter and we will therefore continue to monitor progress closely.

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Cancellations and significant lateness (CaSL)

All the sector CaSL MAA figures were ahead of Network Rail's internal targets at the end of period 7. As with the last quarter, the London & South East CaSL year end requirement remains the most challenging, although it was badly affected by disruption last winter and this should drop out of the MAA calculation later in the year.

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East Coast performance

PPM for these services remains disappointing and the MAA has continued to fall. No single factor is responsible, rather there is a range of causes which need to be addressed both by Network Rail and by the operator. We have reviewed the control, performance planning and management arrangements for the services and have seen evidence of good joint efforts to improve performance, but it will take time for these to deliver their full benefit. Performance in period 7 was encouraging, the best for nine periods. We are continuing to monitor the position closely.

YR

Western performance

Performance has been deteriorating for First Great Western since period 3. The operator has formally asked Network Rail for a remedial plan as provided for by the network code. At this stage our involvement is therefore confined to monitoring the situation.

Y

CaSL (MAA) by sector

Legend:
- Long distance
- London and South East
- Regional Operators

Source: Network Rail

Train service performance

Network Rail delay to passenger and freight trains

The MAT for Network Rail delay minutes to **passenger** services has continued to rise gradually despite generally benign weather conditions. The biggest individual causes of delay are now fatalities & trespass and vandalism & theft (largely of signalling cables). Of those causes more completely within Network Rail's control, track faults and train planning errors have also increased, the latter largely as a consequence of the problems following introduction of ITPS. Track faults are discussed further in the asset management section.
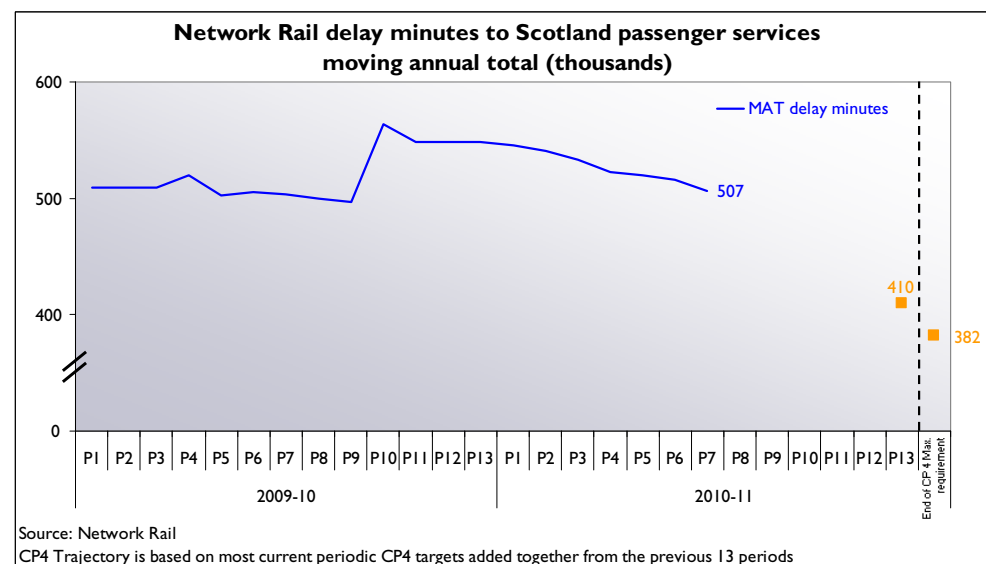
Y

Despite the unsatisfactory trend, after period 7 Network Rail remained just within its own planned trajectory and anticipated meeting the end-year requirement, provided that a more typical winter prevails.

NB See note on page10 about provisional period 8 figures.

Network Rail delay to passenger services in **Scotland** remains ahead of target and is causing no concerns.

G

Network Rail delay minutes to England & Wales passenger services moving annual total (thousands)

— MAT delay minutes

6,283
5,790
4,980

Source: Network Rail

Network Rail delay minutes to Scotland passenger services moving annual total (thousands)

— MAT delay minutes

507
410
382

Source: Network Rail

CP4 Trajectory is based on most current periodic CP4 targets added together from the previous 13 periods

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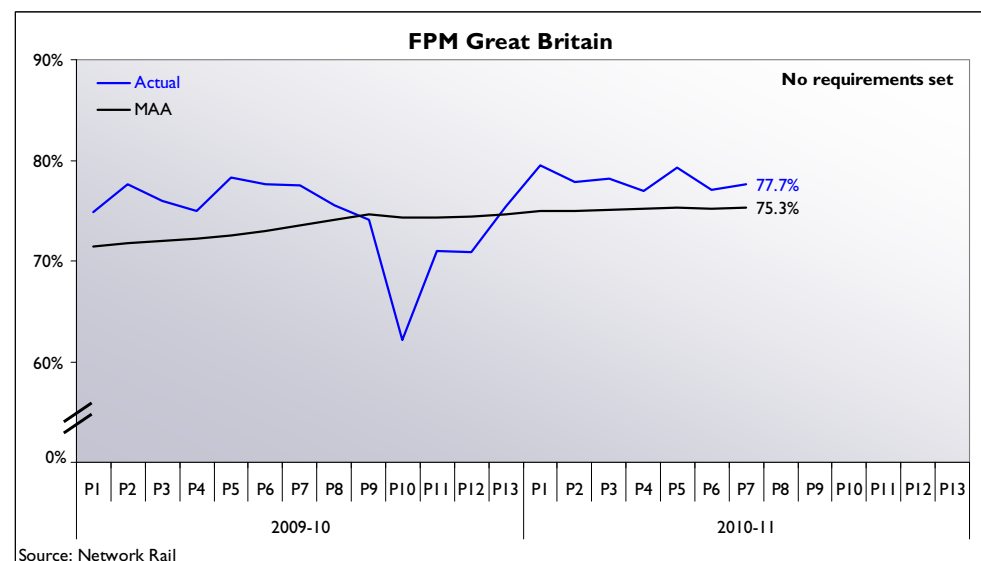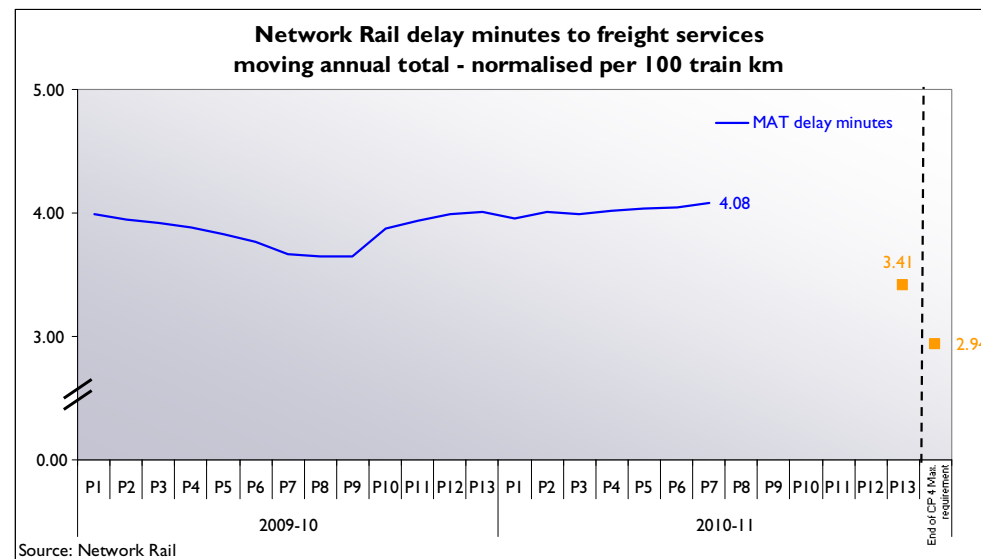# Train service performance

Freight performance in terms of normalised Network Rail delay remains sluggish and behind target. The effect of a new network management protocol (under which freight trains about to set out towards areas of known current disruption are subject to pro-active re-scheduling) has yet to be proved.

However, performance has been better when assessed in terms of the new Freight Performance Measure (FPM), a freight equivalent of PPM developed by Network Rail for this control period. At present there is no regulatory requirement for this KPI.

We have asked Network Rail to ensure that it is on course to deliver its obligations and to meet its customers' requirements, and to provide us with evidence of this.
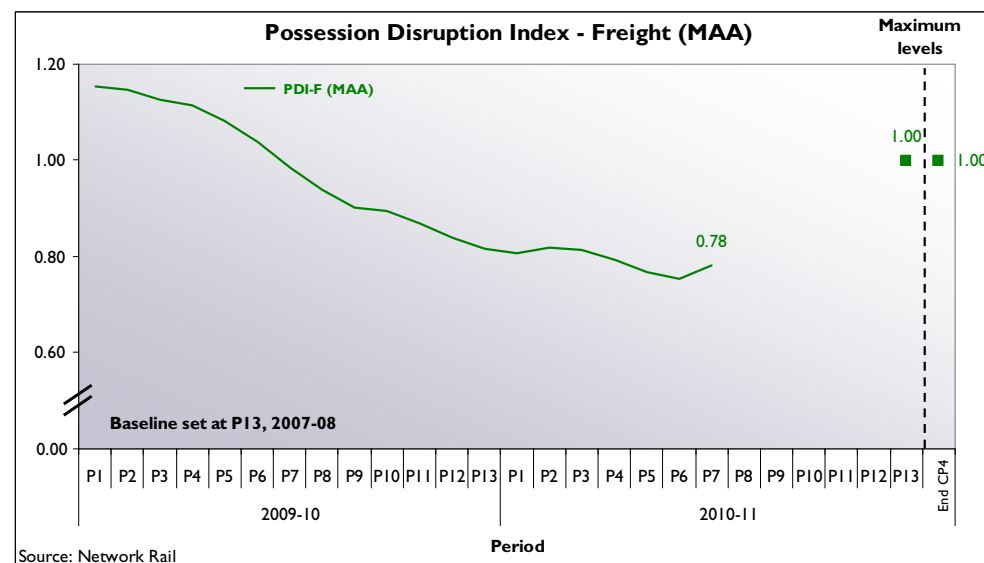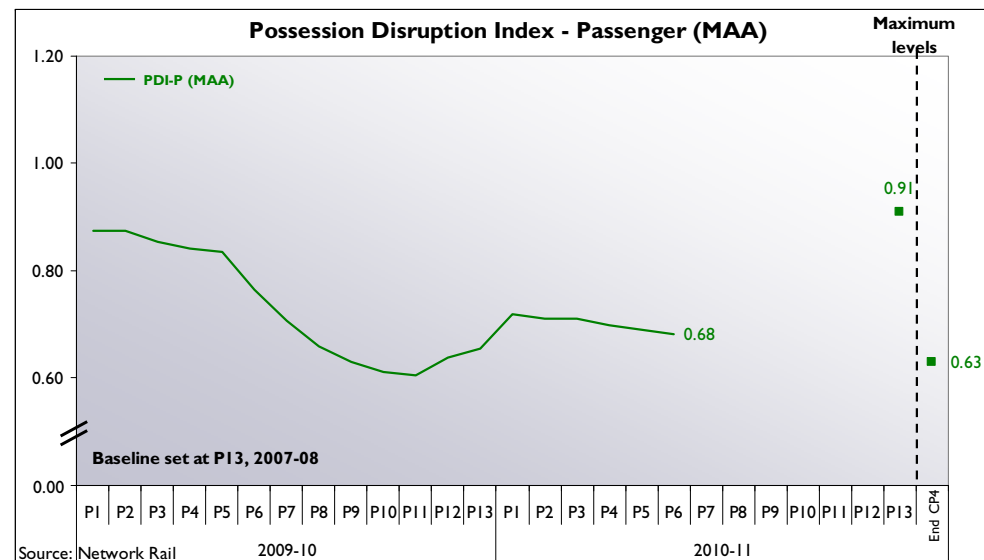
Y

Network Rail delay minutes to freight services moving annual total - normalised per 100 train km

Source: Network Rail

FPM Great Britain

Source: Network Rail

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Train service performance

Network availability - reducing disruption

There was a slight increase in disruption from possession overruns in period 7 but overall the management of availability continues to be satisfactory. The PDI-P and PDI-F measures of disruption remain ahead of target.

Network Rail has now begun to introduce its new Network Availability Reporting System (NARS). This quantifies the impact that different initiatives will have on targets. When fully operational, by providing robust projections of PDI statistics NARS will help provide assurance that Network Rail will continue to meet the targets in future and help the company to agree workplans with operators. Network Rail will then need to update the network availability delivery plan, which sets out the measures it is taking to reduce disruption from engineering works, to reflect the results from NARS.

Possession Disruption Index - Passenger (MAA)

Possession Disruption Index - Freight (MAA)

Developing the network

Overview

Network Rail continues to make progress delivering its programme of enhancements for CP4. The shared service yard and plant room at King's Cross station were completed on time and progress has been made on this project. Honeybourne Bridge on the Cotswolds line was successfully replaced with a new structure in early October. During the 52 hour possession, the opportunity was taken to carry out extra work elsewhere on the line. Network Rail has been working hard with the local community and the operator to minimise disruption. New track will be laid overnight between Dec 2010 and May 2011 meaning that disruptive line closures will be avoided until the work is commissioned later in 2011.

Enhancement delivery plan changes

The Secretary of State has recently announced the way forward on Thameslink, electrification projects and new or redeployed rolling stock as a result of decisions taken in the spending review. Network Rail should review its current enhancement delivery plan in the light of this announcement and propose any relevant changes to us through the change control mechanism. A final decision on IEP and further Great Western electrification is expected in the new year. In addition to changing its delivery plan, Network Rail should start to reassess its capability to deliver the overall CP4 programme and confirm that it can meet its obligations. After the new year announcement we will remit the independent reporters Nichols to review this in the context of its previous assessments.

Cross industry projects

In November the Industry Steering Group presented its views to us on changes that could be made to improve the efficient delivery of cross industry projects. It identified scope for improved behaviours by all parties (e.g. earlier involvement of operators by Network Rail, and increased commitment of effort by operators in the early stages of project development) and enablers which could improve incentives to achieve these behaviours consistently. The work specifically did not consider contractual or structural change as this is in part the subject of the McNulty value for money study, but the group committed to review contractual arrangements once that study is complete. We welcome this initiative and will work with the industry to make sure the proposed changes are effective.

Projects in England & Wales

Work continues on delivering Key Output 1 of the **Thameslink programme**. We recently asked the independent reporters Nichols to review whether the power supply works proposed for Key Output 2 are justified and appropriately allocated to the project; we expect to report on this in the next monitor. **G**

Network Rail is projecting a two month delay to the delivery of works to integrate **Waterloo International** station and provide the necessary infrastructure to allow 10 car trains. We are looking into the reason for this delay and whether it will affect passengers. This is not yet clear as there is some uncertainty about when longer trains will be available. **Y**

In the last monitor we raised concerns about delays to the delivery of the **East Coast main line overhead line renewal project.** Network Rail is now proposing to deliver these works through non disruptive possessions. We accept Network Rail's explanation as to why deferral is sensible and we have now had confirmation from the affected operators that they accept the revised plans. **G**

The third party funding contribution has now been secured for the **Gatwick Airport remodelling** project and Network Rail is **G**

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working up a revised programme. We expect this to be submitted to us for approval under change control arrangements in December.

Network Rail continues to make progress reaching bi-lateral agreements with operators on cab fitment for national implementation of **GSM-R** and the network change process is also nearly complete. GSM-R is now working well on four sections of the network. At a road show on 5 November, operators who have started fitment reported that the process was better than expected. It is essential that this progress continues if the project is to deliver on time.

On 28 October **ERTMS** was introduced for passenger services between Pwllheli - Harlech, the first time it has been used on the GB network. However there remain further challenges before it can be commissioned on the rest of the Cambrian route, which is to be under full European interoperability procedures. We have agreed with Network Rail and DfT to remit the independent reporters to undertake a 'lessons learned' review to inform future ERTMS development plans.

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Network Rail will undertake a major and complex programme of engineering work around **Reading** and on the lines to Paddington over Christmas and the New Year. This will include new trackwork in preparation for Crossrail, new signalling and work on several bridges. Network Rail has carried out extensive and thorough planning and risk assessment, and has worked with a cross industry group to ensure that the unavoidable disruption to rail users is kept to a minimum. Replacement buses will operate in the immediate area, and good industry cooperation means that longer distance services will be rerouted from the West Country via Basingstoke to Waterloo and from South Wales via Banbury to Paddington and ticket restrictions will be eased to give passengers more options.

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Safety and environment fund

In the last monitor we raised concerns about the progress of schemes in this area. We have now received a project plan which we are satisfied provides a credible baseline against which we will monitor Network Rail's delivery.

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Projects in Scotland

Network Rail has successfully completed work on the **Airdrie to Bathgate** route to allow driver training to take place. This represents a major addition to the rail network in Scotland and will open up significant new services for passengers. Although the due date to have the route available for driver training was missed and training started a week late, we believe the company did all it reasonably could to meet the deadline and that the delay was at least in part a consequence of hold-ups during the severe 2009-10 winter. Network Rail is on course to complete the necessary works in time for the start of passenger services on 12 December. Some delays to the receipt of rolling stock mean that the initial service introduction will be partial and services will build up to their full level in early 2011.

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In September the Haymarket North tunnel electrification works started on site. These form part of the **Edinburgh to Glasgow Improvement Programme**.

Planning for the future

In the last monitor we reported on our joint study with Network Rail to review how operational performance modelling is used in the design of major changes such as the West Coast main line upgrade. This work identified several issues needing resolution. Network Rail has now revised its project management process to improve how it takes performance impacts into account in the design of major

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projects. It is working to identify any limitations of the current modelling methodology; we will continue to push the company to ensure that this is entirely fit for purpose.

Investment framework

Our investment framework is designed to encourage and facilitate investment on the rail network. It constitutes policy and guidelines for investment by parties other than central government, and by government where this arises between periodic reviews (which are conducted under the HLOS/SOFA process). As the framework was developed over several years, the guidelines were spread over many documents. We published a draft consolidation of this guidance in April 2010; in the light of comments received we have revised the guidance and the final version is now available on our website[9]. We believe this will help make progressing such investment more straightforward, however we are always open to suggestions as to how it could be further improved.

In March 2009 we consulted Network Rail's stakeholders about any issues and concerns they had about Network Rail's engagement with **third party investment**. The concerns expressed fell into two areas: a perception that Network Rail could be slow or bureaucratic, and a belief that it was too risk averse or unresponsive and reactive in overcoming problems.

Network Rail responded positively to these findings and identified 22 improvement initiatives such as streamlining its approvals processes, producing better template contracts and hosting a stakeholder conference twice a year. We remitted the independent reporter Halcrow to review the effectiveness of these initiatives. Initial results showed that while the initiatives were at varying degrees of

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implementation, good progress had been made on the significant ones. The study is moving on to assess how effective Network Rail has been at addressing the concerns raised through a review of sample schemes. It will identify any remaining areas of concern and examples where actions have been effective in improving customers' experience. The final conclusions will be available later this year.

Delivery of the **Evergreen 3** project to upgrade the routes out of London Marylebone is being led by Chiltern Railways. The first phase of work to reduce journey times from London to Birmingham by around 20 minutes is well underway. The financing arrangements, through Network Rail's RAB, require ORR approval. We have been approached to agree rephasing of Network Rail's payments to Chiltern to reflect changes in project milestones, and before doing this we wish to be assured that the project is on course. We therefore asked the independent reporter Halcrow to review the project and establish whether it would deliver in time for the May 2011 timetable change, as planned. Halcrow found several problems with the programme plan and Chiltern are now revising it. Halcrow will review the revised plan before a final decision is taken.

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[9] See http://www.rail-reg.gov.uk/server/show/nav.190

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'Asset management' is our term for Network Rail's stewardship of the railway infrastructure. It covers all of the activities involved in the planning and delivery of maintenance and renewals.

Asset planning

We continue to await Network Rail's final response to the independent reporter AMCL's Spring 2010 Asset Management Roadmap, which sets out proposed trajectories for achieving best practice. A senior level workshop has been arranged with Network Rail for early December to resolve outstanding issues with the aim of agreeing challenging but achievable trajectories. An important consequence should be that Network Rail will be in a position to make high quality submissions to the various stages of the 2013 Periodic Review process.

Asset policies

AMCL has completed its study of Network Rail's asset management indicators, and recommended that they be augmented with five-grade condition rating measures for reporting the status of each asset group. This will follow an approach well established across utility regulation, and will provide readily understandable statements of overall asset serviceability and enable more transparent tracking of sustainability. We are working with Network Rail to develop the grading criteria, with the aim of producing trial measures for two asset groups by the end of December.

We have seen the independent reporter Arup's initial findings on Network Rail's management of **civil structures**. Positive messages are that there is a strong engineering led focus in Network Rail's route teams and the route asset stewards meet regularly to share information and concerns. Network Rail is also starting to implement

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risk based inspection frequencies for structures examinations by route.

However, while Network Rail undertakes significant collaborative research the reporter also notes that, at present, it is primarily focused on short-term planning with little consideration of medium to long term requirements. Comprehensive asset management plans are not in place for most asset groups, with the exception of tunnels and some major structures. The linkage between structures condition marking index (SCMI) scores and deterioration, risk and failure is unclear. The threats to, or opportunities for, improved performance cannot be clearly derived from SCMI, and no leading indicators are currently available for bridge structures.

Arup's full report is due in early 2011.

Asset information

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Many of Network Rail's current asset management systems are bespoke-built or adapted in-house, and there appears to be considerable scope for improving performance by consolidating its current systems, the next phase of its **asset information strategy**. We welcome Network Rail's pragmatic approach to moving towards eventual replacement of systems.

Network Rail has accepted the independent reporter Arup's recommendations for improving data collection for the **station stewardship measure** (SSM). Network Rail is now working to resolve outstanding issues, ready for the next round of data audit, which is imminent.

Whole life costing

We expect Network Rail to support its periodic review submissions for CP5 with whole life cost analyses. We are therefore encouraged that Network Rail has agreed to progress the recommendations of

the Arup report on unit costing for maintenance, renewals and enhancements. We will inform Network Rail, before the end of the year, of the standard of accuracy and reliability we expect it to achieve for its PR13 unit cost submissions.

Asset delivery

Maintenance

We see Risk Based/Reliability Centred maintenance as a key part of efficient and effective asset management. **ROSE**, Network Rail's project to introduce Reliability centred maintenance On Signalling Equipment, has been running for several years and despite delivering substantial benefits in terms of efficiency and improved equipment reliability, it is only 50% complete. We have remitted AMCL, the independent reporter, to review the benefits and costs and the scope for and timing of further roll-out to signalling and other asset groups.

Renewals

We monitor Network Rail's delivery of asset renewals against the plans it submitted to us for CP4, and which we have agreed represent sustainable management of these assets.

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At the halfway point of the year there are only slight variances against Network Rail's plan for plain line track and S&C delivery.

Delivery of conventional signalling equivalent units (SEUs) is on plan and Network Rail is forecasting to slightly over-deliver at the end of the year. In the last monitor we expressed concern that reporting of signalling renewals includes some enhancement projects. Network Rail has corrected this problem and has agreed to improve the reporting of renewals. We expect this will explain variances in telecoms, electrification and structures renewals and assist in our detailed assessment of delivery against plan. A detailed full year

assessment of delivery will be carried out and reported in the year-end monitor.

Infrastructure caused delays

Infrastructure caused delays account for just over 50% of the delays for which Network Rail is held accountable. Year-on-year these delays have decreased by 3.1%, a welcome reduction but falling short of Network Rail's plans.

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Track assets

Although incidents have decreased, year to date delays due to track assets are 3.4% up on last year. Track condition continues to be a concern, with several track quality measures not meeting Network Rail's internal target. There has now been a 16 period decline in track geometry. Network Rail has briefed us on these issues and presented a credible action plan. Whilst we are satisfied Network Rail is addressing management issues following its reorganisation, we are concerned that improvement may not be evident for some time. We will continue to monitor track delays and will keep the effectiveness of Network Rail's action plans under review.

Non-track assets

Year to date delays due to overhead line equipment and third rail have also increased compared to last year by 6.9% (although these only make up 3% of total Network Rail caused delays). Network Rail has completed a detailed assessment of its strategy for managing electrification assets and producing route strategies. We are reviewing these documents now.

The number of incidents caused by signalling systems & power supply failures and cable faults has increased, as has the resulting delay.

West Coast main line

Until recently the West Coast main line suffered from significant problems with specific asset categories, notably overhead line neutral sections, particular types of point motor and axle counters. These have been tackled successfully with levels of reliability that now support successful operation of Virgin, London Midland and other services on the route.

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Scotland

Network Rail has modernised and improved the radio electronic token block (RETB) systems in the Scottish Highlands. This has significantly extended the reliability and the lifespan of this equipment. Delay minutes due to RETB are now almost zero.

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New technology

Network Rail has continued to make good progress with its New Product Introduction Process and has 31 projects at differing stages of the process. We are encouraged by the early outputs of this work and by Network Rail's intention to embed the new processes early next year. This will aid the delivery of the CP4 efficiency targets.

Scotland summary

Customer service

We imposed a £3m penalty on Network Rail for breaching its licence in the way it implemented the new **Integrated Train Planning System** (ITPS). We found that the problems reflected a failure by Network Rail to consider fully the risk that its actions might have a detrimental impact on its customers[10]. We commend the efforts of Network Rail and operator staff to mitigate the ITPS problems, which minimised the impact on passengers. Network Rail must resolve residual problems which are still affecting parts of the timetabling process and we are pressing it to do this urgently.

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We accept that Network Rail is committed to improving service to customers. In many areas it has done so. Even in the case of ITPS, Network Rail believed that it was helping its customers in ring-fencing the project so that it would not affect other companies' systems. But other critical decisions did not have a customer focus, and the company still has some way to go to embed a true customer service culture consistently across its activities.

We are monitoring how the industry is embedding new processes to improve **information to passengers during disruption**. This is covered in more detail in the ORR Review[11]. We have arranged for the independent reporters Arup to assess how well these are followed when disruption occurs, to monitor their effectiveness and to enable any lessons to be learned and fed back to deliver further improvements.

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Network Rail is now delivering against agreed customer service standards in providing **gauging information** to train operators and those who buy and build rolling stock. It is also important that it

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[10] See http://www.rail-reg.gov.uk/server/show/nav.1362
[11] See http://www.rail-reg.gov.uk/upload/pdf/orr_review_issue3.pdf

meets reasonable third party needs for information about **power supply capability**. Network Rail has gathered stakeholders' views and is following up with a workshop. We expect to see significant progress; we will monitor and report this in future editions.

Across the network operators spend over £200m each year on **electricity for traction.** The industry needs to understand more about system transmission losses and how to reduce these to improve efficiency. We commissioned the independent reporter AMCL to review this; it recommends Network Rail to set up a forum to work with its customers to identify and progress ways to reduce losses; we will monitor progress and will consider options for incentivising Network Rail to reduce losses as part of PR13.

Recommendations from the industry review of **access planning** suggest a need for Network Rail to take a more strategic view of access planning across the network, as well as responding to the needs of operators as they arise. We are proposing, with industry support, a new timetable development process to make it easier to plan new services. We are working with Network Rail to decide what further changes to the access planning process are necessary.

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Train service performance

ScotRail PPM and Network Rail delay to passenger services in **Scotland** remain ahead of target and are causing no concerns.

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PPM for **East Coast** services remains disappointing and the MAA has continued to fall. A range of causes need to be addressed both by Network Rail and by the operator. We have reviewed the control, performance planning and management arrangements for the services and have seen good joint efforts to improve performance, but it will take time for these to deliver their full benefit. Performance in period

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7 was encouraging, the best for nine periods. We are continuing to monitor the position closely.

Performance of **Virgin Trains** on the West Coast main line continued to be better than plan and is generally not causing concern. **[G]** We are mindful that the high frequency timetable has yet to be proved during a winter and we will therefore continue to monitor progress closely.

Network-wide **freight delay minutes** remain worse than target. The effect of a new network management protocol (under which freight trains about to set out towards areas of known current disruption are subject to pro-active re-scheduling) has yet to be **[Y]** proved. Performance has been better in terms of the new Freight Performance Measure (FPM). At present there is no regulatory requirement for this measure. We have asked Network Rail to ensure that it is on course to deliver its obligations and to meet its customers' requirements, and to provide us with evidence of this.

The PDI-P and PDI-F measures of **disruption caused by planned engineering work** remain better than the network-wide targets. **[G]**

Developing the network

Network Rail has successfully completed work on the **Airdrie to Bathgate** route to allow driver training to take place. This represents a major addition to the rail network in Scotland and will open up significant new services for passengers. Although the due date to have **[G]** the route available for driver training was missed and training started a week late, we believe the company did all it reasonably could to meet the deadline and that the delay was at least in part a consequence of hold-ups during the severe 2009-10 winter. Network Rail is on course to complete the necessary works in time for the start of passenger services on 12 December. Some delays to the receipt of rolling stock

mean that the initial service introduction will be partial and services will build up to their full level in early 2011.

In September the Haymarket North tunnel electrification works started on site. These form part of the **Edinburgh to Glasgow Improvement Programme**.

The Industry Steering Group has presented its views to us on changes to improve efficient delivery of **cross industry projects**. It identified scope for improved behaviours (e.g. earlier involvement of operators by Network Rail, and increased commitment of effort by operators in the early stages of project development) and enablers to improve incentives to achieve this. The group committed to review alternative contractual arrangements in the light of findings from the McNulty study. We welcome this initiative and will work with the industry to make sure the proposed changes are effective.

Our **investment framework** is designed to encourage and facilitate investment on the rail network. It constitutes policy and guidelines for investment by parties other than central government, and by government where this arises between periodic reviews (which are conducted under the HLOS/SOFA process). Following consultation we have now published consolidated guidance to make the process as clear and simple to follow as possible[12].

In 2009 we consulted stakeholders about Network Rail's engagement with **third party investment**. Concerns expressed fell into two areas; a perception that Network Rail could be slow or bureaucratic, **[G]** and a belief that it was too risk averse or unresponsive and reactive in overcoming problems. Network Rail responded positively with 22 improvement initiatives such as streamlining its approvals processes, producing better template contracts and a twice-yearly stakeholder

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[12] See http://www.rail-reg.gov.uk/server/show/nav.190

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conference. We remitted the independent reporter Halcrow to review the effectiveness of these initiatives. Initial results show that good progress has been made on the most significant ones. The study is moving on to assess experience on a sample of schemes. It will identify any remaining areas of concern and examples where actions have been effective in improving customers' experience.

Asset management

We continue to await Network Rail's final response to AMCL's Spring 2010 **Asset Management Roadmap**, which sets out proposed trajectories for achieving best practice. A senior level workshop has been arranged with the aim of agreeing challenging but achievable trajectories. An important consequence should be that Network Rail will be able to make high quality submissions to the PR13 process. We expect these to be supported by whole life cost analyses; Network Rail has agreed to progress the recommendations of the Arup report on unit costing.

We have seen the independent reporter Arup's initial findings on Network Rail's management of **civil structures**. Positive messages are that there is a strong engineering led focus in route teams and the route asset stewards meet regularly to share information. Network Rail is also starting to implement risk based inspection frequencies. However, although it undertakes significant collaborative research, at present Network Rail is focused on short-term planning rather than long-term requirements. Comprehensive asset management plans are only in place for tunnels and some major structures. The linkage between the structures condition index and deterioration, risk and failure is unclear. The implications for performance cannot be clearly derived and no leading indicators are available for bridge structures. Arup's final report is due in early 2011.

We see **Risk Based/Reliability Centred maintenance** as a key part of efficient and effective asset management. ROSE, Network Rail's project to introduce this on signalling equipment, has been running for several years and despite delivering substantial benefits is only 50% complete. We have remitted the independent reporter AMCL to review the scope for and timing of further roll-out to signalling and other asset groups.

We monitor delivery of asset renewals against the plans Network Rail submitted to us for CP4, and which we have agreed represent sustainable asset management. After Q2 there are slight variances to plan for plain line track and S&C delivery. Delivery of conventional signalling is on plan. Network Rail has corrected the reporting of renewals to distinguish these properly from enhancements. We expect this will explain variances in telecoms, electrification and structures renewals. A detailed assessment of delivery will be reported in the Q4 monitor.

Infrastructure caused delays account for just over 50% of the delays for which Network Rail is held accountable. Year-on-year these have decreased by 3.1%, a welcome reduction but falling short of Network Rail's plans.

Delays due to **track** are 3.4% up. Several track quality measures are not meeting Network Rail's internal target; there has been a 16 period decline in track geometry. Network Rail has briefed us and presented a credible action plan. Whilst we are satisfied Network Rail is addressing management issues following its reorganisation, we are concerned that improvement may not be evident for some time. We will continue to monitor track delays and the effectiveness of Network Rail's action plans.

Delays due to **overhead line equipment and third rail** have also increased by 6.9% (although these only make up 3% of total Network

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Scotland summary

Rail caused delays). Network Rail has completed a detailed assessment of its strategy for managing electrification assets and producing route strategies. We are reviewing these. The number of incidents caused by **signalling systems & power supply failures and cable faults** has increased, as has the resulting delay.

Network Rail has modernised and improved the **radio electronic token block** (RETB) systems in the Scottish Highlands. This has significantly extended the reliability and the lifespan of this equipment. Delay minutes due to RETB are now almost zero.

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The monitor focuses on issues of Network Rail's delivery for which it is accountable under its network licence. We have used colour flags to show at a glance our current level of concern with an issue:

G Network Rail delivery is satisfactory or good.

Y Network Rail delivery is currently unsatisfactory and/or we have some concerns about future delivery. We have raised the issue with Network Rail at a working level.

YR The issue is subject to special scrutiny, with intensive investigation and enhanced monitoring. We may have discussed potential licence concerns with Network Rail Directors.

R We have major concerns about current and/or future delivery. We are considering, or have already decided to take formal enforcement action.

We welcome feedback on the content and format of this publication. Please address your comments or queries as follows:

Customer service:
 Nigel Fisher on 020 7282 2112 or Nigel.Fisher@orr.gsi.gov.uk

Train service performance:
 Paul Hadley on 020 7282 2039 or Paul.Hadley@orr.gsi.gov.uk

Developing the network:
 Graham Richards on 020 7282 3943 or Graham.Richards@orr.gsi.gov.uk

Asset management:
 Jim Bostock on 020 7282 2113 or Jim.Bostock@orr.gsi.gov.uk

Statistics in this publication:
 Jay Lindop on 0207 282 3978 or Jay.Lindop@orr.gsi.gov.uk

Great Britain / England and Wales

	2009-10							2010-11							End of Q2	Regulatory targets	
	P7	P8	P9	P10	P11	P12	P13	P1	P2	P3	P4	P5	P6	P7		End of 2010-11	End of CP4
Network availability															MAA		
Passenger Disruption Index (PDI-P) [r4]	0.65	0.79	0.49	0.85	0.78	0.96	1.18	1.26	0.79	0.30	0.19	0.25	0.36	No Data	0.68	0.91	0.63
Freight Disruption Index (PDI-F)	0.61	0.68	0.68	0.81	0.59	0.61	0.81	0.74	0.97	0.84	0.82	0.85	0.79	0.97	0.78	1.00	1.00
Train performance															MAA		
PPM (including Scotland) [r1]																	
Total PPM	92.8%	90.3%	89.4%	79.9%	89.5%	91.8%	93.5%	94.0%	93.7%	93.0%	92.6%	94.2%	93.5%	92.8%	91.5%	N/A	N/A
Long Distance	92.5%	88.8%	86.8%	74.6%	87.5%	89.7%	91.2%	90.7%	91.2%	90.3%	89.9%	90.2%	90.7%	91.8%	88.9%	89.8%	92.0%
London and South East	93.0%	90.9%	89.0%	79.3%	88.2%	91.4%	93.6%	94.4%	93.8%	92.8%	92.1%	94.7%	93.6%	92.6%	91.4%	92.0%	93.0%
Regional	93.0%	89.8%	90.9%	85.5%	92.4%	93.6%	94.2%	94.1%	93.8%	93.6%	93.8%	93.8%	93.9%	93.2%	92.6%	91.0%	92.0%
FPM (National) [r5]															MAA		
Total FPM	77.5%	75.6%	74.1%	62.2%	71.0%	70.9%	75.4%	79.5%	77.9%	78.2%	76.9%	79.3%	77.1%	77.7%	75.3%	N/A	N/A
CaSL (England and Wales Only)															MAA		
Long Distance	2.5%	4.1%	5.7%	13.0%	4.5%	4.3%	3.8%	3.8%	3.4%	3.6%	4.0%	3.9%	3.6%	3.0%	4.6%	4.5%	3.9%
London and South East	1.8%	2.1%	2.7%	8.6%	3.7%	2.6%	1.6%	1.5%	1.8%	2.2%	2.4%	1.6%	1.9%	2.1%	2.6%	2.2%	2.0%
Regional	1.8%	2.3%	2.3%	4.9%	1.9%	1.7%	1.8%	1.7%	1.9%	1.7%	1.7%	1.8%	1.5%	1.9%	2.1%	2.5%	2.3%
Delay Minutes (actual delay minutes)															MAT		
Passenger (1000s of minutes)	393.6	546.2	587.0	868.3	530.5	452.1	346.7	408.4	420.2	449.1	459.3	376.8	393.2	445.1	6,282.9	5,790.0	4,980.0
Freight (Normalised by per 100 train km)	3.12	4.00	4.44	8.36	4.52	4.76	3.78	2.82	4.07	3.58	3.76	3.41	3.26	3.58	4.08	3.41	2.94
Infrastructure															MAA		
Number of asset failures [r2]	3,052	3,229	3,331	3,135	3,216	3,159	2,809	3,107	3,087	3,037	3,047	2,737	2,775	2,761	3,033	N/A	N/A

GB data collected annually

Customer satisfaction	2008-09	2009-10	2010-11
TOC (mean satisfaction score)	3.09	3.35	Due in P13
FOC (mean satisfaction score)	2.93	2.95	Due in P13

Finance	2008-09	2009-10	2010-11
Adjusted Interest Cover Ratio	New measure	1.8	Due in P13
Expenditure (£m)	6,934	5,644	Due in P13
Controllable Opex	1,313	991	Due in P13
Maintenance	1,104	1,071	Due in P13
Renewals [r3]	3,139	2,304	Due in P13
Enhancements [r3]	1,378	1,278	Due in P13

Station Stewardship	2008-09	2009-10	2010-11	Regulatory target
Category A	2.33	2.28	Due in P13	2.48
Category B	2.42	2.4	Due in P13	2.60
Category C	2.49	2.47	Due in P13	2.65
Category D	2.53	2.53	Due in P13	2.69
Category E	2.54	2.52	Due in P13	2.74
Category F	2.54	2.54	Due in P13	2.71

- In this Monitor, Q2 refers to periods 5-7, 25 July - 16 October 2010
- Historical delay minutes maybe refreshed due to dispute resolution proccess
- No data received for PDI-P, P7 as the measure lags by one period
- MAA is "Moving Annual Average"
- MAT is "Moving Annual Total"
- SSM (Station Stewardship Measure) is a new regulated output for CP4. The measure represents the remaining life of all measured station assets on a scale of 1 to 5. A new asset would achieve a score of 1 and an asset that is at the end of its life, so needs replacing, would score 5.
- Customer Satisfaction is measured on a 5-point scale; 1 being most negative, 5 being the most positive.

r1 PPM and CaSL figures have been revised so they align with regulated outputs for the current control period and include open access operators.
r2 Asset Failure figures have been updated to reflect mapping code changes and a data refresh following dispute resolution process.
r3 Revised to reflect final figures.
r4 PDI-P figures have been revised due to refresh.
r5 FPM is a new measure showing freight performance, measured by the percentage of trains arriving on time at their final destination, timed to 10 minutes. The national level MAA figures may differ slightly from the numbers published by ORR in the National Rail Trends as the two publications cover slightly different FOC operators.

Network Rail monitor
Quarter 2 of Year 2 of CP4, 25 July 2010 – 16 October 2010

Key statistics

Scotland

	2009/10							2010-11							End of Q2	Regulatory targets	
	P7	P8	P9	P10	P11	P12	P13	P1	P2	P3	P4	P5	P6	P7		End of 2010-11	End of CP4
Network availability															**MAA**		
Passenger Disruption Index (PDI-P) [r4]	1.04	1.01	0.12	0.00	0.43	0.48	0.30	0.07	1.54	0.12	0.72	1.17	0.27	No Data	0.56	N/A	N/A
Train performance															**MAA**		
PPM [r1]																	
First ScotRail	91.6%	89.6%	89.5%	71.9%	90.0%	91.0%	92.5%	94.0%	94.8%	94.7%	94.8%	95.0%	94.1%	93.6%	91.4%	91.3%	92.0%
Delay minutes (actual delay minutes)															**MAT**		
Passenger (1000s of minutes)	34.5	44.0	51.9	106.9	41.2	46.2	36.2	30.3	27.7	23.4	25.8	22.5	25.0	25.6	506.6	410	382
CaSL															**MAA**		
First ScotRail	1.4%	1.6%	2.1%	11.0%	2.3%	2.2%	2.0%	1.7%	1.2%	1.2%	1.4%	1.0%	1.2%	1.6%	2.3%	N/A	N/A
Infrastructure															**MAA**	**MAA**	
Number of asset failures (NR Scotland Route) [r2]	348	371	329	347	332	375	275	333	353	326	284	257	321	269	321	N/A	N/A

Scotland data collected annually

Customer satisfaction	2008-09	2009-10	2010-11
TOC (mean satisfaction score)	3	2.78	Due in P13

Finance	2008-09	2009-10	2010-11
Expenditure (£m)	608	591	Due in P13
Controllable Opex [r3]	112	95	Due in P13
Maintenance	98	92	Due in P13
Renewals	290	226	Due in P13
Enhancements [r3]	108	178	Due in P13

Station Stewardship	2008-09	2009-10	2010-11	Regulatory target
All Stations	2.23	2.24	Due in P13	2.39

- In this Monitor, Q2 refers to periods 5-7, 25 July - 16 October 2010
- Historical delay minutes maybe refreshed due to dispute resolution proccess
- MAA is "Moving Annual Average"
- MAT is "Moving Annual Total"
- SSM (Station Stewardship Measure) is a new regulated output for CP4
  - The scale represents the remaining life of all measured station assets on a scale of 1 to 5. A new asset would achieve a score of 1 and an asset that is at the end of its life, so needs replacing, would score 5.
- Customer Satisfaction is measured on a 5-point scale; 1 being most negative, 5 being the most positive.

r1 PPM and CaSL figures have been revised so they align with regulated outputs for the current control period and include open access operators.

r2 Asset Failure figures have been updated to reflect mapping code changes and a data refresh following dispute resolution process.

r3 Revised to reflect final figures.

r4 PDI-P figures have been revised due to refresh.