

Network Rail monitor
Q2 2008 - 09
22 June - 13 September 08



OFFICE OF RAIL REGULATION

Level of train accident risk stable

- The level of train accident risk remains stable at around 50% of its 2002 level.

Train punctuality is at the highest level since March 1998

- The PPM moving annual average (MAA) at the end of Q2 was 90.5%. This continues to improve ahead of the industry's trajectory and is now at the highest level since the measure was introduced in its current form in March 1998.
- This was due to reductions in both the delays caused by Network Rail and those caused by train operators. At the end of the second quarter the MAA for Network Rail's delays was down 11% compared with the same point last year.
- Performance improved on most routes, most notably on Western. But on London North Western route it continued to be very poor through the quarter.

Improving asset reliability

- Overall infrastructure reliability continued to improve. Assets failed less often and total infrastructure delay continued to fall, although the rate of improvement varied on different parts of the network and across different asset groups.
- The performance of track assets continued to show the most notable improvement. Most measures of track condition have been improving steadily, with fewer track faults and condition-related speed restrictions. Rolling contact fatigue continues to be a problem in southern England.

- The performance of the non-track assets was less encouraging. Although the number of signalling and train control infrastructure incidents in the quarter was lower than a year ago, the delay caused did not fall to the same extent. Delay from failure of signals, points and track circuits was actually higher than a year earlier.
- The number of electrification infrastructure incidents causing significant delay was also running higher than a year ago. Our investigations indicate that many of these incidents are caused by activities connected with renewal and enhancement works that disturb the working OLE system.
- Delay per incident increased in half of the delay categories, including electrification, track circuit and signal failures and cable faults. We are investigating this to see whether there are any particular issues about the effectiveness of Network Rail's interventions.

Challenging renewals and enhancement budget for Network Rail

- In its budget for 2008-09 Network Rail included a substantial increase in renewals and enhancements spend. Actual spend in the first two quarters was below budget, creating doubts about whether the company's full-year forecast spend is achievable and whether the timing of the spend will be efficient.
- Network Rail intends to plan and deliver work more evenly through the year; it is developing a rolling programme of work that will cover a number of years, instead of planning on an annual basis. This should help to ensure that where possible unplanned and inefficient peaks in expenditure are avoided.

West Coast mainline project delivery

- We have continued to monitor the progress of the Network Rail project team in delivering this year's 21 major milestones that underpin the introduction of the new timetable in December 2008.
- Since the previous monitor Network Rail has delivered a further seven major milestones, leaving seven to be achieved by 29 December. We consider that the progress with the project is satisfactory.
- We are also closely monitoring Network Rail's preparations for maintaining the route once the more intensive timetable starts to operate, and we are currently satisfied that they are on course to achieve this.

West Coast mainline performance

- In June this year Virgin formally raised concerns regarding poor reliability on the route. In Q2 West Coast main line performance was still poor, with a PPM of 80.3%. However since the end of Q2 performance is showing signs of improving back to acceptable levels, in line with Virgin's and Network Rail's joint recovery plan.
- To ensure performance is at the level which would enable a successful introduction of the new services, Network Rail and train operators have agreed to introduce a commissioning timetable from mid-December. This timetable essentially introduces the planned service changes, including faster journey times and improved frequencies for Virgin trains, but with a small number of services omitted. The full timetable will be introduced early in 2009.

Network Rail's management of engineering projects involving possessions

- In response to our enforcement order to address the areas of concern that we identified, Network Rail produced and issued its plan on 27 June following consultation with its customers and funders.
- The independent reporter reviewed progress up to 31 October and concluded that Network Rail is on course to comply with the requirements of the final order by 31 December 2008. We will closely monitor implementation of its plan.

Western route performance improving

- First Great Western (FGW) performance continues to improve. PPM for Q2 was 90.8% and the MAA figure of 86.4% at the end of Q2 was ahead of the trajectory in the agreed joint performance improvement plan. In Q2 Network Rail delay minutes to FGW services were 35% lower than the previous year.
- Although we continue to monitor results on Western route closely, ORR is satisfied that all parties are working together effectively to improve performance.

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1. Great Britain



Summary data (Great Britain) Q2 2008-09 (22 June - 13 September 2008)

Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
1 - Safety risk	Actual	50.9	48.9	47.3	47.3	n/av	Year end target
RSSB train accident precursor measure (composite)	Previous year's actual	46.6	46.2	48.4	48.8	50.9	n/app
2 - Passenger train performance	Actual at end of quarter	88.7	89.3	89.9	90.1	90.5	90.6
Public performance measure (PPM) (MAA) (%)	Industry target	88.3	88.9	89.5	90.0	90.2	90.6
3 - Network Rail delay minutes	Year to date actual	4.3	7.4	9.5	1.9	3.8	8.7
Number of delay minutes (millions) attributed to Network Rail	ORR target	4.4	7.6	9.8	2.0	4.1	9.1
4 (a) – Delays to passenger trains	Normalised for the quarter	1.74	1.92	1.63	1.51	1.44	n/av
Network Rail delay minutes to Train operating companies per 100 train km	ORR derived target	1.85	1.94	1.70	1.57	1.70	1.65
4 (b) – Delays to freight trains	Normalised for the quarter	4.75	4.25	4.23	3.88	3.90	n/av
Network Rail delay minutes to Freight operating companies per 100 train km	Network Rail target	3.93	4.13	3.76	3.94	3.95	3.95
5 - Asset failures	Actual 4-weekly average	4,230	3,862	3,998	4,073	3,911	n/av
Number of infrastructure incidents	Previous year's actual	4,662	4,334	4,583	4,431	4,230	45,668
6 - Asset stewardship index (ASI)	Actual	0.69	0.66	0.63	0.62	0.62	n/av
Composite of seven asset condition measures	Network Rail target	0.71	0.71	0.70	0.68	0.66	0.61
7 - Activity volumes (track renewals only)	Actual cumulative	99.1	97.6	97.1	94.9	93.8	101.2
% Activity compared with plan	Network Rail target	100	100	100	100	100	100
8 (a) - Expenditure (OMR)	Year to date actual	2,240	3,872	5,187	1,163	2,420	5,853
Operating, maintaining and renewing the network (£ millions)	Year to date budget	2,423	4,161	5,611	1,255	2,630	5,895
	Variance %	-7.6	-6.9	-7.6	-7.3	-8.0	
8 (b) - Expenditure (enhancements)	Year to date actual	261	481	743	249	542	1,308
Enhancing the network (£ millions)	Year to date budget	341	555	749	276	614	1,278
	Variance %	-23.5	-13.3	-0.8	-9.8	-11.7	
9 - Financing	Actual	68.9	68.6	69.4	66.3	65.8	68.7
Net debt to RAB (Regulatory asset base) ratio (%)	Network Rail budget	70.0	70.2	72.4	66.2	66.1	68.4
10 - Financial efficiency index (FEI)	Year to date actual	80.1	78.9	78.1	79.8	79.3	76.6
Adjusted cost of operations, maintenance and track renewals	Network Rail target	79.6	78.5	77.9	78.6	78.2	75.3

See data note on page 22. Network Rail's own internal targets are in *italics*.

See pages 23-24 for KPI definitions and development.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
1 - Safety risk RSSB train accident precursor measure (composite)	Actual	50.9	48.9	47.3	47.3	n/av	Year end target
	Previous year's actual	46.6	46.2	48.4	48.8	50.9	n/app

1 – Safety risk

The level of overall train accident risk on the network, as measured by RSSB's train accident risk measure, the precursor indicator model (PIM), has remained broadly static since Q4 2007-08.

The trend in the underlying level of train accident risk has been flat over the past two years, following the introduction of TPWS and new rolling stock in earlier years.

Whilst there have been increases in risk during the last two years, these appear to be associated with isolated incidents, such as landslips following exceptional levels of rainfall or clusters of high risk incidents of signals being passed at danger. The adverse impact of these incidents drops out from the measure relatively quickly. For now there is nothing to suggest that there is any longer term increase in train accident risk.

The challenge for the industry is to deliver further sustained decreases in risk in the absence of technical advances that will provide the levels of improvement that followed the introduction of TPWS.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
2 - Passenger train performance	Actual at end of quarter	88.7	89.3	89.9	90.1	90.5	90.6
Public performance measure (PPM) (MAA) (%)	Industry target	88.3	88.9	89.5	90.0	90.2	90.6
							Year end target

2 – Passenger train performance

(Franchised passenger operators only)

The public performance measure (PPM) moving annual average (MAA) at the end of Q2 was 90.5%, above the industry target of 90.2% and 1.7% higher than at the end of Q2 last year. This is the highest level since the measure was introduced in its current form (March 1998).

The improvement has been largely driven by year-to-date reductions in Network Rail delay minutes of 11.0% and in train operators' delay minutes (TOC-on-self) of 10.8%; TOC-on-TOC delay fell by 2.6%.

West Coast main line

The PPM for Virgin Trains was again poor - just 80.3% in Q2, largely due to major incidents affecting the infrastructure. However, provisional data for the first eight weeks of Q3 shows an average of over 84%, implying a strongly improving trend.

Over the last quarter delay from non-track assets was worse than expected, due to poor reliability of points, signalling, track circuits and overhead line equipment.

Progress with Network Rail's detailed recovery plan for the West Coast main line is reviewed on page 19.

East Coast main line

National Express East Coast (Nxec) Q2 PPM was 85.7%. Nxec again had the second lowest PPM score for all operators. It was 0.7% worse than in Q1, but 7.8% higher than in Q2 last year (which was seriously affected by flooding). However, provisional data for the first eight weeks of Q3 shows performance is now improving.

Western route

First Great Western performance and Network Rail delay again improved significantly, with PPM at 90.8% in Q2. Halfway through the year it appears that the joint performance improvement plan (JPIP) target of 86% PPM MAA by the end of the year will be comfortably exceeded.

Sussex route

We have commented previously that the route has struggled with major incidents, particularly in 2007-08, but current performance is good and the principal operators are delivering PPM scores ahead of target. No further special mention will be made of this route whilst these satisfactory trends are sustained.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
3 - Network Rail delay minutes	Year to date actual	4.3	7.4	9.5	1.9	3.8	8.7
Number of delay minutes (millions) attributed to Network Rail	ORR target	4.4	7.6	9.8	2.0	4.1	9.1
4 (a) – Delays to passenger trains	Normalised for the quarter	1.74	1.92	1.63	1.51	1.44	n/av
Network Rail delay minutes to Train operating companies per 100 train km	ORR derived target	1.85	1.94	1.70	1.57	1.70	1.65
4 (b) – Delays to freight trains	Normalised for the quarter	4.75	4.25	4.23	3.88	3.90	n/av
Network Rail delay minutes to Freight operating companies per 100 train km	Network Rail target	3.93	4.13	3.76	3.94	3.95	3.95

3 – Network Rail delay minutes

(all train operators)

Delay (year-to-date) was 3.84 million minutes at the end of Q2, 10% lower than at the same point last year. Network Rail outperformed its own business plan target of 3.965 million minutes by 3% and the regulatory target of 4.097 million minutes by 7%.

The MAA at the end of Q2 was 12% lower than at the same point last year.

A year-to-date comparison with last year shows notable reductions in delay from:

- severe weather – 61% better;
- track faults (including broken rails) – 18% better;
- real time signalling decisions – 11% better; and
- fatalities and trespass – 4% better.

However there were increases in delays from:

- infrastructure damage from vandalism /theft – 17% worse (largely cable theft);
- track circuit and axle counter failures – 4% worse (largely on the West Coast route); and
- points failures – 2% worse (also largely on the West Coast route).

4 (a) and (b) – Delays to passenger/freight trains

As described in the Q1 monitor, we had concerns about delay to freight in 2007-08 and followed this up with Network Rail. There has been modest progress recently despite major incidents on the West Coast main line and in South Wales, both key freight routes.

Although there no longer appears to be a general trend of worsening freight performance across the network, we will continue to monitor this area closely.

In Q1 we also noted that freight operators themselves cause a disproportionate amount of inter-operator delay. Year-to-date, they still account for 43% of all such delay but less than 9% of total distance operated. This continues to demonstrate the importance of Network Rail managing down FOC-on-TOC delay.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
5 - Asset failures	Actual 4-weekly average	4,230	3,862	3,998	4,073	3,911	Year end target
Number of infrastructure incidents	Previous year's actual	4,662	4,334	4,583	4,431	4,230	n/av
							45,668

5 – Asset failures

Overall infrastructure reliability is still improving. Assets are failing less often and total infrastructure delay continues to fall. In Q2, infrastructure failures were 8% down on last year, while the total delay was down by 7%.

However, the rate of improvement varies on different parts of the network and across different asset groups; non-track assets are proving less reliable than track assets. Although there are fewer incidents overall, delay per incident was higher in half of the delay categories.

Track

Track assets failures account for 20% of infrastructure delay, year-to-date.

Most measures of track condition continue to improve steadily, with fewer track faults and condition-related speed restrictions and significantly less delay as a result compared to Q2 last year.

There were further reductions in track faults (15%) and temporary speed restrictions (TSRs) caused by track condition (31%) compared to Q2 last year.

However in the South East territory, TSRs due to rolling contact fatigue (RCF) rail defects, as reported in previous monitors, are increasing. Network Rail, the train operators and train owners have several initiatives underway to tackle this complex, cross industry problem, some of which are listed below:

- since May Network Rail has been rolling out a new predictive model that helps target maintenance work on the very small track irregularities that can trigger RCF, or to change the track design over long curves to reduce susceptibility to RCF;
- an 18 month trial of a new wheel profile on the Windsor branch is due to commence in December 2008;
- installation of new premium rail steel at key sites that should have a longer life than normal grade rail steel; and
- revised specifications for new trains making them more track-friendly and therefore reducing future costs for the industry.

It is clear that Network Rail has made significant progress with understanding the causes of RCF over the past few years. Although progress has been slower than originally anticipated, implementation and trialling of many of the different measures needed for specific routes and rolling stock is underway. As the impact of the majority of these mitigation measures are in the medium or long term, reductions in RCF will take time to materialise.

We will continue to press Network Rail to implement the measures. We will closely monitor the situation and report on progress in future monitors.

1. Great Britain



Signalling and train control

Signalling and train control assets failures accounted for 56% of infrastructure delay, year-to-date.

Performance of this group of assets in Q2 was mixed. The equipment is proving to be more reliable, with fewer failure incidents than at the same point last year. However, the small reduction (1%) in delay minutes was well below the 7% reduction in all infrastructure related delay.

Delay from signalling system & power supply failures was 11% less than in Q2 last year. In contrast, delay from signal failures was 10% higher.

There has been an increase in the number of reports by drivers of incidents of signals obscured by foliage, which are classed as high risk. This is not yet a safety issue, but we expect Network Rail to address this over the winter through vegetation clearance.

Electrification

Electrification assets accounted for 6% of infrastructure delay, year-to-date.

Although there were no DC incidents and a substantial reduction in AC incidents in Q2, the number of incidents year-to-date is higher than at the same point last year (39 against 30), but still within Network Rail's internal target.

During 2008 there have been a number of significant overhead electrification system incidents on various routes. These incidents are very disruptive and cause considerable delay and inconvenience to passengers and to freight traffic. The West Coast, East Coast and Great Eastern main lines have all suffered. We have discussed the individual incidents with Network Rail to understand the underlying causes. Network Rail needs to have effective inspection and maintenance routines as well as ensuring that new and renewed installations use reliable components and that they are installed correctly to avoid similar problems in the future. We will continue to monitor further incidents to satisfy ourselves that the company is doing all it can to minimise disruption.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
6 - Asset stewardship index (ASI)	Actual	0.69	0.66	0.63	0.62	0.62	Year end target
Composite of seven asset condition measures	Network Rail target	0.71	0.71	0.70	0.68	0.66	n/av
7 - Activity volumes (track renewals only)	Actual cumulative	99.1	97.6	97.1	94.9	93.8	0.61
% Activity compared with plan	Network Rail target	100	100	100	100	100	101.2
							100

6 – Asset stewardship index (ASI)

The ASI continues to outperform the ACR2003 target and Network Rail's own internal stretch target. This performance is replicated in all the territories with the corresponding ASI-R measure. The quarter ended with an ASI of 0.62, 6% better than Network Rail's target of 0.66 and 11% lower than in Q2 last year.

7 – Activity volumes (track renewals only)

Plain line track renewals

Network Rail renewed¹ 964 km of plain line track year-to-date compared to a planned output of 1028 km. This is a composite measure, comprising rails, sleepers and ballast. This is a minor shortfall and Network Rail expects to fully deliver its target for the year.

Switch and crossing renewals

Network Rail renewed¹ 156 switch and crossing (S&C) equivalent² units year-to-date compared with a planned output of 158. This minor shortfall occurred in the previous quarter. Network Rail is forecasting a year-end deficit of 48 against the planned total of 470 equivalent units due to a change to its S&C renewals programme through rescoping of some full renewals to partial renewals. This is in line with Network Rail's recently revised track asset policy and brings the mix of full and partial renewals closer to next year's proposals.

¹ Excludes WCRM

² Weighted to reflect the mix of full renewals, partial renewals, abandonments

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
8 (a) - Expenditure (OMR) Operating, maintaining and renewing the network (£ millions)	Year to date actual	2,240	3,872	5,187	1,163	2,420	5,853
	Year to date budget	2,423	4,161	5,611	1,255	2,630	5,895
	Variance %	-7.6	-6.9	-7.6	-7.3	-8.0	
8 (b) - Expenditure (enhancements) Enhancing the network (£ millions)	Year to date actual	261	481	743	249	542	1,308
	Year to date budget	341	555	749	276	614	1,278
	Variance %	-23.5	-13.3	-0.8	-9.8	-11.7	

8 – Expenditure variance

Comparison to budget: year-to-date

Q2 total expenditure was £163m (9.5%) lower than budget and year-to-date total expenditure was £282m (8.7%) below budget.

The year-to-date variance is largely due to:

- deferral of renewals of £224m (14.6%), particularly deferral of signalling works (£21m), the fixed telephone network (FTN) programme (£57m) and efficient engineering access (EEA) (£33m) as a result of delays to these programmes, which is likely to have only a minor effect on performance; and
- enhancement projects £72m below budget (11.7%), particularly due to savings on the Thameslink programme (£75m).

Comparison to budget: full year

For the full year, Network Rail is forecasting to spend £12m (0.2%) below budget. This is £132m less than forecast in Q1, reflecting a more realistic view of expenditure in 2008-09.

In particular, Network Rail is forecasting to spend:

- £81m (2.3%) below budget on renewals, reflecting deferrals on signalling works (£43m), the FTN programme (£111m) and EEA (£35m) as a result of delays to these programmes, which is likely to have only a minor effect on performance. These

deferrals are offset by expected above budget expenditure on WCRM of £117m; and

- £30m (2.3%) above budget on enhancements. Network Rail is forecasting overspend on some of the projects, e.g. WCRM (£48m), offset by savings on Thameslink (£65m). Overall, the projects are expected to cost £137m more than budget. Network Rail is taking the view that it will not be able to deliver all of this spend in 2008-09 so it includes a deliverability adjustment of £107m, which reduces the net overspend to £30m.

In our view, Network Rail faces a challenge in delivering its forecast renewals programme in 2008-09. It is 17.4% higher than last year and would be the highest annual level of spend on renewals in CP3. Given the size of the year-to-date underspend, we have doubts about the company's ability to deliver its forecast full year renewals programme.

Our calculation of the starting point for the PR08 final 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 impact upon 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.

1. Great Britain



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
9 - Financing	Actual	68.9	68.6	69.4	66.3	65.8	68.7
Net debt to RAB (Regulatory asset base) ratio (%)	Network Rail budget	70.0	70.2	72.4	66.2	66.1	68.4
10 - Financial efficiency index (FEI)	Year to date actual	80.1	78.9	78.1	79.8	79.3	76.6
Adjusted cost of operations, maintenance and track renewals	Network Rail target	79.6	78.5	77.9	78.6	78.2	75.3

9 – Financing (Net debt to RAB ratio)

At the end of Q2 Network Rail's net debt to RAB ratio (gearing) of 65.8% was within the regulatory limit and 0.3% below budget. According to Network Rail, this is due to:

- net debt being £154m below budget, largely as a result of the lower expenditure described above (£282m) and in particular the Q1 expenditure variance (£119m); and
- the RAB being £100m lower than budget, due to spend on projects that can be added to the RAB being lower than budget, largely due to the savings on Thameslink (£75m).

Forecast gearing of 68.7% at the end of the year is also within the regulatory limit but higher than the budget by 0.3%.

10 – Financial efficiency index (FEI)

According to Network Rail, at the end of Q2 the financial efficiency index was 1.1 worse than the target of 78.2, largely due to adverse variances on maintenance expenditure (0.4) and higher than target track renewal unit costs (0.5). The full-year forecast is 1.3 worse than the target of 75.3, largely due to adverse variances on maintenance expenditure (0.5) and higher than target track renewal unit costs (0.6).

2. England and Wales



Summary data (England and Wales) Q2 2008-09 (22 June - 13 September 2008)

Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
2 - Passenger train performance	Actual at end of quarter	88.6	89.2	89.8	90.0	90.4	Year end target
Public performance measure (PPM) (MAA) (%)	Industry target	88.3	88.9	89.4	89.9	90.1	n/av
3 - Network Rail delay minutes	Year to date actual	4.1	6.9	8.9	1.8	3.6	90.6
Number of delay minutes (millions) attributed to Network Rail	ORR target	4.1	7.0	9.0	1.8	3.8	8.3
5 - Asset failures	Actual 4-weekly average	3,892	3,517	3,606	3,706	3,571	n/av
Number of infrastructure incidents	Previous year's actual	4,252	3,909	4,160	4,008	3,892	41,765
6 - Asset stewardship index (ASI)	Actual	0.63	0.60	0.57	0.57	0.56	n/av
Composite of seven asset condition measures	Network Rail target	0.64	0.64	0.62	n/av	n/av	n/av
7 - Activity volumes (track renewals only)	Actual cumulative	98.9	97.5	97.2	95.1	93.7	101.2
% Activity compared with plan	Network Rail target	100	100	100	100	100	100
8 (a) - Expenditure (OMR)	Year to date actual	2,037	3,517	4,705	1,064	2,234	5,341
Operating, maintaining and renewing the network (£ millions)	Year to date budget	2,188	3,759	5,058	1,150	2,432	5,391
	Variance %	-6.9	-6.4	-7.0	-7.5	-8.1	1,186
8 (b) - Expenditure (enhancements)	Year to date actual	254	466	719	235	505	1,154
Enhancing the network (£ millions)	Year to date budget	331	530	710	260	571	77.0
	Variance %	-23.3	-12.1	1.2	-9.6	-11.6	75.6
10 - Financial efficiency index (FEI)	Year to date actual	80.3	78.9	78.4	81.9	79.8	
Adjusted cost of operations, maintenance and track renewals	Network Rail target	79.5	78.5	78.9	80.6	78.5	

See data note on page 22. Network Rail's own internal targets are in *italics*.
See pages 23-24 for KPI definitions and development.

3. Scotland



Summary data (Scotland) Q2 2008-09 (22 June - 13 September 2008)

Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
2 - Passenger train performance	Actual at end of quarter	89.4	90.2	90.6	91.0	91.0	Year end target
Public performance measure (PPM) (MAA) (%)	Industry target	88.8	89.5	90.0	90.7	90.5	n/av
3 - Network Rail delay minutes	Year to date actual	247.0	439.7	604.8	104.0	228.1	90.6
Number of delay minutes (thousands) attributed to Network Rail	ORR target	362.7	642.0	820.0	160.6	324.7	562.0
5 - Asset failures	Actual 4-weekly average	338	345	393	367	340	762.0
Number of infrastructure incidents	Previous year's actual	410	425	423	423	338	n/av
6 - Asset stewardship index (ASI)	Actual	0.68	0.65	0.70	0.68	0.71	3,903
Composite of seven asset condition measures	Network Rail target	0.85	0.91	0.97	0.91	0.85	n/av
7 - Activity volumes (track renewals only)	Actual cumulative	101.2	98.6	96.1	111.5	94.8	0.71
% Activity compared with plan	Network Rail target	100	100	100	100	100	101.7
8 (a) - Expenditure (OMR)	Year to date actual	203.0	355.0	482.0	99.0	186.0	100
Operating, maintaining and renewing the network (£ millions)	Year to date budget	235.0	402.0	553.5	105.0	198.0	512
	Variance %	-13.7	-11.6	-12.9	-5.7	-6.1	504
8 (b) - Expenditure (enhancements)	Year to date actual	7.0	15.0	23.9	14.0	37.0	122
Enhancing the network (£ millions)	Year to date budget	10.0	25.0	38.7	16.0	43.0	124
	Variance %	-30.0	-39.1	-38.2	-12.5	-14.0	73.2
10 - Financial efficiency index (FEI)	Year to date actual	78.4	79.1	77.3	74.2	74.4	72.3
Adjusted cost of operations, maintenance and track renewals	Network Rail target	77.8	77.8	77.9	73.4	74.7	72.3

See data note on page 22. Network Rail's own internal targets are in *italics*.
See pages 23-24 for KPI definitions and development.

3. Scotland



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
2 - Passenger train performance	Actual at end of quarter	89.4	90.2	90.6	91.0	91.0	Year end target
Public performance measure (PPM) (MAA) (%)	Industry target	88.8	89.5	90.0	90.7	90.5	n/av
3 - Network Rail delay minutes	Year to date actual	247.0	439.7	604.8	104.0	228.1	562.0
Number of delay minutes (thousands) attributed to Network Rail	ORR target	362.7	642.0	820.0	160.6	324.7	762.0

2 – Passenger train performance

PPM MAA for Scotrail at the end of Q2 was 91.0%, an improvement of 1.6% over Q2 last year.

3 – Network Rail delay minutes (Scotland route)

Network Rail was well ahead of both regulatory and business plan targets for Q2.

3. Scotland



Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
5 - Asset failures	Actual 4-weekly average	338	345	393	367	340	Year end target
Number of infrastructure incidents	Previous year's actual	410	425	423	423	338	n/av
6 - Asset stewardship index (ASI)	Actual	0.68	0.65	0.70	0.68	0.71	3,903
Composite of seven asset condition measures	Network Rail target	0.85	0.91	0.97	0.91	0.85	n/av
7 - Activity volumes (track renewals only)	Actual cumulative	101.2	98.6	96.1	111.5	94.8	0.71
% Activity compared with plan	Network Rail target	100	100	100	100	100	101.7
							100

5 – Asset failures

The general trend of improving infrastructure reliability across the whole of the network is generally matched in Scotland, where asset failures were 7% less year-to-date than at Q2 last year. The number of asset failures fell in 13 of the 19 infrastructure categories in Q2, including most of the major causes such as track circuit failures (15% better), points failures (5% better) and signal failures (8% better), although these improvements were not as marked as Q1.

Scotland continues to be the only part of the network where Network Rail is not succeeding in reducing track faults. As in Q1, telecoms failures continue to be higher (by 33%) than last year, and in this quarter we also note that the number of electrification failures was up on last year by 19%. For signalling and telecom failures the rate of improvement has fallen back compared with Q1. We will investigate these differences with Network Rail.

6 – Asset stewardship index (ASI-R)

The equivalent regional measure (the ASI-R) was 17% better than Network Rail's internal stretch target, better than the GB trend. Our view remains that the overall progress being made in managing the condition of the infrastructure in Scotland compares very favourably with the overall network picture.

7 – Activity volumes (track renewals only)

Network Rail renewed 91km of plain line track in Scotland year-to-date compared to a planned output of 96 km. This 5% shortfall is not of concern at this stage of the year. Eight switch and crossings were renewed as planned.

3. Scotland

Key performance indicators (KPIs)		2007-08			2008-09		2008-09
		Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Year end forecast
8 (a) - Expenditure (OMR) Operating, maintaining and renewing the network (£ millions)	Year to date actual	203.0	355.0	482.0	99.0	186.0	512
	Year to date budget	235.0	402.0	553.5	105.0	198.0	504
	Variance %	-13.7	-11.6	-12.9	-5.7	-6.1	
8 (b) - Expenditure (enhancements) Enhancing the network (£ millions)	Year to date actual	7.0	15.0	23.9	14.0	37.0	122
	Year to date budget	10.0	25.0	38.7	16.0	43.0	124
	Variance %	-30.0	-39.1	-38.2	-12.5	-14.0	
10 - Financial efficiency index (FEI) Adjusted cost of operations, maintenance and track renewals	Year to date actual	78.4	79.1	77.3	74.2	74.4	73.2
	Network Rail target	77.8	77.8	77.9	73.4	74.7	72.3

8 – Expenditure variance

Comparison to budget: year-to-date

Q2 total expenditure was £10m (8.3%) lower than budget and year-to-date total expenditure was £18m (7.5%) below budget. The year-to-date variance is largely due to:

- deferrals of renewals of £11m (10.8%), to later in the year; and
- delays on enhancement projects of £6m (14.0%), particularly on Airdrie – Bathgate (£2m) and safety & environment schemes (£2m), which is likely to only have a minor effect on customers.

Comparison to budget: full year

For the full year, Network Rail is forecasting to spend £6m (1.0%) more than budget. This is largely due to overspend of £7m (2.4%) on renewals, particularly track renewals, as a result of both additional volume and increased unit costs.

10 – Financial efficiency index (FEI)

According to Network Rail, at the end of Q2, efficiency was 0.3 better than the FEI target of 74.7, largely due to favourable signalling unit costs (0.3) and maintenance costs (0.5) offset by higher track unit costs (0.5). The full year forecast is 0.9 worse than the target of 72.3 largely as a result of higher track unit costs (1.3). Track unit costs have more impact in the full year as Network Rail's budget assumed they would reduce during the year.

4. Major projects and other significant issues

West Coast route modernisation (WCRM)

Network Rail's revised delivery plan is dependent on achieving 21 milestones in 2008, all of which are key to achieving the December 2008 timetable. By 23 November 14 milestones had been achieved.

The planned dates for achieving the remaining seven milestones are:

- 30 November 2 milestones
- 1 December 1 milestone
- 7 December 2 milestone
- 26 December 1 milestone
- 29 December 1 milestone

We continue to monitor progress closely and our most recent formal review concluded that progress with the project itself is satisfactory.

In June this year Virgin formally raised concerns regarding poor reliability on the route. As reported on page 7, the West Coast main line performance is now showing signs of improving back to acceptable levels in line with the joint recovery plan agreed by Virgin Trains and Network Rail, although there is still some way to go.

The plan identifies a 20% overall reduction in delay by March 2009. To ensure performance is at the level which would enable a successful introduction of the full new service, Network Rail and the train operators have agreed to the introduction of a commissioning timetable from mid-December. This timetable essentially introduces all the planned service changes, including faster journey times and improved frequencies for Virgin trains, but with a small number of services omitted. The full timetable will be introduced as soon as performance reaches the required levels.

The intensity of the new timetable also requires Network Rail to introduce a substantially different approach to maintaining the infrastructure with much more work carried out at night. We have been closely monitoring Network Rail's preparations for this change

including the introduction of new working methods and increases in staffing. Although these preparations are not yet fully complete we are satisfied at this stage that Network Rail should be ready to maintain the route safely when the new timetable starts without adversely affecting performance.

Possessions overruns

In March we found Network Rail in breach of its network licence and issued a Final Order requiring the company to deliver real improvements in its project management by 31 December 2008.

The independent reporter has reviewed progress up to 31 October and concluded that Network Rail is on course to comply with the requirements of the final order by 31 December.

We will be auditing the company's performance early in 2009 to check that the plan has delivered the necessary improvements on the ground. At that point we will expect to find that the changes (other than those which we have agreed will need longer to implement fully) are operational and effective across all relevant project work.

Implementation of global system for mobile communication - railway (GSM-R)

The work carried out by the GSM-R/FTN project team over recent months to re-structure the delivery program has created much greater clarity of what is required and by when.

However, as the end date for the project approaches, the timescale now facing the project is extremely tight and the focus is on completion of the required new equipment, both on the infrastructure and on vehicles. This means there is a danger that some of the secondary benefits that should be resulting from this project will be delayed. In particular the progress made on upgrading systems link appears to have slowed despite the reliability benefits that could follow, although the project team is now addressing this.

4. Major projects and other significant issues

Great Eastern line rewiring project

Network Rail is replacing the existing fixed tension overhead line equipment from Liverpool Street to Chelmsford and Southend with a modern balance weight constant tension system.

The rationalisation will help to improve infrastructure performance in this sector and the final replacement of the contact system will ensure higher reliability in the future.

This substantial project is now in progress and the first stage of the rationalisation of the existing system is under way. This will be followed by installation of new wiring out to Chelmsford by 2012 with the Southend branch delivered in CP5.

The whole of the Liverpool Street area out to the East London line overbridge was completed on time at the end of November 2008. There will be a short blockade at Bethnal Green over Christmas to rationalise the junction area before new wires are installed during 2009-2012.

Regenerative braking

Good progress is being made with regenerative braking on both AC and DC systems with consequential environmental and financial benefits. On the 750v DC system in SE England, 20% of the Southern Electrostars now operate with regenerative braking (with around 20% of power being returned to feed other accelerating trains). With extensive overnight testing in progress, it appears that the system is capable of accepting higher levels of regenerated power from braking trains without raising voltages to an unacceptable level. Further train fleets (Junipers and Networkers) will be switching to regenerative braking as testing and modification continues. Where the London underground (LUL) shares the same power system, tests are being carried out to demonstrate that LUL trains, for example at Wimbledon, Richmond and Putney Bridge, will not be adversely affected.

4. Major projects and other significant issues

Table 1 Enhancement expenditure

£ million	2008-09							
	Year to date				Full year			
	Actual	Budget	Variance	Variance %	Forecast	Budget	Variance	Variance %
ACR funded	255.5	270.7	-15.2	-5.6%	670.8	493.1	177.7	36.0%
Government sponsored	180.6	265.3	-84.7	-31.9%	478.1	538.2	-60.1	-11.2%
NRDF	47.5	33.5	14.0	41.8%	117.7	77.9	39.8	51.1%
Out performance	34.9	18.1	16.8	92.8%	62.8	64.7	-1.9	-3.0%
TOC sponsored	22.5	31.3	-8.8	-28.1%	85.8	101.9	-16.1	-15.8%
Planning adjustment	0.9	-4.9	5.9	118.5%	-106.8	2.1	-108.9	n/app
Total	541.9	614.0	-72.0	-11.7%	1,308.4	1,277.9	30.5	2.4%

Enhancement schemes

ACR2003 funded

Expenditure on ACR funded schemes is forecast to be £178m over budget in 2008-09. There are a number of drivers of this forecast overspend, the most significant being:

- the WCRM project full-year forecast overspend has been increased from £27m last quarter to £48m this quarter. Network Rail says that this is due to further reprofiling of the programme; and
- a full year overspend of £79m is now forecast in the Network Rail sponsored other schemes category, consisting of many new small projects, including income generating schemes and development for CP4.

Government sponsored

The picture is similar to Q1, with lower than expected spend on Thameslink (due to lower property costs, TOC compensation costs and scope of work on rolling stock cascades; overall an underspend of £65m is forecast for the year) and the access for all programme (because of delays in planning and unforeseen difficult ground conditions).

The Kings Cross programme has progressed faster than planned and so an overspend (£63m compared to a budget of £49m) is anticipated this year.

Spend on Glasgow-Kilmarnock is now included in this category, which offsets the forecast underspend by £13m.

Network Rail discretionary fund (NRDF)

Network Rail is now expecting to spend £40m more than budgeted this year for NRDF (the Q1 forecast was that the budget would be exceeded by £20m).

TOC sponsored

The lower than expected spend on this category of schemes is driven by underspend on the West Coast car parks enhancement programme, as reported last quarter. Set against this is higher than expected spend on the Waterloo ticket gating project to make up for delay to the project due to the discovery of asbestos.

5. Key to tables and data notes

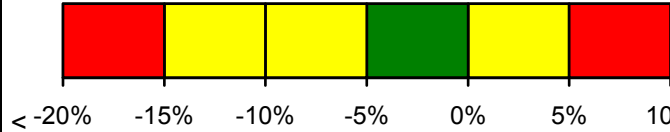
Key to Network Rail monitor graphs

Key:-

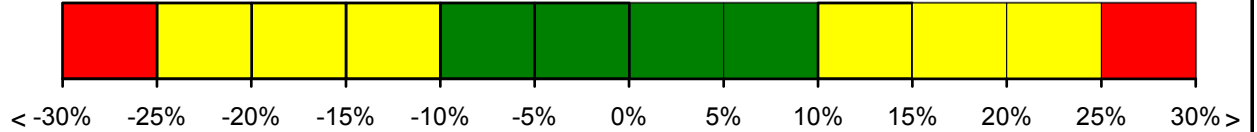
- On or better than target
- 0.1-10% worse than target
- More than 10% worse than target and clear cause for concern (otherwise yellow).

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

For Expenditure variance KPI 8 (a) only



For Expenditure variance KPI 8 (b) only



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.

6. 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.

6. 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.

KPI 10 Financial efficiency index (FEI)

This index shows changes in 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.

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.

Feedback

We welcome feedback on the content and format of this publication. If you have any comments, please contact Alan Hayden-Case on 020 7282 3861 or alan.hayden-case@orr.gsi.gov.uk