Network Rail monitor

Quarter 4 of Year 2 of CP4, 9 January 2011 - 31 March 2011

and annual assessment 2010-11

OFFICE OF RAIL REGULATION

Great Britain summary

Overview

This Network Rail monitor and annual assessment provides an overview of the company's performance over 2010-11.

Network Rail has made progress over the past year in successfully delivering a number of major rail projects, however some performance setbacks mean that it has big challenges ahead. Progress includes the successful delivery of project milestones including the completion of the Airdrie-Bathgate line and important progress on King's Cross and Reading stations. The company has developed improved plans for managing its assets such as bridges which it must now deliver effectively.

However, our expectation, reflected in our settlement with Network Rail for the current funding period which runs from 2009-14 (CP4), is that the company will become more efficient, improve its operational performance, and develop the rail network year-on-year. Network Rail therefore needs to pick up momentum if it is to meet key performance targets for CP4, as this report also highlights performance setbacks and failures over the past year, including:

- Safety - weaknesses in Network Rail's safety culture have been recognised including the exposure of flawed injury reporting. We are often frustrated by the slow pace of necessary safety improvements, and a number of enforcement notices followed failure to make timely progress.
- Operational performance - Network Rail missed many of its targets for the year including for delays and punctuality. We accept that exceptionally severe winter conditions were a major factor and that, in the circumstances, the company managed performance reasonably well. However, a recent upward trend in delays is concerning and we have required Network Rail to implement plans for improvement, including how it will cope better with winter conditions in future. Network Rail also breached its licence for poor implementation of the new integrated train planning system for which we imposed a financial penalty as a strong incentive to consider better the interests of customers.
- Efficiency - Network Rail's efficiency is analysed across its maintenance, operating and renewals costs. While it is ahead of plan for delivering maintenance and operating cost efficiencies, we cannot confirm the overall position yet as there are still questions about its assessment of renewals efficiency which need to be answered.

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:

Network Rail delivery is satisfactory or good.

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.

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

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

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A safe railway

We will report in detail on Network Rail and industry health and safety performance in July 2011. The monitor focuses on aspects of Network Rail's delivery for which it is accountable under the network licence, but to provide a complete year-end assessment here we include this overview of its health and safety performance.

In respect of its safety record Network Rail compares favourably with other railways. We have seen some positive changes in Network Rail's attitude to health and safety, for example it has launched a cultural change programme and has adopted our rail management maturity model.

Our inspection work has found no room for complacency and some areas that require significant improvement. During the year it has been necessary for us to issue 14 enforcement notices on Network Rail and a further 19 on its contractors to achieve minimum legal compliance, more than in recent years. Most of our routine inspection centres on Network Rail's maintenance and construction activities where we look at safety of the infrastructure and worker safety. This year we found significant issues with structures and drainage; examples of poor compliance with Network Rail's own procedures for inspecting and maintaining the infrastructure; issues with the competency of staff who work with and support frontline supervisors; very poor management of occupational health risk and issues with design and safe use of road rail vehicles.

We are concerned about the robustness of Network Rail's own assurance processes because these frequently fail to identify health and safety risks found by our inspections. This year we uncovered significant under-reporting of injuries; an investigation by RSSB found under-reporting resulted from perverse incentives and a weakness in safety culture. Network Rail has already taken steps to address this and reported rates of worker injuries have risen consequently. Reversing the underlying climate of fear and the incentives created in some contracting arrangements will take some time to be fully effective. Regrettably, there was a fatal accident to a Network Rail contractor in the year.

Our work on structures, which found a significant backlog of examinations, complements the reporter study of civil engineering structures asset management (see below). Network Rail is proposing additional resource to implement a detailed action plan and a thorough audit to improve its overall management of structures.

We have seen good progress with implementing some of the RAIB Grayrigg recommendations, but have concerns about the pace and progress on the recommendation requiring Network Rail to understand the precursors to derailments at switches and crossings. The Potters Bar inquest coroner raised similar issues in his points of concern. Our work following up some of the RAIB Grayrigg recommendations, the Potters Bar concerns and our proactive work on drainage and track have all found poor quality asset information. ORR's dual function is helping us to press for current asset data that is reliable and improved for safe and efficient asset management.

Customer service

We agree with Network Rail that it is vital for the company to continue working towards putting customers at the heart of all it does. Together we are developing a robust basis for assessing progress towards 'best in class' customer service, using quantitative and qualitative approaches, and we aim to agree a trajectory for improvement by the end of the year.

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Passenger Focus's 2010 surveys showed overall passenger satisfaction with journeys remaining at its highest ever level. In autumn 2010, 84% of passengers were satisfied overall. However Network Rail's survey of its train operator customers conducted at the end of 2010 showed satisfaction down from 3.32 to 3.15 (on a scale of 1 to 5) although freight operator satisfaction increased to 3.11. The main reasons appear to be specific concerns about problems with ITPS and operational performance up to the autumn.

In contrast, Network Rail's later efforts to keep trains running during the exceptional winter conditions were welcomed. The conditions were in general handled more successfully than the previous winter showing that lessons had been learnt, although there is still scope for improvement.

The disruption did, however, again expose the variable quality of information provided to passengers. This is an issue for the whole industry though Network Rail has a key role; it has been playing its part including managing special training and improving short-term planning arrangements to help operators introduce and communicate contingency timetables. It is essential that the industry's programme to improve such information is carried through quickly and effectively. We are monitoring progress and have consulted on licence changes that will clarify and align responsibilities in this area.

We imposed a £3m penalty for Network Rail's poor implementation of its new train planning system **ITPS**, reflecting a significant failure to take sufficient account of the risks to customer service. During the year Network Rail relocated its timetable planning to Milton Keynes leading to the loss of many experienced staff. This caused a dip in standards, particularly affecting short-term freight train alterations, and a considerable increase in schedule clashes (although the direct effect on end customers was modest). Delays due to train planning errors were 71% worse than in 2009-10. Network Rail is implementing a plan to address this, though it has not yet borne fruit.

Network Rail worked well with industry partners to minimise the impact on rail users of disruption from major and complex engineering work at Reading over Christmas. Work was completed and train services returned to normal as planned.

During the year Network Rail regularised all the discrepancies between actual and published **network capability** identified in recent years. It made good progress with its gauging strategy and is working well with its customers on the gauging stakeholder group. It has developed and is meeting KPIs for handling customer requests.

Operators spend over £200m each year on electricity for traction, which includes the cost of transmission losses on Network Rail's system. We are not satisfied that Network Rail is managing losses efficiently. A cross-industry meeting discussed the feasibility of improvements but progress since has been disappointing and we are pressing Network Rail to tackle the matter quickly. In future we want to change incentives to encourage better management of the issue.

Train service performance

Until October performance across the industry in terms of punctuality, cancellations and significant lateness (CaSL) and delays had been good, and most high level measures were tracking broadly the trajectory required. Performance dipped in the autumn, then severe weather from late November through to January had a significant impact across the country. At the end of March Network Rail had failed to meet any of its 2010-11 regulated performance targets except those for punctuality and CaSL for 'regional' services.

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We have considered carefully whether these failures represent a breach of Network Rail's licence obligations. Following a thorough review we concluded that the winter conditions were genuinely exceptional and that, were it not for those conditions, Network Rail was likely to have met its obligations in respect of passenger services. We also considered that overall it had managed performance reasonably well during the severe weather and clearly better than in the previous winter. We therefore concluded that there had been no licence breach. However there is still room for improvement and we expect lessons to be learnt and put into effect for future years. We have published our detailed findings[1].

Our analysis has, however, highlighted a serious concern about the outlook for **delays to passenger services** in England and Wales for which it is held accountable. There appears to be a material risk that Network Rail will not meet its 2011-12 obligation on this measure. We have therefore required the company to set out its plans to address this, against which we will monitor its progress[2].

Although we acknowledge that the exceptional winter was handled reasonably well, disruption was nonetheless severe. We look for continued efforts to achieve sustained improvement in the ability to maintain service to customers in the face of such challenges. We expect to see evidence of this both in these plans and around the network when we next experience severe weather.

Freight delay figures also fell short of the regulatory requirement for the year. Although the operators indicated that they did not wish us to take action, it is not acceptable for regulated outputs simply to be overlooked. Equally, we have no wish to hold Network Rail to deliver obligations against the interests of its customers and rail users. We therefore require Network Rail to quickly review with its FOC customers its commitments. If in the light of these discussions Network Rail wishes to formally request a change to its regulatory objectives, we will consider it.

West Coast performance for **Virgin Trains** recovered well in the year, PPM rising from below 80% to over 86%.

However **East Coast Trains** performance declined badly due to a range of factors, many of them Network Rail's responsibility. The company is taking the problem seriously but has so far not delivered improved results. We are carefully assessing its 2011-12 improvement plans and, once satisfied, will hold it to deliver against them.

In the second half of the year we were called on for support by several other operators concerned about declining performance. In most cases there are now signs of improvement.

Network Rail remains well ahead of the PR08 targets for reducing the impact of planned disruption from engineering work. It has responded positively to our pressure to develop a more robust plan for the remainder of CP4 in which all parties can have confidence.

Developing the network

Over the year Network Rail caught up with its internal schedule of project milestones and is now slightly ahead of plan. It has made steady progress overall including completion of the new Airdrie-Bathgate line and important progress on King's Cross and Reading stations.

[1] www.rail-reg.gov.uk/upload/pdf/operational_performance_letter_jun11.pdf
[2] www.rail-reg.gov.uk/upload/pdf/passenger_delays_030511.pdf

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However we believe several projects are at risk of being late. In some cases this is due to factors outside Network Rail's control, such as uncertainty about rolling stock plans, but for others the company needs to recover slippage. Where Network Rail no longer expects to meet commitments defined in its delivery plan it must propose changes, seek the support of its stakeholders, and submit these proposals to us for consideration.

The **delivery challenge** continues to grow. Scheme slippage due to planning uncertainties, additional projects being developed (such as electrification in England and Wales and the Edinburgh to Glasgow improvements in Scotland) and deferral of renewals, all add to delivery pressures in the second half of the control period. We have therefore told Network Rail to submit an updated assessment of its capability to deliver alongside proposed changes to its delivery plan.

Network Rail set up an 'efficient project governance' workstream to reduce the time and cost of projects. Actions include a refresh of its GRIP (governance for railway investment projects) process, a framework for tier one contractors and new contractual arrangements such as guaranteed maximum price/partnership contracts. It has examined its value management and contingency management processes. We consider this to be a significant and vital component of Network Rail's improvement plans for CP4 and CP5.

Network Rail worked hard to reconfigure and re-phase elements of **Thameslink**, particularly at London Bridge, to reduce costs. This helped the programme secure government commitment to Key Output 2 (24 trains an hour through the core) now planned for 2018. Work for Key Output 1 included major track realignment and steady progress on construction of the new south bank entrance at Blackfriars, and construction of a new viaduct at Borough Market.

Work continued on the new western concourse for King's Cross and, despite some delays on the train shed roof, this project remains on course for completion before the Olympics.

Network Rail recently announced that the project to deliver new platforms and a new depot at Reading will be completed by 2015, a year earlier than shown in the current delivery plan. The company has also made significant progress working across the industry to coordinate interfaces between the large number of major projects on the route including electrification, Crossrail, ERTMS and resignalling.

We have been concerned with Network Rail's capability to deliver the necessary programme of **power supply upgrades** to support capacity expansion. The company has increased resources in this area. West Anglia is now on course to be completed on time but there are risks for programmes south of the Thames, particularly on the Kent route where we have asked Network Rail to explain its plans and present revised proposals as soon as possible. Network Rail will need to consult affected stakeholders and propose changes to the delivery plan to reflect any revised timetable.

Significant progress was made implementing the **GSM-R** project. Cambrian, Airdrie-Bathgate, North London Line & East Coast South have all been brought into service with a broadly favourable response from users. Trials in Strathclyde demonstrated that the cab mobile equipment has met the reliability required. However there are still technical challenges and there is little leeway in the programme.

ERTMS was finally commissioned on the Cambrian route in March. The delay and difficulty experienced raises questions about the readiness of the industry to deliver national rollout as planned, at an economic price and delivering the expected benefits. We have therefore asked the independent reporter Halcrow to carry out a

review of delivery to date to establish learning points and provide a basis for assessing future roll-out plans.

Asset management

Through the year we continued to find evidence of the gap between Network Rail's **asset management capability** and best practice. The continuing inability to demonstrate, through **whole life cost** analysis, the optimal balance of maintenance and renewal remains a key concern. A major reporter study of civil engineering structures management highlighted serious shortcomings.

We have worked with Network Rail to agree improvement programmes to address shortfalls. In January the Network Rail and ORR boards agreed a detailed **roadmap** for the company to deliver capability improvements moving towards best practice by 2014. We are scrutinising Network Rail's progress. The first milestone, an **asset information vision**, was delivered slightly late but comprises an ambitious and impressive plan to modernise Network Rail's outdated and inefficient asset information architecture and processes, a huge challenge and a key enabler for efficient asset management. We are concerned that Network Rail has missed its roadmap commitment to provide draft CP5 asset policies by May 2011.

In February, the independent reporter concluded its extensive **civil structures audit** with a substantial recommended improvement programme. Drawing on this, we expect Network Rail to table its detailed action plans for our agreement very shortly.

We reviewed the implementation of Network Rail's **maintenance restructuring** to ensure that safety was maintained in the lead-up to go live on 1 April 2011. We will continue to monitor its impact, particularly with regard to workload implications for section managers and the competence of staff in new roles. If it appears to be having an impact on asset reliability and track quality we will ensure that action plans are put in place to resolve these quickly.

Network Rail's project to introduce reliability centred maintenance on signalling equipment (**RoSE**), has been running for several years. The independent reporter is carrying out a review of RoSE in comparison with RCM best practice and is examining the scope for further RCM roll-out, within signalling and to other asset groups. Findings by the year end were disappointing, indicating only 50% usable coverage on signalling assets.

Deferral of renewals within CP4, largely to exploit more efficient means of delivery, is not currently causing us serious concern. It does not appear to be having an effect on short-term asset performance and while it increases the delivery challenge in the next few years, this should not be insurmountable.

We monitor **asset serviceability and sustainability** through condition and reliability KPIs set out in Network Rail's 2010 delivery plan update. Network Rail achieved most KPIs in 2010-11.

It has continued to improve the reliability of its infrastructure, extending a five year downward trend of incidents causing delay (down 9% year on year). However the associated delay minutes increased by 1%, as the delay per incident has been rising for reasons not yet properly understood.

Track assets are a significant contributor to infrastructure reliability; incidents causing delay fell 12% compared with the previous year. There was a deterioration in some track quality measures in the middle of the year but we are satisfied that Network Rail

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understands the causes and is tackling them. The number of incidents caused by non-track asset faults fell by 10%.

Efficiency

Controllable opex efficiency on a real economic efficiency measure (REEM) basis was 6.7% in 2010-11 and 3.5% for the two years to 2010-11, 1.3% ahead of Network Rail's trajectory[3].

Maintenance efficiency on a REEM basis was 11.3% in 2010-11 and 13.3% for the two years to 2010-11, 0.7% ahead of Network Rail's trajectory.

However our assessment of renewals efficiency for the first two years of CP4 is not complete. This is an important issue and means at this stage we cannot yet be confident that, overall, Network Rail is on course to meet the CP4 efficiency challenge. We are working with Network Rail and Arup to resolve the issues and we will report further in our annual efficiency and finance assessment in September.

Expenditure

Network Rail spent £108m (13.5%) more on controllable opex than assumed in our determination largely due to Network Rail exiting CP3 in a worse position than our determination; £103m (8.8%) less on maintenance than our determination largely as a result of the restructuring of the maintenance organisation; and spent £368m (14.1%) less on renewals, largely due to the deferral of renewals work to later in CP4.

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

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[3] Network Rail's CP4 REEM trajectory is available at: www.rail-reg.gov.uk/upload/pdf/nr-cp4-success-010311.pdf

Customer service

Customer service maturity model

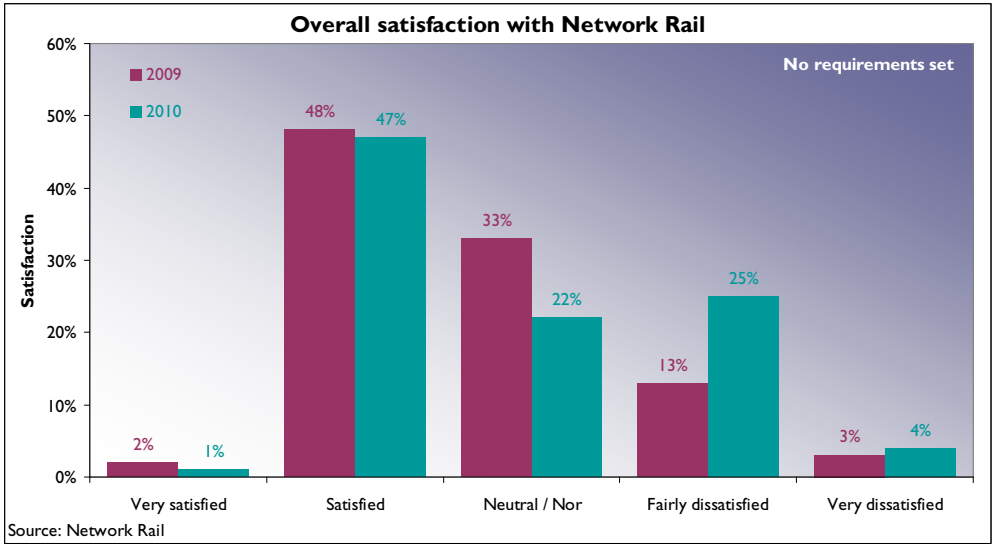
We agree with Network Rail that it is vital for the company to continue working towards putting customers at the heart of all it does. Together we are developing a robust basis for assessing progress towards 'best in class' customer service, using quantitative and qualitative approaches, and we aim to agree a trajectory for improvement by the end of the year.

Passenger satisfaction

Passenger Focus's national passenger surveys in 2010 showed overall satisfaction with journeys remaining at highest ever levels. In autumn 2010, 84% of passengers were satisfied overall with their journey. The results for the spring 2011 survey are due to be published on 29 June 2011 and we will comment on them in the next Network Rail monitor.

Customer satisfaction

Results from Network Rail's annual survey of its train operator customers, conducted at the end of 2010, show that overall customer satisfaction was down 0.17 to 3.15 (on a scale of 1 to 5), although freight operator satisfaction increased 0.16 to 3.11. These results reflect a shift from respondents being 'neutral' to being 'dissatisfied'; in the 2009 survey 17% of customers were dissatisfied, in 2010 this had risen to 29%. The main reasons appear to be widespread concern about the way Network Rail introduced its new train planning system (ITPS) and that previously high levels of train performance were not improved or sustained. Autumn 2010 performance in particular was poor compared to recent years. The survey was carried out before the severe winter disruption. Although the overall result was disappointing, improvements in scores for working relationships, decision making, sponsoring enhancements and integration is evidence that actions last year have had some effect.



Source: Network Rail

However a number of scores have declined significantly since 2009, including the attributes easy to work with, delivers on promises, helps to solve my problems and timely response to queries.

We have discussed with Network Rail how it should respond to these disappointing results. It has told us that its devolution strategy will empower staff at a local level and enable a more responsive and flexible approach to meeting customer needs and expectations.

It gave as an illustration the recent review of company engineering standards which has clarified the degree of freedom a route has: those standards that are mandatory, those a route has authority to change (if that is appropriate for its area), and those that are

identified as good practice guidance. We are working with Network Rail to ensure that this does not cause any additional risk.

Network Rail has also said it is working with TOCs to identify areas where they can collaborate to improve TOCs' satisfaction scores in the national passenger survey. G

Network Rail restructuring

We welcome Network Rail's progress with its plan to devolve more authority and autonomy to its routes, and the work done in Scotland and Wessex to pilot the process. Understandably, some customers have concerns about the approach, notably FOCs and TOCs whose operations span multiple routes. Network Rail needs to ensure the new devolved arrangements work for all its customers. In this context it intends to appoint a freight director.

Severe winter

Network Rail made great efforts to keep trains running during the exceptional winter conditions last year. The conditions were in general handled more successfully than those of the previous winter, showing that lessons had been learnt, although there is still scope for improvement. G

Network Rail handled the second period of snow better than the first, even though it was more severe and prolonged. In both periods, it worked well with its customers to run trains and in some cases the ability to run services was limited by the condition of the train fleet rather than the network. In some cases operators chose to run a reduced timetable but Network Rail also accommodated those who wanted to run a full timetable, despite the impact that could have on their performance figures. As a result of these efforts the railway was able to run a reasonable service across the country when many roads and airports were closed; elsewhere rail services were significantly affected across Europe, including in countries normally thought able to cope with such conditions. We commended Network Rail for this in our evidence to recent Transport Select Committee enquiries.

Information for passengers

The winter disruption did, however, highlight once again the variable quality of information provided to passengers. Although a whole industry issue, Network Rail has a key role and has been playing its part managing industry initiatives. These included special training for staff and revising short-term planning arrangements to help operators introduce and communicate contingency timetables. We have been monitoring the industry's progress and, working through the National Task Force, we commissioned the independent reporter to review compliance with the industry code of practice. Y

We recently published the report, including a specific review in Scotland[4]. It is clear that the industry has more to do to be fully compliant with its code of practice. Network Rail should continue to ensure its processes are fit for purpose and key staff are trained appropriately. It also needs to continue to work collaboratively with operators to validate contingency timetables which can be uploaded quickly for improved day-to-day planning.

In March we consulted on changing licences to better clarify and align responsibilities across the whole industry in a flexible way[5]. The consultation closes in June and we will consider responses before finalising the changes we want to make.

[4] www.rail-reg.gov.uk/upload/pdf/passenger_info_review_jun11.pdf
[5] www.rail-reg.gov.uk/upload/pdf/passenger_information_consultation_290311.pdf

Customer service

Enforcement action

In October 2010 we imposed a £3m penalty on Network Rail for its flawed implementation of the **ITPS** project, reflecting a significant failure to take sufficient account of customer impacts. Subsequently the company has devoted energy to further development of the system, which ultimately should provide a faster, more accurate and flexible timetabling system than the suite of legacy systems, many of which predate privatisation in the mid 1990s. ITPS proved useful in allowing faster upload of emergency timetables during severe winter weather. However, all the outstanding issues had not been resolved by the year end and continued focus on this area is required.

Strategic timetabling and operational planning

During the year Network Rail also re-organised its timetable planning activities, centralising them in new offices at Milton Keynes. Although some experienced staff did transfer to the new facility there was a dip in overall standards, particularly affecting short-term freight train alterations due to engineering works and altered traffic patterns. This led to a considerable increase in schedule clashes (although the direct effect on end customers was relatively modest).

In combination, the problems with train planning during the year led to end-of-year delays due to operational planning 71% worse than in 2009-10 (this category accounts for 4.5% of total Network Rail caused delay). Network Rail is now implementing a plan to address this, though it has not yet borne fruit. We will therefore continue to monitor closely Network Rail's progress through 2011-12.

Stations

Reading

A good example of the industry working well together to minimise major engineering works on rail users, was at Reading station. Complex engineering work was completed by Christmas as planned, including the re-opening of the Caversham Road bridge, and train services returned to normal. Disruption to passengers was minimal through careful preparation and we look to see such practice elsewhere in future.

Simplifying station change

In September we reported that Network Rail had established the stations contract reform task group, involving ATOC and TOCs, to look at, among other things, issues relating to the station change process and third party involvement in investment at stations.

We received proposals from Network Rail to simplify the station change process and to give third parties that wish to invest appropriate rights and obligations. These proposals were accompanied by a commentary from ATOC outlining its views. We considered the proposals carefully and in March 2011 we consulted on proposed modifications to the Station Access Conditions[6].

Information about network capability

During the year Network Rail regularised all the discrepancies between actual and published network capability identified in recent years (the subject of enforcement action in 2006). It must now certify compliance with its obligation to maintain capability as published in its

[6] The consultation can be found at: www.rail-reg.gov.uk/server/show/ConWebDoc.10339

annual return. The company is concentrating on the next steps where it has made a short-term network change. It has finalised those which expired in 2010 (apart from three which were extended with the operators' agreement) and should resolve all those which will expire this year. We will continue to monitor outstanding short-term network changes every six months.

Network Rail made good progress with its **gauging strategy** this year and it is working well with its customers through the gauging stakeholder group. It has developed KPIs for dealing with customer requests (initial response time and completion by date promised) and has so far met its targets in every period. The last report in February showed that some 70% of its gauging data was less than 4½ years old; the agreed target is to reach 75-80% by September this year.

We called for Network Rail to establish what information its stakeholders need about **power supply capability** and to make any necessary improvements. An industry workshop in January agreed key information requirements and Network Rail has written to the industry setting out its current process and planned developments to provide power supply capability information.

Improving traction electricity efficiency

Operators spend between £200m and £250m each year on electricity for traction. This includes the cost of transmission losses on Network Rail's system and the rail industry does not yet fully understand how these can be reduced.

Following an independent reporter review, we are not satisfied that Network Rail is managing electrical losses efficiently. Train operators held a cross-industry meeting to discuss the feasibility of efficiency improvements but progress since February has been disappointing.

We now expect Network Rail to develop whole-industry business cases for these in the coming months.

At present Network Rail has no financial incentive to minimise losses. We want to change this in future and we need better estimates from Network Rail to help us understand how best to do this. The quality of Network Rail's work in 2010-11 to estimate losses has not been satisfactory. After pressing Network Rail we have now agreed the first stage of a plan to estimate losses across the network.

Train service performance

Overview

Until October train service performance across the industry had been good and most high level measures were tracking broadly the trajectory required. However severe weather from late November through to January had a significant impact on Network Rail's performance across the country, for both passenger and freight services. At the end of March it had missed all of its regulated performance targets in the year, except for the regional public performance measure (PPM) and regional cancellations and significant lateness (CaSL).

We have considered whether the winter weather was exceptional and whether Network Rail's failures amount to a breach of its licence. Following a detailed review we have concluded that the conditions were genuinely exceptional and that were it not for those conditions Network Rail was likely to have met its obligations to the passenger train operators. We have published our detailed findings[7].

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Our analysis has, however, highlighted a serious concern about the outlook for **delays to passenger services** in England and Wales for which it is held accountable. There appears to be a material risk that Network Rail will not meet its 2011-12 obligation on this measure. We have therefore required the company to set out its plans to address this, against which we will monitor its progress[8].

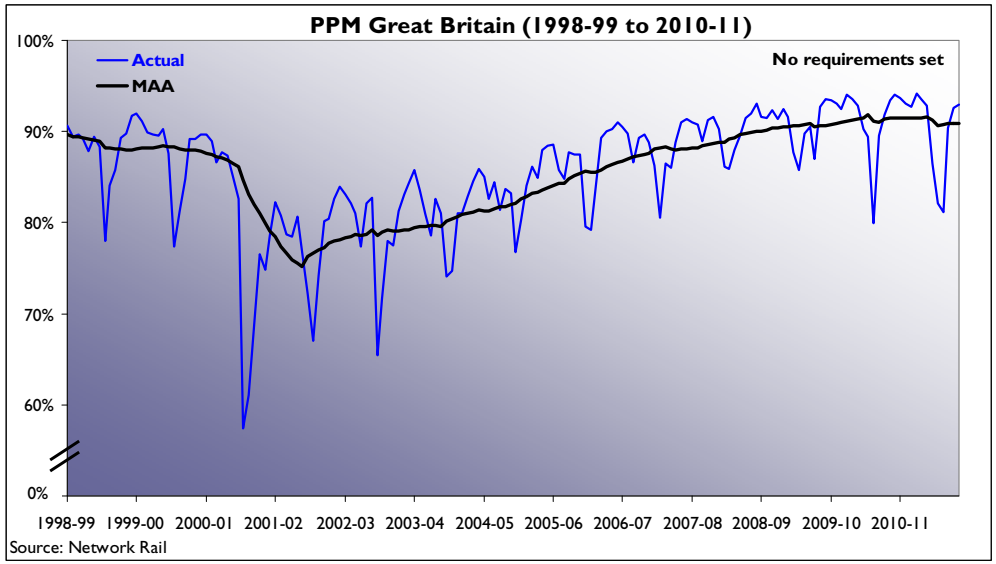
YR

Freight delay figures were also behind target throughout the year, although the FOCs indicated this was not a particular worry and performance was acceptable on alternative measures such as the freight performance measure (FPM). We have therefore required Network Rail to quickly review with its FOC customers its commitments. We will consider any formal proposal Network Rail might make to change its obligations.

YR

Public performance measure (PPM)

Train service performance was good until period 7. But in periods 8-10 performance was seriously affected by a late, sharp autumn, followed by two significant snowfalls with prolonged freezing temperatures in December.



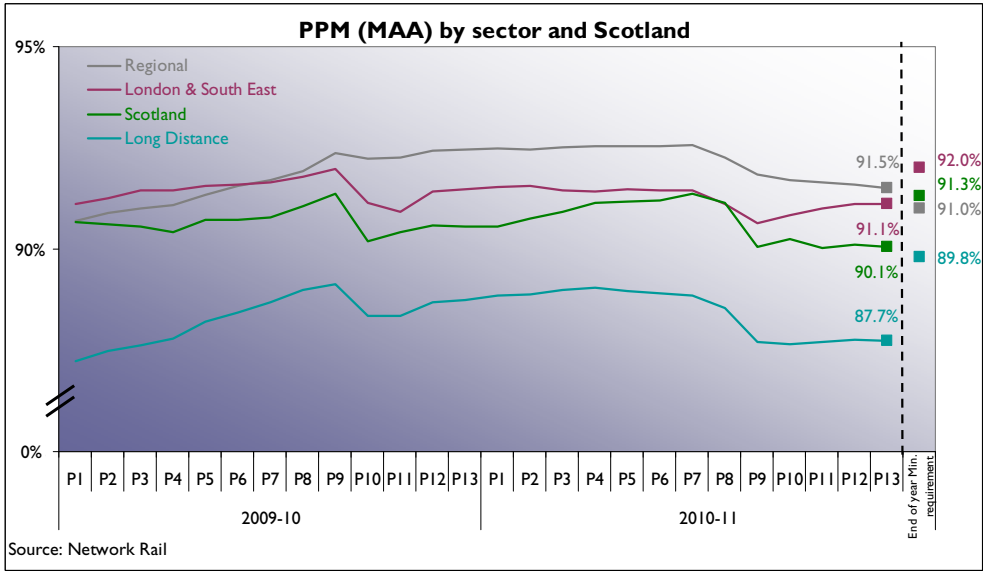
The autumn leaf fall period, whilst difficult, was not extraordinary and Network Rail agrees with our view that it should have coped with it better. A particular issue was the operation of railhead treatment trains in Kent and Sussex, where arrangements were less robust than in previous years and some equipment was not adequately prepared for the season.

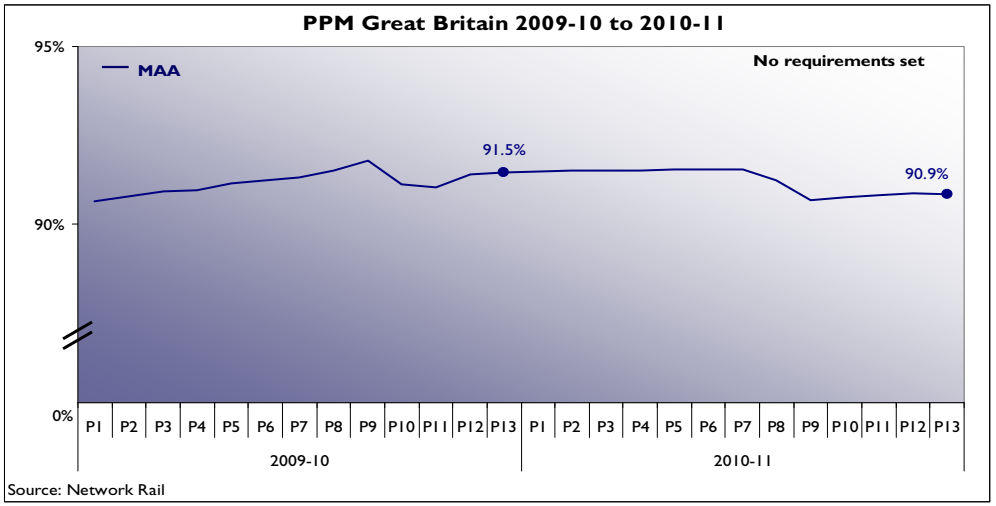
[7] www.rail-reg.gov.uk/upload/pdf/operational_performance_letter_jun11.pdf
[8] www.rail-reg.gov.uk/upload/pdf/passenger_delays_030511.pdf

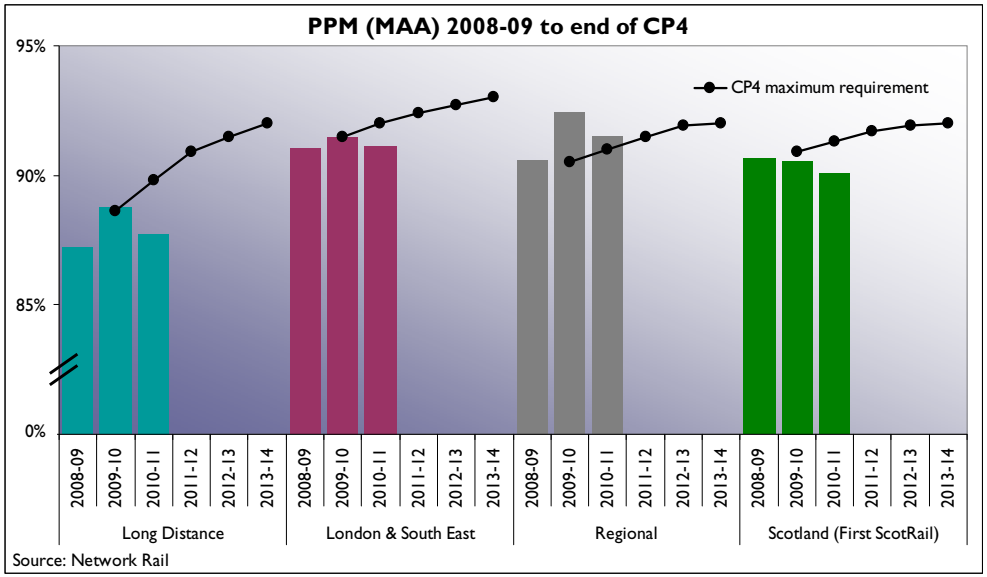
Train service performance

In late November the transition to winter occurred suddenly and more severely than usual with widespread, heavy snowfall and sustained low temperatures. Network Rail responded reasonably well in the circumstances, with conversion from railhead treatment to de-icing and snow ploughing taking place (except where equipment was undergoing maintenance). Its later actions to recover included repairing the immediate damage, reprioritising cancelled possessions and other planned maintenance and increasing resources available through offering overtime opportunities. As a result, performance had recovered to its internal targets by the end of January.

We spoke with several TOCs about performance on their routes both generally and about winter in particular. Most praised Network Rail for its efforts during the snow and agreed it had done as much as was reasonably practicable to recover performance in January.







Train service performance

Individual train operators

Over the course of the year we worked with several concerned operators to help ensure Network Rail delivered on its commitments made in joint performance improvement plans (JPIPs).

West Coast

Performance has recovered over the past two years from a PPM moving annual average (MAA) of just under 80% to over 86%. The intensified timetable, introduced in December 2008, has become well established. Initially there were significant problems with the overhead line equipment, axle counters and points but these have been addressed successfully. Although performance levels dipped again over the recent severe winter (when priority was given to providing as full a service as possible, even if this was subject to delays) Virgin Trains is now happy to rely on normal performance improvement processes in 2011-12.

East Coast

East Coast Trains' performance declined throughout 2010-11 due to a wide range of factors. Some of these were external, notably the extreme weather which saw some of the worst snowfalls in the North East and Scotland, high levels of cable thefts and fatalities. But there were also many asset failures. Network Rail is focusing attention on basic reliability and we are reviewing the 2011-12 JPIP in detail. We have also reviewed the preparations for the intensified timetable introduced in May 2011. Although there are encouraging signs of a reduction in the number of incidents on the route and generally good performance by some other operators sharing the tracks, East Coast performance has a long way to go and we are seeking further evidence from Network Rail that its 2011-12 plans form a sound basis for delivering the scale and speed of improvement needed.

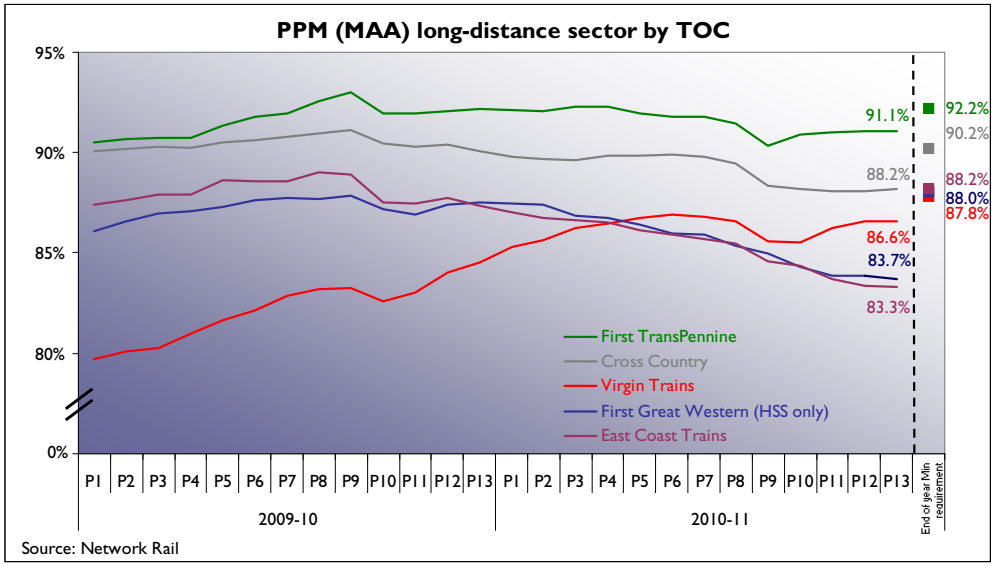
First Great Western

The large number and wide range of services operated by First Great Western means that the overall picture can mask local trends. The gradual decline in PPM MAA over the past year has been mainly due to problems in the Thames Valley area rather than in the West Country. Besides some asset failures there were issues around the use of restricted infrastructure during the Reading major upgrade, although this was well planned. The winter weather was a factor but seasonal issues were not as severe as in other parts of the network. The JPIP for 2011-12 has been agreed and we will continue to monitor delivery.

Southern

Southern performance has been broadly static for the past three years and the largely third rail network has suffered badly at times in successive winters. Underlying performance seems to be held down by a high level of asset failures, largely associated with the signalling and electrification systems. With Network Rail and the TOC we have commissioned the independent reporter to investigate these issues and its findings are expected in September.

Train service performance



Source: Network Rail

Southeastern

The introduction of a radically different timetable, including high speed services over the High Speed 1 infrastructure into St Pancras International from December 2009, was followed by severe winter weather and it took a while for the new service to settle down. More recently Kent was again badly affected by extreme winter weather in periods 9 and 10. However, recent performance has been very good and there is little indication of underlying problems. Meanwhile several initiatives (including conductor rail heating and in-service de-icing) are being applied to reduce the impact of any future extreme winters. Southeastern and Network Rail now expect to rely on normal JPIP processes during 2011-12.

G

First Capital Connect (FCC)

FCC uses several different routes, including three (London North Eastern, Sussex and Kent) that saw significant performance problems during 2010-11. We met with Network Rail and FCC to understand the many causes of the problems and what was being done to rectify them. Recent performance has been good and normal JPIP processes are expected to be adequate for 2011-12.

G

National Express East Anglia (NXEA)

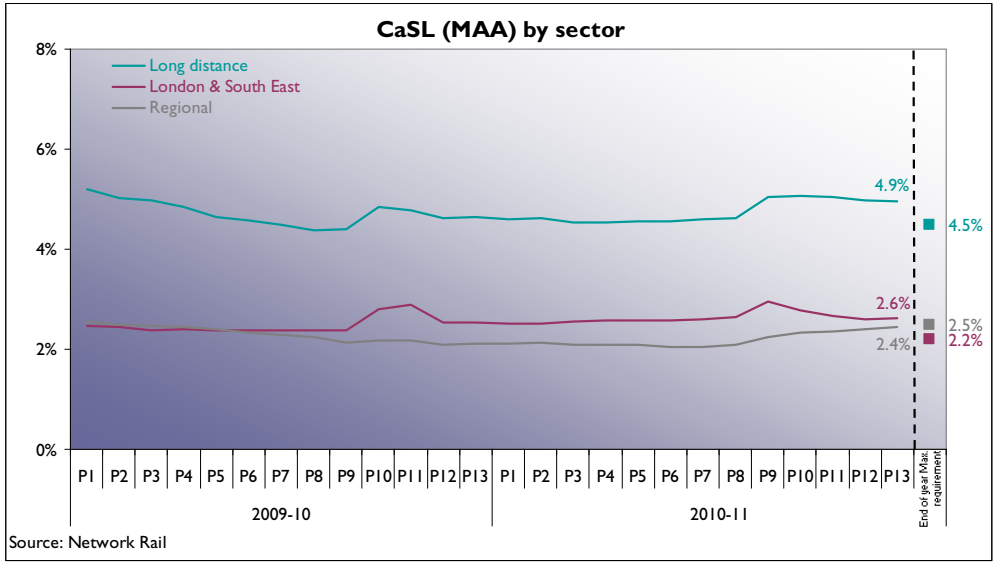
During 2010-11 there were major problems with overhead line failures, train planning issues and possession overruns. At the same time NXEA is in the process of making significant timetable changes on all of its routes and simultaneously making major changes to its fleet. Much of its older fleet was particularly prone to damage during the severe winter on account of inherent design features. However, recent performance has been good and it is expected that normal JPIP processes will support a continuation of this in 2011-12.

G

Train service performance

Cancellations and Significant Lateness (CaSL)

CaSL for all three sectors recovered quickly after the severe winter weather and was on target across Q4. Over the whole of 2010-11 both the long distance and London & South East targets were missed, as with PPM because of the exceptional winter.



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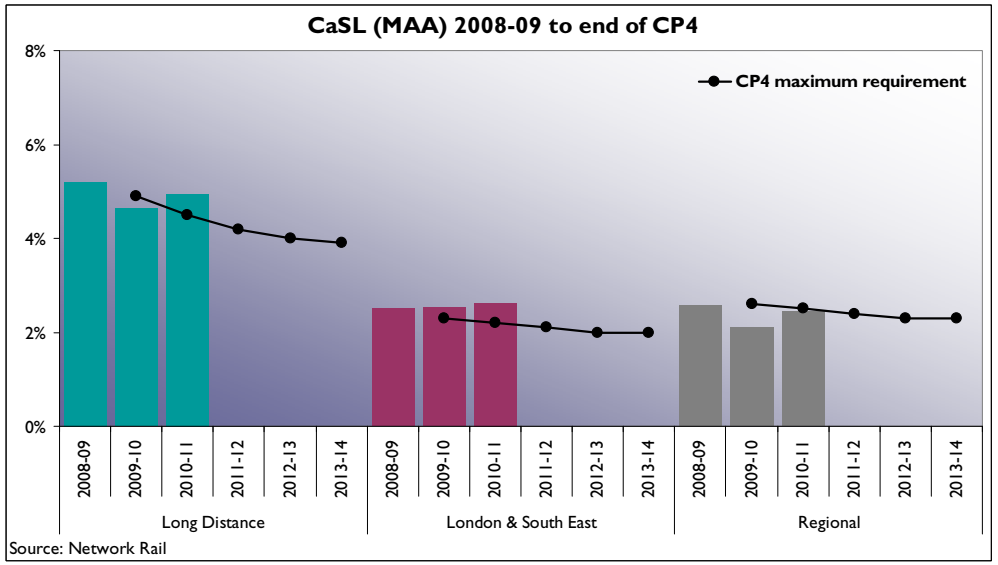


Source: Network Rail

Train service performance

Network Rail delay to passenger and freight trains

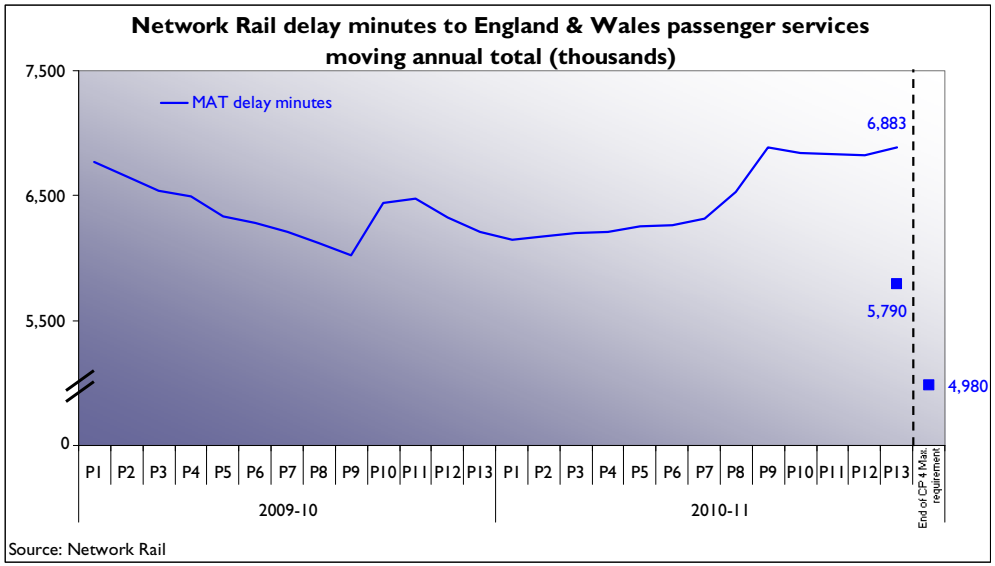
Passenger

The flawed implementation of ITPS led to a dramatic increase in delays due to timetable errors, continuing through to the end of 2010-11. This affected the achievement of delay minutes targets generally. Network Rail has also claimed that ice damage to its infrastructure and flooding from the melt water caused delays into January. This was on top of a backlog of planned maintenance that had not been possible to do in the snow. These factors caused almost as many delay minutes as the snowfall itself.

We have estimated that with more normal winter conditions, passenger delay minutes in England and Wales might have been 3% worse than target. Some of this would be due to the record level of delay caused by cable theft, despite substantial and increasing efforts by Network Rail to counter this problem. Allowing for the margin of error in our analysis, we cannot conclude that Network Rail would have missed the target.

We are, however, concerned at the underlying upward trend in passenger delay minutes in England and Wales and the risk to achieving the 2011-12 requirements. We have therefore required Network Rail to set out urgently how it is managing this risk, and we will report on its plan in the next monitor.

Increasing delay per incident for track, non-track and other asset failures is a particular concern. Network Rail is investigating the reasons for this increase, which it appears might be rooted in maintenance (increased time-to-fix) or operational influences.



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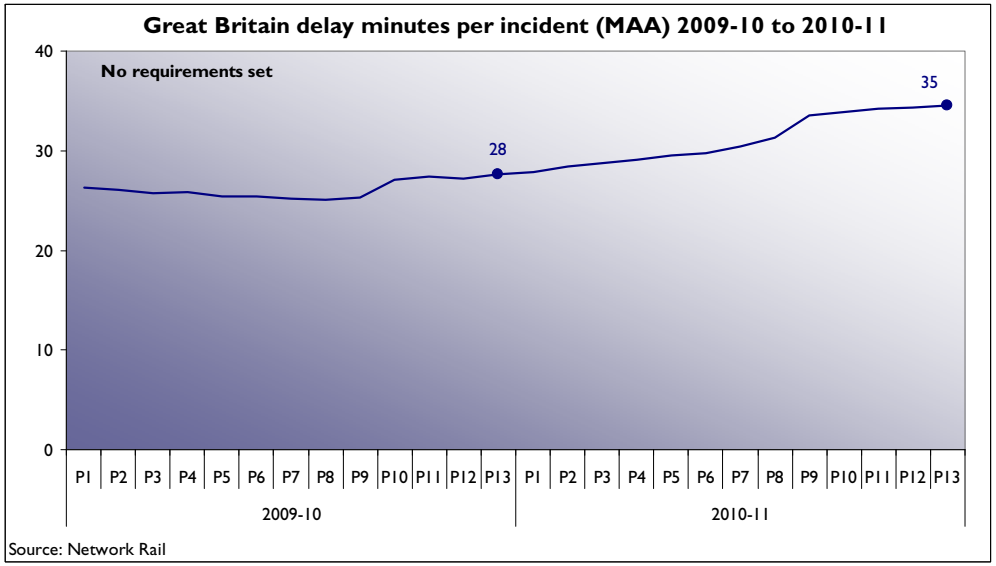
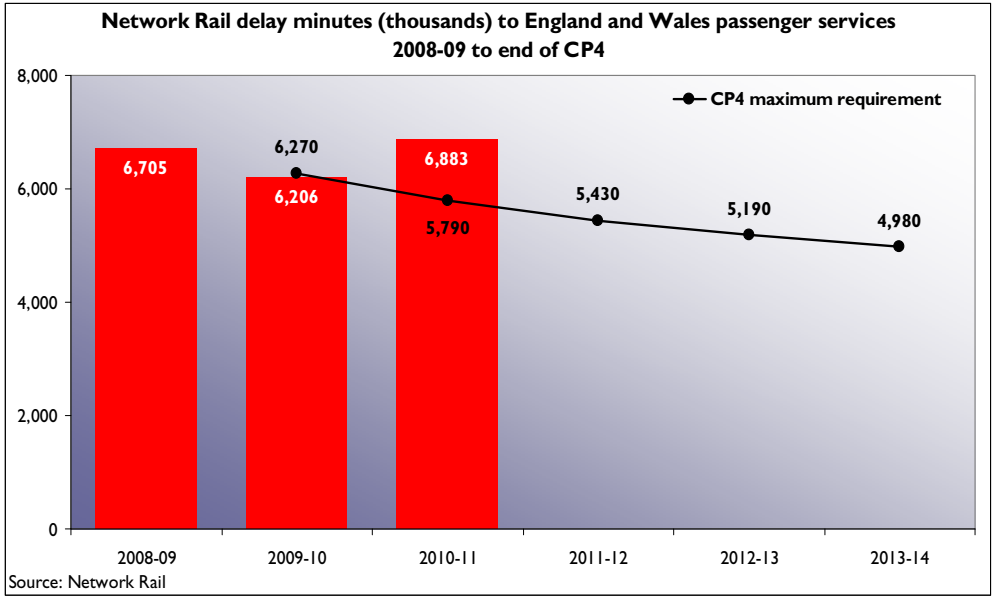
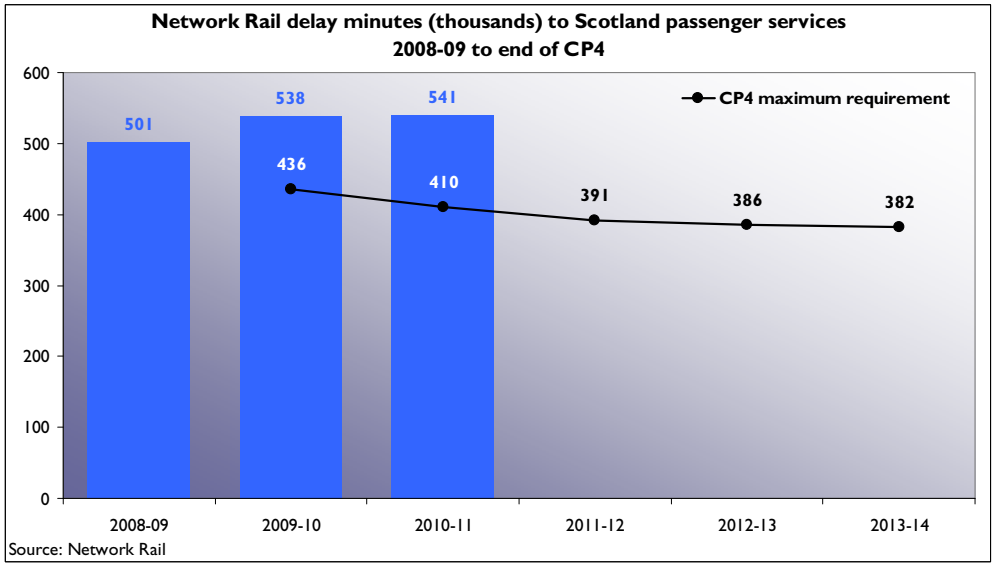
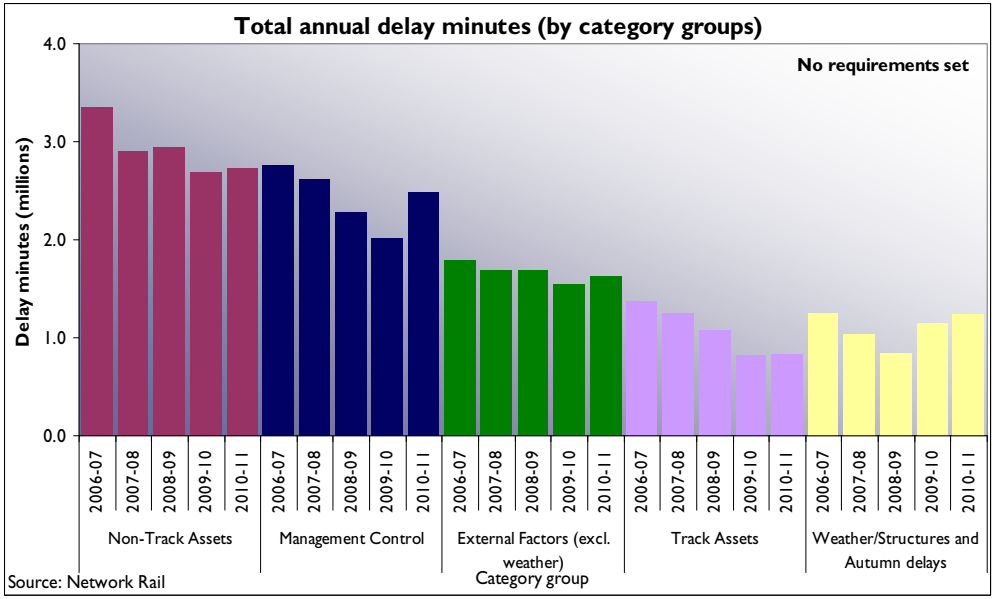


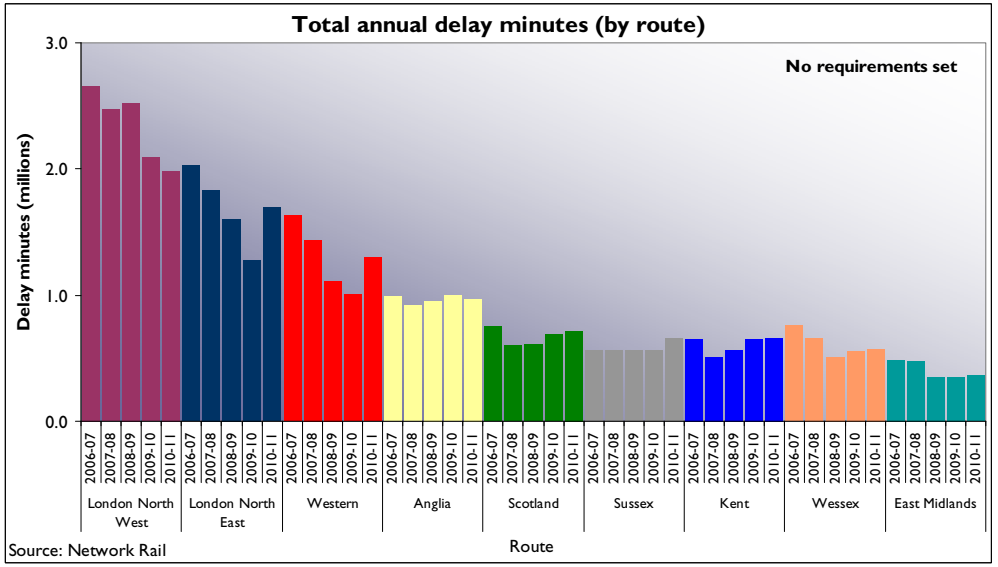
Source: Network Rail

Train service performance







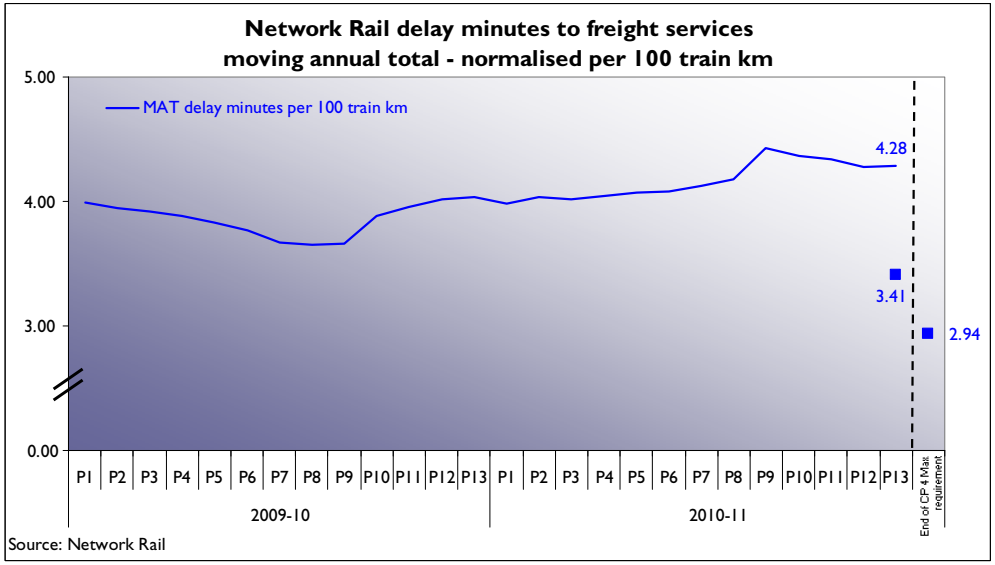


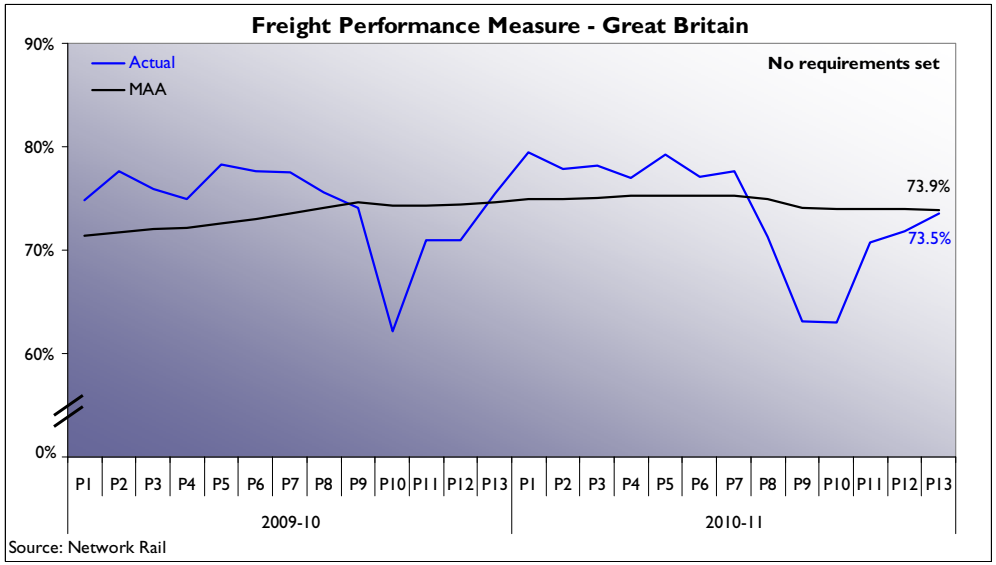
Train service performance

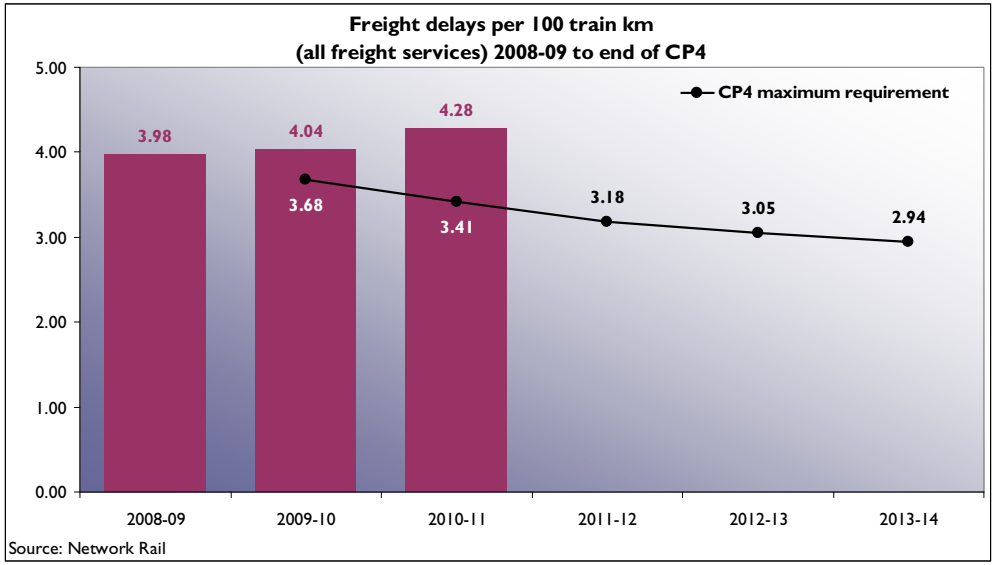
Freight

Network Rail also missed its 2010-11 national freight performance target. We consulted the freight operators midway through the year when it first became apparent that this target was at risk, though none thought we should take action at that time. This view was confirmed recently by the Rail Freight Operators Association.

Whatever the reason for this the position is not satisfactory, and we have therefore required Network Rail to quickly review its commitments with its FOC customers. If in the light of these discussions Network Rail wishes to formally request a change to the regulatory requirements, we would consider it. We will report the outcome of this work in the next monitor.







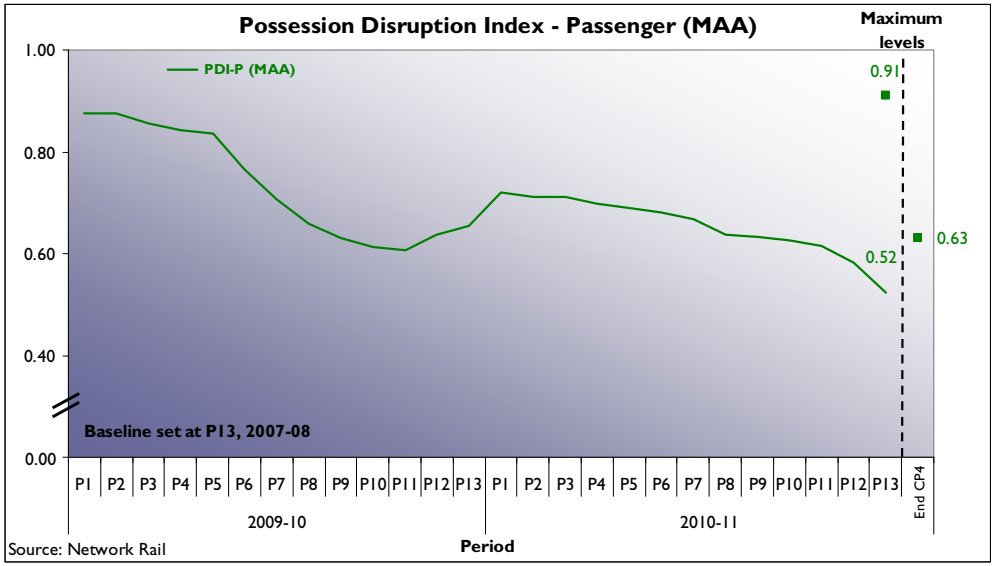
Train service performance

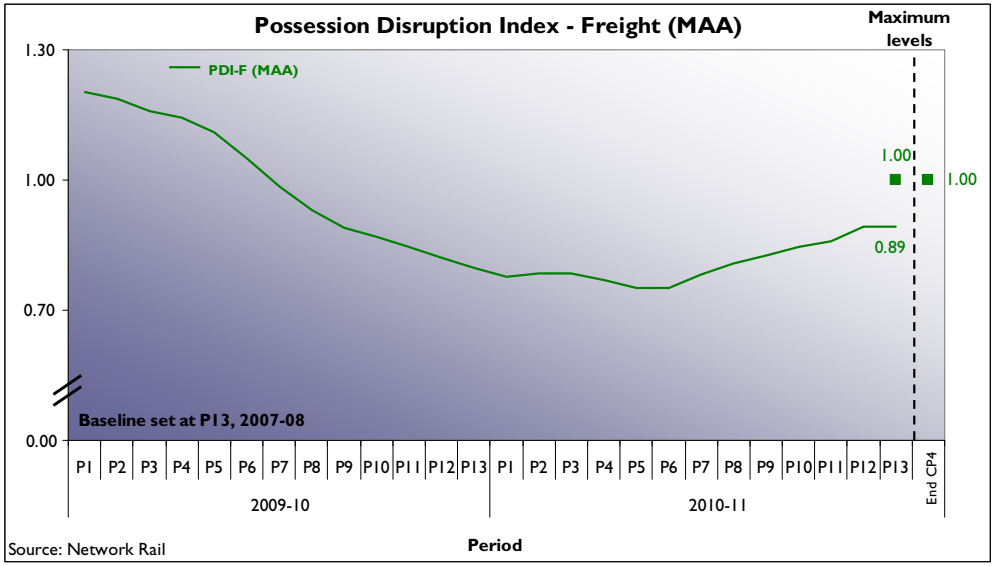
Network availability - reducing disruption

Network Rail remains well ahead of the PR08 targets for reducing the impact of planned disruption. This year it has responded positively to pressure from us to develop a more robust plan in which we have more confidence.

Network availability as measured by the established possession disruption index - passenger (PDI-P) and freight (PDI-F) was better than target in 2010-11. Although the previous year's success was partly due to reduced activity volumes, this year has seen genuine progress in terms of undertaking work in shorter periods by use of high-output equipment and innovative techniques.

We are now seeing network availability becoming embedded in industry processes with development of an automated network availability reporting system (NARS) that can forecast and measure developments quickly and accurately. There has also been work with train operators to develop joint network availability plans (JNAPs) to complement established joint working to improve operational performance.





Developing the network

Overview

Over the last year Network Rail has caught up with its internal schedule for delivering project milestones and it is now slightly ahead of plan. We believe it has made steady progress overall with completion of the Airdrie to Bathgate project and visible progress on King's Cross and Reading stations. G

The scale of the enhancements delivery challenge continues to grow and Network Rail has been developing new projects such as the electrification programme in England and Wales and the Edinburgh to Glasgow improvement project in Scotland.

However, there are several projects we think are at risk of being late. Some have factors outside Network Rail's control: uncertainty about rolling stock availability has a major impact, but for others the company needs to recover any slippage. The position on rolling stock has now been clarified and we have told Network Rail to redefine the scope and milestones for those projects that have been affected (particularly northern urban centres) and submit changes to the delivery plan for our approval. This, in combination with the new projects being developed and deferral of renewals work, adds further pressure on the tail end of the control period and we have told Network Rail to submit an assessment of its capability to deliver alongside its change control proposals. Y

Network Rail has set up an 'efficient project governance' workstream which reviewed a number of internal processes and procedures. Its purpose was to increase efficiency to reduce both the time and cost of projects for the remainder of CP4, as well as lay foundations for the delivery of CP5. Specific actions include a refresh of its GRIP (governance for railway investment projects) process, which is now a company standard. It has also introduced a framework for 'tier one' contractors as well as introducing new contractual arrangements such as guaranteed maximum price / partnership contracts. It is making best use of modular solutions, especially with regard to signalling and has examined how its value management and contingency management processes work. We consider these initiatives to be a significant and vital component of Network Rail's improvement plans for CP4 and CP5. G

Thameslink

The Network Rail Thameslink team had to work hard this year to reconfigure and re-phase elements of Thameslink, particularly at London Bridge, in order to reduce the programme costs to within the overall budget. This resulted in the programme successfully securing government commitment to Key Output 2 (24 trains an hour through the core) now planned for 2018. Meanwhile, work for Key Output 1 continued with a new track being laid on Blackfriars rail bridge, with rail services transferred to their new alignment over Christmas. Steady progress was made on the construction of the new station entrance on the south bank. Significant work was also completed at Borough Market where a new viaduct structure was moved into place. Foundation work at Farringdon station began for the new multi-storey integrated ticket hall with steelwork lifted in over the track and put into place on either side of the lines over Christmas. G

Western improvements programme

Network Rail has made significant progress in coordinating the interfaces between projects across the route, with a large number of complex schemes to deliver including electrification, Crossrail, ERTMS and resignalling. This awareness and engagement across the industry has already delivered benefits. G

Developing the network

Network Rail has recently announced that the project to deliver new platforms and a new depot at Reading will be completed by 2015, a year earlier than the current delivery plan suggests. A major piece of work was completed in the Christmas and New Year holiday when a new bridge was slid into place at Caversham Road. This will enable the track to be built to service the new platforms to the north of the current station. The project worked closely with the train operators, passenger representatives and local authorities to minimise disruption to passengers, ensuring that train diversions were used wherever possible rather than the less popular replacement buses. This approach was welcomed by passenger groups.

The Barry to Cardiff Queen Street enhancement project is expected to deliver 16 Valley line trains per hour through central Cardiff by 2014. Network Rail has identified that some of the phasing of the delivery stage should be changed to make it more efficient and that reinstatement of the bay platform for Maesteg services is not required to deliver the outputs. After agreement with the Welsh Assembly Government, the delivery of the extra train services will now be delayed until 2016. We expect to receive a change control proposal in June 2011 so that the revised timescales can be reflected in the delivery plan.

Following some delays in the early development of the Cotswold line redoubling project, good progress was made this year. Network Rail has made good use of extended midweek night possessions to allow the additional track to be installed. Commissioning will take place in two blockades later in the year and the work is on course. The stakeholder management by the project team has been very good with frequent 'meet the manager' sessions both at stations along the route and on trains. Updates have also been regularly provided on the Network Rail website.

Crossrail

Development continued last year with the submission of an initial overall target price in December. Preliminary works at Westbourne Park and Dog Kennel bridge were completed successfully over Christmas.

King's Cross

Work continued on the new western concourse and, despite some delays on the main train shed roof, this project remains on course for completion before the Olympics.

National stations improvement programme

The industry continues to work collaboratively on this programme through local delivery groups. 37 projects were completed this year, which was more than last year but less than we had expected to meet the objective of 150 medium sized stations to be improved by March 2014. Among these schemes, work at Halifax station started in May and was completed by September on time and within budget. Improvement works at Canterbury West were completed under budget.

We have asked the independent reporters to review whether the arrangements in place will deliver the 150 station objective. The review will also examine a sample of schemes completed to date and assess whether they have been delivered efficiently.

Strategic freight network

This year we undertook an efficiency review of both the Felixstowe to Nuneaton and Southampton to Basingstoke projects. In July we

reported on Felixstowe to Nuneaton[9] where the independent reporters found the project was being delivered efficiently as judged against various benchmarks. For Southampton to Basingstoke we undertook our own assessment and found the project to be well specified, designed and managed. The implementation phase is just beginning, but we have confidence that this will be delivered on time by the project team and supply chain. Our report is currently being finalised and will be published on our website shortly.

Safety and environment fund

In 2009-10 Network Rail made slow progress delivering work through this fund. In September we held a formal review. This resulted in the production of a revised delivery plan which was again updated in January. Network Rail has strengthened its management of the fund and the bulk of schemes will be delivered in CP4 although later than originally expected. We will continue to watch this fund to make sure that progress is maintained.

Access for all

We commissioned the independent reporter to review delivery of this programme. The review was largely positive and illustrated Network Rail's ability for effective optioneering. No critical issues were identified. However, the rate of station completions was less than we expected.

Network Rail has accelerated delivery. We have put in place an enhanced monitoring regime to assess the completion rate this year and we expect to see delivery against target.

[9] www.rail-reg.gov.uk/upload/pdf/enh-strategic-freight-network-jul10.pdf

West coast main line committed schemes

These schemes are on course to deliver. We saw good progress made by Network Rail on managing risks and planning to minimise disruption during delivery. The company also made progress on designing a more cost effective and less intrusive infrastructure solution to deliver the required outputs in the Stafford area.

Intercity express programme - infrastructure works

Network Rail continued to develop this programme and the announcement following the Foster review and spending review has enabled it to clarify some aspects of the project. The project team's work throughout the year has meant that Network Rail has been able to adapt the project scope and completion dates to meet the overall requirements quickly, and we expect a change control to be made shortly.

Electrification

Following the latest Government announcement in March 2011, it is now confirmed that electric trains will operate to Oxford, Newbury, Bristol and Cardiff by 2017. Pre-feasibility design work is progressing for both these routes and the North West electrification routes announced earlier in 2009. National Grid has been approached for the necessary connection agreements and the specification for a high output plant system has been issued.

Birmingham New Street

Works started this year. The outputs remain on course to be delivered by spring 2015, despite serious safety concerns that resulted in Network Rail temporarily stopping work and subsequent action by ORR and HSE safety inspectors. Network Rail is working in partnership with Birmingham City Council and they recently

announced an agreement with John Lewis Partnership for a new store at the redeveloped south side of the station.

Southern platform lengthening

We remain concerned about delays to completing the Waterloo International integration project and the consequences this will have for the remainder of the programme and the introduction of longer trains. Network Rail is consulting South West Trains on a revised scheme and we expect to receive it for approval shortly.

Power supply upgrade

Decisions outside of Network Rail's control on the type and quantity of rolling stock have led to changes in scope, cost and milestones for the schemes in this programme. We have been concerned with the company's capability to deliver this programme and Network Rail has strengthened its resources in this area. The West Anglia route is on course to be completed on time, but there are risks for the other programmes south of the River Thames, particularly for the Kent route. Delivery of Wessex and Sussex routes by December is at risk, but Network Rail has an accelerated plan in place to achieve this. The Kent route is likely to be delayed into CP5 and we have asked Network Rail to explain its plans and present revised proposals as soon as possible. If they are satisfactory, Network Rail will need to consult affected stakeholders and propose changes to the delivery plan to reflect the revised timetable.

Southern capacity

The Gatwick airport remodelling and East Croydon projects progressed well this year.

East coast main line improvements

Most of this programme is in development with work progressing on course. Delays have occurred on the capacity relief project because of uncertainty around third party funding and further definition of what is required in the Werrington junction area. Platform lengthening works continued this year with the successful opening of a lengthened up platform, on programme, at Royston in December 2010 for 12 car trains to run. The company was also granted a TWA Order in March 2011 to build a flyover at Hitchin to remove a substantial bottleneck and continues to discuss these proposals with affected operators through the network change process. Works around York Holgate junction have recently started, on programme, with a significant amount of work planned for this summer.

Nottingham resignalling

Planning work has progressed well on this project ahead of the main blockade in summer 2013.

Midlands improvement programme

The uncertainty around third party funding has delayed the Bromsgrove electrification project whilst the length of time to secure planning approvals has delayed the Redditch branch lines. There have also been delays to Wrexham to Marylebone linespeed improvements and the South Ruislip loop as a result of the interface with the Evergreen 3 project and these will now be delivered in line with the revised programme for that project.

North London line

The infrastructure work was completed successfully in time for the May timetable change which has allowed an improved service pattern to be introduced. The project recovered well from set backs around

the signalling design and implemented a revised plan which had little scope for further delays. This has however led to cost overruns.

Airdrie to Bathgate

This project was completed and opened to services on 12 December as planned. We discuss the projects in Scotland in the Scotland summary.

Global system for mobile telecommunications - Railway (GSM-R)

Significant progress was made in 2010-11. Cambrian, Airdrie to Bathgate, North London Line & East Coast South have all been brought into service with a broadly favourable response from users. The reliability trials in Strathclyde finished in May 2011 which have demonstrated that the cab mobile equipment has met the reliability requirement specified. Once formal confirmation of this is completed the existing Strathclyde radio system can be decommissioned.

However, there is no room for complacency. There are still technical challenges ahead and very little leeway in the programme for further delay. The network change notice (NCN5) still has to be signed off and although all parts of the rail industry are focused on the need to complete this, there are still commercial and legal issues to resolve before all organisations are happy to sign off the change. This is a difficult cross industry project, not least because of the different commercial interests of the main delivery partners. But operators need to work together and the levels of cross industry co-operation have improved during this year, increasing the chances of a successful outcome.

ERTMS

The section of line between Pwllheli and Harlech was commissioned in October and the fleet of modified class 158s and trackside infrastructure were authorised in March, under current interoperability regulations. Service operation has since started. We also authorised the class 97 rescue and pilot locomotives in April after issues around the braking system were resolved. The extent of delay and difficulty experienced raises questions about the readiness of the industry to deliver the national rollout of ERTMS as planned, at an economic price and delivering the expected functional and operational benefits. We have therefore asked the independent reporter Halcrow to review delivery to date to establish learning points and provide a basis for assessing future roll-out plans.

Olympics

Network Rail is on target to complete its major projects required for the Olympic Delivery Authority's Games-time transport plans well in advance of the games, except for the renewal of the overhead line electrification on the great eastern route. The planned end date for this renewal is after the games and all work on the project will be suspended well before and throughout the games period. With the infrastructure work substantially complete we have also been reviewing games-time plans for station operation, crowd control and infrastructure maintenance planning. In September 2010 Network Rail and operators agreed a programme which would produce a train timetable for the 2012 Olympic games period, in order that rail tickets could be offered for sale in June 2011 at the same time that event tickets are allocated.

Developing the network

Ryder cup

In September, Network Rail opened its new station in Newport, in time for passengers travelling to watch the Ryder cup. The station design is built from the same type of material used to construct the Eden project and it won an ICE (Wales) award for design and sustainability.

Investment framework

In October we consolidated the policies and guidelines for investment in the network outside of a periodic review into a single document to make it more straightforward. We also commissioned the independent reporters to review how Network Rail engages with its stakeholders. This will complete shortly and we will report the findings in the next monitor.

During the year we asked the independent reporter Halcrow to review progress of the Evergreen 3 project, which identified major problems. These have been addressed with Network Rail taking a more significant role and phase 1 of the project is on course to deliver in September.

Planning for the future

The route utilisation strategies for the east midlands and great western routes were established this year, with good progress made on the remainder of the programme, which is on course to complete in time for meaningful input into the next periodic review. In May we consulted on the principles of the next review[10].

[10] www.rail-reg.gov.uk/pr13/consultations/orr013.php

Asset management

'Asset management' is our term for Network Rail's stewardship of the railway infrastructure. It covers the planning and delivery of maintenance and renewals. This section of the monitor also deals with consequent asset performance.

Asset planning summary -*Throughout the year we continued to uncover evidence of the gap between Network Rail's asset management capability and best practice. In particular, the company's continuing inability to demonstrate, through whole life cost analysis, the optimal balance of maintenance and renewal remains a key concern. A major reporter study of civil engineering structures management highlighted serious shortcomings in many areas.*

However, we have worked with Network Rail to agree improvement programmes to address the known shortfalls. In particular, January saw agreement between the Network Rail and ORR boards on a detailed set of trajectories called the **asset management roadmap**, against which the company will progressively deliver capability improvements aimed at steering Network Rail towards achieving best practice by 2014. Furthermore, at the end of February, the independent reporter concluded its civil structures audit with the delivery of a detailed improvement plan, addressing all of the areas for improvement identified in its extensive six month study.

We are scrutinising Network Rail's progress against the roadmap and the civils improvement plan. The first roadmap milestone, **an asset information vision**, was delivered slightly late, but comprises an ambitious and impressive plan to modernise Network Rail's outdated and inefficient asset information architecture and processes.

Disappointingly, however, Network Rail missed its roadmap commitment to provide draft CP5 asset policies by the end of May.

The independent reporter has just started a comprehensive review of Network Rail's current asset management capability, and we will report its conclusions in the next monitor.

Management of civil structures

We decided in summer 2010 to commission a comprehensive reporter study into all aspects of civil structures management. This was the cumulative consequence of many aspects of structures management which were causing us concern including Network Rail's inability to produce a credible PR08 civil structures spending programme (resulting in us reducing its requested funding by £300m), its declaration that (even after fundamentally reworking its structures policy) it could not guarantee sustainable stewardship beyond CP6, three bridge failures within an 18 month period and the serving of a safety improvement notice on the southern route. Working collaboratively throughout the remainder of 2010-11 the reporter, Network Rail and ORR examined all aspects of maintenance and renewal planning and delivery. The resulting report, and its concluding improvement plan, is published on the Network Rail and ORR websites[11]. The audit revealed numerous shortfalls in efficient, effective stewardship, the latter in terms of ensuring timely, appropriate inspections and interventions, so as to minimise service delays and disruption. These were addressed in a 76 point improvement plan, published at the end of February, which Network Rail is now working to convert into a detailed, resourced action plan. Delivery of the action plan will be monitored by a governance board, comprising senior management from Network Rail, ORR and the reporter.

[11] www.rail-reg.gov.uk/upload/pdf/reprters-audit-rev-policy-arup-mar11.pdf

Asset management

Drainage

Network Rail's funding for CP4 included an allowance of £100m for drainage renewals and a similar amount for drainage maintenance. Despite this Network Rail's knowledge of its drainage assets remains poor. In last year's annual return it introduced a measure of drainage renewal expenditure but appears unable to provide any condition measures or record of renewal volumes. We are therefore continuing discussions on improving management of this vital asset.

Safety inspections have also found that Network Rail's management of track drainage is poor and its drainage asset database incomplete. We are pressing Network Rail on what it will do about this.

Asset policies

In June 2010 we wrote to Network Rail confirming the conclusions of our review of its revised CP4 asset policies. All of the policies passed our robustness test and, with the exception of civil structures, all satisfied our sustainability test.

The revised policies were accompanied by an updated CP4 delivery plan, which we also accepted after careful scrutiny. Performance against the revised policies and delivery plan is discussed later.

Asset information

Network Rail is operating its asset management functions through more than 180 IT systems, many of which are old, under-functional and stand-alone i.e. there is little or no integration. There is considerable scope for the company to improve the efficiency and effectiveness of its asset stewardship through better IT and data management. This was recognised by the company in its first-time appointment, in autumn 2010, of a director of asset information. This appointment has marked a notable turn-around in both Network Rail's perception of the status of its asset knowledge, and its planning for necessary improvements. Its **asset information vision** is an impressive, all-encompassing view of what Network Rail must do to enable its ambition of becoming a best practice asset steward by 2014. The roadmap schedules the vision to be followed by a costed asset information strategy, to be included in September's industry plan. We will report on our view of the strategy in a future monitor.

Asset condition

The independent reporter has recommended that Network Rail reports a new condition KPI for each asset group, additional to the set we already monitor. This will use a five grade system, an approach already well established in utility regulation. Network Rail is developing trial grading systems for two asset groups, and joint development workshops have been running with the company since autumn 2010. However we are concerned that progress is too slow, and are pressing the company to expedite the trial systems.

For this control period we set regulatory targets for average **station condition**, a station stewardship measure (SSM). The independent reporter audited Network Rail's reporting of these condition measures, and found a systematic bias: station condition appears to be 6% better than Network Rail has been reporting. We are considering whether this requires us to revise the PR08 targets for SSM. Network Rail is also required to maintain **light maintenance depot condition** at the end of the control period. A recent audit of this measure has highlighted data sufficiency issues that Network Rail will need to resolve before reporting is reliable.

The independent reporter has audited Network Rail's signalling infrastructure condition assessment (**SICA**) tool, which it uses

among other things to prioritise signalling maintenance and renewals. The audit found that:

- the SICA tool is well understood within Network Rail and currently achieves the purpose for which it was designed, namely to logically prioritise the short- to mid-term renewals workbank; however,
- useful remaining lives generated by SICA are underestimated and are not accurate for use in strategic planning; and consequently
- SICA is not a suitable tool for ensuring that signalling assets are managed sustainably to achieve minimum whole life cost, and Network Rail should expedite the development of such tools for PR13.

We are discussing with Network Rail the implications of the audit findings.

Maintenance planning

We reviewed the implementation of Network Rail's maintenance restructuring throughout the year, to ensure that safety was maintained in the lead-up to go live on 1 April 2011. We will continue to monitor the impact of the restructuring, particularly with regard to its workload implications for section managers and the competence of staff in new roles. If the reorganisation appears to be having an impact on asset reliability and track quality we will call on Network Rail to take action to resolve these quickly.

Network Rail's project to introduce reliability centred maintenance on signalling equipment (RoSE), has been running for several years. The independent reporter is carrying out a review of RoSE in comparison with RCM best practice, and is also examining the scope for further RCM roll-out, within signalling and to other asset groups.

Findings by the year's end were disappointing, indicating only 50% usable coverage on signalling assets. We will report on the completed RoSE audit in the Q1 monitor. 

Asset delivery

Deferral of renewals within CP4, largely to exploit more efficient means of delivery, is not yet causing us serious concern. It does not appear to be having an effect on short-term asset performance and while it increases the delivery challenge in the next few years, this should not be insurmountable. 

Track renewals

Network Rail has reported a 17% under-delivery of plain line track renewals (1,557km delivered against the plan to deliver 1,883km). Earlier in the year, the company told us this shortfall was due to later than expected commissioning of high output plant, under-delivery during the cold weather and the problems associated with reallocation of jobs following the failure of Jarvis.

Non-track renewals

Network Rail has under-delivered its committed 2010-11 volume of **signalling** equivalent units (SEUs) by 25% (603 SEUs delivered compared with 802 planned). This shortfall was due to delays in commissioning 218 SEUs at Newport (which was delivered in May).

On **electrification**, despite over-delivery of HV switchgear (AC circuit breakers), Network Rail has under-delivered on OLE campaign changes and structures. For DC electrification renewals there has been under-delivery of all items, including only 2km of conductor rail renewed against a plan to complete 31km in 2010-11.

Asset management

Overall quality of Network Rail's renewals reporting

Network Rail has not provided us with satisfactory renewals delivery data for most asset groups. This information is vital to our monitoring of sustainable asset management and to making assessments of claimed efficiency. We are pressing the company urgently to address the completeness, correctness and comparability of its financial and volume tracking against the delivery plan which we accepted in June 2010.

Asset serviceability and sustainability

We have been monitoring the condition and reliability KPIs set out in Network Rail's 2010 delivery plan update. Network Rail achieved most KPIs in 2010-11. There has been some deterioration in track quality but we are encouraged that this is now improving, since Network Rail's introduction of new management practices.

Network Rail has continued to improve the reliability of its infrastructure, extending a five year downward trend of incidents causing delay. Compared to 2009-10, the number of incidents has reduced by 9%. (However, the associated delay minutes increased by 1%, reflecting the increased delay per incident mentioned earlier).

Track assets

Track assets are a significant contributor to infrastructure reliability, making up 14% of the total infrastructure caused incidents. Compared to 2009-10 track incidents decreased by 12% (although resultant delays improved only slightly).

Some track quality measures did deteriorate in the middle of the year but we are satisfied Network Rail understands the causes and is tackling them. This deterioration has not resulted in an increase in incidents for any track sub-category, though there has been a 6% increase in delay minutes caused by track faults (including broken rails) making this the largest single cause of infrastructure delay in 2010-11.

Non-track assets

The number of incidents caused by non-track assets has improved compared to 2009-10 by 10%.

Points failures are the largest contributor to delay minutes caused by non-track assets. We welcome the improving trend in both incidents and delays caused by point failures over the last three years. Track circuits are also a significant contributor to non-track asset reliability, so it is also encouraging to see a reduction in the number of incidents of 11% compared to 2009-10.

Asset management

Infrastructure asset failure performance		Delay minutes					Incidents				
		2006-07	2007-08	2008-09	2009-10	2010-11	2006-07	2007-08	2008-09	2009-10	2010-11
Track assets		**1,272,126**	**1,146,630**	**956,857**	**764,046**	**763,266**	**9,833**	**8,668**	**7,750**	**6,665**	**5,880**
104A	TSRs Due to Condition of Track	340,492	283,920	203,603	134,989	96,215	2,104	1,871	1,428	1,151	866
104B	Track faults (including broken rails)	922,350	847,174	730,740	617,174	655,833	7,638	6,722	6,152	5,387	4,948
104C	Gauge Corner Cracking	9,284	15,536	22,514	11,883	11,218	91	75	170	127	66
Non-track assets		**3,194,681**	**2,784,564**	**2,825,857**	**2,594,961**	**2,606,721**	**36,472**	**32,156**	**31,998**	**30,056**	**27,117**
101	Points failures	834,700	736,316	752,185	662,620	646,923	9,057	7,816	8,022	7,116	5,802
103	Level crossing failures	115,924	107,934	100,828	95,765	101,816	2,363	2,200	2,260	2,162	2,005
201	OLE/Third rail faults	333,707	223,770	237,637	244,780	242,570	1,705	1,357	1,458	1,241	1,275
301A	Signal failures	348,229	292,185	312,880	245,790	207,764	7,364	6,551	6,559	6,001	4,899
301B	Track Circuit failures	775,857	650,220	584,691	517,299	552,130	7,509	5,994	5,381	5,145	4,568
301C	Axle counter failure	47,269	70,305	121,973	106,629	66,768	441	569	1,096	913	647
302A	Signalling System & Power Supply failures	435,068	394,377	439,114	419,594	517,496	3,988	3,945	3,748	4,016	4,417
302B	Other signal equipment failures	92,842	69,244	63,685	64,995	68,621	1,976	1,591	1,495	1,580	1,701
303	Telecoms failures	51,077	65,863	70,494	70,039	53,549	1,442	1,467	1,406	1,352	1,251
304	Cable faults (signalling & comms)	160,009	174,350	142,368	167,449	149,083	627	666	573	530	552
Others		**930,324**	**913,901**	**779,265**	**601,648**	**639,347**	**13,219**	**13,886**	**12,637**	**9,346**	**9,105**
105	Civil Engineering structures, earthworks & buildings	126,143	128,874	80,016	78,567	62,219	572	511	397	436	385
106	Other infrastructure	281,349	299,809	251,160	158,272	189,416	6,695	6,713	5,482	3,548	3,382
106A	Track Patrols & related possessions	81,810	78,202	68,243	33,862	33,222	2,634	3,126	3,362	2,565	2,269
108	Mishap - infrastructure causes	152,404	158,874	190,568	154,371	157,189	1,362	1,624	1,839	1,450	1,588
112	Fires starting on Network Rail infrastructure	33,604	27,086	17,115	32,468	34,010	285	230	197	221	249
401	Bridge strikes	255,014	221,057	172,164	144,108	163,292	1,671	1,682	1,360	1,126	1,232
Total		**5,397,131**	**4,845,095**	**4,561,979**	**3,960,655**	**4,009,334**	**59,524**	**54,710**	**52,385**	**46,067**	**42,102**
Track assets account for 19%, Non-track assets account for 65% and Other assets account for 15% of all infrastructure caused delays											

Note: UK 2006-07 to 2010-11, by infrastructure delay cause. Figures do not include incidents or delay due to maintenance trains etc.

Efficiency and expenditure

Efficiency

Having an accurate calculation of the change in Network Rail's efficiency is an important part of our assessment of its financial performance. There several ways of measuring efficiency. To make the presentation as straightforward as possible we are presenting performance on a real economic efficiency measure (REEM) basis.

In our annual efficiency and finance assessment in September we will also present Network Rail's financial performance against our determination and expenditure in the previous year.

Controllable opex efficiency on a REEM basis was 6.7% in 2010-11, 3.5% for the two years to 2010-11, 1.3% ahead of Network Rail's trajectory.[12]

Maintenance efficiency on a REEM basis was 11.3% in 2010-11 and 13.3% for the two years to 2010-11. REEM at the end of 2010-11 is 0.7% ahead of Network Rail's trajectory.

For renewals, both scope (volume) and unit cost savings can count as efficiency improvements as long as a volume reduction is not merely a deferral of spend and it has not led to an adverse effect on the sustainability of the network. An important part of our assessment is comparing Network Rail's current forecast of CP4 renewals volumes with the information it provided when we were reviewing its asset policies. Network Rail has changed the way it reports its telecoms renewals volumes and made some relatively small changes to its forecast CP4 track volumes. It is working on providing telecoms volumes on a comparable basis and explaining the track changes.

The assessment of renewals efficiency for the first two years of CP4 has been difficult and is not complete as Network Rail has not yet demonstrated adequately that some of its reduction in volumes can be treated as efficiency rather than deferral. We are working with Network Rail and Arup to resolve the issues and we will report on Network Rail's renewals efficiency in our annual efficiency and finance assessment, which we will publish in September. Therefore at this stage we cannot yet be confident that Network Rail is on course to meet its CP4 efficiency challenge.

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REEM is a year-on-year efficiency measure that we reported on last year for the first time in our annual efficiency and finance assessment. Network Rail's delivery plan is to achieve generally lower efficiencies in the early years of CP4, offset by higher savings in the later years of CP4. The REEM trajectory mirrors the profiles in Network Rail's delivery plan, which means that in the early years of CP4 actual efficiencies reported on a REEM basis are higher than on a determination basis. Therefore, Network Rail's challenge in the remainder of CP4 will be much harder than we assumed in our determination.

Expenditure

This section contains an overview of Network Rail's expenditure in 2010-11 compared to our PR08 determination, the prior year (2009-10) and the company's own delivery plan. We will report on these matters in more detail in our annual efficiency and finance assessment in September.

The table below summarises Network Rail's controllable opex, non-controllable opex, maintenance and renewals expenditure in 2010-11.

[12] Network Rail's REEM trajectory is available at: www.rail-reg.gov.uk/upload/pdf/nr-cp4-success-010311.pdf

Efficiency and expenditure

	2010-11 actual (£m)	PR08 Determination[1] (£m)	Actual compared to determination (£m)	2009-10 actual (£m)[1, 2]	Actual compared to 2009-10 (£m)
Controllable opex	909	801	*108*	975	*-66*
Non-controllable opex	419	395	24	455	-36
Maintenance	1,068	1,171	*-103*	1,184	*-116*
Renewals	2,234	2,602	*-368*	2,413	*-179*
Total	**4,630**	**4,969**	***-339***	**5,027**	***-397***

1. Uplifted to 2010-11 prices.
2. There has also been a £63m reallocation of pension and bonus costs from opex to maintenance since 2009-10 that effectively offsets reclassification in 2009-10. We have restated 2009-10 to reflect this.
3. Actual 2010-11 expenditure in the table is based on unaudited data.

Controllable opex was £909m. This is £108m (13.5%) higher than our determination largely due to Network Rail exiting CP3 in a worse position than our determination assumption. Controllable opex is £66m (6.8%) lower than in 2009-10 and £62m (6.4%) lower than Network Rail's 2010 delivery plan update. Cumulative controllable opex for the first two years of CP4 is £201m (11.9%) higher than our determination.

Controllable opex savings in 2010-11 include reduced staff incentives, staff expenses and headcount, particularly following restructuring in operations and customer services. Also, there were one-off re-organisation payments to contractors made in 2009-10 that were not made in 2010-11. These savings have been partly offset by increased headcount in asset management and fines.

Non-controllable opex was £419m. This is £24m (6.1%) higher than our determination, £36m (7.9%) lower than in 2009-10 and £2m (0.5%) lower than Network Rail's 2010 delivery plan update. Cumulative non-controllable opex expenditure for the first two years of CP4 is £108m (14.1%) higher than our determination. The most significant cost saving in 2010-11 was reduced traction electricity costs largely as a result of changes in market prices for power, partly offset by increased cumulo rates.

Maintenance expenditure was £1,068m. This is £103m (8.8%) lower than our determination, £116m (9.8%) lower than in 2009-10 and £10m (0.9%) higher than Network Rail's 2010 delivery plan update. Cumulative maintenance expenditure for the first two years of CP4 is £83m (3.6%) lower than our determination.

The main driver of these maintenance savings has been the restructuring of the maintenance organisation with headcount decreasing by around 1,350 (7.5%) during 2010-11. Other savings include reduced use of contractors (particularly in telecoms), standardisation of delivery methods, the introduction of new plant, equipment and technologies, better stock utilisation and stricter overtime approval procedures. Offsetting these, Network Rail made a one-off incentive payment to maintenance staff to harmonise contractual terms and conditions and has agreed additional travel allowances to displaced staff.

Renewals expenditure was £2,234m. This is £368m (14.1%) lower than our determination. Renewals expenditure is £179m (7.4%) lower than in 2009-10 and £632m (22.1%) lower than Network Rail's 2010 delivery plan update. Cumulative renewals expenditure for the first two years of CP4 is £1,138m (19.7%) lower than our determination. In its internal reporting Network Rail has identified savings in unit costs and scope efficiencies. Unit cost savings are due to a number of factors including; an improved procurement process for building and civils projects, lower contract prices in a competitive construction sector and the incremental benefit of the transformation programme. Network Rail thinks it has achieved scope efficiencies through its revised asset policies.

Scotland

Customer service

Network Rail and ORR agree that it is vital for the company to continue working towards putting customers at the heart of all it does. Together we are developing a robust basis for assessing progress towards 'best in class' customer service, using quantitative and qualitative approaches, and will aim to agree a trajectory for improvement by the end of the year.

Passenger satisfaction for First ScotRail (from Passenger Focus' autumn 2010 survey) was 86%, above the national result of 84%, albeit 4% lower than the previous two surveys (spring 2010 and autumn 2009).

However, First ScotRail's satisfaction with Network Rail was among the lowest of all franchised TOCs, with only Arriva Cross Country and First Great Western having lower overall satisfaction scores. In particular First ScotRail rated Network Rail poorly for 'decision involvement' and being 'timely'.

In contrast, Network Rail's later efforts to keep trains running during the exceptional winter conditions were welcomed. The conditions were in general handled more successfully than the previous winter showing that lessons had been learnt, although there is still scope for improvement.

The disruption did, however, again expose the variable quality of information provided to passengers. This is a whole industry issue though Network Rail has a key role and has been playing its part managing special training and improving short-term planning arrangements to help operators introduce and communicate contingency timetables. It is essential that the industry's programme to improve such information is carried through quickly and effectively. We are monitoring progress and have also consulted on licence changes that will clarify and align responsibilities in this area.

We imposed a £3m penalty for poor implementation of the **ITPS** project, reflecting a significant failure to take sufficient account of the risks to customer service. During the year Network Rail also centralised its timetable planning function with significant loss of experienced staff. This led to a dip in standards, particularly affecting short term freight train alterations, and a considerable increase in schedule clashes (although the direct effect on end customers was relatively modest). Over the full year delays due to train planning errors were 71% worse than in 2009-10. Network Rail is implementing a plan to address this, though it has not yet borne fruit.

We welcome Network Rail's progress with its transformation plan to devolve more authority and autonomy to its routes and the work done in Scotland to help pilot the process. Understandably, some customers have concerns about the approach, notably FOCs and TOCs whose operations span multiple routes. Network Rail needs to ensure the new devolved arrangements work for all its customers. In this context it intends to appoint a freight director.

Network Rail made good progress with its gauging strategy and is working well with its customers through the gauging stakeholder group. It has developed KPIs for dealing with customer requests and is meeting its targets.

We are not satisfied that Network Rail is managing electricity transmission losses efficiently. A cross-industry meeting discussed the feasibility of improvements but progress since has been disappointing and we are pressing Network Rail to tackle the issue quickly. In future we want to change incentives to encourage better management of the issue.

Scotland

Train service performance

Until October, train service performance across the industry had been good and most high level measures were tracking broadly the trajectory required. Performance dipped in the autumn, then severe weather from late November through to January had a significant impact across the country. At the end of March Network Rail had failed to meet any of its 2010-11 regulated performance targets in Scotland.

We have considered carefully whether these failures represent a breach of Network Rail's licence obligations. Following a thorough review we concluded that the winter conditions were genuinely exceptional and that, were it not for those conditions, Network Rail was likely to have met its obligations in respect of Scottish passenger services. We also considered that overall it had managed performance reasonably well during the severe weather and clearly better than in the previous winter. We therefore concluded that there had been no licence breach. However there is still room for improvement and we expect lessons to be learnt and put into effect for future years. We have published our detailed findings[13].

While we acknowledge that the exceptional winter was handled reasonably well, disruption was nonetheless severe. We look for continued efforts to achieve sustained improvement in the ability to maintain service to customers in the face of such challenges, and we will expect to see further improvements when we next experience severe weather.

Our analysis of the winter has highlighted a concern about the outlook for delays to passenger services. Although our concerns are greatest for England and Wales where we have required the company to set out its plans to address this, we will also monitor its progress generally[14].

Freight delay figures also fell short of the regulatory requirement for the year, although the operators indicated that they did not wish us to take action. It is not acceptable for regulated outputs simply to be overlooked. Equally, we have no wish to hold Network Rail to deliver obligations against the interests of its customers and rail users. We therefore require Network Rail to quickly review with its FOC customers its commitments. If in the light of these discussions Network Rail wishes to formally request a change to its regulatory objectives, we would consider it.

Network Rail remains well ahead of the PR08 targets for reducing the impact of planned disruption from engineering work. It has responded positively to our pressure to develop a more robust plan for the remainder of CP4 in which all parties can have confidence.

Developing the network

Airdrie to Bathgate

This project was completed and opened to services on 12 December as planned. Network Rail overcame set backs we reported on previously, namely project slippage and extreme weather conditions. New stations were built at Blackridge, Armadale and Caldercruix, as well as the closure and relocation of Drumgelloch and Bathgate stations, and enhanced station works at Airdrie, Uphall and Livingston North. The project re-establishes a link lost in the 1950s and increases the options for people travelling between Scotland's two main cities.

[13] www.rail-reg.gov.uk/upload/pdf/operational_performance_letter_jun11.pdf

[14] www.rail-reg.gov.uk/upload/pdf/passenger_delays_030511.pdf

Scotland

Paisley corridor improvements

This scheme is designed to improve commuter journeys into Glasgow from Ayrshire and the Clyde coast. This year a number of advance and enabling works were completed, including the commissioning of two new platforms at Glasgow station, and track and switches & crossings work on the Elderslie loop.

G

Ayrshire and Inverclyde infrastructure enhancements

Works were completed on time to accommodate the planned introduction of longer trains.

Edinburgh to Glasgow improvement programme

Design work on the electrification and infrastructure elements of this programme has started. We have commissioned the independent reporters to review Network Rail's commercial submissions and delivery plans for the constituent projects and assist ORR to determine the efficient price of the works. This is a significant programme of work for Network Rail to manage. Its role will include the integration of the new operational requirements with the changed infrastructure and rolling stock.

G

Asset management

Through the year we continued to find evidence of the gap between Network Rail's **asset management capability** and best practice. The continuing inability to demonstrate, through **whole life cost** analysis, the optimal balance of maintenance and renewal remains a key concern. A major reporter study of civil engineering structures management highlighted serious shortcomings.

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We have worked with Network Rail to agree improvement programmes to address known shortfalls. In January the Network Rail and ORR boards agreed a detailed **roadmap** for the company to deliver capability improvements steering towards best practice by 2014. We are scrutinising Network Rail's progress. The first milestone, an **asset information vision**, was delivered slightly late but comprises an ambitious and impressive plan to modernise Network Rail's outdated and inefficient asset information architecture and processes, a huge challenge and a key enabler for efficient asset management. We are concerned that Network Rail has missed its roadmap commitment to provide draft CP5 asset policies by May 2011.

G

In February, the independent reporter concluded its extensive **civil structures audit** with a substantial recommended improvement programme. Drawing on this, we expect Network Rail to table its detailed action plans for our agreement very shortly.

Y

We reviewed the implementation of Network Rail's **maintenance restructuring** to ensure that safety was maintained in the lead-up to go live on 1 April 2011. We will continue to monitor its impact, particularly with regard to workload implications for section managers and the competence of staff in new roles. If it appears to be having an impact on asset reliability and track quality we will ensure that action plans are put in place to resolve these quickly.

Network Rail's project to introduce reliability centred maintenance on signalling equipment (**RoSE**), has been running for several years. The independent reporter is carrying out a review of RoSE in comparison with RCM best practice, and is also examining the scope for further RCM roll-out, within signalling and to other asset groups. Findings by the year's end were disappointing, indicating only 50% usable coverage on signalling assets.

Y

Scotland

Deferral of renewals within CP4, largely to exploit more efficient means of delivery, is not currently causing us serious concern. It does not appear to be having an effect on short-term asset performance and while it increases the delivery challenge in the next few years, this should not be insurmountable.

We monitor **asset serviceability and sustainability** through condition and reliability KPIs set out in Network Rail's 2010 delivery plan update. Network Rail achieved most KPIs in 2010-11.

We are pleased to note that Network Rail has caught up delivery of plain line track in Scotland since Q3. Year end volumes of both switches & crossings and plain line work slightly exceeded plan.

The number of incidents caused by **track assets** in Scotland were 8% higher in 2010-11 than in the previous year, mainly because of an increase in TSRs due to the condition of the track. Delay minutes caused by track assets were 28% higher, largely driven by an increase in delay minutes relating to track faults and broken rails. The increase is due to a few significant incidents for which response was hampered by the severe winter weather.

Non-track asset incidents and delay minutes show improvement from the previous year. The number of incidents improved by 14% and the number of delay minutes improved by 20%. In line with the national trend, however, delays per incident were increased for several categories of non-track asset, most notably for electrification assets. Network Rail is investigating the reasons for this. Its adoption of remote condition monitoring should help to improve non-track asset performance.

Efficiency

Controllable opex efficiency on a real economic efficiency measure (REEM) basis was 12.4% in 2010-11 and 8.3% for the two years to 2010-11, which is 2.7% ahead of Network Rail's trajectory.

Maintenance efficiency was 7.2% in 2010-11, 8.6% for the two years to 2010-11, which is 5.9% behind Network Rail's trajectory.

Our assessment of renewals efficiency for the first two years of CP4 is not complete. Therefore at this stage we cannot yet be confident that, overall, Network Rail is on course to meet the CP4 efficiency challenge. We will report further in September.

Expenditure

Controllable opex was £83m. This is £10m (13.7%) higher than our determination and £10m (10.8%) lower than in 2009-10. It is £11m (11.7%) lower than Network Rail's 2010 delivery plan update.

Non-controllable opex was £28m. This is £5m (15.2%) lower than our determination, £6m (17.6%) lower than in 2009-10 and £4m (12.5%) lower than Network Rail's 2010 delivery plan update.

Maintenance costs were £96m. This is £15m (13.5%) lower than our determination and £6m (5.9%) lower than in 2009-10. It is £1m (1.1%) higher than Network Rail's 2010 delivery plan update.

Renewals expenditure was £264m. This is £72m (21.4%) lower than our determination and £27m (11.4%) higher than in 2009-10. It is also £64m (19.5%) lower than Network Rail's 2010 delivery plan update.

These variances reflect the issues on page 34, a more direct (lower) allocation of some costs to Scotland, the greater impact of the severe weather and that maintenance efficiency in Scotland started CP4 ahead of in England & Wales.

Key statistics

Great Britain / England and Wales

	2009-10	2010-11													End of	Regulatory targets	
	P13	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	Q4	End of 2010-11	End of CP4
Network availability															MAA		
Passenger Disruption Index (PDI-P) [r4]	1.18	1.26	0.79	0.30	0.19	0.25	0.36	0.43	0.41	0.42	0.75	0.64	0.56	0.35	0.52	0.91	0.63
Freight Disruption Index (PDI-F)	0.81	0.74	0.97	0.84	0.82	0.85	0.79	0.97	1.02	0.92	1.07	0.77	1.04	0.82	0.89	1.00	1.00
Train performance															MAA		
PPM (including Scotland) [r1]																	
Total PPM	93.5%	94.0%	93.7%	93.0%	92.6%	94.2%	93.5%	92.8%	86.5%	82.1%	81.2%	90.4%	92.5%	92.9%	90.9%	N/A	N/A
Long Distance	91.2%	90.7%	91.2%	90.3%	89.9%	90.2%	90.7%	91.8%	84.8%	76.0%	74.0%	88.1%	90.4%	91.0%	87.7%	89.8%	92.0%
London and South East	93.6%	94.4%	93.8%	92.8%	92.1%	94.7%	93.6%	92.6%	86.9%	82.9%	82.6%	90.7%	92.7%	93.3%	91.1%	92.0%	93.0%
Regional	94.2%	94.1%	93.8%	93.6%	93.8%	93.8%	93.9%	93.2%	85.9%	85.3%	83.1%	91.6%	93.1%	93.0%	91.5%	91.0%	92.0%
FPM (National) [r5]															MAA		
Total FPM	75.4%	79.5%	77.9%	78.2%	76.9%	79.3%	77.1%	77.7%	71.3%	63.1%	63.0%	70.7%	71.8%	73.5%	73.9%	N/A	N/A
CaSL (England and Wales Only)															MAA		
Long Distance	3.8%	3.8%	3.4%	3.6%	4.0%	3.9%	3.6%	3.0%	4.5%	11.2%	13.5%	4.0%	3.4%	3.5%	4.9%	4.5%	3.9%
London and South East	1.6%	1.5%	1.8%	2.2%	2.4%	1.6%	1.9%	2.1%	2.8%	6.7%	5.8%	2.1%	1.8%	1.9%	2.6%	2.2%	2.0%
Regional	1.8%	1.7%	1.9%	1.7%	1.7%	1.8%	1.5%	1.9%	2.9%	4.2%	6.3%	2.3%	2.1%	2.4%	2.4%	2.5%	2.3%
Delay Minutes (actual delay minutes)															MAT		
Passenger (1000s of minutes)	348.5	410.6	421.3	449.2	460.2	380.7	393.6	450.5	760.0	946.1	826.1	532.5	441.6	410.9	6,883.5	5,790.0	4,980.0
Freight (Normalised by per 100 train km)	3.81	2.83	4.08	3.59	3.81	3.42	3.28	3.73	4.65	7.93	6.92	4.38	4.00	3.98	4.28	3.41	2.94
Infrastructure															MAA		
Number of asset failures [r2]	2,787	3,139	3,156	3,100	3,118	2,816	2,825	2,825	2,958	3,097	2,596	2,942	2,788	2,804	2,936	N/A	N/A

GB data collected annually

Customer satisfaction [r7]	**2008-09**	**2009-10**	**2010-11**
TOC (mean satisfaction score)	3.09	3.35	3.16
FOC (mean satisfaction score)	2.93	2.95	3.11

Finance	**2008-09**	**2009-10**	**2010-11**
Expenditure (£m)	6,691	5,712	5,277
Controllable Opex	866	881	826
Non-Controllable Opex	390	421	391
Maintenance	1,057	1,082	972
Renewals [r3]	2,996	2,176	1,970
Enhancements [r8]	1,382	1,152	1,118

Station Stewardship	**2008-09**	**2009-10**	**2010-11**	**Regulatory target**
Category A	2.44	2.38	2.30	2.48
Category B	2.47	2.46	2.40	2.60
Category C	2.52	2.52	2.47	2.65
Category D	2.52	2.54	2.47	2.69
Category E	2.57	2.58	2.50	2.74
Category F	2.55	2.56	2.50	2.71

Data source: Network Rail

- In this Monitor, Q3 refers to periods 8-10, 17 October 2010 - 8 January 2011
- Historical delay minutes maybe refreshed due to dispute resolution proccess
- Delay data does not include incidents affecting non-PfPI trains
- 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.
r6 Adjusted Interest Cover Ratio (AICR) has been removed as a series from this table. The AICR will be provided along with key commentary in the finance publication in September
r7 Customer satisfaction scores sourced from GfK NOP Customer & Freight End User Surveys 2010
r8 For 2010-11 the enhancements numbers are total actual enhancements expenditure (PR08 + non-PR08)

Key statistics

Scotland

	2009-10	2010-11												End of	Regulatory targets	
	P13	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	Q4	End of 2010-11	End of CP4
Network availability															MAA		
Passenger Disruption Index (PDI-P) [r4]	0.30	0.07	1.54	0.12	0.72	1.17	0.27	0.14	0.60	0.10	0.07	0.09	0.06	0.22	0.40	N/A	N/A
Train performance															MAA		
PPM [r1]																	
First ScotRail	92.5%	94.0%	94.8%	94.7%	94.8%	95.0%	94.1%	93.6%	86.9%	72.1%	74.0%	87.1%	92.0%	92.0%	90.1%	91.3%	92.0%
Delay minutes (actual delay minutes)															MAT		
Passenger (1000s of minutes)	36.6	30.0	27.5	23.3	25.8	22.3	25.0	26.7	48.6	130.6	71.3	50.0	30.0	29.5	540.5	410	382
CaSL															MAA		
First ScotRail	2.0%	1.7%	1.2%	1.2%	1.4%	1.0%	1.2%	1.6%	2.0%	10.3%	8.1%	3.2%	1.9%	1.9%	2.7%	N/A	N/A
Infrastructure															MAA	MAA	
Number of asset failures (NR Scotland Route) [r2]	262	342	365	339	296	279	330	291	273	231	261	325	295	311	303	N/A	N/A

Scotland data collected annually

Customer satisfaction [r7]	**2008-09**	**2009-10**	**2010-11**
TOC (mean satisfaction score)	3.00	2.78	2.79

Finance [r6]	**2008-09**	**2009-10**	**2010-11**
Expenditure (£m)	637	652	662
Controllable Opex [r3]	87	93	83
Non-Controllable Opex	32	34	28
Maintenance	102	103	96
Renewals	306	237	264
Enhancements [r8]	111	186	191

Station Stewardship	**2008-09**	**2009-10**	**2010-11**	**Regulatory target**
All Stations	2.39	2.39	2.33	2.39

Data source: Network Rail

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