Network Rail monitor - Q4 2008-09
4 January - 31 March 09
and Annual Assessment 2008-09

OFFICE OF RAIL REGULATION

Network Rail monitor – Executive brief

Overview

Network Rail succeeded in delivering its main output obligations for the end of Control Period 3 (CP3), as set in 2003, which included reductions in delays to train services, improvement in the asset stewardship index, and delivery of projects including in particular the main elements of the West Coast route modernisation. However on parts of the network its performance was unsatisfactory, most notably on the West Coast main line where performance was patchy throughout the modernisation works and has been poor since the upgraded services were introduced.

The company has failed to make significant improvement to its poor scores for customer satisfaction as reported by train operators, and is perceived as bureaucratic and unresponsive. These behavioural characteristics need to be addressed with as much effort and effectiveness as the company has devoted to meeting more formal regulatory targets.

Scotland

The same points generally apply to the network within Scotland.

The public performance measure (PPM) averaged 90.6%, unchanged from 2007-08 but 0.9% behind the plan agreed with First Scotrail. Network Rail delays rose 6% while the operator's own performance and inter-operator delays improved. Performance suffered early in 2009 following work on West of Scotland resignalling, where weaknesses in implementation led to a period of serious delays before the new signalling system was made fully operational and effective. Although there are still problems with parts of the service around Glasgow, Network Rail and the operators have not yet been able to identify the root cause.

Siemens, on behalf of Transport Scotland, experienced difficulties obtaining gauging information from Network Rail to enable the design of new trains for use in Scotland. This exposed deficiencies both in Network Rail's gauging database and in its handling of the specific requirements in this case. The company is now remedying the problems.

Safety

The risk to passengers associated with Network Rail activities reduced by 8.7% during the year. The element arising from potential train accidents remained stable, but within this the risk from misuse of level crossings rose. We consider that overall the risks from level crossings that are within Network Rail's control are reasonably well-managed; we welcome Network Rail's commitment to a programme of removal of user worked crossings and its high profile awareness campaign "Don't run the risk."

Workforce safety deteriorated in the year and ended above Network Rail's internal target. There were three fatalities. Risks associated with projects and construction work are a particular concern given the high volumes of such activity due to be carried out in CP4. However, we recognise Network Rail's commitment to measure and improve safety culture.

Satisfaction of Network Rail's customers

Delivery of defined 'hard' outputs (such as levels of delay) is only one aspect of success for a world class company. Satisfying its customers on a broader front is essential. We place great importance on Network Rail's own surveys of its (train operating) customers and it is very disappointing that they continue to show low levels of overall satisfaction, with average scores below the midpoint of the range for both passenger and freight operators. Personal relationships, honesty and understanding of its customers' needs scored relatively well, but this was outweighed by perceptions that the company is unresponsive, slow and does not always appear well integrated. Achieving real improvement in these areas will be one key measure of the success of Network Rail's 'transformation plan'.

Network Rail monitor – Executive brief

Train service performance

Network Rail reduced the amount of delay (to all trains) for which it is held responsible by a further 6.2% during the year and bettered the regulatory target set in 2003 by 3%.

Overall passenger train performance continued to improve through the year. Although Network Rail did not quite achieve its own business plan target for reduction in delay to passenger services, the industry achieved the 90.6% PPM target which it had set itself. PPM is now at its highest since the measure was introduced.

Most passenger operators saw improvements and some made striking progress, notably Great Western after years of below-par performance. However black spots remain. The worst by far is on the West Coast main line which suffered not only from planned disruption due to engineering works, but from highly volatile underlying performance. PPM for Virgin Trains over the year was 80% and in period 13 it was still below 84%, unacceptable levels for a prestige operation on a route which has benefitted from massive investment. The great majority of delays are the responsibility of Network Rail, and it must be a top priority to address these problems. Virgin Trains disputes Network Rail's plans to improve performance in 2009-10 on the grounds that they are an inadequate response; at a meeting we called with both parties to progress matters Network Rail agreed to review its plans and expects to make an improved proposal before we meet again in mid-June.

Network Rail delay to freight services reduced by 9.8% whilst freight train mileage fell by 2.8% over the whole year, giving a 7.2% reduction in delay per 100 freight train kilometres.

Asset stewardship

Overall asset reliability and condition improved again in 2008-09, and the asset stewardship index improved by 6%, comfortably beating the regulatory target set in 2003. This was largely driven by improvements in track assets, including impressive reductions in the numbers of track faults and (particularly) of temporary speed restrictions. There was no improvement in the performance of non-track assets and the trend in this area is a cause for concern, particularly in some key asset categories – e.g. the reliability of points is no better now than it was in 2005. Wide variations in asset reliability across the network suggest considerable scope for the spread of best practice. An area of comparative success has been the containment of delays due to cable thefts.

A specific issue we raised with Network Rail during the year was how it manages the introduction of new technology. Exploiting technological advances to improve quality and efficiency is essential but in recent years this has often been poorly managed, leading to performance deterioration (e.g. following the introduction of axle counters and new designs of points). Network Rail has assured us that it has learned from these episodes and we will monitor future instances to see that this is so.

Developing the network

Work on West Coast route modernisation to enable the introduction of improved services, as required by the 2003 access charges review, was completed in time for the December 2008 timetable. Due to earlier programme slippage resulting in enforcement action by ORR in spring 2008, compressing the remaining work into this timescale caused extensive disruption during engineering possessions affecting both passenger and freight users. However we agreed that this was preferable to deferring completion of the project and realisation of the significant frequency and journey time benefits. In the event these have been diluted by poor operational performance (described above).

Network Rail effectively delivered its part of the complex works to enable the Thameslink project to deliver 'Key Output 0' on time in March 2009. We are completing a review of its proper role in delivery of the overall programme, which presents the whole industry with further major challenges during CP4. Overall it has also made good progress towards delivering three major enhancement projects in Scotland: Airdrie-Bathgate, Glasgow Airport Rail Link and Glasgow-Kilmarnock.

Network Rail monitor – Executive brief

Efficiency

There have been significant movements in the financial efficiency index (FEI) in Q4 compared with the Q3 forecast, such that the FEI target in 2008-09 is now reported as being met. Network Rail has explained to us the reasons for this movement. They include items which we and Network Rail do not consider to be efficiencies, such as an underspend on elements of expenditure which have simply been deferred. Adjusting for such items would lead to an actual FEI below target.

We estimate Network Rail's efficiency improvement in operating, maintaining and renewing the railway in 2008-09 to be 4.5% compared with a regulatory assumption in the 2003 access charges review (ACR03) of 6%. This means that Network Rail fell further behind the cumulative ACR03 assumption for CP3 of 31% after a poor performance in 2007-08. We estimate that Network Rail has achieved cumulative efficiencies over the control period of around 27% - a disappointing result given the good progress earlier in CP3.

Planning the network

The company has continued to manage the industry's process for producing Route Utilisation Strategies (RUSs) most effectively. Four further RUSs became established during the year and work on the remainder of the 'first generation' programme is progressing well.

Licence compliance

As noted above, Network Rail delivered its obligations on West Coast route modernisation, in line with the revised plan we accepted following enforcement action at the end of 2007-08.

During the year the company was operating under an enforcement order to improve its management of engineering work involving possessions, following serious overruns at New Year 2008. We have been impressed by how it has now responded to the need to improve its performance in this area. Improvements had to be implemented by the end of December, following which we asked the independent reporter, Halcrow, to audit Network Rail's processes. The reporter advised that he believed the company had complied with the order, and at its May meeting the ORR Board formally agreed this.

Acknowledgment

We are grateful to Network Rail for their assistance in producing this publication three months ahead of our usual annual assessment timetable.

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Feedback

We welcome feedback on the content and format of this publication. If you have any comments, please contact Sukhninder Mahi on 020 7282 2053 or Sukhninder.Mahi@orr.gsi.gov.uk

1. Great Britain summary data Q4 2008-09 (4 January - 31 March 2009)

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
1 - Safety risk	Actual	46.3	46.9	48.0	48.3	n/av	n/av
RSSB train accident precursor measure (composite)	Previous year's actual	48.6	48.8	49.8	47.8	n/av	n/av
11 (a) - Customer satisfaction (TOC)	MORI survey	-0.21	-	-	-	-0.25	-
Train operators' attitude to Network Rail)	Previous year	-0.14	-	-	-	-0.21	-
11 (b) - Customer satisfaction (FOC)	MORI survey	-0.85	-	-	-	-0.57	-
Freight operators' attitude to Network Rail	Previous year	0.00	-	-	-	-0.85	-
2 - Passenger train performance	Actual at end of quarter	89.9	90.1	90.5	90.8	90.6	90.6
Public performance measure (PPM) (MAA) (%)	Industry target	89.5	90.0	90.2	90.6	90.6	90.6
3 - Network Rail delay minutes	Year to date actual	9.5	1.9	3.8	6.8	8.9	8.9
Number of delay minutes (millions) attributed to Network Rail	ORR target	9.8	2.0	4.1	7.0	9.1	9.1
4 (a) – Delays to passenger trains	Normalised for the quarter	1.63	1.52	1.46	1.80	1.58	1.60
Network Rail delay minutes to Train operating companies per 100 train km	ORR derived target	*1.70*	*1.57*	*1.70*	*1.81*	*1.54*	*1.65*
4 (b) – Delays to freight trains	Normalised for the quarter	4.23	3.95	4.01	4.26	3.87	4.04
Network Rail delay minutes to Freight operating companies per 100 train km	Network Rail target	*3.76*	*3.94*	*3.95*	*4.09*	*3.62*	*3.95*
5 - Asset failures	Actual 4-weekly average	3,998	4,088	3,936	3,780	3,891	50,866
Number of infrastructure incidents	Previous year's actual	4,583	4,431	4,230	3,862	3,998	53,425
6 - Asset stewardship index (ASI)	Actual	0.63	0.62	0.62	0.60	0.60	0.60
Composite of seven asset condition measures	Network Rail target	*0.70*	*0.68*	*0.66*	*0.63*	*0.61*	*0.61*
7 - Activity volumes (track renewals only)	Actual cumulative	97.1	94.9	97.0	96.5	101.7	101.7
% Activity compared with plan	Network Rail target	*100*	*100*	*100*	*100*	*100*	*100*
8 (a) - Expenditure (OMR)	Year to date actual	5,187	1,163	2,420	4,142	5,556	5,556
Operating, maintaining and renewing the network	Year to date budget	*5,611*	*1,255*	*2,630*	*4,456*	*5,895*	*5,895*
(£ millions)	Variance %	-7.6	-7.3	-8.0	-7.0	-5.8	
8 (b) - Expenditure (enhancements)	Year to date actual	743	249	542	963	1,377	1,377
Enhancing the network	Year to date budget	*749*	*276*	*614*	*1,020*	*1,278*	*1,278*
(£ millions)	Variance %	-0.8	-9.8	-11.7	-5.6	7.7	
9 - Financing	Actual	69.3	66.3	65.8	67.5	70.0	70.0
Net debt to RAB (Regulatory asset base) ratio (%)	Network Rail budget	*72.4*	*66.1*	*66.1*	*67.1*	*68.4*	*68.4*
10 - Financial efficiency index (FEI)	Year to date actual	78.1	79.2	79.3	77.8	75.3	75.3
Adjusted cost of operations, maintenance and track renewals	Network Rail target	*77.9*	*78.4*	*78.2*	*77.0*	*75.3*	*75.3*

See notes on pages 56-58. Network Rail's own internal targets are in *italics.* For KPI 10 actual performance against target is overstated - see page 40.

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
1 - Safety risk	Actual	**46.3**	**46.9**	**48.0**	**48.3**	**n/av**	**n/av**
RSSB train accident precursor measure (composite)	Previous year's actual	**48.6**	**48.8**	**49.8**	**47.8**	**n/av**	**n/av**

KPI 1 – Safety Risk

Workforce safety continues to be a major concern. There were three fatal accidents involving workers during the year on Network Rail managed infrastructure. This is the highest figure since 2005. The indices for workforce accidents and injuries have also increased and exceed the target for the year.

The level of risk to passengers from train accidents is broadly constant, at a little less than half of its 2002 level.

There were no train-related passenger accidental fatalities and for the second year running there were no child trespasser fatalities.

Numbers for safety related incidents on level crossings rose with a peak in May – July but showed a decline towards the year end. There were 13 fatalities involving members of the public, including those at level crossings (but excluding trespass and suicide).

Data sources

We assess Network Rail's performance using our own and industry (quantitative) data alongside inspection and investigation intelligence (qualitative) information. This report is based substantially on quantitative data.

Quantitative data

The industry has developed a number of useful data measures involving key performance indicators such as accident rates, train accidents, asset defects and adverse public behaviours. These are analysed in the safety risk model (SRM) and the precursor indicator model (PIM), which considers risks to passengers, workforce and the public arising from train accidents. Network Rail reports its performance in the safety and environment assurance report (SEAR), compiled every four weeks.

We also extract accident and injury data from reports made to us under the legal obligations of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR).

Data sources alone cannot provide a complete picture as the number of accidents is generally small and changes may not be statistically significant.

1. Great Britain

Precursor indicator model

Because train accidents are relatively infrequent, it can be useful to look at trends in the lower level events that preceded them. RSSB's PIM provides a measure of the underlying risk from train accidents by tracking changes in the occurrence of accident precursors.

Within the PIM, a train accident is defined as one of the following: train derailment, a train collision, buffer stop collisions, train fire, train striking road vehicle at a level crossing and other train striking road vehicle, not resulting in a derailment. RSSB's safety risk model identifies 84 precursors to these accidents which fall into six main precursor groups.

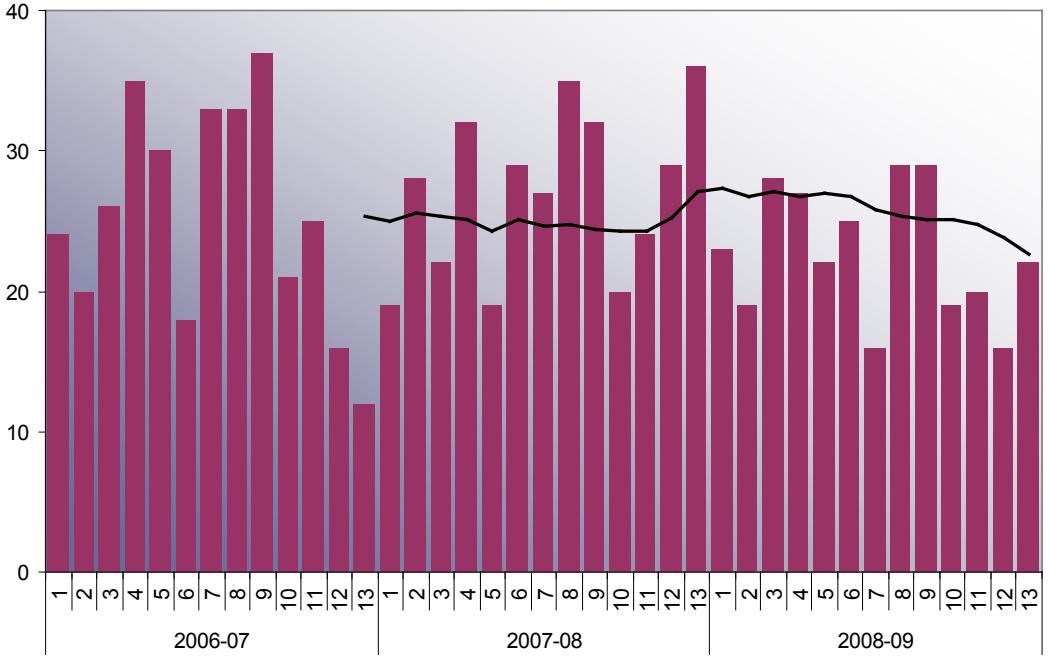
The PIM value is an annual moving average, so at any point in time it reflects precursors that have occurred in the last 12 months, normalised by train miles to account for changes in the level of activity on the railway. The risk level at the end of March 2002 is taken as the reference level for the PIM and is set to 100.

- The PIM is therefore a measure of industry performance and not Network Rail alone. It has remained broadly unchanged over the last year. However, there have been changes in the level of risk for some of the six main precursor groups;
- the risk from infrastructure failures due to problems with structures and track is down 1.8 points over the year, although this improvement was partially offset by an increase in risk due to environmental effects, such as heavy rain and strong winds, and wrong-side signal failures, both of 0.4 points;
- the risk from objects on the line was also down over the year with reductions in the risk from vehicle incursions and objects deliberately placed on the line of 1.7 points in total; and
- there was a relatively large increase in the risk from misuse of level crossings due to public actions of 3.5 points, and the level of risk for this group is now showing a distinct upward trend.

Signals passed at danger (SPADS)

The provisional total of category A SPADs on Network Rail infrastructure for the year is 294. This is a considerable reduction on the figure of 359 for the previous twelve months. However, 2007-08 contained a six month period where SPADs were at their highest rate since the introduction of TPWS (train protection and warning system). This temporary blip in SPAD trends remained unexplained, despite considerable effort by industry.

Figure 1. Category A SPADs



Source: Network Rail's Safety and Environment Assurance Report P13

1. Great Britain

The total for 2008-09 is still a significant reduction compared with the years before 2007-08 (371 in 2004-05; 328 in 2005-06; and 334 in 2006-07). The level of SPAD risk, as measured by RSSB, is about 15% of the March 2001 baseline figure. This is a measure of how successful the introduction of TPWS has been in reducing train accident risk.

Network Rail continues to work with TOCs through local OPSRAM (operations reduction and mitigation) forums to introduce further improvements in SPAD management.

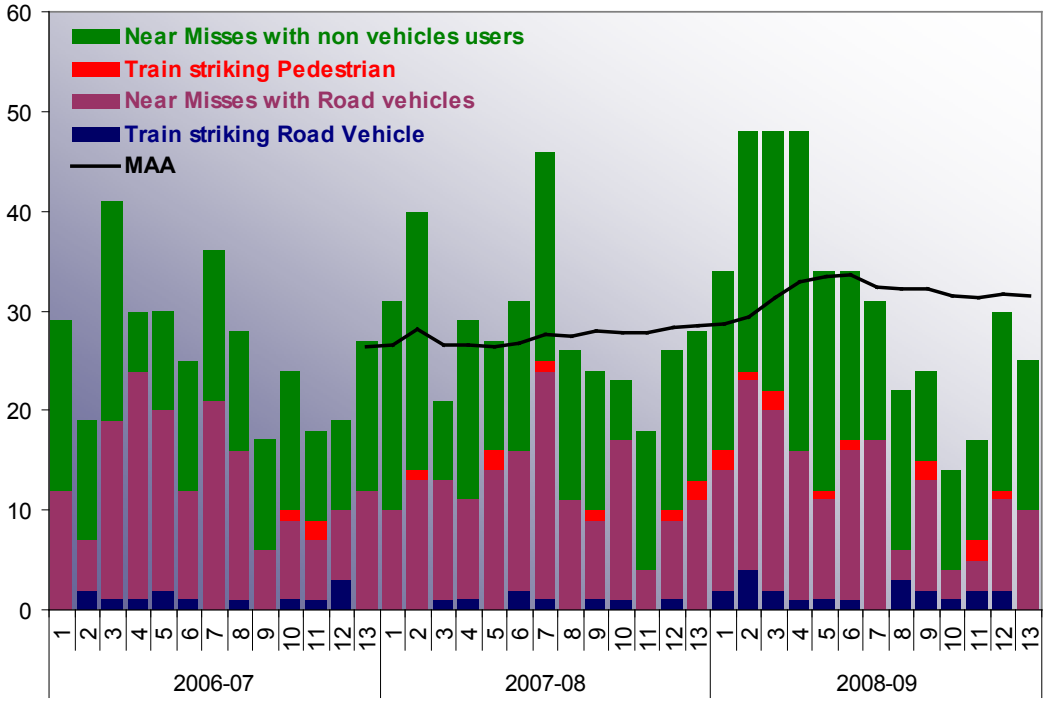
Level crossings

Public misuse of level crossings is the single biggest contributor to train accident risk, although 78% of this risk is to the occupants of road vehicles. However, the risks from level crossings that are within Network Rail's control are reasonably well managed. Therefore we target our resources at those crossings where there are bigger gains to be made in risk reduction. In 2007–08, we looked at user worked crossings (UWC) to see how well users managed the risks to vehicle occupants and pedestrians at the crossings.

In 2008-09 Network Rail committed to a programme of UWC closures and enhancements, partly funded by the CP3 Safety and Environment Fund. The total number of UWCs targeted for closure is 470, with an objective of securing the legal release of 150 of these, by March 2010. A 'fast track' closure system has been developed, with the aim of enabling the negotiation, legal and financial deliverables, as well as the physical removal of assets in 24 weeks. This is an important initiative.

There was a peak in the public misuse of level crossings during the early summer months of 2008. Network Rail is running a hard hitting advertising campaign "Don't run the risk" to raise awareness of the dangers of level crossing abuse.

Figure 2. Level crossings



Source: Network Rail's Safety and Environment Assurance Report P13

1. Great Britain

Infrastructure failures

Track - Much of our work has been to follow up findings of the investigations into the Grayrigg derailment in February 2007, in which a passenger died.

Network Rail has introduced a new standard for the management of points similar to those at Grayrigg, covering both track and signalling disciplines. Amongst other things this requires all defects with fixed stretcher bars and key switch set-up geometry to be recorded in a national database. The collection and management of this data will enable national defect trends to be monitored and corrective actions designed using contemporary information. This database requires at least two rounds of three-monthly inspections to be completed before meaningful data can be identified, so it will not become live for defect management until July 2009.

This is a positive action by Network Rail and, in part, addresses the Rail Accident Investigation Branch (RAIB) Grayrigg recommendations 2 & 3.

Structures - As part of the 2008-09 inspection plan we reviewed Network Rail's arrangements for managing the contractors' design and temporary works. This was during the construction phase of projects with a significant element of structures-related work. The assignment was undertaken solely in Scotland.

The evidence obtained indicated that the risks were being managed in a broadly acceptable manner. However, improvements could be made which would provide more consistency and accuracy in the design certification of permanent and temporary works, and in controlling design changes required during the project's development and construction.

ORR completed structures inspections in both the LNE and Western territories in 2008-09 as a sample check of Network Rail's risk management regime for structures. We focused on two important elements of the management arrangements: the basic quality of the detailed examination report and the quality of the subsequent assessment of the report by the Network Rail engineer.

In both territories it can be concluded from the sample checks done (from 50 structures) that:

- Network Rail's detailed examinations were adequate and reporting standards, with some minor exceptions were good; and
- the rationale for the territory engineers' further actions was not always clear, although we did not find any instances where their assessments/ actions jeopardised safety in a serious way.

Drainage - At Marks Tey, in the Anglia region, there was a derailment in June 2008 and a broken rail some 6 months later. Our investigations identified that the track drainage through this site was ineffective due to blockages; a known precursor to the track faults that led to the broken rail and derailment. Further investigation identified that in the Anglia region Network Rail does not have adequate arrangements in place for ensuring that line-side collector drains and outfalls are adequately inspected and maintained. We have served an improvement notice requiring Network Rail to address this.

1. Great Britain

Passenger safety indicator

This reports the passenger safety risk associated with Network Rail activity, based on the PIM quarterly output, combined with the actual non-train passenger fatalities and weighted injuries at Network Rail managed stations and level crossings, normalised per million passenger kilometres.

The passenger safety indicator ended the year at 0.252. This is an 8.7% improvement on the average for the previous year. However the figure was impacted upon by the deaths of a passenger who fell on an escalator at Birmingham New Street station sustaining fatal head injuries and a passenger who fell onto the track at London Bridge and was struck by a train.

Slips, trips and falls accounted for the greatest proportion of injury to passengers on Network Rail managed infrastructure.

Public safety

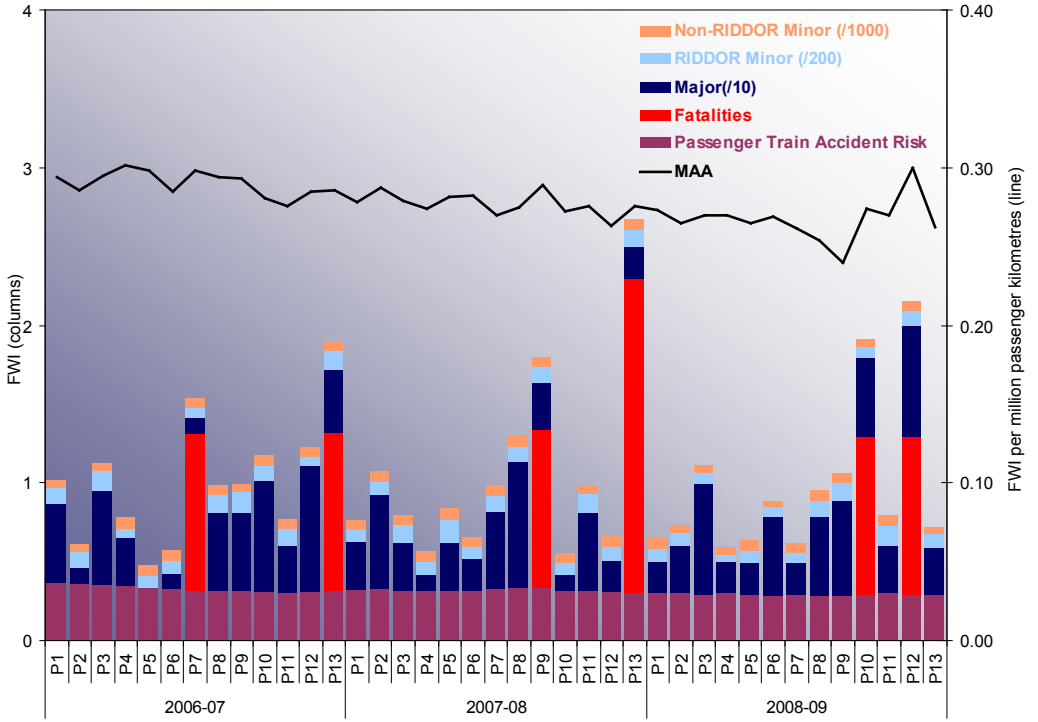
For the second consecutive year there were no child trespass deaths on the network. Levels of adult trespass deaths and suicides are little changed from the previous year.

Route crime is defined as malicious acts that are likely to cause significant risk to the railway. There has been steady improvement in numbers of malicious acts, ending the year 11% better than target.

Network Rail has made some improvements in the management of scrap and fly-tipped materials and is also successfully increasing precautions against cable theft.

Vehicle incursions onto the railway, other than at level crossings, remain fairly static. There were no deaths resulting from incursions during this year.

Figure 3. Passenger safety indicator (Network Rail)



Source: Network Rail's Safety and Environment Assurance Report P13

1. Great Britain

Workforce fatalities and weighted injuries (FWI)

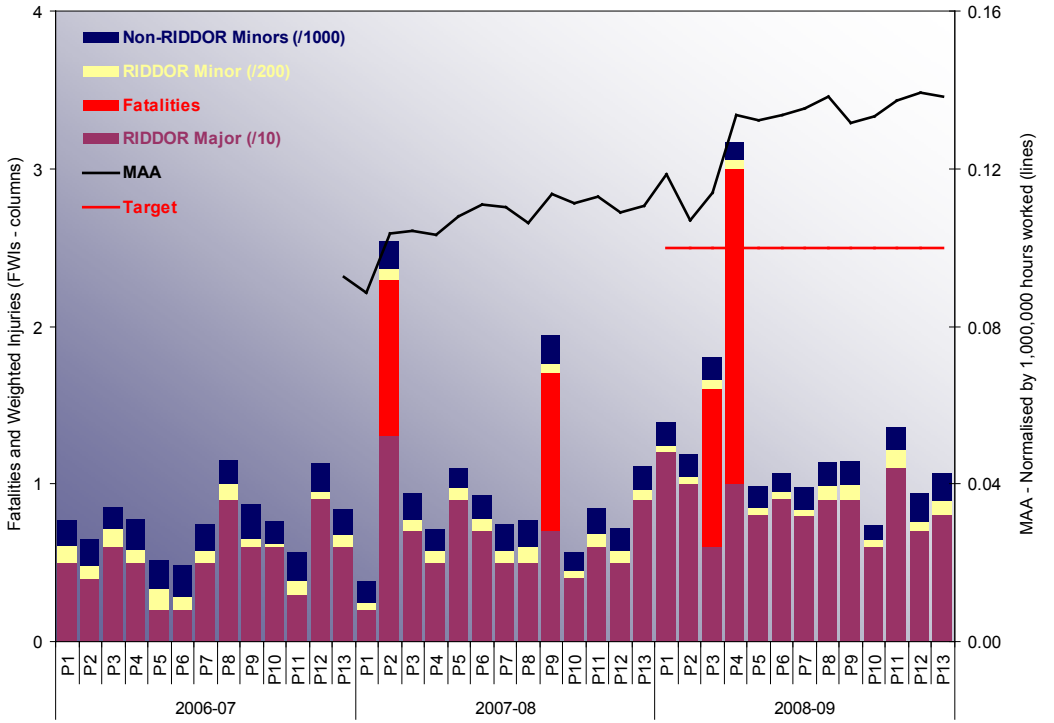
This reports fatalities and weighted injuries for all Network Rail workforce and contractors normalised per one million hours worked.

Workforce safety performance has shown an overall decline ending the year on 0.138, which is 38% worse than Network Rail's internal target of 0.1. Infrastructure investment showed the greatest deterioration, with smaller falls in performance by maintenance and operations and customer services.

Three workers lost their lives making this the worst year since 2005, although the number of major injuries to track workers shows a steady improvement. In June a track worker working on overhead lines in the South East region was fatally injured when the metal basket on a hoist fell away from its hydraulic arm. Two other members of the workforce suffered minor and major injuries in the same event. Two weeks later, a member of the workforce was trapped and fatally injured after being crushed between a JCB and a dumper truck in the London North East region. In July a crane operator was fatally injured when he was struck by a road rail vehicle whilst he was working on a site south of Rugby.

ORR will be giving priority in 2009-10 to the inspection of track worker safety and risk management at construction sites. For the latter, the focus will be on compliance with the Construction (Design and Management) Regulations 2006 to manage non-railway specific health and safety risks.

Figure 4. Combined workforce safety - FWI



Source: Network Rail's Safety and Environment Assurance Report P13

1. Great Britain

RIDDOR

In addition to the three fatal injuries, provisional figures show that Network Rail reported to us around 50 major and 100 over-3-day injuries, as defined by RIDDOR. Contractors reported similar numbers of injuries. This represents around the same number of major injuries as the previous year, but a reduction in over-3-day injuries from a total of 265 for Network Rail and contractors. We remain concerned that the ratio of major to over-3 day injuries suggests it is an incomplete picture.

The main causes of injury to workers are slips and trips and falls from a height of less than 2 metres, assaults to staff and manual handling operations associated with moving loads.

Safety enforcement action

We served 23 enforcement notices on Network Rail during the year: 21 improvement notices (IN) and 2 prohibition notices (PN).

INs covered a range of subjects with requirements to improve safety precautions at level crossings being the most common. Also:

- three notices were served on maintenance of earth protection at GSM-R mast sites;
- two notices were served on planning of safe systems of work for track workers;
- two notices concerned construction site management after a tipper wagon delivering materials to a site damaged a bridge, causing debris to land foul of the running line;
- one notice addressed risk of falls from height from unsafe gantries; and
- another required systems to ensure the proper inspection and maintenance of line-side drains in the Anglia region.

Sample inspection gave us sufficient assurance to consider that an IN served on Network Rail in December 2007 was satisfied. It required improvement to the system for planning and monitoring basic visual inspection of track and arose from inspection activities following the Grayrigg derailment.

A PN was served to stop the use of a look out warning system (LOWS) made by Zollner, following a wrong side failure in which a handset failed to send a warning to a work party, when operated by the lookout. Remedial steps were taken before the equipment was brought back into use. We continue to work with Network Rail to see how the design of LOWS can be improved to reduce human error.

A second PN was served on Network Rail to prohibit track patrolling in a section of the London North West region, until better safety related information was provided to the controller of site safety.

Two cases were heard against Network Rail during the year, arising from:

- the electric shock to two workers at the Channel Tunnel Rail Link construction works at Gasworks Tunnel, King's Cross. A fine of £120,000 was imposed. Jarvis Rail Ltd was also prosecuted for the same incident and fined £66,000;
- the electric shock to a contractor at Chadwell Heath Depot. A fine of £75,000 was imposed. Cabin Club Ltd, the contractor's employer, was also prosecuted for the same incident and fined £20,000.

Additionally, contractors have been prosecuted for incidents that occurred on Network Rail controlled Infrastructure:

- following the electric shock to a worker during upgrade works on the WCML in 2003, Balfour Beatty Ltd, GT Railway Maintenance Ltd and Elec-Track Installations were each fined £200,000;
- following the death of a worker operating a defective mobile elevating work platform outside Edinburgh Waverley Station in 2006, LH Access Technology Ltd and Border Rail and Plant were each fined £240,000; and
- following the death of a track worker at Acton Mainline, Amey Rail Ltd was fined £20,000.

1. Great Britain

RAIB

RAIB inspectors investigate accidents and incidents on the railways to identify root causes and make recommendations for actions to prevent recurrence. RAIB recommendations are addressed to us for our consideration before we send them on to relevant parties.

In 2008-09 RAIB published 19 reports containing recommendations relevant to Network Rail. Of these over 90 related to issues for national attention; the rest were about local matters within a territory or route.

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
11 (a) - Customer satisfaction (TOC)	MORI survey	-0.21	-	-	-	-0.25	-
Train operators' attitude to Network Rail)	Previous year	**-0.14**	-	-	-	**-0.21**	-
11 (b) - Customer satisfaction (FOC)	MORI survey	-0.85	-	-	-	-0.57	-
Freight operators' attitude to Network Rail	Previous year	**0.00**	-	-	-	**-0.85**	-

KPI 11 – Network Rail customer and supplier satisfaction

Network Rail's latest customer satisfaction survey shows that the attitude of train operating companies (TOCs) towards Network Rail declined slightly from the previous survey (2007); the attitude of freight operating companies (FOCs) improved.

Attitudes of suppliers to Network Rail again improved to the highest level seen since the survey was introduced in 2003-04.

Customer satisfaction

This section reviews the results of the annual customer satisfaction survey that Network Rail undertakes (through its agency Ipsos MORI).[1] TOCs and FOCs were asked questions that included:

- level of advocacy towards Network Rail;
- satisfaction with Network Rail over the past 12 months; and
- satisfaction with the working relationship.

The level of advocacy TOCs show to Network Rail produced a mean score of -0.25, down from -0.21 in 2007. Overall this is a disappointing result, with Network Rail unable to improve on last year. FOCs' levels of advocacy improved to -0.57, up from -0.85 in 2007. However this measure can be volatile, given the small sample size.

Network Rail has proposed (and we support) moving to a measure of satisfaction; "taking into account all of your experiences with Network Rail over the past 12 months as a whole, how satisfied or dissatisfied are you with Network Rail" for CP4. In the 2008 survey the overall satisfaction mean score was 3.08 compared with a target of 3.65. This was another disappointing result (set against the target), although Network Rail has pointed out that as this is the first year for this measure it was difficult to set a target. The net satisfaction score for this attribute was +10%, indicating that more customers were satisfied than dissatisfied with Network Rail.

1 The data to produce the measure is gathered through primary research. A total of 254 interviews were carried out by telephone with TOC and FOC managers (against a target list of 310 names – the response rate of 82% is very high for a business survey). The sample was representative of all operators, including open access operators. The revised methodology from the 2006 survey was maintained to ensure statistical validity. The survey was carried out between 3 November and 12 December 2008.

The key measure that Network Rail uses to assess the satisfaction of its customers (TOCs, FOCs and owning groups) and suppliers is the advocacy measure:

- "Which describes how you best feel about Network Rail?"
- I would be critical without being asked (-2)
- I would be critical if someone asked my opinion (-1)
- I would be neutral if someone asked my opinion (0)
- I would speak highly if someone asked my opinion (+1)
- I would speak highly without being asked (+2)"

1. Great Britain

The key questions receiving the worst overall scores were:

- Does Network Rail feel like an integrated organisation?
- Do you feel pro-actively involved in Network Rail's business decisions?
- Is Network Rail flexible and willing to adapt ?

Customers' verbatim comments suggested that Network Rail's structure did not facilitate responsiveness or demonstrate a focus on customer needs, that it did not deliver on time and frequently changed delivery dates.

The questions that received the highest overall scores were:

- How satisfied are you with your personal working relationship with NR?
- Network Rail is easy to work with.
- Network Rail values its relationship with my company.
- Network Rail is open and honest.

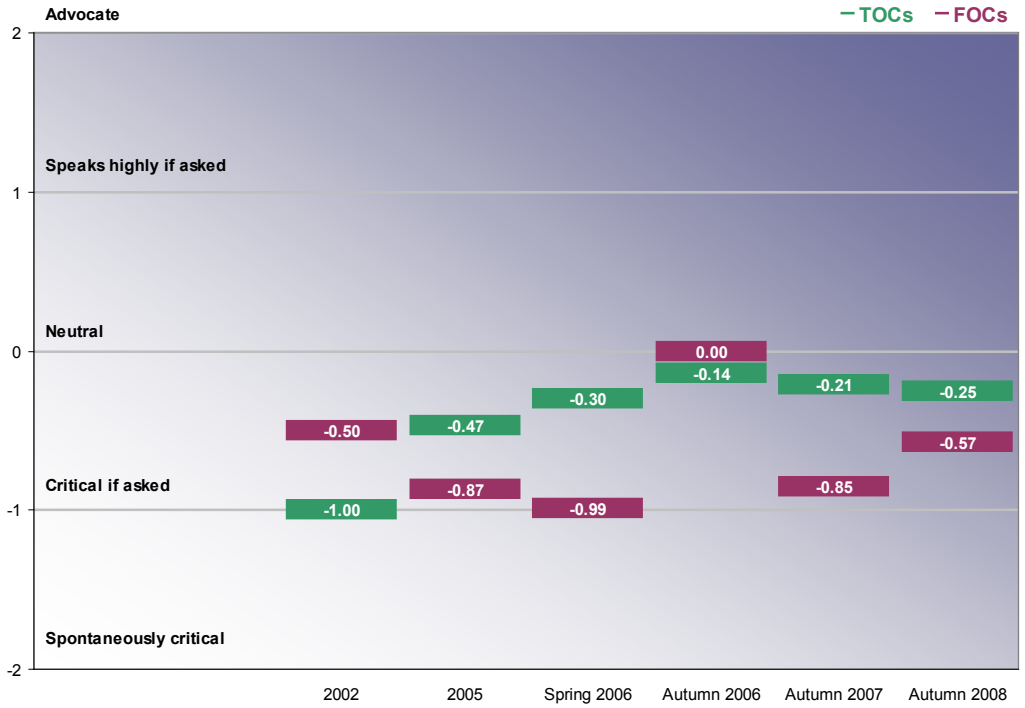
These were the same as last year's best scores with verbatim comments indicating that the working relationship has got better as a result of a noticeable improvement in Network Rail's co-ordination and communication.

The areas in which perceptions had improved most were:

- How satisfied are you with your personal working relationship with NR?
- Network Rail is easy to work with.
- Network Rail delivers on its promises to customers.
- How well do you feel that NR understands your needs?

At an individual customer level, EWS (2.39) and Freightliner (2.45) gave the lowest satisfaction scores. Freightliner, GB Rail Freight and Eurostar's scores declined most from last year's survey.

Figure 5. Customer satisfaction index



Source: IPSOS MORI

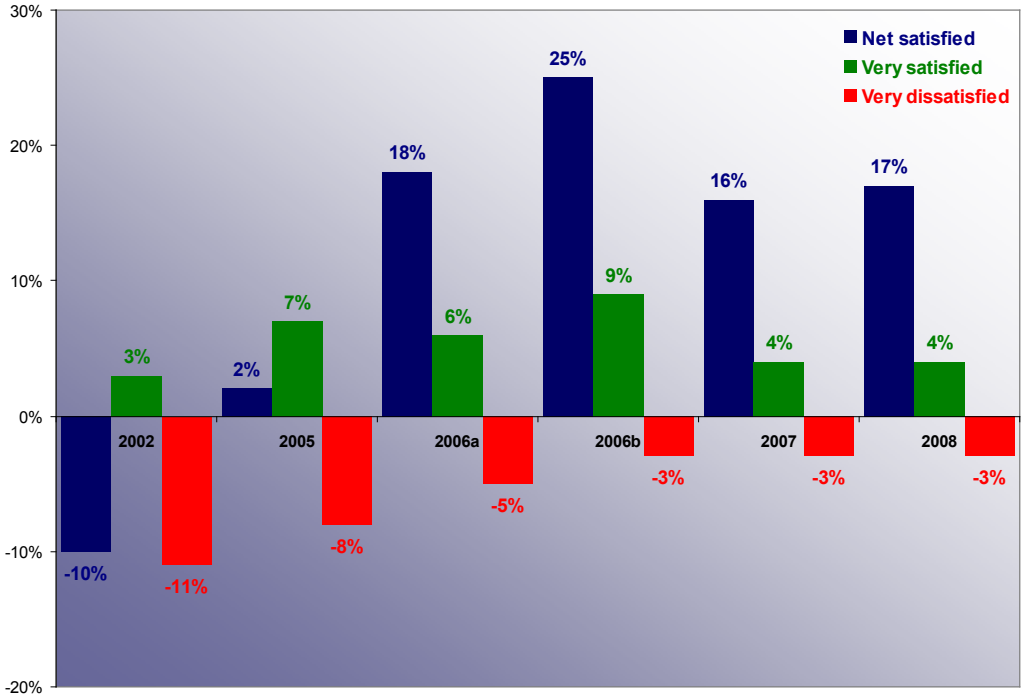
The most satisfied customers were London Midland (3.55), First Scotrail (3.51) and Southern (3.47) with all of Southern's scores improving from the previous survey.

Supplier satisfaction

The methodology for assessing supplier satisfaction was unchanged from the previous two surveys. The overall satisfaction score was based on the same advocacy measure as customers, described above.

The survey again showed an increase in satisfaction levels based on the advocacy score up to +0.51 from +0.33 in the previous survey. This was the highest score since the survey was introduced in 2003-04.

Figure 6. Customer satisfaction with working relationship with Network Rail



Source: IPSOS MORI

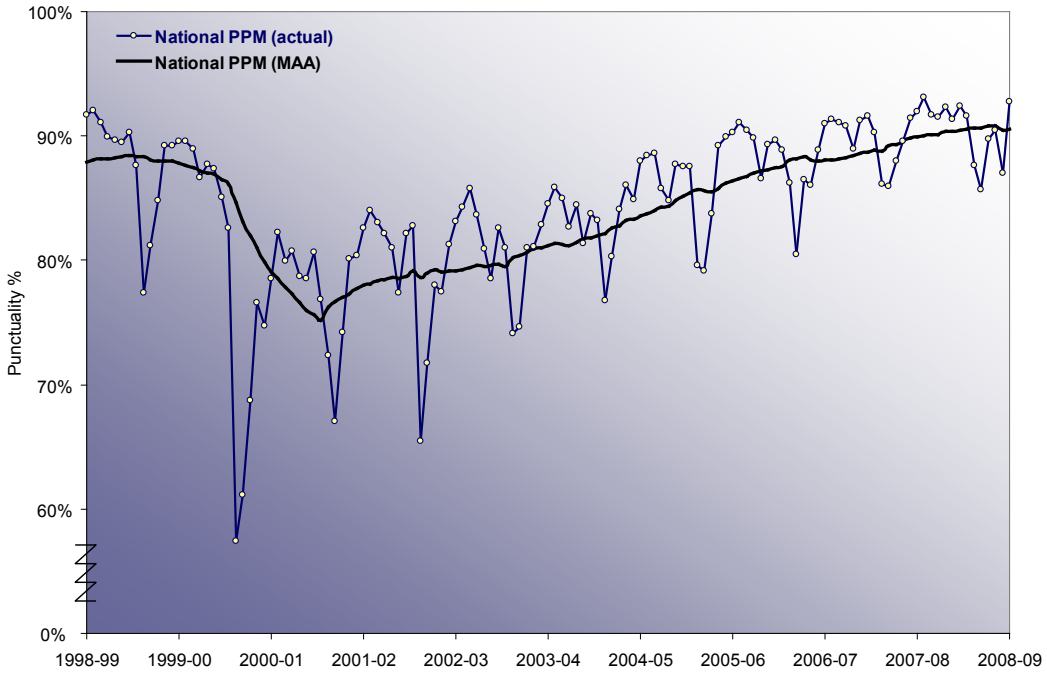
1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
2 - Passenger train performance	Actual at end of quarter	**89.9**	**90.1**	**90.5**	**90.8**	**90.6**	**90.6**
Public performance measure (PPM) (MAA) (%)	Industry target	**89.5**	**90.0**	**90.2**	**90.6**	**90.6**	**90.6**

KPI 2 – Passenger train performance

The industry met the end of year target of 90.6% PPM MAA that it had set itself. PPM is at its highest since the measure was introduced. This was despite the challenges of the worst snowfalls for about 20 years on many parts of the network during early February.

Figure 7. PPM by four-weekly periods (industry average), 1998-99 to 2008-09



Source: Network Rail, period performance report data

1. Great Britain

All three sectors improved during 2008-09 as a whole although London South East experienced a setback in Q4 on account of the February snow that caused a large number of cancellations for some operators.

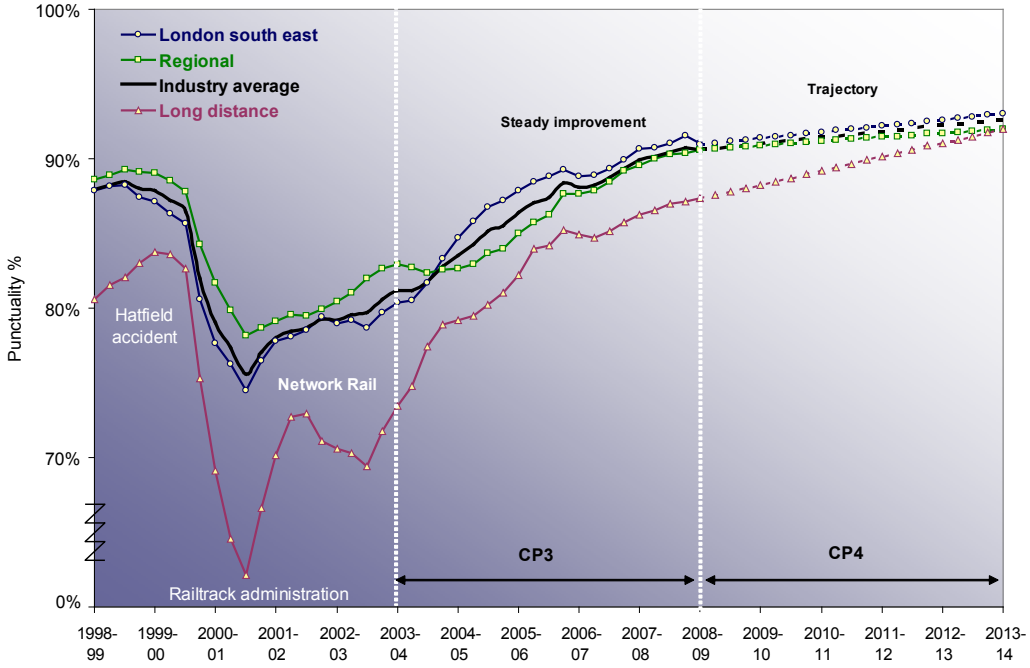
Previous monitors have recorded progress in improving performance on Network Rail's Western route, especially affecting First Great Western. We are pleased that by the end of 2008-09 PPM MAA had improved to 90.5%, well ahead of the joint performance improvement plan. This level is in line with national standards and no longer any cause of concern.

Poor performance on the West Coast main line, particularly affecting Virgin Trains and (to a lesser extent) London Midland, has continued with equipment failure being a major problem. Whilst this has involved some items associated with the route upgrade, older assets have also been the subject of some of the failures. The intensified and accelerated timetable, which was phased in between December 2008 and February 2009, can easily be seriously disrupted and PPM MAA has fallen to 80.0%. Virgin Trains disputes Network Rail's plans to improve performance in 2009-10 on the grounds that they are an inadequate response; at a meeting we called with both parties to progress matters Network Rail agreed to review its plans and expects to make an improved proposal before we meet again in mid-June.

Table 1

PPM MAA by sector	2007-08	2008-09
Long Distance	86.2%	87.3%
London & South East	90.6%	91.0%
Regional	89.6%	90.6%

Figure 8. PPM by four-weekly periods (by rail sector), 1998-99 to 2008-09



Source: Network Rail, period performance report data

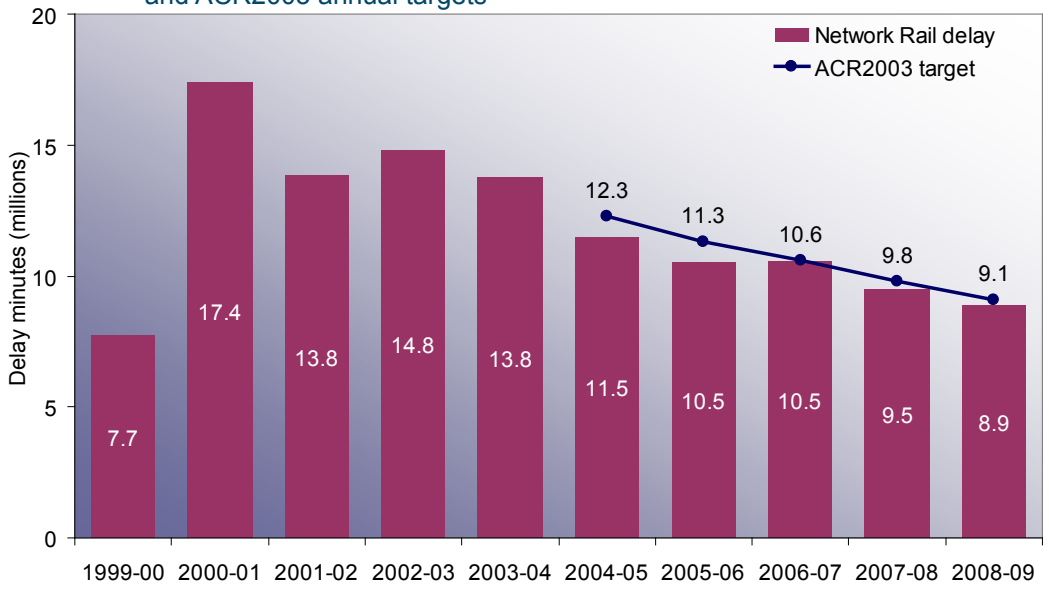
1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
3 - Network Rail delay minutes	Year to date actual	**9.5**	**1.9**	**3.8**	**6.8**	**8.9**	**8.9**
Number of delay minutes (millions) attributed to Network Rail	ORR target	**9.8**	**2.0**	**4.1**	**7.0**	**9.1**	**9.1**
4 (a) – Delays to passenger trains	Normalised for the quarter	**1.63**	**1.52**	**1.46**	**1.80**	**1.58**	**1.60**
Network Rail delay minutes to Train operating companies per 100 train km	ORR derived target	***1.70***	***1.57***	***1.70***	***1.81***	***1.54***	***1.65***
4 (b) – Delays to freight trains	Normalised for the quarter	**4.23**	**3.95**	**4.01**	**4.26**	**3.87**	**4.04**
Network Rail delay minutes to Freight operating companies per 100 train km	Network Rail target	***3.76***	***3.94***	***3.95***	***4.09***	***3.62***	***3.95***

KPI 3- Network Rail delay minutes

Network Rail met its ACR03 target of 9.1 million minutes with a total of 8.9 million minutes delay (to all trains) for the year. This was a good result, ahead of Network Rail's stretch target, although there was some increase in cancellations.

Figure 9. Delay attributed to Network Rail (all services) 1999-00 to 2008-09, and ACR2003 annual targets



Source: Network Rail data and ACR2003

1. Great Britain

KPI 4 (a) and (b) Network Rail delay to passenger and freight trains

Network Rail passenger delays

Network Rail just missed its own stretch target of 7.0 million minutes by 0.24 million minutes. This is partly accounted for by passenger train mileage being 1.2% more than planned.

Over the year as a whole Network Rail beat its target of 1.65 minutes /100 train km, achieving 1.60 minutes/100 km. This was despite missing the target in Q4 (which reflects the series of major incidents in this quarter).

Network Rail freight delays

Network Rail comfortably met its own stretch target of 1.7 million minutes, causing 1.6 million minutes delay to freight trains. However, this was largely because freight volume was 6.3% less than expected.

Network Rail just missed its target of 3.95 minutes/100 train km, achieving 4.04 minutes/100 train km. As has been noted throughout the year, delivery to freight has been relatively sluggish.

Figure 10. Delay attributed to Network Rail per 100 train kilometres (franchised passenger services) 1999-00 to 2008-09, and ACR2003 annual targets

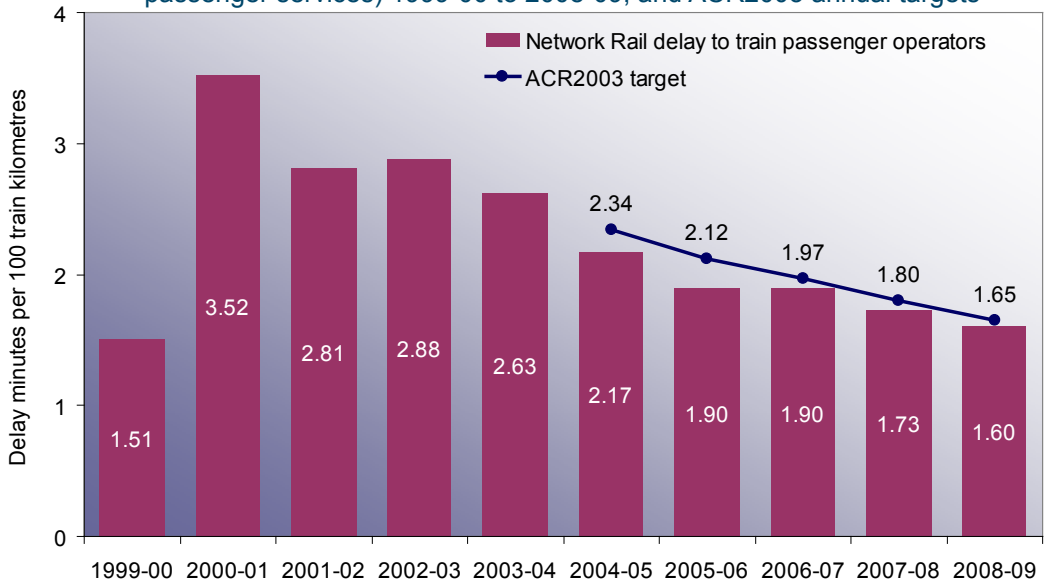
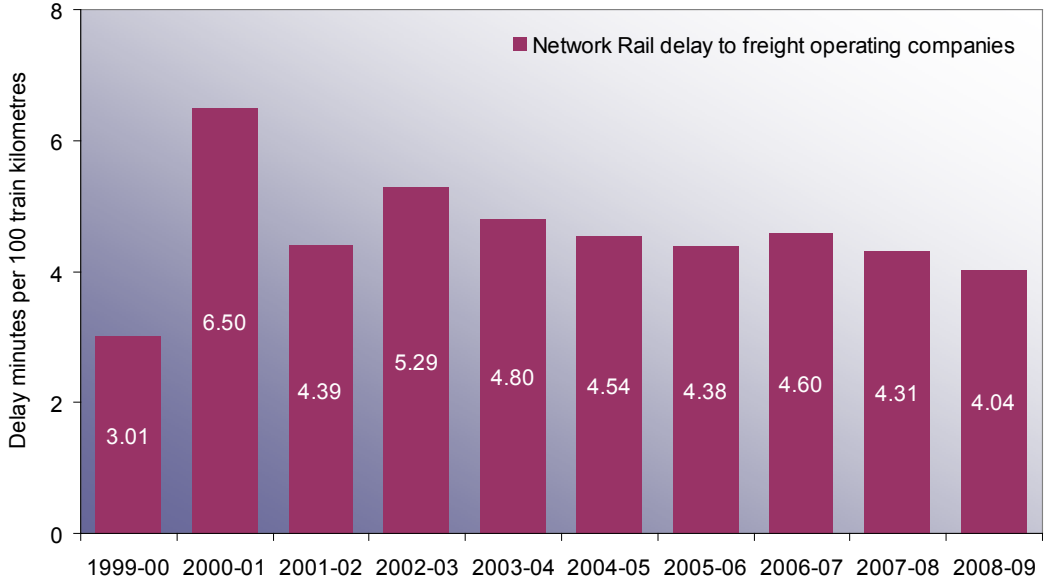


Figure 11. Delay attributed to Network Rail per 100 train kilometres (freight services) 1999-00 to 2008-09.



Source: Network Rail data and ACR2003

1. Great Britain

Geographical variation

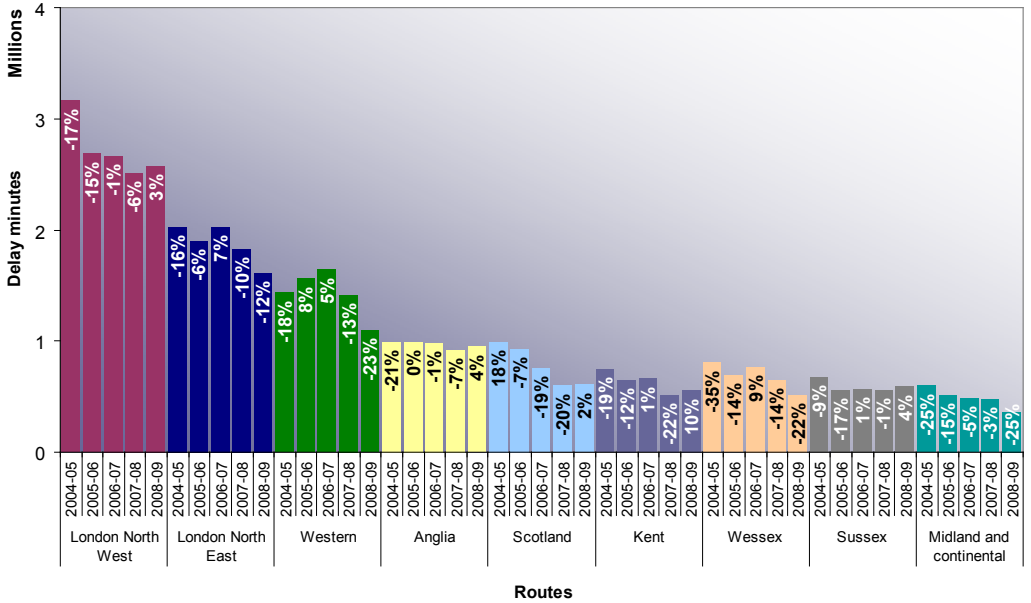
The ORR targets established under the ACR03 did not include a regional or route breakdown. However, we do monitor delay at this level for comparison. We note that in 2008-09 five of Network Rail's nine routes (Anglia, Kent, London North Western, Scotland and Sussex) actually saw an increase in delay minutes compared to 2007-08, but there was a significant decrease in delay minutes on the other four routes.

Table 2

Delay minutes by route	2007/08	2008/09	% Variance
London North Western	2,513,476	2,578,289	+3%
London North Eastern	1,827,529	1,616,242	-12%
Western	1,419,596	1,096,809	-23%
Anglia	918,067	954,732	+4%
Scotland	602,440	612,824	+2%
Kent	512,627	561,970	+10%
Wessex	655,837	514,235	-22%
Sussex	560,731	584,039	+4%
Midland & Continental	476,832	357,477	-25%

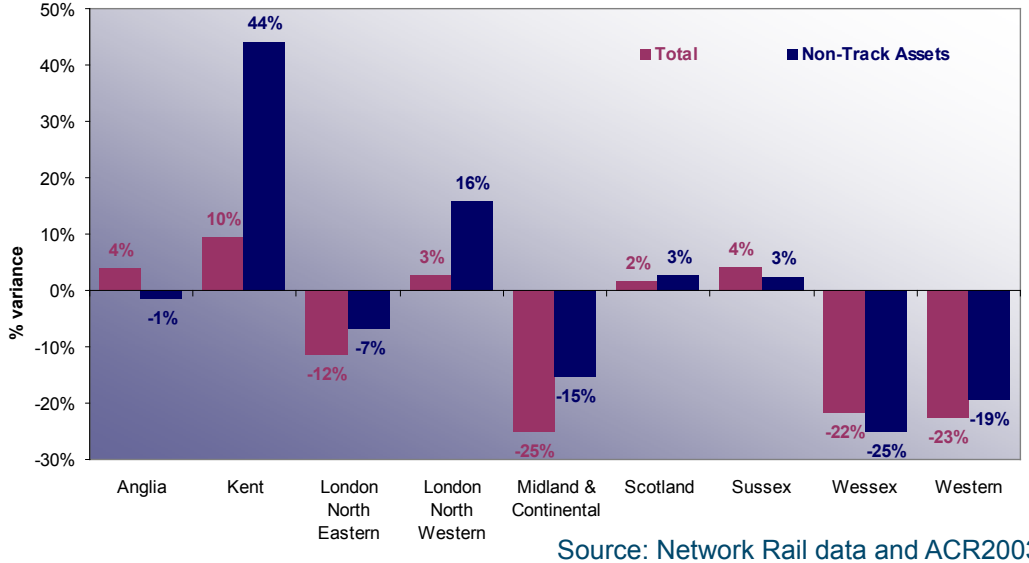
Graph illustrating year-on-year route performance and non-track asset delay minutes:

Figure 12. Annual delay minutes by route



Source: Network Rail, period performance report data and ACR2003

Figure 13. Route delay minutes performance - Total and mon-track assets summary



Source: Network Rail data and ACR2003

1. Great Britain

Network Rail delays by group

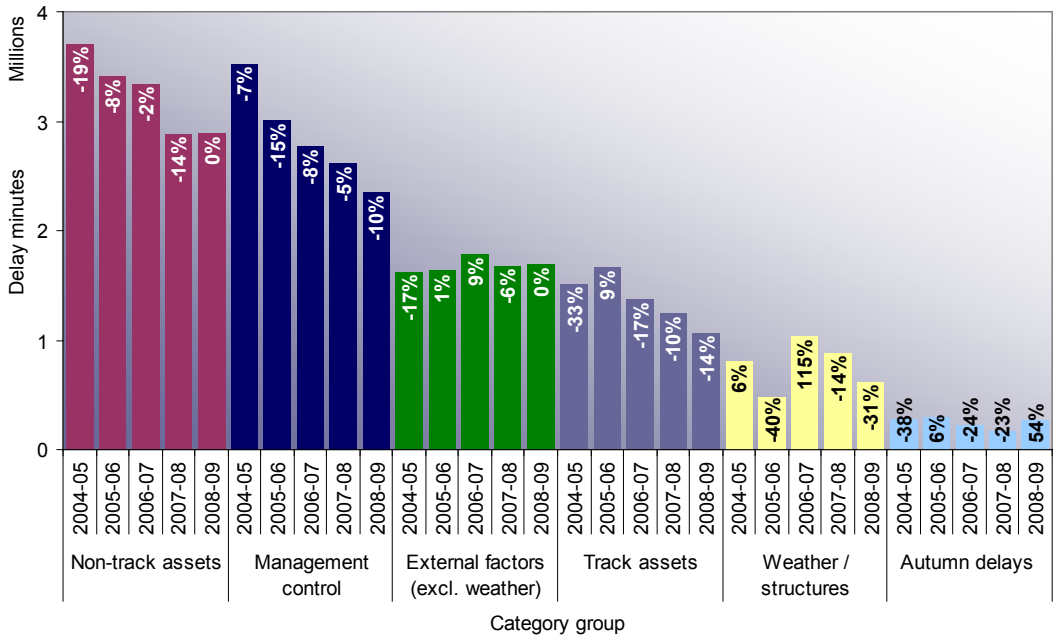
The ORR targets established under the ACR03 did not include a breakdown by category. However, we do monitor delay at this level for comparison. There was a significant increase in the number of minutes delay in autumn categories compared to the previous year. We note that there was no improvement in 2008-09 in the number of minutes delay caused by the non-track assets and external (excluding weather) categories. Non-track assets covers things like points failures, signalling failures and electrification failures and is the largest category. The lack of progress in these areas is disappointing.

The improvements in performance of track assets is welcomed and described in more detail under KPI 5 below. Management control includes causes such as possessions overruns, signaller error and timetabling problems, all of which improved. Weather delays were down despite another wet year. Although the snow in February 2009 caused considerable disruption much of this was in terms of cancellations (captured by the PPM and cancellations and significant lateness measures) rather than delay minutes.

Table 3

Delay minutes by category group	2007-08	2008-09	% Variance
Non-track assets	2,886,442	2,899,268	+0%
Management control	2,616,744	2,343,730	-10%
External (excl. weather)	1,683,679	1,688,274	+0%
Track assets	1,242,539	1,069,227	-14%
Weather and structures	884,275	608,901	-31%
Autumn	173,456	267,216	+54%

Figure 14. Total annual delay minutes (by category groups) and percentage change



Source: Network Rail, period performance report data

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Cancellations and significant lateness

CaSL is a relatively new measure that is being introduced as a formal target for the rail industry as part of the high level output specification for England and Wales. It seeks to identify the proportion of trains on which customers will have experienced significant disruptions, essentially part or full cancellation or missed calls or lateness of more than 30 minutes. All three sectors have seen a gradual reduction in disruptions as captured by this measure over the past couple of years although the February snow had a noticeable impact on London and South East operators.

Within the long distance sector four of the five operators have seen an improvement over the year as a whole. However, Virgins Trains has seen a significant deterioration, largely due to Network Rail infrastructure issues.

Figure 15.Cancellations and significant lateness, by sector.

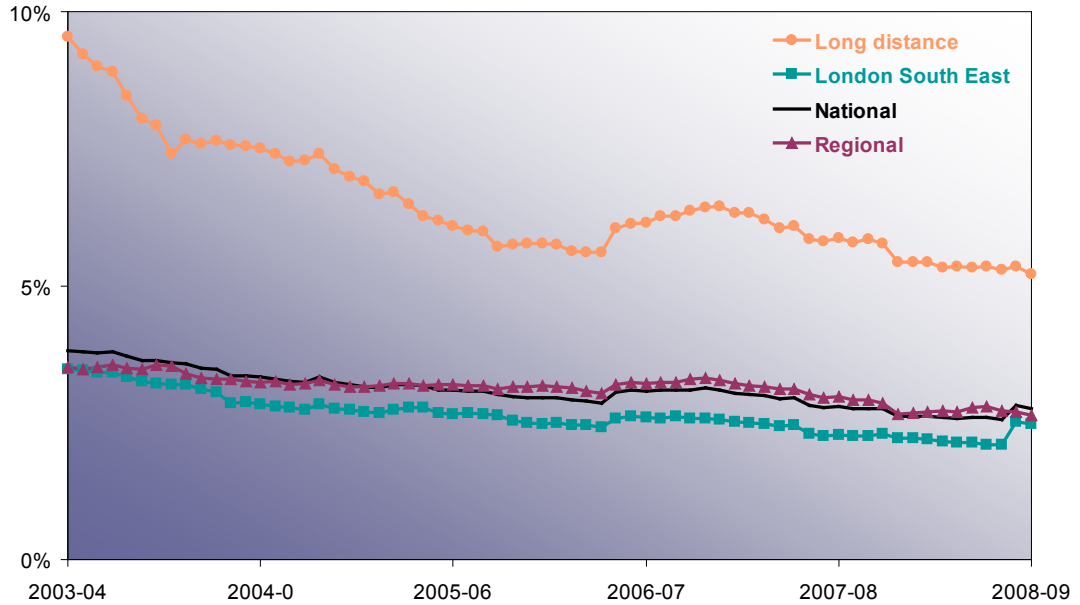
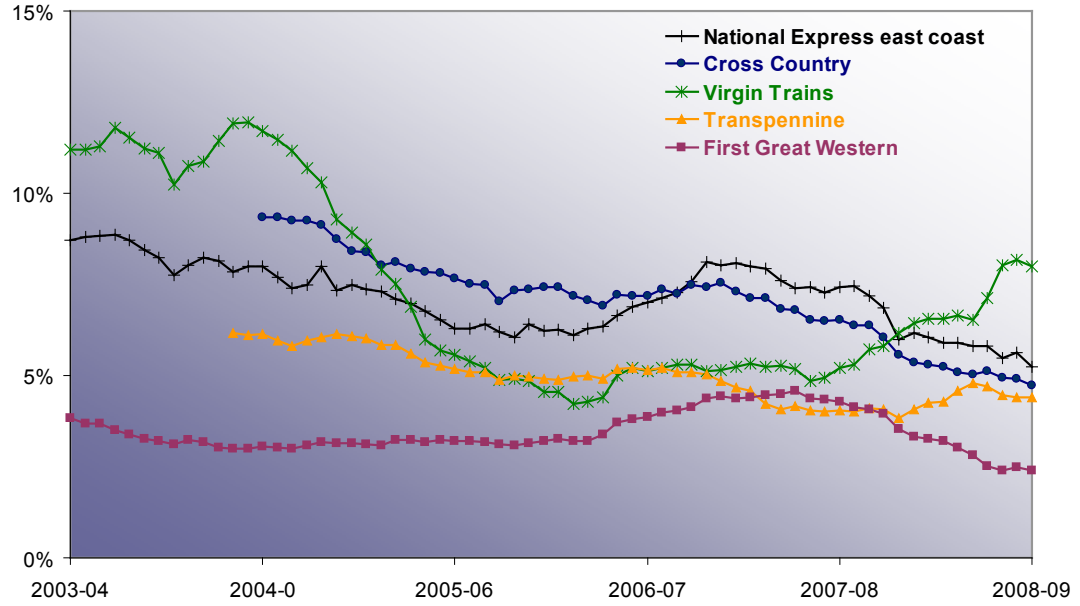


Figure 16.Cancellations and significant lateness, by operator



Source: Network Rail data and ACR2003

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
5 - Asset failures	Actual 4-weekly average	**3,998**	**4,088**	**3,936**	**3,780**	**3,891**	**50,866**
Number of infrastructure incidents	Previous year's actual	**4,583**	**4,431**	**4,230**	**3,862**	**3,998**	**53,425**

KPI 5 – Asset failures

Network reliability improved again in 2008-09. At the end of Q4 the total number of infrastructure incidents was 50,866, 4.8% lower than 2007-08. These incidents caused 4.5m minutes of delay in 2008-09, 6.3% less than last year.

Although this remains a broadly encouraging picture, there are significant geographical variations in performance of the infrastructure, and differences between the two groups of track and non-track assets.

Track assets

Track assets account for 21.5% of all infrastructure caused delay and this delay has reduced by 16% compared with last year. The number of incidents has reduced by 11%.

This improvement is particularly notable. Most measures of track condition are continuing to improve steadily, resulting in fewer track faults (down by 8.7%), condition-related speed restrictions (down by 24%) and significantly less delay compared to the end of last year.

Other measures of track condition such as L2 geometry faults and broken rails also continue to improve but the number of isolated rail defects remaining in track has risen from last year.

Table 4: Categories of infrastructure caused delay

	2004-05	2005-06	2006-07	2007-08	2008-09	% change 2008-09 on 2007-08
Incidents						
Non-track assets	38,445	36,619	36,503	32,160	31,818	-1%
Track assets	9,005	9,171	9,972	8,673	7,736	-11%
Other	10,946	10,709	11,837	12,592	11,312	-10%
Total	**58,396**	**56,499**	**58,312**	**53,425**	**50,866**	**-5%**
Delay minutes						
Non-track assets	3,551,729	3,267,089	3,196,580	2,770,692	2,786,209	1%
Track assets	1,400,748	1,517,031	1,286,328	1,138,725	959,824	-16%
Other	1,039,761	846,919	862,811	852,426	717,621	-16%
Total	**5,992,238**	**5,631,039**	**5,345,719**	**4,761,843**	**4,463,654**	**-6%**
Delay per incident						
Non-track assets	92	89	88	86	88	2%
Track assets	156	165	129	131	124	-6%
Other	95	79	73	68	63	-6%
Total	**103**	**100**	**92**	**89**	**88**	**-2%**

Source: Network Rail period performance report

As last year, the effect of rolling contact fatigue has increased (incidents more than doubled from 74 to 170). It remains a small overall figure, and mainly affects Wessex. Network Rail is continuing to address the problem with a range of measures including early identification of problem sites, grinding regimes, use of premium rail steels and liaison with TOCs and vehicle manufacturers to introduce a new wheel profile. However it is too early to see evidence that the problem has been resolved.

Network Rail eventually reached agreement with South West Trains and Siemens to commence a trial of the new 'P12' wheel profile on the Windsor branch Class 450s. This study is intended to run for 18 months and will focus on the effects on the infrastructure / track condition and the upkeep regime.

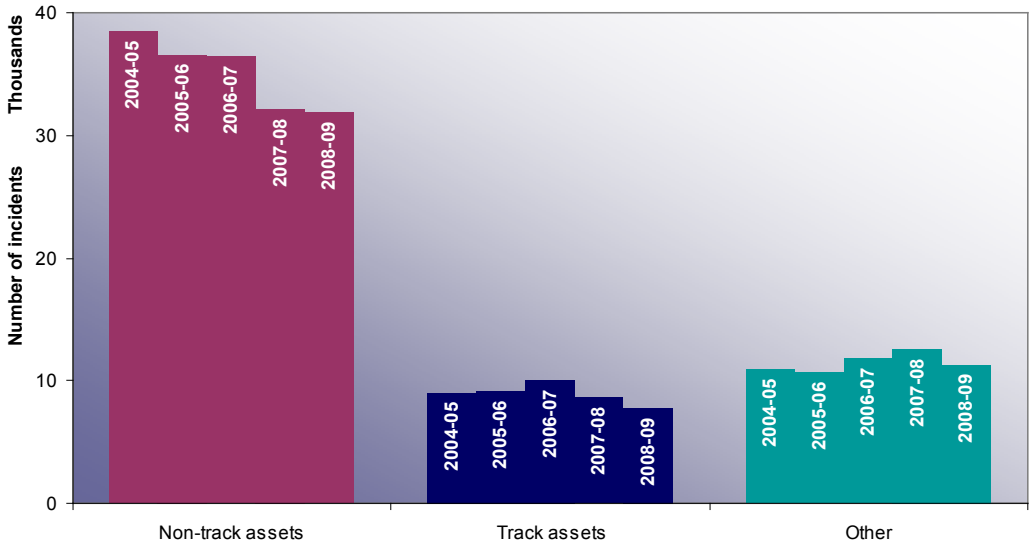
Two long distance Class 444 units have also been treated for a separate review of the effect of the P12 profile on wheel/vehicle upkeep. It is intended that findings from this vehicle study and initial findings from the Windsor branch will be available by the year-end.

Non track assets

Non track assets account for 62% of infrastructure caused delay. It is disappointing that performance improvement in this diverse asset group has stalled. For non track assets, 31,818 infrastructure delay incidents in 2008-09 represent only a 1% reduction on last year, and total delay minutes are 0.6% worse than last year.

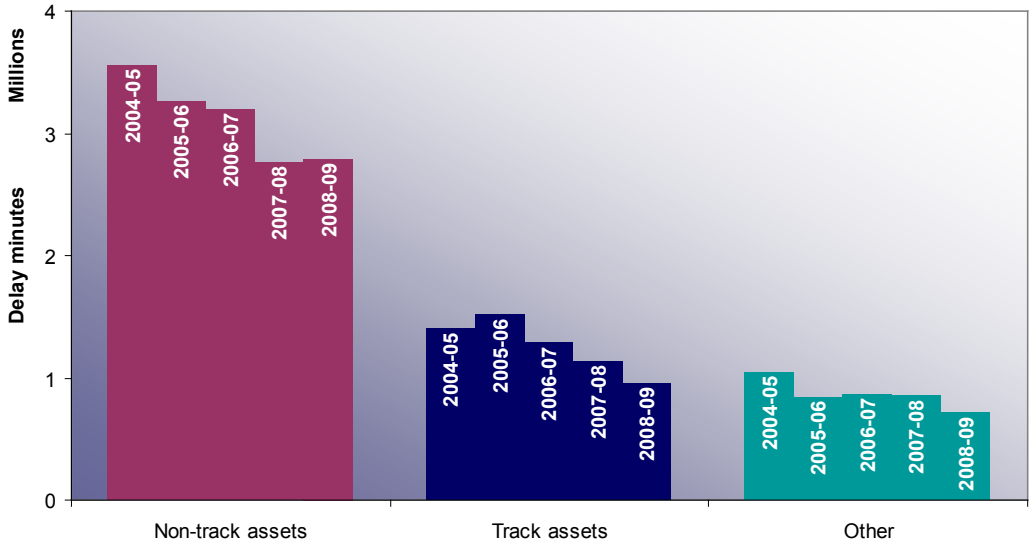
The net position masks some asset categories where there have been reductions in numbers of incidents and delay minutes (for example cable faults, signalling system/power supply failures). Also there has been marginal improvement in track circuit failures which accounts for 15.8% of all infrastructure caused delay. In contrast, however, there has been a 7.2% increase in delay caused by signal failures and a 9.7% increase in signalling system/power supply failures.

Figure 17. Year-on-year comparison of national number of infrastructure incidents causing delays



Source: Network Rail period performance report data

Figure 18. Year-on-year comparison of national delay minutes caused by asset failures



Source: Network Rail period performance report data

Points failures

Points failures are the single highest cause of infrastructure delay, accounting for 15% of infrastructure delay minutes, and there are signs that the number of points failures is increasing. These caused 3.1% more infrastructure incidents in 2008-09 than last year, with a corresponding increase in delay minutes. The rolling MAA shows that although the current rate of failure per switch and crossings (S&C) unit is better than it was eighteen months ago, points reliability nationally is still worse than it was in and before 2005.

There is a wide variation between the best and worst routes. Scotland and London North East (LNE) are seeing more points failures than last year and have a current failure rate equivalent to 1.3 for every set of points each year. LNE is now about 40% worse than it was four years ago. In contrast, other parts of the network such as Kent and East Anglia achieved 0.88 and 0.94 failures per unit per annum.

Despite Network Rail's initiatives to improve reliability of points, we conclude that it is still struggling with the issue. In the medium term remote condition monitoring offers promise of improvement but in the short term we expect Network Rail to do more to understand the reasons for regional variations and to exploit the opportunities to improve performance by migrating best practice across the network.

Table 5. Year-on-year comparison of regional number of infrastructure incidents causing delays

Operating Route	Infrastructure delays in 2008-09 (minutes)	% change in infrastructure delays in 2008-09	Infrastructure delays per 100 train km (minutes) 2008-09	Infrastructure delays per 100 train km (minutes) 2007-08
LNW	1,416,507	(5%)↑	1.22	1.24
LNE	816,987	9%↓	0.97	1.07
Anglia	494,112	(6%)↑	1.08	1.05
Western	483,059	28%↓	0.71	0.99
Kent	289,828	(24%)↑	0.87	0.71
Wessex	285,684	26%↓	0.64	0.88
Scotland	277,498	1%↓	0.57	0.60
Sussex	215,850	(0%)↑	0.70	0.72
Midland and Continental	184,129	28%↓	0.73	

Train detection

There was a slight reduction in the number of failures of train detection equipment (track circuits and axle counters) from 6,554 to 6,474, leading to a 1.7% improvement in the delay caused. There is considerable geographic variation in performance when normalised figures are viewed. Western is noticeably better than any other route, but this may be because it is almost entirely free of electrification, so there will only be a small number of failures caused by interference with the traction. Scotland is the worst performing route for this measure, but it is not clear why it should be worse than the other routes. London North West (LNW), Kent and Sussex routes have also experienced a decline in the reliability of train detection equipment.

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Table 6. Delay by infrastucture incident category, 2003-04 to 2008-09

	Total Infrastructure delay (minutes)						Number of incidents					
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Track assets	**2,132,694**	**1,400,748**	**1,517,031**	**1,286,328**	**1,138,725**	**959,824**	**11,529**	**9,005**	**9,171**	**9,972**	**8,673**	**7,736**
TSR's Due to Condition of Track	811,687	524,942	567,574	348,496	284,850	205,698	3,860	3,132	2,803	2,198	1,878	1,427
Track faults (including broken rails)	1,245,952	856,755	934,958	928,548	838,249	731,602	7,450	5,775	6,297	7,683	6,721	6,139
Gauge Corner Cracking	75,055	19,051	14,499	9,284	15,626	22,524	219	98	71	91	74	170
Non-track assets	**4,379,153**	**3,551,729**	**3,267,089**	**3,196,580**	**2,770,692**	**2,786,209**	**41,568**	**38,445**	**36,619**	**36,503**	**32,160**	**31,818**
Points failures	1,069,100	884,525	839,299	832,048	733,815	752,101	9,802	8,770	8,724	9,074	7,828	8,052
Level crossing failures	142,186	134,407	126,721	116,093	108,064	96,774	2,794	2,725	2,657	2,365	2,201	2,259
OLE/Third rail faults	399,022	305,334	242,176	337,668	214,832	212,883	1,475	1,616	1,497	1,705	1,358	1,364
Signal failures	516,615	436,411	395,152	346,695	292,416	313,043	9,119	8,300	8,145	7,370	6,566	6,558
Track Circuit failures	1,272,458	1,062,891	988,514	823,137	719,587	707,227	9,935	9,233	8,568	7,970	6,554	6,474
Signalling System & Power Supply failures	577,934	413,099	370,159	436,629	392,903	432,260	3,719	3,451	3,273	3,996	3,943	3,738
Other signal equipment failures	130,556	107,765	72,736	78,045	60,070	54,952	2,653	2,355	1,740	1,712	1,419	1,282
Telecoms failures	58,282	50,128	64,021	51,140	66,291	66,512	1,194	1,276	1,314	1,445	1,464	1,345
Cable faults (signalling & comms)	193,950	141,332	156,184	160,305	174,697	143,585	535	445	470	624	667	570
Change of Aspects-NFF	19,050	15,837	12,127	14,820	8,017	6,872	342	274	231	242	160	176
Others	**1,395,822**	**1,039,761**	**846,919**	**862,811**	**852,426**	**717,621**	**11,868**	**10,946**	**10,709**	**11,837**	**12,592**	**11,312**
Civil Engineering structures, earthworks & buildings	257,331	153,486	103,807	124,619	126,593	78,192	952	594	485	569	492	389
Other infrastructure	414,479	252,624	235,993	206,075	238,093	186,883	5,462	4,843	4,625	5,240	5,457	4,163
Track Patrols & related possessions	127,813	120,599	94,749	81,832	77,885	68,212	2,012	2,462	2,616	2,639	3,093	3,360
Mishap - infrastructure causes	178,461	142,440	124,587	160,431	161,186	195,059	920	876	1,075	1,416	1,634	1,838
Fires starting on Network Rail infrastructure	82,307	46,178	42,149	33,580	27,089	17,100	513	282	314	285	230	197
Bridge strikes	335,431	324,434	245,634	256,274	221,580	172,175	2,009	1,889	1,594	1,688	1,686	1,365
Total Asset Failures	**7,907,669**	**5,992,238**	**5,631,039**	**5,345,719**	**4,761,843**	**4,463,654**	**64,965**	**58,396**	**56,499**	**58,312**	**53,425**	**50,866**

Signalling and train control

Delays caused by the signal system and power supply increased by 9.7% although the number of incidents was down 5%.

Signal failure delays increased by 10%, although Wessex, Scotland, Midlands and Continental (M&C) and East Anglia routes were all better than last year.

The number of cable failures has shown a marked improvement, down 14.5%. Delay per incident also improved by 3.8% resulting in an improvement of 17.8% in delay minutes. This category includes cable theft, where Network Rail's efforts to counter the problem appear to be suceeding. Scotland and LNW are the only routes showing an increase in the number of incidents and delay minutes.

Level crossing failure delays improved by 10.4% despite a slight increase in the number of failures.

Telecommunications nationally saw an 8.1% reduction in failures over the year, entirely due to improvements in Wessex. One factor that has affected this year's performance is a problem with introducing IVRS (interim voice radio system) on the Midland main line as part of a re-signalling scheme. During periods 8 and 9 about 12,000 delay minutes were caused by speed restrictions associated with the non-availability of this system on the M&C and LNE routes.

Signalling infrastructure condition

To assess the underlying condition of the signalling system Network Rail uses a process called the signalling infrastructure condition assessment (SICA). This process assesses the anticipated length of residual useful life before renewal. For 2008-09 Network Rail reported an improvement in the average condition to 2.27 from 2.38, which continues the trend of previous years. This indicates that the average remaining life of the signalling assets is increasing as a result of the renewal activity.

It is good to see the asset condition assessment process developed for signalling now being extended to level crossing equipment. The CP4 renewal plan shows an increase in level crossing renewal and the condition assessments will be critical to targeting those crossings in greatest need of attention.

Electrification

The number of incidents this year due to overhead line electrification (OLE) and third rail faults is slightly higher at 1,364 compared with 1,358 last year, but significantly lower than the year before (1,705). However, there was a slight improvement (0.9%) in the delay caused. The number of significant incidents (those which cause more than 500 minutes delay) increased to 83 compared with 72 last year. 82% of all significant incidents occurred on the 25kv OLE network and this is the main focus of our monitoring.

We reported in the last monitor on the significant OLE failures which occurred on the West Coast main line in January, some of which were caused by component failure and poor installation, and we have now reviewed these incidents further. Network Rail investigated each incident and reported to us on its conclusions. Some of the incidents resulted from poor initial installation of neutral sections (see below), but the other incidents were random, non-connected events. It was not possible to link the incidents clearly to the cold weather at the time or to the increased speed and frequency of the train services initiated in December 2008.

The neutral section failures caused substantial damage to most of the pantographs on the Pendolino fleet of trains and had the potential to reduce the availability of the fleet. The neutral sections were of a relatively new design, needed to replace earlier, less reliable designs. This required very high installation accuracies to achieve the required degree of alignment.

Whilst Network Rail has planned campaign changes to eliminate the OLE elements that cause most concern this will take a number of years. Observation of the OLE needs to be carried out at line speed and we are concerned at Network Rail's current inability to inspect at speeds above 110mph when the line speed is often 125mph, but note that it is taking steps to resolve this issue. This includes trialling cameras on service trains.

Structures

We expressed concern in the annual assessment for 2007-08 at the rate of progress of detailed bridge examinations and the associated rate of structures condition marking index (SCMI) scoring. The condition of bridges is assessed on a scale of 1 to 5 where 1 represents very good, or as new conditions and 5 represents the poorest conditions. This is derived from the results of detailed bridge examinations. Provisional data indicates Network Rail scored 4,122 bridges last year (approximately 10% of the total stock) giving an average condition grade of 2.1, which is no change on last year.

We have challenged Network Rail on the progress of examinations throughout the year and it has continued to work on its risk based approach to examinations. This methodology sensibly allows structures with minimal rates of deterioration (typically masonry bridges and viaducts) to be examined less frequently, while those with a higher risk of rapid failure are inspected more frequently. We support this approach.

Network Rail now appears to be on target with detailed inspections everywhere except in LNW and Southern. Network Rail has confirmed that, except for a few structures in LNW and Southern, it is up to date with its programme of visual inspections. Annual visual inspections are an important backstop to the risk based approach to bridge management. We understand this situation will further improve when new contractual arrangements for carrying out the work become fully effective in the coming year.

Throughout the year Network Rail has rolled out its civil asset register and recording system (CARRS) but this is not yet functionally complete and does not cover all asset types. This is an important tool in the asset register and Network Rail needs to progress this quickly.

Network Rail is reporting the number of structures subject to special examination as part of its asset stewardship index (ASI) for CP4. This will be a useful additional measure of overall condition of the structures assets.

Earthworks

The number of earthwork failures has halved from last year to 53. Temporary speed restrictions (TSRs) caused by structures and earthworks failures are well below target at 23 compared with 2007-08 levels of 35. At the start of CP3 the baseline was 100. There has been significant investment in earthworks remediation throughout CP3.

Asset management

Network Rail is continuing to develop its asset management maturity, especially in respect of the quality, application and availability of asset information.

However, it still faces considerable challenges in fully embedding this progress into the culture and operation of the company so that it becomes a natural part of its business. There is more to be done to improve the data management and quality assurance processes by which consistently good asset information will be sustained and made available to relevant third parties that rely upon Network Rail for its provision.

We received significant evidence from a number of key stakeholders during the year that further highlighted such issues, especially relating to the supply of infrastructure data (such as structure gauging data) needed by the manufacturers of new trains.

During the year the independent reporter carried out two further studies in these areas. His reports made important recommendations on ways in which Network Rail can continue to develop and improve its asset information strategy. We are continuing to monitor its response in implementing these recommendations, and we are also continuing to engage with industry stakeholders and funders to ensure that their reasonable information requirements are being properly addressed and met by Network Rail. This includes the management of information that is needed to comply with European interoperability directives as they become transposed into British law.

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
6 - Asset stewardship index (ASI)	Actual	**0.63**	**0.62**	**0.62**	**0.60**	**0.60**	**0.60**
Composite of seven asset condition measures	Network Rail target	***0.70***	***0.68***	***0.66***	***0.63***	***0.61***	***0.61***
7 - Activity volumes (track renewals only)	Actual cumulative	**97.1**	**94.9**	**97.0**	**96.5**	**101.7**	**101.7**
% Activity compared with plan	Network Rail target	***100***	***100***	***100***	***100***	***100***	***100***

KPI 6 – Asset stewardship index (ASI)

The ASI outperformed the Network Rail target by 2%, showing a 6% improvement compared with last year. Overall, there has been a 40% improvement during CP3. However, the ASI-R measure shows that this improvement is not consistent across the network. Whilst LNE, LNW and Scotland met Network Rail's target and showed an improvement on last year, Southern and East Anglia and Wessex both missed the target.

KPI 7 – Activity volumes

Final audited returns of renewal volumes delivered in 2008-2009 are not yet available. However some comments can be made on the preliminary data available. Based on Network Rail's composite volume measure, 90% of all asset planned volumes were delivered in 2008-2009. Within this figure, which excludes WCRM volumes, there was variation between assets and within asset types. For example, the overall volume of civils asset renewals was 109% of plan with over delivery for most bridges and culverts and under delivery of earthworks, coastal and estuarial defences, and retaining walls. Renewal of telecoms was 84% of plan and electrification 59% of plan.

Table 7. Asset stewardship index, 2002-03 to 2008-09

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Year end ASI	1.2	1.09	0.9	0.8	0.72	0.63	0.60
Network Rail target			1.06	0.85	0.78	0.70	0.61
ACR2003 target							1.00

Table 8. Component measure and weighting of the ASI, 2005-06 to 2008-09

Asset category	Asset measure	Weighting	2005-06 actual	2006-07 actual	2007-08 actual	2008-09 actual	2008-09 target
Track	Track geometry	20%	0.835	0.806	0.72	0.68	1
	Broken rails	15%	317	192	181	163	300
	Level 2 exceedences	15%	0.82	0.72	0.58	0.50	0.9
Signalling	Points/track circuit failures	10%	17,285	17,038	14,367	14,526	19,360
	Signalling failures	20%	23,367	22,719	19,911	19,620	28,750
Electrification	Electrification failures	10%	55	80	72	83	133
Structures and Earthworks	Related TSRs	10%	48	40	35	23	100

Source: Network Rail Annual Return and ACR2003

1. Great Britain

Track

Network Rail renewed[2] 2,532 km of plain line track in 2008-09 compared to a planned output of 2,489 km. This is a composite measure, comprising rails, sleepers and ballast. This is 2% more than the Q4 target.

Network Rail renewed 419 switch and crossing equivalent units (a measure that normalises different S&C treatments), compared with a planned output of 438, a shortfall of 4%. Network Rail has told us that this reflects a move towards more partial renewals where condition and route requirements allow. This is a change it is making for the new control period to better utilise remaining asset life of S&C.

Signalling renewals

Preliminary data indicates1035 signalling equivalent units (SEUs) renewed against a plan of 1109 which represents 93.3% achievement. Analysis of the volumes from individual routes shows varying degrees of achievement, with only three showing 100% achievement of planned volumes. Three routes failed to meet their plan by significant margins and the remaining three over achieved by equally large amounts.

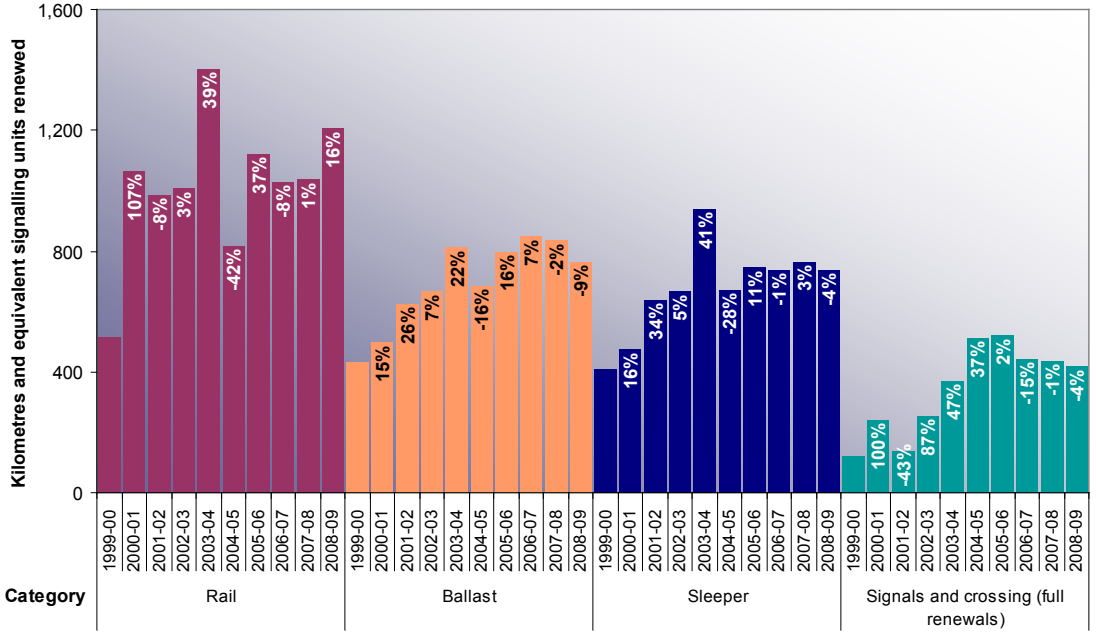
Telecoms renewals

Data for telecom system renewals also shows large variations between plan and achievement. Again the overall achievement is close to the plan but the variation within specific elements indicates that there is room for improvement in the renewal planning process.

Table 9. Track and signalling renewals volumes 2004-05 to 2008-09

Renewal Activity	2004-05		2005-06		2006-07		2007-08		2008-09	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Rail renewal - km	874	816	1,002	1,120	1,007	1,028	1,016	1,039	939	1,206
Sleeper renewal (all types) - km	695	670	733	744	782	738	698	763	687	735
Ballast renewal (all types) - km	690	685	752	798	986	850	851	837	804	763
Switches and crossings - units	539	511	507	520	407	442	473	436	438	419
Signalling - equivalent units	N/A	1,678	257	278	669	481	1,357	1,441	1,109	1,035

Figure 19. Track (kilometre) and S&C (equivalent units) renewals



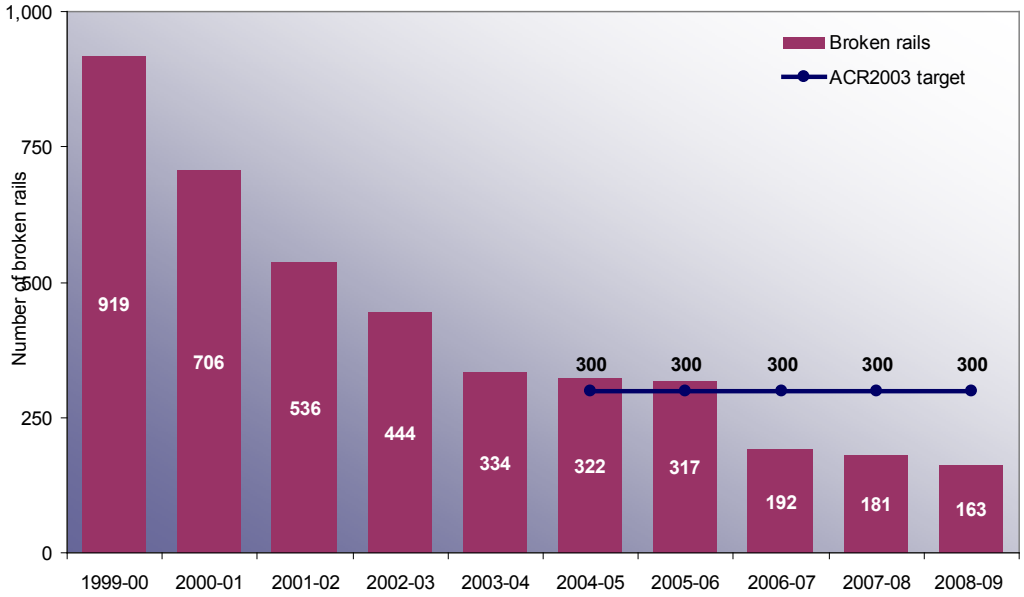
Source: Network Rail's Annual Return 2009 and Network Rail's business plan

2 Excludes West Coast route modernisation

Structures renewals

Preliminary data is based on period 12 and planned forecasts for period 13. Network Rail's composite volumes table indicates that the overall volume of civils assets renewals was 109% of plan but there is considerable variability within that figure. Most bridges over delivered by up to 24% above plan, with the exception of Bridgeguard3 work which was 76% of plan. Culverts were six times planned volume and we are asking Network Rail the reasons for this. Earthworks, coastal and estuarial defences, and retaining walls were all behind plan. Retaining walls were worst at 34% of plan (mostly in LNW and Sussex), although preliminary results indicate actual output significantly higher than last year. Much of this variability is driven by the progress of larger remediation schemes.

Figure 20. Number of broken rails



Source: Network Rail period performance report data

1. Great Britain

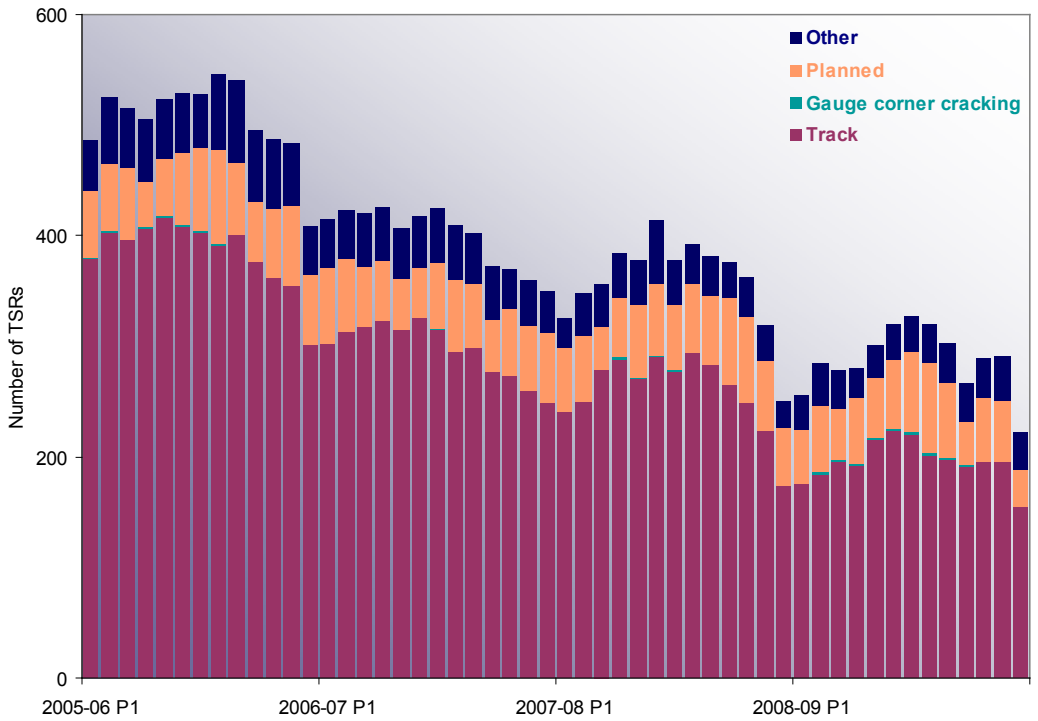
Table 10 Number of TSRs in place at the end of the year, by cause

	2002-03	2003-04	2004-05*	2005-06	2006-07	2007-08	2008-09
Condition of track	355	325	n/av	301	249	174	156
Rolling contact fatigue	15	5	n/av	0	0	0	0
Work in progress	63	53	n/av	63	63	52	33
Other	104	74	n/av	45	37	24	33
Total	537	457	0	409	349	250	222

Source: Network Rail's network condition data

[1] Network Rail only reported aggregate data for part of 2004-05

Figure 21. Number of TSRs in place at the end of the year, by cause



Source: Network Rail period performance report data

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09			
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
8 (a) - Expenditure (OMR)	Year to date actual	**5,187**	**1,163**	**2,420**	**4,142**	**5,556**
Operating, maintaining and renewing the network	Year to date budget	***5,611***	***1,255***	***2,630***	***4,456***	***5,895***
(£ millions)	Variance %	**-7.6**	**-7.3**	**-8.0**	**-7.0**	**-5.8**
8 (b) - Expenditure (enhancements)	Year to date actual	**743**	**249**	**542**	**963**	**1,377**
Enhancing the network	Year to date budget	***749***	***276***	***614***	***1,020***	***1,278***
(£ millions)	Variance %	**-0.8**	**-9.8**	**-11.7**	**-5.6**	**7.7**

2008-09
Year end actual
Year end target
5,556
5,895
1,377
1,278

KPI 8 (a) and (b) – Expenditure

Network Rail's budget for 2008-09 included a challenging 20.2% increase in renewals spend over last year. The company's full-year total expenditure is 3.3% below budget, with renewals spend 9.8% below budget.

In the last period of this year, Network Rail significantly increased the budget for renewals (associated with the fixed telecoms network (FTN)) in Scotland by £36m (12.5%), with a similar reduction in the England & Wales budget. This highlights a poor allocation of the original budget and suggests that Network Rail needs to improve the way it accounts for expenditure in Scotland.

Comparison to budget

Total expenditure in Q4 was £131m (7.7%) higher than budget with the full year total expenditure £240m (3.3%) below budget. Network Rail's explanation of the full year variance is that it was largely due to:

- £342m (9.8%) below budget on renewals. This reflects deferrals of signalling works (£47m), the FTN programme (£125m), efficient engineering access (EEA) (£59m) and plant and machinery (£46m) as a result of delays to these programmes, which is likely to have only a minor impact on improving railway services; and
- £99m (7.7%) above budget on enhancements. Network Rail managed to make more progress on its enhancement schemes than expected in its budget e.g. the Network Rail discretionary fund (NRDF) (£66m), due to improved planning. This additional spend is partly offset by savings on Thameslink (£64m).

Comparison to last year

Total expenditure for the full year is £1,003m higher than in 2007-08. Network Rail's explanation for this increased spend is:

- increased spend on enhancements (£634m), primarily due to Thameslink (£232m), King's Cross (£44m), Airdrie to Bathgate (£70m), WCRM (47m), Reading (£12m), additional customer sponsored schemes (£51m), additional safety and environment schemes (£75m) and additional NRDF schemes (£83m);
- increased renewal spend (£245m), largely due to increased spend on West Coast (£118m), increased spend on the FTN programme (£36m) and the EEA programme (£66m);
- higher controllable opex (£39m) as a result of various overspends;
- maintenance expenditure £14m higher than last year, primarily due to increased traffic growth (particularly on the West Coast) partly offset by higher efficiencies; and

- non-controllable opex costs £99m higher, the major increase being in traction electricity costs (£85m higher) due to increased electricity prices, this has been largely offset by increased income.

Comparison to determination

Total expenditure for the full year is £1,783m higher than the ACR2003 determination.

Network Rail's explanation for this increased spend is:

- increased spend on enhancements (£1,125m), primarily due to Thameslink (£295m), other government sponsored schemes (£191m), NRDF schemes (£144m), Out-Performance Fund (£62m), Network Rail sponsored schemes (£157m), customer sponsored schemes (£82m), and higher spend on ACR2003 funded projects (£199m);
- overspend on WCRM renewals (£238m) due to increases in the cost of the project to deliver the December 2008 timetable change;
- non-WCRM renewals £286m higher largely due to expenditure on the EEA programme (£66m), expenditure on the FTN programme (£174m) and lower efficiencies than assumed at ACR2003 offset partly by lower volumes of work;
- increased maintenance spend of £43m largely due to the impact of traffic growth (particularly on the west coast), offset by increased efficiencies;
- non-controllable opex £136m higher largely due to increases in traction electricity costs as a result of increased electricity prices, which are largely offset by increased income; higher British Transport Police costs as a result of the programme to increase safety at stations; and the increase in the ORR licence fee; and
- net schedule 8 payments £43m better due to improved train performance.

We indicated in previous editions of the monitor that we thought Network Rail was optimistic in forecasting the amount of renewals work it could complete in 2008-09, as it involved a significant step up in expenditure in comparison to 2007-08 (20.2%), the expenditure was at historically high levels and there were significant year to date underspends. This has turned out to be the case.

Network Rail has previously said that it is intending to plan and deliver work more evenly throughout the year and is developing a rolling programme of work that will cover a number of years, instead of planning for an annual period. This should help to ensure that where possible unplanned and inefficient peaks in expenditure are avoided.

Our calculation of the starting point (1 April 2009) for the PR08 determination included our assumptions for 2008-09 income and expenditure for the purposes of forecasting the size of the regulatory asset base, debt levels and corporation tax balances. These assumptions affect the levels of access charges in CP4. Where appropriate, we will adjust for the difference between our assumptions and the 2008-09 outturn in CP5.

Enhancements expenditure

Network Rail spent £98.5m more than its budget on enhancements schemes in 2008-09.

This included spending £113m more than budget on the ACR03 funded category of schemes, mainly due to Network Rail sponsored development work for CP4 projects. This spend was not included in the 2008-09 budget.

The company also spent £66m more than budget on the Network Rail discretionary fund (NRDF), an increase in spend above the Q3 full year forecast of around £30m. Despite our concerns expressed in earlier editions of the monitor, Network Rail has managed this significant ramp-up in spending so that the full CP3 discretionary fund has been spent in the control period.

These expenditures over budget were partially offset by spending below budget on Government sponsored schemes, including Thameslink (£64m below budget) and the access for all programme (£15m below budget). King's Cross however made faster progress than anticipated and expenditure there was £22m above budget.

Table 11. Enhancement expenditure

£ million	Full year			
	Actual	Budget	Variance	Variance %
ACR funded	606.0	493.1	112.9	22.9%
Government sponsored	486.4	538.2	-51.8	-9.6%
NRDF	143.7	77.9	65.8	84.5%
Out performance	61.9	64.7	-2.8	-4.4%
TOC sponsored	82.0	101.9	-19.9	-19.5%
Planning adjustment	-3.6	2.1	-5.7	-268.9%
Total	**1376.5**	**1278.0**	**98.5**	**7.7%**

1. Great Britain

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
9 - Financing	Actual	**69.3**	**66.3**	**65.8**	**67.5**	**70.0**	**70.0**
Net debt to RAB (Regulatory asset base) ratio (%)	Network Rail budget	***72.4***	***66.1***	***66.1***	***67.1***	***68.4***	***68.4***
10 - Financial efficiency index (FEI)	Year to date actual	**78.1**	**79.2**	**79.3**	**77.8**	**75.3**	**75.3**
Adjusted cost of operations, maintenance and track renewals	Network Rail target	***77.9***	***78.4***	***78.2***	***77.0***	***75.3***	***75.3***

KPI 9 – Financing (Net debt to RAB ratio)

At the end of Q4 Network Rail's net debt to RAB ratio (gearing) was 70.0%, within the regulatory limit but 1.6% above budget.

According to Network Rail, this is due to:

- net debt being £466m below budget largely as a result of lower expenditure (in particular the Q2 and Q3 expenditure variance (£252m)) and delayed creditor payments (£235m); and
- the RAB being £1,350m lower than budget largely due to a down-ward adjustment for the non-delivery of some outputs and deferral of expenditure (£1,018m) [3] actual inflation (used to index the RAB) being lower than assumed in the budget (£345m) and spend on projects that can be added to the RAB being lower than budget, largely due to savings on Thameslink (£64m).

The net debt to RAB ratio at the end of Q4 is 2.5% higher than at the end of Q3, largely due to the downward adjustment to the RAB for the non-delivery of outputs (£1,018m) (3.3%).

KPI 10 – Financial efficiency index (FEI)

There have been significant movements in the financial efficiency index (FEI) in Q4 compared with the Q3 forecast, such that the FEI target in 2008-09 is now reported as being met. Network Rail has explained to us the reasons for this movement. They include items which neither Network Rail nor we consider to be efficiencies, such as an underspend on elements of expenditure which have simply been deferred. Adjusting for such items would lead to an actual FEI below target.

The FEI has improved by 2.5 in Q4 to reach the target level of 75.3. Network Rail has explained to us the reasons for this movement. They include reductions in controllable opex, reductions in maintenance costs largely as a result of the delay in the harmonisation of maintenance terms and conditions, and improvements in track unit costs partly due to earlier under-reporting of the volume of activity. However, the list includes items which neither Network Rail nor we consider to be efficiencies, such as the underspend on the harmonisation of maintenance terms and conditions, which is expenditure that has simply been deferred, and savings which have been included in opex for accounting reasons but which are not strictly

3 Other adjustments of £4,613m for issues such as the revenue deferral and incentive schemes as described in the PR08 final determination, will be made to the RAB at 1 April 2009, which will reduce the net debt to RAB ratio to 60.6%.

opex efficiencies. Adjusting for such items would lead to an actual FEI below target.

The reporter (Halcrow) has said that renewals volumes being mistakenly omitted from the calculation of the FEI until period 13 raises concerns about data accuracy and data assurance processes. It also raised concerns regarding data quality of costs and volumes in the maintenance delivery units. We will be following these issues up with Network Rail.

Although there is no evidence to suggest that the FEI systematically overstates Network Rail's efficiency performance (it may understate Network Rail's efficiency performance over CP3 as a whole), the above supports concerns we have expressed in the past about the adequacy of the FEI as a measure of efficiency. Network Rail has changed the measure for its 2009-10 management incentive programme.

Efficiency performance

We have undertaken an initial assessment of Network Rail's efficiency performance in 2008-09. We have also undertaken an initial assessment of Network Rail's efficiency performance over CP3.

We estimate Network Rail's efficiency improvement in operating, maintaining and renewing the railway in 2008-09 to be 4.5% compared with a regulatory assumption in ACR03 of 6%. This means that Network Rail fell further behind the cumulative ACR03 assumption for control period 3 of 31% after a poor performance in 2007-08. We estimate that Network Rail has achieved cumulative efficiencies over the control period of around 27% - a disappointing result given the good progress earlier in CP3.

The efficiency data we received is for Network Rail as a whole. As in the past, we have not been able to disaggregate for Scotland and England & Wales separately. During CP4 we expect Network Rail to report separately for Scotland and England & Wales.

There are three broad ways in which we judge Network Rail's efficiency improvement. The first is through examining the variance between Network Rail's actual spend and our determination (for operating and maintenance expenditure). The second is by reviewing Network Rail's budget variance analysis. The third is by taking a view on Network Rail's unit cost data.

The picture varies across all three measures.

Using the variance between Network Rail's actual operating and maintenance spend and our ACR2003 assumed expenditure:

- Network Rail has failed to meet our 30% opex efficiency assumption, underperforming by almost 2%; and
- on maintenance, Network Rail appears to have achieved our regulatory assumption of 35%, adjusting for equated track miles.

Network Rail's budget variance analysis shows that in respect of renewals expenditure, it has underperformed against our CP3 assumption. Last year, it achieved an improvement of 4% but this was insufficient to reverse the poor performance in 2007-08. Network Rail achieved renewals efficiencies of 22.7% across the control period against a regulatory assumption of 29.7%. Poor performance on track was key to the overall underperformance.

Combining the budget variance analysis on renewals with operating and maintenance expenditure variance gives total efficiencies over CP3 of 27%.

Using renewals unit cost data gives a lower efficiency performance than suggested by the budget variance analysis above:

- this year's unit cost analysis indicates that the company has made up some efficiency it unwound in 2007-08. It suggests that renewals efficiencies were 3.3% in 2008-09, contributing to an 18% improvement across the control period; and
- Network Rail has found it difficult to achieve efficiencies in track renewals in particular. Although unit cost efficiency improved by 2.5% in 2008-09, improvements of only 11.7% have been made over the control period. Adjusting for composite unit rates improves the overall figure. However, we should caution that sharp fluctuations in indices give us reason to doubt the quality of track unit costs.

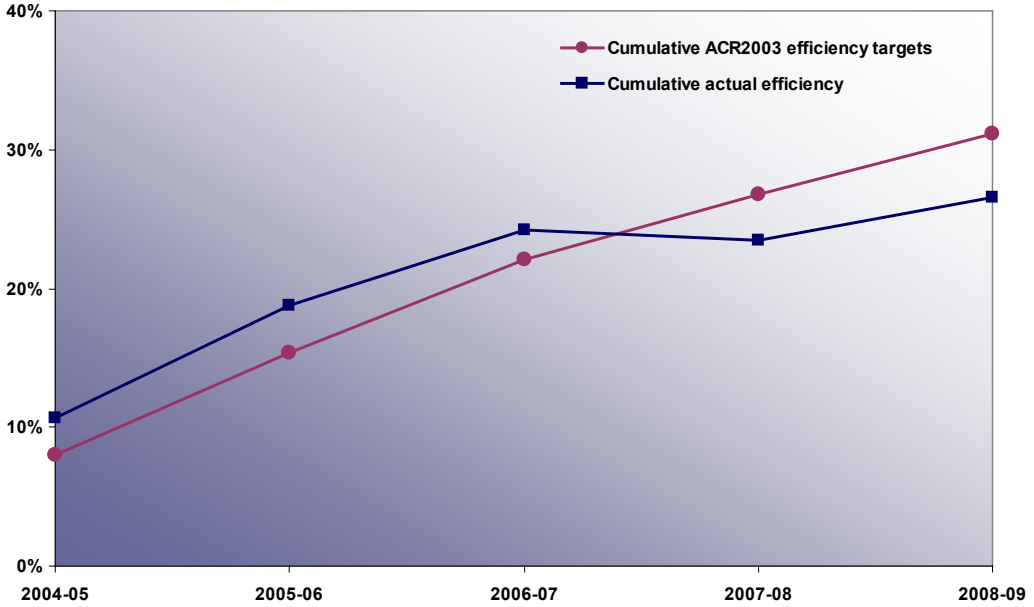
The reporter has stated that maintenance unit costs are not yet sufficiently robust to ensure that the unit costs are accurate and comparable between MDU's. Many problems seen in previous years continue to affect data accuracy.

Combining the renewals unit cost analysis with the operating and maintenance expenditure variance gives an efficiency improvement of around 25% for the control period. This is compared to the estimate of 27% reported above if the renewals budget variance analysis is used instead of renewals unit costs.

As in previous years, concerns about unit cost data quality and the less than full coverage of renewals in the unit cost data means we need to be cautious in relying on the data for our efficiency assessment. We therefore use the renewals variance budget analysis as a more accurate picture of Network Rail's efficiency performance.

Figure 22 shows our preliminary assessment of Network Rail's CP3 efficiency against our regulatory assumption at ACR03.

Figure 22. Cumulative Efficiency targets against actual outperformance based on Network Rail's budget variance



Source: ACR03/ Network Rail

1. Great Britain

Table 12 shows that income in 2008-09 was £39m (0.6%) higher than budget. According to Network Rail this was mainly due to: increased charges for traction electricity (£27m) as a result of higher electricity prices; higher Schedule 4 income (£31m), due to better than expected performance on planned possessions and timetabling; offset by Schedule 8 income being £17m lower than budget, mainly due to higher compensation payments for the reduction in performance as a result of the adverse weather conditions in February 2009.

The expenditure variances are explained on page 37. The RAB and net debt variance are explained on page 40.

Table 12. Summary of Network Rail's financial performance 2008-09

£ millions	Full year actual	Full year budget	Variance £ millions	Variance %
Total Income	**6,170**	**6,131**	**39**	**1%**
Expenditure				
Operating costs				
- Controllable operating costs	912	893	19	2%
- Non-controllable costs	401	393	8	2%
- Total operating costs	1,313	1,286	27	2%
Maintenance	1,104	1,128	-24	-2%
Renewals				
- Non WCRM	2,661	3,013	-352	-12%
- WCRM	478	468	10	2%
- Total renewals	3,139	3,481	-342	-10%
Enhancements	1,378	1,278	100	8%
Total expenditure	**6,933**	**7,173**	**-240**	**-3%**
GB RAB	**29,840**	**31,190**	**-1,350**	**-4%**
Net Debt	**-20,879**	**-21,335**	**456**	**-2%**
Movement in net debt	**-1,527**	**-1,983**	**456**	**-23%**

Source: Network Rail

2. England and Wales summary data

Q4 2008-09 (4 January - 31 March 2009)

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
2 - Passenger train performance	Actual at end of quarter	89.8	90.0	90.4	90.8	90.6	90.6
Public performance measure (PPM) (MAA) (%)	Industry target	89.4	89.9	90.1	90.6	90.6	90.6
3 - Network Rail delay minutes	Year to date actual	8.9	1.8	3.6	6.3	8.3	8.3
Number of delay minutes (millions) attributed to Network Rail	ORR target	9.0	1.8	3.8	6.4	8.3	8.3
5 - Asset failures	Actual 4-weekly average	3,606	3,719	3,594	3,434	3,471	46,089
Number of infrastructure incidents	Previous year's actual	4,160	4,008	3,892	3,518	3,606	48,586
6 - Asset stewardship index (ASI)	Actual	0.57	0.57	0.56	0.53	0.53	0.53
Composite of seven asset condition measures	Network Rail target	*0.62*	n/av	n/av	n/av	*n/av*	n/av
7 - Activity volumes (track renewals only)	Actual cumulative	97.2	95.1	97.3	97.2	102.1	102.1
% Activity compared with plan	Network Rail target	*100*	*100*	*100*	*100*	*100*	*100*
8 (a) - Expenditure (OMR)	Year to date actual	4,705	1,064	2,234	3,791	5,058	5,058
Operating, maintaining and renewing the network	Year to date budget	5,058	1,150	2,432	4,074	5,368	*5,368*
(£ millions)	Variance %	-7.0	-7.5	-8.1	-6.9	-5.8	
8 (b) - Expenditure (enhancements)	Year to date actual	719	235	505	893	1,269	1,269
Enhancing the network	Year to date budget	710	260	571	943	1,162	*1,162*
(£ millions)	Variance %	1.2	-9.6	-11.6	-5.3	9.2	
10 - Financial efficiency index (FEI)	Year to date actual	78.9	81.9	81.1	78.5	76.1	76.1
Adjusted cost of operations, maintenance and track renewals	Network Rail target	*77.9*	*80.6*	*79.8*	*77.9*	*75.9*	*75.9*

See notes on pages 56-58. Network Rail's own internal targets are in *italics.*

3. Scotland summary data

Q4 2008-09 (4 January - 31 March 2009)

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
2 - Passenger train performance	Actual at end of quarter	**90.6**	**91.0**	**91.0**	**90.9**	**90.6**	**90.6**
Public performance measure (PPM) (MAA) (%)	Industry target	**90.0**	**90.7**	**90.5**	**90.4**	**90.6**	**90.6**
3 - Network Rail delay minutes	Year to date actual	**604.8**	**105.0**	**227.7**	**447.2**	**620.4**	**620.4**
Number of delay minutes (thousands) attributed to Network Rail	ORR target	**820.0**	**160.6**	**324.7**	**589.0**	**762.0**	**762.0**
5 - Asset failures	Actual 4-weekly average	**393**	**369**	**342**	**346**	**420**	**4,777**
Number of infrastructure incidents	Previous year's actual	**423**	**423**	**338**	**345**	**393**	**4,839**
6 - Asset stewardship index (ASI)	Actual	**0.70**	**0.68**	**0.71**	**0.66**	**0.58**	**0.58**
Composite of seven asset condition measures	Network Rail target	***0.97***	***0.91***	***0.85***	***0.76***	***0.73***	***0.73***
7 - Activity volumes (track renewals only)	Actual cumulative	**96.1**	**111.5**	**94.8**	**90.6**	**98.3**	**98.3**
% Activity compared with plan	Network Rail target	***100***	***100***	***100***	***100***	***100***	***100***
8 (a) - Expenditure (OMR)	Year to date actual	**482.0**	**99.0**	**186.0**	**350.5**	**498.3**	**498**
Operating, maintaining and renewing the network	Year to date budget	**553.5**	**105.0**	**198.0**	**381.6**	**526.8**	***527***
(£ millions)	Variance %	**-12.9**	**-5.7**	**-6.1**	**-8.1**	**-5.4**	
8 (b) - Expenditure (enhancements)	Year to date actual	**23.9**	**14.0**	**37.0**	**69.6**	**108.1**	**108**
Enhancing the network	Year to date budget	**38.7**	**16.0**	**43.0**	**77.1**	**116.0**	***116***
(£ millions)	Variance %	**-38.2**	**-12.5**	**-14.0**	**-9.7**	**-6.8**	
10 - Financial efficiency index (FEI)	Year to date actual	**77.3**	**74.2**	**75.5**	**72.0**	**69.2**	**69.2**
Adjusted cost of operations, maintenance and track renewals	Network Rail target	***77.9***	***73.4***	***75.7***	***69.2***	***69.7***	***69.7***

See notes on pages 56-58. Network Rail's own internal targets are in *italics.*

3. Scotland

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
2 - Passenger train performance	Actual at end of quarter	**90.6**	**91.0**	**91.0**	**90.9**	**90.6**	**90.6**
Public performance measure (PPM) (MAA) (%)	Industry target	**90.0**	**90.7**	**90.5**	**90.4**	**90.6**	**90.6**
3 - Network Rail delay minutes	Year to date actual	**604.8**	**105.0**	**227.7**	**447.2**	**620.4**	**620.4**
Number of delay minutes (thousands) attributed to Network Rail	ORR target	**820.0**	**160.6**	**324.7**	**589.0**	**762.0**	**762.0**

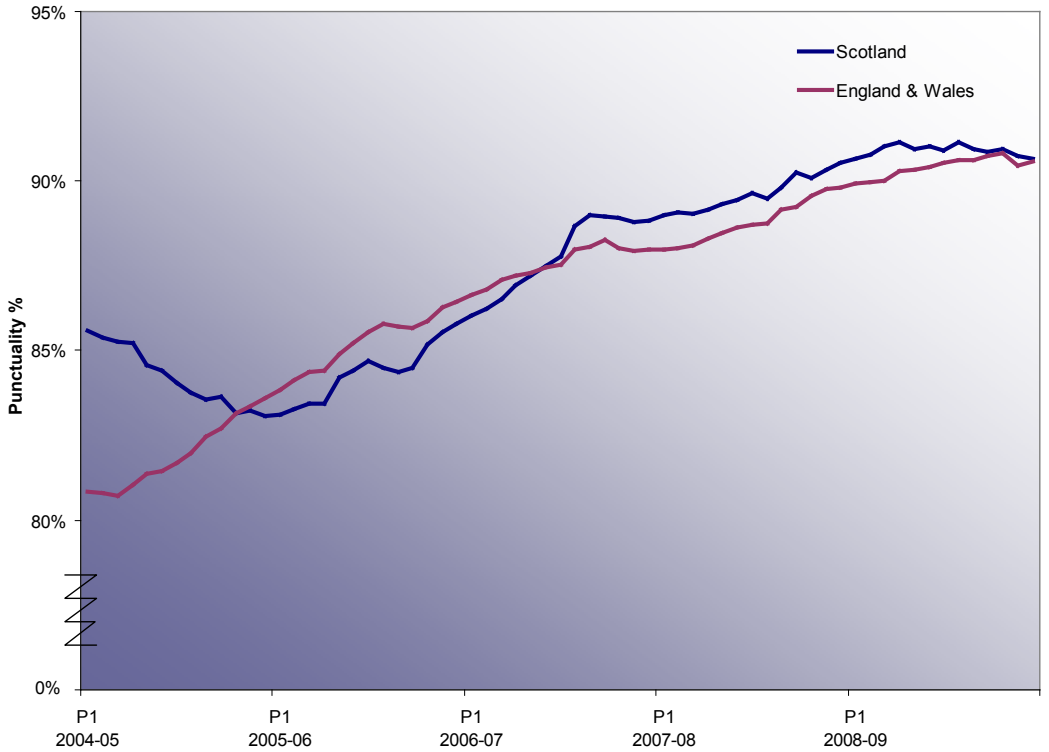
KPI 2 – Passenger train performance

The industry just met the end of year target of 90.6% that it had set itself (this was the same level achieved last year) but 0.9% behind the planned position. This was despite the challenges of significant winter weather in many parts of Scotland during early February. Performance had in fact been running at an even higher rate earlier in the year but problems of autumn flooding in Eastern Scotland and difficulties with the introduction of a new signalling system at Glasgow Central in the New Year caused a slight deterioration. There continues to be performance problems around Glasgow although Network Rail and operators have not yet been able to identify the root cause.

KPI 3 – Network Rail delay minutes

Network Rail delays to First ScotRail increased by 6% although overall delays fell by 2.1% as the operator's own performance and inter-operator delays improved.

Figure 23. PPM by four-weekly periods (England and Wales and Scotland), 2004-05 to 2008-09



Source: Network Rail, period performance report data

3. Scotland

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
5 - Asset failures	Actual 4-weekly average	**393**	**369**	**342**	**346**	**420**	**4,777**
Number of infrastructure incidents	Previous year's actual	**423**	**423**	**338**	**345**	**393**	**4,839**

KPI 5 – Asset failures

Track

The number of incidents of track faults and broken rails increased against the GB trend by 20% compared to a network reduction of 26%. This is a larger fluctuation than would be expected on a route basis and requires further explanation.

Non-track

As noted for the network as a whole, points failures in Scotland are up compared to last year and significantly worse than the best performing routes. On a rolling MAA points failures per unit have reduced by 22.5% compared with a peak two years ago, but are still 15% worse than they were 4 years ago.

Train detection

As reported for the network as a whole, there was a slight reduction in the number of failures of train detection equipment (track circuits and axle counters). However Scotland is the worst performing route and over 70% worse than the best. It is not obvious why Scotland should be worse than other routes and this will be investigated further. The total number of failures was however 2.3% better than last year (715 compared with 732)

Signalling and train control

The number of signal failures was 4.5% better than last year (908 against 951). Level crossing failures were also reduced from 152 to 140 (7.9%)

However, infrastructure delay incidents from signalling system and power supply failures were 13.8% worse compared with last year (429 against 377). Telecom failure delay incidents were also up by 12.7% (230 against 204).

During the Christmas holiday period Glasgow Central was re-signalled together with eight remotely controlled interlockings. Although the possession was handed back on time for the planned service, it quickly became apparent that there were problems with the performance of the equipment, which had a major impact on the performance of rail services. Whilst the most serious issues were resolved within a few days, Network Rail has spent the last few months improving the operating flexibility that is needed on the approaches to the terminus. One of the difficulties is that the density of traffic in and out of Glasgow Central means that the area is very sensitive to any reduction in flexibility such that delays can mount up very quickly.

Stewarton Bridge

A significant collapse of a rail over road bridge occurred at Stewarton, Ayrshire on 27 January 2009 involving an oil train which derailed and subsequently caught fire. Fortunately no one was injured and we await the outcome of the RAIB safety investigation. Upon receipt of these details we shall review any lessons to be learnt.

3. Scotland

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
6 - Asset stewardship index (ASI)	Actual	**0.70**	**0.68**	**0.71**	**0.66**	**0.58**	**0.58**
Composite of seven asset condition measures	Network Rail target	***0.97***	***0.91***	***0.85***	***0.76***	***0.73***	***0.73***
7 - Activity volumes (track renewals only)	Actual cumulative	**96.1**	**111.5**	**94.8**	**90.6**	**98.3**	**98.3**
% Activity compared with plan	Network Rail target	***100***	***100***	***100***	***100***	***100***	***100***

KPI 6 – Asset stewardship index

The equivalent regional measure (the ASI-R) was 19% better than Network Rail's internal stretch target, better than the GB trend and 17% better than the situation last year

KPI 7 – Activity volumes

Network Rail renewed 229 km of plain line track in Scotland in 2008-09 compared to a planned output of 233 km, and delivered 45 of 49 planned switch and crossing renewals.

3. Scotland

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual / Year end target
8 (a) - Expenditure (OMR)	Year to date actual	**482.0**	**99.0**	**186.0**	**350.5**	**498.3**	**498**
Operating, maintaining and renewing the network	Year to date budget	**553.5**	**105.0**	**198.0**	**381.6**	**526.8**	***527***
(£ millions)	Variance %	**-12.9**	**-5.7**	**-6.1**	**-8.1**	**-5.4**	
8 (b) - Expenditure (enhancements)	Year to date actual	**23.9**	**14.0**	**37.0**	**69.6**	**108.1**	**108**
Enhancing the network	Year to date budget	**38.7**	**16.0**	**43.0**	**77.1**	**116.0**	***116***
(£ millions)	Variance %	**-38.2**	**-12.5**	**-14.0**	**-9.7**	**-6.8**	

KPI 8 (a) and (b) – Expenditure

Comparison to budget

Total expenditure in Q4 was £2m (1.2%) higher than budget and full year total expenditure was £36m (5.7%) below budget. Network Rail's explanation of the full year variance is that it was largely due to:

- underspend of £26m (8.2%) on non-track renewals largely due to deferral of work to CP4, which is likely to have only a minor impact on improving railway services; and
- £8m (6.8%) below budget on enhancements, largely due to delays on Airdrie to Bathgate (£7m) and GARL (£3m), which is likely to have only a minor impact on improving railway services.

In the last period of this year, Network Rail significantly increased the budget for renewals in Scotland by £36m (12.5%) (with a similar reduction in the England & Wales budget), largely due to changes in the FTN project, which only affects 2008-09. This highlights a poor allocation of the original budget and suggests that Network Rail needs to improve the way it accounts for expenditure in Scotland.

Comparison to last year

Total expenditure for the full year is £100m higher than in 2007-08. Network Rail's explanation for this increased spend is:

- additional enhancement projects (£84m), primarily due to the Airdrie to Bathgate project (£71m) and the Glasgow to Kilmarnock project (£13m);
- increased renewal spend (£15m) largely due to renewals deferred from 2007-08; and
- increased non-controllable operating expenditure (£6m), primarily due to increased traction electricity costs as a result of increased electricity prices, which are largely offset by increased income.

3. Scotland

Key performance indicators (KPIs)		2007-08	2008-09				2008-09
		Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year end actual
							Year end target
10 - Financial efficiency index (FEI)	Year to date actual	**77.3**	**74.2**	**75.5**	**72.0**	**69.2**	**69.2**
Adjusted cost of operations, maintenance and track renewals	Network Rail target	***77.9***	***73.4***	***75.7***	***69.2***	***69.7***	***69.7***

KPI 8 (a) and (b) – Expenditure - continued

Comparison to determination

Total expenditure for the full year is £164m higher than the ACR2003 determination.

Network Rail's explanation for this increased spend are:

- additional enhancement projects not funded by ACR2003 (£108m), primarily due to the Airdrie to Bathgate project (£71m) and the Glasgow to Kilmarnock project (£13m);
- non-WCRM renewals spend is £80m higher than the ACR2003 determination as a result of lower efficiencies than assumed at ACR2003 and increased volumes of work. This is partly offset by underspend on WCRM renewals (£19m) as a result of a change to the scope of the project; and
- non-controllable opex is £4m higher than the ACR2003 determination largely reflecting increased traction electricity costs due to increases in traction electricity costs as a result of increased electricity prices.

These increases in expenditure are partly offset by £5m of savings in controllable operating costs.

KPI 10 – Financial efficiency index (FEI)

According to Network Rail, at the end of Q4, the FEI was 69.2, which was 0.5 better than the target of 69.7. This is largely the result of lower maintenance costs (1.0) (partly relating to the delay in the harmonisation of maintenance terms and conditions), partly offset by higher track unit costs (0.7), largely due to lower efficiencies.

The FEI has improved by 2.8 in Q4 and is also 1.7 better than the full year forecast in Q3. As with the Great Britain FEI, some of the factors which have contributed to this significant movement cannot be considered as efficiencies.

4. Planning and major projects

Planning

Route utilisation strategies (RUSs) establish plans for the efficient use and development of the railway. They are important in ensuring robust plans are in place for the future. It is Network Rail's responsibility to lead on the development of RUSs.

We want to make sure everyone is aware of the RUS work and can plan their contributions to it. We therefore require Network Rail to publish a RUS programme. We approved its revised programme in January 2009.

There are 17 geographical RUSs plus freight and network RUSs in the programme. Network Rail develops each RUS, steered by the relevant stakeholder management group (SMG) at each of the development stages: scoping, baseline, options and recommendations. We are an observer at SMG meetings and we provide advice and assistance to ensure that the process runs smoothly and fairly in accordance with Network Rail's network licence.

Network Rail submits each RUS to us and we assess it. We have 60 days to decide whether to issue a notice of objection to the RUS, and we take account of stakeholder responses. In 2008-09, Network Rail developed and established four RUSs on time, for the East Coast main line, South London, Lancashire and Cumbria and Wales. In addition, it published the Merseyside RUS in March 2009 for establishment in May, and published a consultation draft of the Network RUS long distance services and scenarios on 1 April 2009, and a consultation draft of the Kent RUS on 24 April. Work is well underway on the five remaining RUSs in the programme. In 2008-09, we did not object to any RUS, reflecting our belief that they are of good quality and meet the industry's requirements as defined in Network Rail's network licence and our RUS guidelines.

We reviewed some aspects of the overall RUS process as part of our review of Network Rail's network licence, and prepared new guidelines which came into force alongside the new licence on 1 April 2009. Network Rail responded positively to these changes, and is developing a second generation of RUSs as well as a system for tracking the progress of RUS outputs.

West Coast route modernisation

During 2008, Network Rail achieved all the significant milestones on this project, and completed the infrastructure upgrade in time to support an improved timetable from 14 December 2008, designed to deliver faster journey times and increased service frequency. But this involved significant disruption as additional possessions were required to increase the certainty of delivery and overcome earlier slippages in the programme.

Leading up to December, the reliability of the overall route infrastructure was poor, falling well short of what train operators required to run a high frequency, high performance service. As a result, train operators delayed introducing some of the planned new services until they were satisfied performance levels were sufficiently robust.

In January there were further reliability problems with several highly disruptive incidents including some significant OLE failures. These again raised doubts about the reliability of the route. Because of the seriousness of the disruption, we undertook a quick review to verify the nature of the incidents and the adequacy of Network Rail's response. We established that the asset failures were not directly related to each other and were not indicative of a systemic failure.

Performance subsequently improved sufficiently so that on 16 February the full set of enhanced train services was introduced. However, performance has not yet reached the consistent high levels expected and remains a serious concern.

In relation to the infrastructure upgrade work, some further work is planned in 2009 to conclude this phase of the upgrade. The majority of this work was deferred from the 2008 programme in order to de-risk the delivery of critical projects and Virgin's driver training programme. We expect this work to contribute to route performance. It is currently planned to be completed in November 2009.

4. Planning and major projects

Thameslink

Thameslink is a complex programme with major track, stations and signalling work, new rolling stock and cascades, timetable changes and franchise changes. It involves DfT, Network Rail, TfL, mainline train operating companies and London Underground. It will deliver a substantial increase in capacity on the cross London route.

Network Rail's work during the year has been focused on enabling the major timetable change in March 2009 to take place. This timetable change is in turn necessary to allow the next stage of infrastructure work. The infrastructure work and new trains will together lead to much greater capacity.

Network Rail completed four main types of work. It worked to improve the reliability of the infrastructure on the core route between St Pancras and London Bridge. It carried out gauge clearance to allow the complex rolling stock cascade to take place (rolling stock was moved between train operators to facilitate the new timetable). As different types of rolling stock are used on routes, alterations have to be made to the track and platforms to ensure the trains 'fit' on the route.

The third type of work was station works at Blackfriars and Farringdon to accommodate the changed and increased passenger flows at the stations. This involved, for example, work on a new footbridge and new canopies.

Finally, the track layout at Blackfriars had to be remodelled to allow the eventual removal of the bay platforms.

In March the branch line from Farringdon to Moorgate and the bay platforms at Blackfriars were closed and the new timetable introduced.

There was an intense period of work across the industry in the run up to the timetable change, made more difficult by delays in the delivery of new trains. The industry was successful in introducing the change on the planned date and initial indications are that there have been few problems since the change.

Although there tends to be a focus on the negative aspects of infrastructure work, Network Rail's delivery to date on this complex programme has been a credit to the company.

We need to ensure this good progress is maintained. In March 2009 we commissioned Nichols to review Network Rail's programme management plans for the remainder of the Thameslink work, to ensure these are robust. Nichols reported in May 2009 and we will consider the recommendations. Its report will be published.

Projects in Scotland

Network Rail has progressed on three main enhancement projects in Scotland covered by the 2008 periodic review:

Airdrie-Bathgate: the main aim of this project is to deliver an electrified railway between Airdrie and Bathgate capable of running four trains per hour. Network Rail is constructing a double track electrified railway on the closed route (which is around 22km long) between Drumgelloch (near Airdrie) and Bathgate. It is also building new stations and additional platforms at existing stations.

Glasgow Airport Rail Link (GARL): the GARL project will provide a direct rail link from Glasgow Central station to the airport. The work includes major track remodelling work, a new junction and crossover to the west of Paisley St James, extra platform capacity at Glasgow Central and construction of the branch line to the airport. There are also substantial signalling renewals works within the scope.

Glasgow-Kilmarnock: a track redoubling project to allow increased service frequency between Glasgow and Kilmarnock. New platforms will also be constructed at Dunlop and Stewarton.

The Airdrie-Bathgate programme was revised during the year with some milestones for 2008-09 being slipped, although the final completion date of the project (in 2010) is maintained. Network Rail has met the revised programme. The remainder of the programme is now very tight and a lot of work was carried out towards the end of the year on analysing risks to the programme and considering options to ensure that the project will deliver on time. We will continue to monitor the project closely.

On GARL the major activity during the year was development work prior to main physical works starting in 2009-10. This work was completed to schedule. Part of the enhancement work on the project is being carried out by Transport Scotland. Although the exact split of work between Transport Scotland and Network Rail has been agreed, it is likely to change at the request of Transport Scotland. The interface agreements between Transport Scotland and Network Rail have yet to be finalised although they are at an advanced stage.

The Glasgow to Kilmarnock project is much smaller and the enhanced service is due to start in December 2009. Network Rail delivered on schedule during 2008-09.

Overall Network Rail made good progress on the projects in Scotland.

Implementation of GSM-R and ERTMS

Introduction of GSM-R (the train radio system) and ERTMS (the train control system) are both mandated in European legislation to aid the movement of trains across international borders within Europe. Once common systems are in place it will be possible for trains to operate throughout the EU without needing multiple communication and control systems. But these are hugely complex projects and it will be years before the full benefits are realised.

Network Rail is responsible for leading both programmes, although these will significantly affect both the infrastructure and trains.

GSM-R

In January 2009 Network Rail announced that it had finalised an order for the purchase of over 6000 cab mobile units; about two thirds of those needed for the national rollout. This was a key stage in the project requiring significant co-operation from train operators confirming that the product being ordered was acceptable.

The two main strands of the project roll-out are the development of the national implementation plan and the demonstration of technical operations through the trials in Glasgow.

The national implementation plan now has much greater detail as a result of some positive cross industry working. The success of this project is dependent on a significant degree of co-operation from all train operators and rolling stock owners. Although the trial in Glasgow has demonstrated that the system functions to a high standard, the project still has to resolve a couple of technical issues which have delayed the completion of the trials and have caused some train operators to express uncertainty about its introduction. Resolution of these issues and completion of the trial will help build confidence that the system will work reliably and effectively.

During 2008-09 the project has seen major restructuring of its methods of operation, both organisationally within the project team and its working relationship with other industry partners. As a result there appears to be greater clarity of the objectives and how they are to be achieved.

The project has had to follow the process of the network change notification (NCN) at each stage that has an impact on train operators' working arrangements. The process has proved onerous, given the complexity of the changes involved and the fact that the NCN process was not originally developed for changes like this. It is understandable that with several separate commercial organisations, resolving issues that can have financial implications will require each organisation to consider carefully its position before reaching agreement. However, ORR is working with stakeholders to find ways to enable major projects to proceed more quickly and efficiently, to everyone's benefit.

ERTMS

At the start of CP3 there seemed very little commitment within the industry to see ERTMS introduced. The project team has achieved a remarkable turn around in opinion to the extent that the industry, DfT and ORR have all committed to a high level strategy to introduce ERTMS across the network.

The system is currently being trialled on the Cambrian line. Details of how and when the Cambrian system will be introduced into service are now becoming clearer.

The technical challenge of changing from the existing RETB system to ERTMS is complex since it has not been possible to allow both to operate at the same time and closure of the line is not feasible for any length of time. So the Cambrian line will now be commissioned in two parts and the October 2009 date originally planned as the full commissioning will now only apply to the section from Harlech to Pwllheli. Much of the infrastructure work has been completed during the year and cab fitment plans have largely been resolved. As expected fitting all the on-train equipment into an existing DMU has proved challenging and resulted in some loss of passenger compartment space. It seems likely that each retrofit design will meet with similar problems.

With commercial arrangements regarding the train fitment still to be finalised, the commissioning of the full route must wait until sufficient units have been fitted to run the full service.

Similarly the plans for national implementation are struggling to resolve the challenge of introducing ERTMS onto an operational railway. The national strategy, based on fitting cab equipment first followed by the infrastructure changes, has had to be reviewed for GWML. The timescales of Crossrail, intercity express programme and potential electrification have resulted in an 'infrastructure first' approach being considered. This in turn will require some sections of line dual fitted with ERTMS and lineside signals which is likely to incur additional cost and raise new issues on operating rules.

The clear message from European experience is that to carry out such a strategy on an existing network requires some major logistical issues to be resolved, of which making the technology work is but one part.

5. Licence compliance

West Coast route modernisation

In light of the engineering overruns at Rugby in January 2008, we concluded that Network Rail did not have a robust plan to deliver the West Coast mainline project outputs and that it was likely to be in breach of its licence obligations. We required Network Rail to submit a revised plan. It did this in March 2008, supplementing the programme with additional possessions, intended to increase the certainty of its delivery by December 2008.

We reviewed the plan with the independent reporter (Halcrow), and considered the views of stakeholders. We concluded that delivery in December 2008 was achievable and preferable to deferral, despite the extra short-term disruption this would cause. We accepted the revised plan in May 2008. An update on the project is in the planning and major projects section.

Better planning and execution of work in possessions

During the year we also required Network Rail to make and implement a plan to address the systemic weaknesses we had identified while investigating the January 2008 overruns at Rugby as well as at Liverpool Street Station and Shields junction (Glasgow). The plan focused on four key areas: risk management, site management, supplier management and communications. We accepted the plan and engaged the independent reporter Halcrow to assist us in monitoring Network Rail's implementation.

Network Rail has worked hard to design and then deliver its plan. An early indication of improvements was the relatively smooth running and completion of the 2008-09 Christmas and New Year engineering works.

Halcrow has reviewed Network Rail's progress, including auditing a sample of projects between February and April 2008 to check the new measures were being implemented on the ground. Its final audit report to us in April 2009 confirmed Network Rail's considerable progress.

In May the ORR board agreed that Network Rail had complied with the order. Network Rail needs to make sure its new processes are properly embedded across the organisation, and we expect to see the benefits feed through in significantly less disruption to Network Rail's customers from possession overruns.

Problems with network capability information

In April 2008 we concluded that Network Rail had complied with its asset register licence obligations, although we had residual concerns about data quality and the provision of information to third parties. During the year we asked AMCL to further assess Network Rail's arrangements. This work has highlighted problems with the timely availability of gauging information to inform the specification, design and testing of new trains, a lack of clarity around the change control processes for gauging, and the embedding of good asset information processes into Network Rail's working practices. In particular, Siemens had difficulty obtaining information for its train design work for Transport Scotland.

Network Rail recognises that it needs to address these issues quickly, which go to its obligations under the network licence, railway group standards and the ROGS regulations. The company is now remedying these weaknesses, including writing guidelines which will set out more clearly what information third parties can reasonably expect from it and to what timescales.

Separately, Network Rail has published on its website details of the baseline capability of its network as at the start of CP4. Further details will be included in the annual return which Network Rail is required to provide to us by 1 July 2009. In terms of removing discrepancies between actual and published capability, Network Rail has worked with stakeholders throughout the year to agree an action plan for each one; we expect Network Rail to implement these plans quickly and efficiently. We confirmed in our determination for CP4 that any work needed to restore capability to published levels must be completed without further funding.

6. Key to tables and data notes

Key:-

On or better than target
0.1-10% worse than target
More than 10% worse than target and clear cause for concern (otherwise yellow).

n/app	Information not applicable
n/av	Information not available at the moment

For Expenditure variance KPI 8 (a) only

< -20% -15% -10% -5% 0% 5% 10% >

For Expenditure variance KPI 8 (b) only

< -30% -25% -20% -15% -10% -5% 0% 5% 10% 15% 20% 25% 30% >

Data notes

Where an indicator is shown to be red, we will assess the reasons for this and determine the extent to which there is cause for concern and what Network Rail needs to do to improve the situation.

Introduction

Safety data is measured monthly and published by Rail Safety and Standards Board (RSSB) each calendar quarter.

All other data is four-weekly based. There are 13 four-week periods (P) in a financial year. The period quarters (Q) are set out below.

Q1	Q2	Q3	Q4
P1-3	P4-6	P7-10	P11-13

KPIs 1, 2 and 6 are actual values at the end of quarter.

KPI 2 is a 'moving annual average' (MAA), the total for the previous 13 four weekly periods divided by 13. (This definition of MAA makes it a lagging indicator). Latest quarter is a provisional estimate.

Network-wide KPIs 1 and 9 are not disaggregated below network level.

For KPI 2, an increase over time denotes improvement.

For KPIs 3, 4, 5, 6 and 10, a decrease over time denotes improvement.

For KPI 6, the ASM has been replaced by the ASI for the whole network and ASI-R for routes. Historic targets for this measure are not available.

Figures in the monitor are the latest available and may be further updated.

Please note that RSSB PIM data and National rail trends are based on calendar months. The Network Rail monitor reflects the Network Rail four-week periods and quarters split by period rather than by calendar month. This results in some small differences in figures reported.

Targets

The 'actual' data is compared with the appropriate ORR target where one has been set. Otherwise Network Rail's own internal target (to meet Network Rail's required overall outputs as set by ORR) is used. Where this is not available or appropriate, the data for the corresponding period in the previous year is used as the comparator.

7. KPI definition and developments

KPI 1 Safety risk

The train accident precursor indicator model (PIM), which is managed by the Rail Safety and Standards Board (RSSB), measures the risk per million train miles of a train accident, e.g. collisions, derailments, fires or striking a road vehicle at a level crossing. The measure incorporates 84 precursor events in six groups. Around 65% of the risk arises from events largely under the control or the responsibility of Network Rail, e.g. track geometry, infrastructure failures, and environmental factors (such as flooding or land slips). Significant risk arises from public behaviour, such as level crossing misuse, trespass and vandalism and the management of these represents a major challenge for the industry. The PIM risk indicator was set to a reference value of 100 at the end of March 2002 and it provides a measure of the change in risk relative to this level. A reduction in the index is therefore beneficial, denoting a reduction in risk.

KPI 2 Passenger train performance

The public performance measure (PPM) represents the percentage of trains run by franchised passenger operators arriving at their destination within a specified lateness margin (five or ten minutes) and making all planned station stops. This measure captures all delay causes (including Network Rail and train operators). For simplicity, the Great Britain monitor reports PPM for all franchised TOCs. The England & Wales monitor reports PPM for all franchised passenger operators with the exception of First ScotRail. The Scotland monitor reports only First ScotRail PPM, as it accounts for the great majority of passenger train mileage in Scotland.

KPI 3 Network Rail delay minutes

This measures the total number of minutes delay to all passenger and freight trains where the cause of delay is attributed to Network Rail.

For England & Wales and for Scotland, we compare Network Rail's delay to passenger trains with our derived target.

KPIs 4 (a) & 4 (b) Passenger and freight delay

These measures are delay minutes per 100 train kilometres. For franchised passenger operators, we compare delay against a derived regulatory target. For freight operators, we compare delay against Network Rail's target.

KPI 5 Infrastructure assets - Asset failures

This is the total number of incidents causing train delay where the cause is the responsibility of Network Rail. This measures the performance of assets where failure directly delays trains.

KPI 6 Infrastructure assets - Asset stewardship index (ASI) (GB only)

This is a composite index that includes elements (e.g. track geometry) where degradation is more gradual and does not necessarily cause train delays. This established measure has been adopted on an interim basis, but we intend to work with Network Rail to develop an indicator which covers a wider range of infrastructure assets and which has no overlap with the asset failures measure.

KPI 6 Infrastructure assets - Asset stewardship index - routes (ASI-R) (England and Wales, and Scotland)

The asset stewardship measure has been replaced by the ASI-R. The ASI-R is similar to the network-wide ASI and differs only in detailed respects for the track geometry, which in part explains the difference in the national figures shown in the England and Wales, and Scotland monitors compared with those in the Great Britain monitor. The split ASI-R also uses different baselines for different parts of the network, which prevents direct comparisons of local asset stewardship with this measure. We expect Network Rail to develop this measure to facilitate benchmarking across the network.

7. KPI definition and developments

KPI 7 Activity volumes

While Network Rail can analyse its expenditure by class of work, at present it can only provide a detailed measure of the volume of track renewals. Network Rail has been reviewing for some time a composite measure encompassing the vast majority of infrastructure renewals. A draft of this has now been received and is under review. The activity volumes measure in this monitor remains confined to track renewals.

KPI 8 (a) & (b) Expenditure

(a) compares Network Rail's expenditure on operations, maintenance and renewals (OMR) against the company's own budgeted expenditure.

(b) compares Network Rail's expenditure on enhancements (excluding third party funding and investment) against the company's own budgeted expenditure.

KPI 9 Financing (Debt to RAB (regulatory asset base) ratio)

This financial indicator measures Network Rail's net debt position as a percentage of its regulatory asset base (RAB). This is one way of measuring the financial gearing of the company and is used for regulatory purposes.

The actual figures are based on actual net debt (on a regulatory basis) divided by the company's own valuation of the RAB at the end of the period concerned. The budget figures are calculated similarly, using budgeted net debt and budgeted RAB.

The RAB included in the monitor is Network Rail's estimate of the RAB and is adjusted by Network Rail on a yearly basis for inflation. We reviewed the forecast value of the RAB at 1 April 2009 as part of PR08 and the value of the RAB as at 1 April 2009 will be included in Network Rail's 2008-09 regulatory accounts and the final value confirmed in our efficiency and financeability report.

KPI 10 Financial efficiency index (FEI)

This index shows changes in some of Network Rail's operating, maintenance, and renewal expenditure, normalised to take account of changes in the volume of work required.

Total maintenance expenditure is normalised for the change in equivalent track miles (a measure of track type, length, traffic tonnage and speed). Plain-line track renewals expenditure is normalised for changes in the volume of track renewed. Expenditure on switch and crossing renewals is normalised for changes in switch and crossing volumes renewed. Expenditure on major resignalling schemes is normalised by signalling equivalent units.

A base score of 100 reports efficiency levels equivalent to actual performance in 2003-04, scores below this represent efficiency gains beyond 2003-04 performance.

KPI 11 Network Rail customer satisfaction

Network Rail has a measure for gauging customer satisfaction both for passenger and freight operators. This is based on research administered by Ipsos MORI, to find out how Network Rail is perceived by its customers. One of the questions asks "Which of these best describes how you feel about Network Rail? "Perceptions of customers' relationship with Network Rail are measured using a five-point advocacy scale (+2 to –2), where zero indicates a neutral view of their performance. By adding the scores and dividing by the number of respondents a weighted index score is derived.

Major schemes

There is no single performance indicator for projects. We monitor projects which are specifically funded in the ACR2003, for emerging expenditure against the regulatory settlement, and for the delivery of projects compared to high-level objectives.