

Network Rail and Office of Rail
Regulation

Part A Independent Reporter

Mandate AO/018: Review of 2011
Annual Return

04-05-01

Issue | 3 November 2011

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Appendices

Appendix A

Mandate

Appendix B

Meetings held with Network Rail Data Champions

1 Introduction

1.1 Network Rail Annual Return 2010/11

Network Rail is required to produce the Annual Return document at the end of each financial year under the terms of Condition 12 of the Network Licence. The Annual Return reports Network Rail's performance against a range of regulatory parameters, which relate to the outputs for Control Period 4 (2009-14) specified in the ORR Periodic Review 2008.

ORR and Network Rail have asked the Part A Independent Reporter to review the process used by Network Rail to compile the 2011 Annual Return, including reference to previous processes. The review should also include a summary of confidence gradings for all Annual Return measures (where reviewed by the Part A Reporter in 2010-2011). Finally, recommendations should be made that support the continuous improvement of processes and the accuracy / reliability of measures. This report presents the findings of the review.

1.2 Acknowledgements

We are grateful to the various Data Champions in Network Rail who made time to speak to us and send data at fairly short notice, especially during this holiday period.

1.3 Structure of Report

Following this Introduction:

- Section 2 reports on progress made on last year's recommendations for the Annual Return. It also describes the method for this year's review;
- Section 3 presents our findings for chapters 1 to 4 of the 2011 Annual Return;
- Section 4 reviews the chapter on the Enhancement Programme;
- Section 5 reviews the Confidence Grades that have been reported;
- Section 6 presents some ideas given by Data Champions to improve the Annual Return;
- Section 7 summarises our conclusions; and
- Section 8 presents our new recommendations.

2 Annual Return Process

2.1 Review of Last Year's Recommendations

No.	Recommendation to Network Rail	NR Data Champion	Due Date	August 2011 Progress
2010.AR.1	The Annual Return should quote the Independent Reporter's confidence ratings, to avoid confusion.	Strategic Planner	June 2011	Some of the Independent Reporter confidence ratings are quoted with an explanation of the system used. But not all are quoted and other ratings are also quoted. Replaced by new recommendation.
2010.AR.2	The Scotland PPM value should be quoted explicitly in Network Rail spreadsheet outputs	Strategic Planner	June 2011	The Scotland PPM is quoted in Table 1.3 of the Annual Return. Closed.
2010.AR.3	Incorrect references to AMEC should be removed from future reports	Strategic Planner	June 2011	There is no reference to AMEC in the 2011 Annual Return. Closed.
2010.AR.4	The timely provision of data and commentary for inclusion in the Annual Return should be further encouraged and enforced by Network Rail senior management (i.e. the sponsors and directors with overall responsibility for the production of the Annual Return and its individual elements), to build upon the progress made in 2009/10 in its preparation.	Strategic Planner, Network Rail senior management	June 2011	A template for the 2011 Annual Return was issued to all Data Champions for their section who provided text and tables. Each section was then signed off by both the Corporate Owner and the relevant Executive Director. All sections were signed off in this way during June 2011. The Executive Summary was approved by all Executive Directors on the 6 th June. Closed.
2010.AR.5	A simple, but rigorous checking system should be put in place to identify and remove errors and inconsistencies arising in the Annual Return as a result of transcription and typographical errors.	Strategic Planner	June 2011	Two proofs of the Annual Return are produced and checked. Proof 1 is produced 2 weeks prior to publication. Proof 2 is produced at the Publishers for a page turn, although this year there was not enough time for this final check. Although not fully compliant, closed to be replaced by 2011.AR.1.

2.2 Method for Reviewing 2010/11 Annual Return

An initial meeting was held with the Data Champion for the Annual Return on the 12th July to agree the overall approach of the review and who to interview. The Data Champions for each of the sections shown in Appendix B were then subsequently interviewed. At these meetings, they were asked to describe the process for providing text and tables for their section of the Annual Return and to provide us with supporting data so that we could verify the figures quoted. We also asked them for any ideas to improve the reporting process for next year.

Following these meetings, we also contacted a few other people in Network Rail as suggested by the Data Champions for them to send us copies of relevant data for checking.

3 Review of 2010/11 Annual Return

A summary of our findings by individual section of the Annual Return is shown in the table below. For those sections marked as 'Consistent', the figures and text reported in the Annual return matched the underlying data provided to us. For those sections where we identified discrepancies with the data provided to us, or other issues, a brief description follows the table.

Review of Annual Return 2011			
Description	Review Outcome	Review Comments	Data
Section 1 Operational performance and stakeholder relationships			
Public Performance Measure (PPM)	Consistent		101_PPMCASL_200501201213.xls
Delays to all train services	Discrepancy	Difference is due to the delay minutes in dispute. The data checked was produced at end of period 1 (2011/12) and had 8,937,741 mins delay; the Annual Return used data from the 17th May and had 8,948,775 mins delay which should be more accurate.	104_DELAYS_201011P13.xlsx
Summarised network-wide data (delays to major operators)	Discrepancy	Same reason; data for period 1 = 8,885,625 mins v Annual Return (17th May) = 8,904,847 mins	104_DELAYS_201011P13.xlsx
Network-wide total delays to freight train services	Discrepancy	Same reason as above	104_DELAYS_201011P13.xlsx
Network-wide data by delay category grouping	Discrepancy	Same reason as above	104_DELAYS_201011P13.xlsx
Train km (quoted in above sections)	Discrepancy	From period 1 data, freight km = 35,038,692 km (v 35,044,683 km in Annual Return) and passenger train km = 483,284,551km (475,060,899 km in Annual Return). Data champion not so sure this is all due to above reason.	105_FMLEAGE_1112P01.xls 105_TMILEAGE_1112P01.xls
Asset failures	Discrepancy	Small discrepancies on some incidents because of period 1 v 17th May data versions. E.g. no. of points failures = 5802 v 5,815 in Annual Return.	104_IncidentCount_201011P13.xlsx
Cancellations & Significant Lateness (CaSL)	Discrepancy	Small discrepancies because of period 1 v 17th May data versions. E.g. long distance = 4.95% v 5.00% in Annual Return.	101_PPMCASL_200501201213.xls
Customer satisfaction	Consistent		General.ppt
Passenger satisfaction	Consistent		National Passenger Survey - Spring 2011 Main Report (Source: Passenger Focus website)
Doing business with Network Rail	N/A		
Key regulatory issues arising in 2010/11	N/A		
Section 2 Network capability and network availability			
Network capability			
Linespeed capability (C1)	Consistent		ORRbitV4A.xls
Gauge capability (C2)	Consistent		ORRbitV4A.xls
Route availability value (C3)	Consistent		ORRbitV4A.xls
Electrified track capability (C4)	Consistent		ORRbitV4A.xls
Infrastructure Capability Programme (ICP)			
Discrepancies between actual and published capability identified by the ICP	Consistent		Consistent with Discrepancy Register on NR website
Short-Term Network Changes resulting from ICP and year of expiry	Discrepancy	Network Rail advise that the differences are due to the spreadsheet having been revised since the population of Table 2.14 of the Annual Return. A version of the spreadsheet concurrent with the Annual Return has not been found	Discrepancy Master List.xls
Permanent Network Changes completed resulting from ICP	Consistent		Consistent with last year's Discrepancy Register and Sectional Appendices.
Network availability			
Disruptions to passengers and freight as a result of planned engineering possessions	Consistent		7DR fund.xls PDI-P main model P01_101.xls P13_2010_11 PDI-F data.xls
Section 3 Asset management			
Broken rails (M1)	Consistent		Broken Rail Information 1011.xls
Rail defects (M2)	Consistent		ORRbitV4A.xls
Track Geometry – Good Track Geometry (M3)	Consistent		GTG.xls
Track Geometry – Poor Track Geometry (M3)	Consistent		PTG.xls
Track buckles	Consistent		ORRbitV4A.xls
Track failures	Consistent		104_IncidentCount_201011P13.xls
Condition of asset temporary speed restriction sites (M4)	Discrepancy	Typographical errors in the Tables in Annual Return	1348 ESRs & TSRs 2010-11.xls
Track geometry faults (M5)	Consistent		ORRbitV4A.xls
Earthwork failures (M6)	Consistent		ORRbitV4A.xls
Earthwork condition (M33)	Discrepancy	The raw data given to Arup was incorrect but the data champion has assured that the data published in the Annual Return is correct	ORRbitV4A.xls
Tunnel condition	Discrepancy	Data is not consistent with Annual return	TCMI data
Bridge condition (M8)	Discrepancy	The Average condition grade, which is a weighted average of the bridge condition grades, was incorrectly reported as 2.10 instead of 2.24	SCMI data
Signalling failures (M9)	Consistent		M9v1.xls
Signalling asset condition (M10)	Consistent		M10 - Report P13 10-11.xls
Alternating current traction power incidents causing train delays (M11)	Consistent		ORRbitV4A.xls
Direct current traction power incidents causing train delays (M12)	Consistent		ORRbitV4A.xls
Electrification condition – AC traction feeder stations and track sectioning points (M13)	Consistent		ORRbitV4A.xls
Electrification condition – DC traction substations (M14)	Consistent		ORRbitV4A.xls
Electrification condition – AC traction contact systems (M15)	Consistent		ORRbitV4A.xls
Electrification condition – DC traction contact systems (M16)	Consistent		ORRbitV4A.xls
Station Stewardship Measure (M17)	Consistent		ORRBIT submission for Station Stewardship Measure (2010-11) with NSIP stations.xls
Light Maintenance Depot Stewardship Measure (M19)	Consistent		ORRBIT submission for LMDSM 27 May 2011.xls

Review of Annual Return 2011			
Description	Review Outcome	Review Comments	Data
Section 4 - Activity volumes			
Rail renewed (M20)	Consistent		Track Annual Return 10-11 FINAL VERSION.xls
Sleepers renewed (M21)	Consistent		Track Annual Return 10-11 FINAL VERSION.xls
Ballast renewed (M22)	Consistent		Track Annual Return 10-11 FINAL VERSION.xls
Switches and crossings renewed (M25)	Consistent		Track Annual Return 10-11 FINAL VERSION.xls
Signalling renewed (M24)	Consistent		SPC P13 Volumes Final.xls
Level crossing renewals	Consistent		SPC P13 Volumes Final.xls
Telecom renewals	Discrepancy	The data champion has explained that the difference (CIS data) was due to the late reporting of one of the projects, so Annual Return is correct.	SPC P13 Volumes Final.xls
Civils activity volumes	Consistent		Table 4.17 Annual Return P13 Actual Volumes.xls
Bridge renewals and remediation (M23)	Consistent		Frozen Civils CLP P01 1112.xls
Culverts renewals and remediation (M26)	Consistent		Frozen Civils CLP P01 1112.xls
Retaining walls remediation (M27)	Consistent		Frozen Civils CLP P01 1112.xls
Earthwork remediation (M28)	Consistent		SCO M28 2010-11.xls
			SEA M28 2010-11.xls
			WES M28 2010-11.xls
			LNE M28 2010-11.xls
			LNW M28 2010-11.xls
Tunnel remediation (M29)	Consistent		Frozen Civils CLP P01 1112.xls
Electrification and plant renewal activity volumes	Consistent		Wk4 Deliverability Volumes Report 04-Apr.xls
Drainage renewals expenditure	Consistent		10-11 Annual Return by Project (ARUP).xls Drainage Expenditure 10-11.xls
Section 5 - Safety and environment			
Safety			
Passenger Safety	Consistent		Safety KPI Definition 2011_2012.doc
Workforce Safety	Consistent		passenger safety indicator data 201011.xls
System Safety	Consistent		workforce safety 201011.xls
Infrastructure wrongside Failures	Consistent		
Category A SPADs	Consistent		
Level Crossing Misuse	Consistent		
Irregular Working	Consistent		
Criminal Damage	Consistent		
Public Safety	Discrepancy	A minor typographical error in the text in Annual Return	suicides_trespas.xls
Environment			
Environmental Performance	Discrepancy	Numbers are transcribed in Table 5.8 of the Annual Return: CO2 emissions for Managed Stations should be -8% and for Depots should be -10%.	carbon data orr annual return updated to show performance by building type.xls Waste data breakdown GT 300611.xls carbon data orr annual return GT amends.xls
Enhancement programme			
Enhancement Expenditure	N/A		
Enhancement Expenditure	Consistent		Network Rail 2011 Regulatory Financial Statements (source: Network Rail website)

3.1 Operational performance and stakeholder relationships

The Annual Return reports delays for 2010/11 from data dated the 17th May 2011. This is not an end of period date but was chosen as the latest possible before publication of the Annual Return in order to minimise the amount of delay in dispute between Network Rail and the Train Operating Companies. It therefore presents the most accurate picture possible.

However, this data was not saved and we were instead given data created at the end of period 1 in 2011/12. As expected, this contained slightly less delay attributed to Network Rail than was reported (8,937,741 minutes v 8,948,775 minutes to all train services). We were therefore unable to precisely replicate many of the tables in this section. An example is shown below for Cancellations and Significant Lateness (Table 1.14 in Annual Return).

	Annual Return 2010/11	Audit Results
London & South East	2.61	2.62
Long Distance	5.00	4.95
Regional	2.44	2.44
England & Wales	2.76	2.76
Scotland	2.65	2.65
Network Total	2.75	2.76

There were also small discrepancies in the number of train km reported compared with the Period 1 data. Following discussions with the Data Champion, the reasons are less clear, and may be due to different methods for converting miles to km as well as the change of delays in dispute.

This (as well as other sections mentioned below) highlights the importance of storing data which is used to produce the Annual Return, to provide greater assurance.

3.2 Infrastructure Capability Programme (ICP)

The ICP was initiated by Network Rail to reconcile the network capability against an agreed baseline. With only one discrepancy remaining, Network Rail are of the opinion that the ICP is almost complete. Future reporting will be by route rather than through this special programme.

We have been unable to fully replicate Table 2.14 which shows the number of Short-Term Network Changes (where there is an agreed short term change to the capability prior to a longer term resolution) from the underlying data. We checked the Discrepancy Master List spreadsheet which was dated 21st July 2011. This fully matched the changes shown for Scotland in Table 2.14 but there were small discrepancies for England and Wales. For example, the total number for England and Wales from the spreadsheet is 46 compared to 45 in Table 2.14.

Network Rail advise that the differences are due to the spreadsheet having been revised since the population of Table 2.14. A version of the spreadsheet concurrent with the Annual Return has not been found. Also the person who managed and produced this information has since left Network Rail.

A process for storing the underlying data with an explanation of how it has been used for the Annual Return would resolve this problem.

3.3 Condition of asset temporary speed restriction sites (M4)

Some minor typographical errors were found in Tables 3.14 and 3.15 which report the numbers of unplanned and planned Temporary Speed Restrictions.

Table 1: Corrections to Table 3.14 (Annual Return shown in brackets)

Table 3.14: National Unplanned Temporary Speed Restrictions Summary – Total 2010/11							
	Classification	Track	GCC	Structures	Earthworks	Safety	Total
England & Wales	Primary	278	0	2 (v 0)	26	9	315 (v 313)
	Secondary	44	0	5 (v 0)	3	14	66 (v 61)
Scotland	Primary	11	0	0	4	0	15
	Secondary	42	0	4	5	3	54
Network Total	Primary	289	0	2	30	9	330
	Secondary	86	0	9	8	17	120
Grand Total		375	0	11	38	26	450

Table 2: Corrections to Table 3.15 (Annual Return figures shown in brackets)

Table 3.15: National Planned Temporary Speed Restrictions Summary – Total Speeds 2010/11						
	Classification	Track	Structures	Earthworks	Safety	Total
England & Wales	Primary	610	42	14	14	680 (v 670)
	Secondary	74	8	2	4	88
Scotland	Primary	23	0	1	0	24
	Secondary	73	32	1	0	106
Network Total	Primary	633	42	15	14	704
	Secondary	147	40	3	4	194
Grand Total		780	82	18	18	898

3.4 Earthwork condition (M33)

Earthwork condition is reported by five chain lengths for poor, marginal and serviceable condition rating in Table 3.19 of the Annual return. The data is reported geographically, that is, England & Wales, Scotland and for the overall network. The quoted values were checked against the underlying dataset provided by Network Rail, and some minor discrepancies were found as shown below.

Network Rail have explained that the raw input data to ORRbit that was supplied to us had an error. Route - London & North East (RLNE) Cuttings Poor was reported as 0 instead of 219.

Network Rail have further explained that in the Annual Return, the data has been aggregated into 10 Routes (including Wales) and has slightly different boundaries for Scotland than those used in the ORRbit which has the data reported by 9 Routes.

In this case, then, the Annual Return is accurate and Table 3.19 is correct.

Table 3: Discrepancies in Annual Return Table 3.19 (Annual Return figures shown in brackets)

Table 3.19: Earthwork condition results per five chains for 2010/11				
	Poor	Marginal	Serviceable	Total
England & Wales				
Embankments	4,782	32,025 (v 32,005)	34,123 (v 34,115)	70,902
Cuttings	1,909 (v 2,128)	21,483 (v 21,459)	24,633 (v 24,620)	48,207
Rock Cuttings	494	2,149	2,382	5,025
Total	7,404	55,613	61,117	124,134
Scotland				
Embankments	575	2,815 (v 2,835)	13,244 (v 13,252)	16,662
Cuttings	267	2,618 (v 2,642)	9,796 (v 9,809)	12,718
Rock Cuttings	156	1,059	490	1,705
Total	998	6,536	23,551	31,085
Network Totals				
Embankments	5,357	34,840	47,367	87,564
Cuttings	2,176 (v 2,395)	24,101	34,429	60,925
Rock Cuttings	650	3,208	2,872	6,730
Grand Total	8,402	62,149	84,668	155,219

3.5 Tunnel condition

The Annual Return reports the condition of tunnels using the Tunnel Condition Marking Index (TCMI). We were supplied with the data, although, there was

some uncertainty whether it was the correct version that was used for the Annual Return. We did find some minor discrepancies in Table 3.21 as shown below.

Table 4: Discrepancies in Annual Return Table 3.21 (Annual Return figures shown in brackets)

Table 3.21: Tunnel Condition Marking Index score 2010/11				
	No. of bore scores out of total bores	Average bore score	No. of portal scores out of total portals	Average portal score
England & Wales	255 out of 664	88	223 (v 237) out of 1,192	91.4 (v 91.5)
Scotland	36 (v 40) out of 80	93	51 (v 54) out of 159	93.1 (v 93.9)
Network Average		88.6		91.7 (v 91.9)

3.6 Bridge condition (M8)

Table 3.23 in the Annual Return reports the number of bridges assessed for the year 2010/11 and the condition band to which those bridges were allocated. We were able to successfully replicate the values in Table 3.23 for the year 2010/11 using the structures condition marking index (SCMI) data that was supplied to us. However, we noticed that the Average condition grade, which is a weighted average of the bridge condition grades, was incorrectly reported as 2.10 instead of 2.24.

3.7 Light Maintenance Depot Stewardship Measure (M19)

There is a minor typographical error in the heading of Table 3.39. The Delivery Plan Target which should be quoted as the ‘*Maximum* average score at the end of CP4’ has been quoted as ‘*Minimum* average score at the end of CP4’.

3.8 Telecom renewals

Renewals data for the Station Information and Surveillance Systems (SISS) group are reported in Table 4.16 of the Annual Return. The total number of CIS (Customer Information Screens) renewals in Table 4.16 of the Annual return is reported as 662, whereas the equivalent value in the underlying spreadsheet data was 677.

The Data Champion responsible for this measure explained to us that the difference of 15 screens was due to the late reporting of one of the projects that delivered 15 screens less than what was originally planned in the P13 Finance Pack. The Annual Return is therefore correct.

3.9 Bridge renewals and remediation (M23)

The Annual Return reports the total number and square area of bridge decks that have been subject to renewal or remediation, with total cost per scheme greater than £50,000. We were provided with an extract of the Period 01 Business Plan along with the year end (2010/11) sign off sheets for all the routes. The sign off sheets reported planned v actual renewals and remediation data by route. Our checks have indicated that the deliverables reported in the Annual Return is consistent with the information provided by the route managers/engineers in their end of the year summary sheet. This methodology and outcome is also applicable to the following sections:

- **Culverts renewals and remediation (M26)**
- **Retaining walls remediation (M27)**
- **Tunnel remediation (M29)**

3.10 Environment

Network Rail's environmental performance is summarised in Table 5.8 of the Annual Return. This is based on figures that have been signed off by consultants Bureau Veritas. In carrying out our checks we have noted the following:

- The managed stations and depots figures are the wrong way round in the Annual Return, i.e. managed station should be -8% and depots should be -10%.
- Waste – following publication of the 2010 Annual Return, more evidence came to light which meant that the percentage of renewals and enhancement activity waste mass that was re-cycled or re-used should have been 96% rather than the 92% reported for 2009/10. This is not mentioned in Table 5.8.

Note that Network Rail were unable to gather this additional evidence for 2010/11 and have decided not to seek it out because the soil in question is sufficiently contaminated that it is not classified inert and, whilst that may mean it can still be used as cover on a landfill site, it is not a clear cut case of re-use.

4 Enhancement programme

The Enhancement projects undertaken by Network Rail are regularly reviewed by the Part C Independent Reporters. We have therefore limited our review to the process for gathering the information for the Annual Return and Table 6.3 which presents the expenditures by project.

A template for reporting milestones planned v actual and project progress was sent by the Data Champion to each project sponsor in February 2011. A project plan was also sent that showed the main tasks and dates by which the sponsors had to respond. These included producing two drafts of their text and then the final version. Sponsors were also asked to specifically check the commitments made for their project(s) in the 2011 Delivery Plan and to report progress against them. This process is thorough, and the Data Champion considers that it worked well.

5 Confidence Gradings

The table below compares the Confidence Grades awarded by Arup during 2010/11 with those quoted in the 2011 Annual Return.

Review of Annual Return 2011 - Confidence Grades			
Description	Confidence Grade awarded by Arup	Confidence Grade reported in Annual Return	Highest Achievable Grade (as suggested by Arup)
Section 1 - Operational performance and stakeholder relationships			
Public Performance Measure (PPM)	A1		A1
Summarised network-wide data (delays to major operators)	A1		A1
Network-wide total delays to freight train services per 100 train km	A3		
Cancellations & Significant Lateness (CaSL)	A2		A1
Customer satisfaction	A1		A1
Section 2 Network capability and network availability			
Linespeed capability (C1)	B2	B2	A1
Gauge capability (C2)	B2	B2	A1
Route availability value (C3)	B2	B2	A1
Electrified track capability (C4)	B2	B2	A1
Infrastructure Capability Programme (ICP)	BX		BX
Disruptions to passengers and freight as a result of planned engineering possessions	B3	B3	B2
Section 3 Asset management			
Broken rails (M1)		A1	
Rail defects (M2)	A2	B3	
Track Geometry – Good Track Geometry (M3)	B2	A1	
Track Geometry – Poor Track Geometry (M3)		A1	
Track buckles		A2	
Track failures		B2	
Condition of asset temporary speed restriction sites (M4)		B2	
Track geometry faults (M5)		A1	
Earthwork failures (M6)		A2	
Earthwork condition (M33)		B2	
Tunnel condition		B2	
Bridge condition (M8)		B3	
Signalling failures (M9)		B2	
Signalling asset condition (M10)		B2	
Alternating current traction power incidents causing train delays (M11)		B2	
Direct current traction power incidents causing train delays (M12)		BX	
Electrification condition – AC traction feeder stations and track sectioning points (M13)		B4	
Electrification condition – DC traction substations (M14)		BX	
Electrification condition – AC traction contact systems (M15)		B4	
Electrification condition – DC traction contact systems (M16)		B3	
Station Stewardship Measure (M17)	B3	B3	A2
Light Maintenance Depot Stewardship Measure (M19)	C4	C4	A2
Section 4 - Activity volumes			
	none	none	
Section 5 - Safety and environment			
Passenger Safety	B3		B2
Infrastructure wrongside Failures	A1		A1
Category A SPADs	A1		A1
Level Crossing Misuse	A3		A2
Irregular Working	B3		A2
Criminal Damage	B3		B2
Environmental Performance	B3		B3

Not all of the grades awarded by Arup have been reported in the Annual Return.

Most of those that have are reported correctly, except for two which were awarded by Arup in Quarter 3 of 2010/11 and for which grades awarded by the previous Independent Reporter (Halcrow) are instead reported:

- Rail defects (M2) reported as B3 compared with Arup's A2 grade;
- Track Geometry – Good Track Geometry (M3) reported as A1 compared with Arup's B2 grade.

There are some grades reported that have not been awarded by Arup. Network Rail advise that these were awarded by the previous Independent Reporter in their final Annual Return review, but with four grades having been subsequently updated (measures M8, M9, M13 and M14).

6 Suggested Improvements to the Annual Return

We asked the Data Champions for their views on what could be improved and the following suggestions were made:

- Remove the ‘optimism bias’ factor that dampens the SICA scores by 22.5% to measure the signalling asset condition (M10). This is now out of date since the methodology has been improved and Network Rail do not apply this factor internally. The impact of making this change would be to score some assets 1 (>20 years residual life) instead of 2 (10 to 20 years).
- The process would be improved further if the data input for reporting could be automated as much as possible. There are still instances of manual calculation of results and manually entering figures into tables for the Annual Return.
- Some thought may need to be given to the geographical split of results. The Annual Return currently reports by England & Wales, and Scotland. Devolution within Network Rail is to 10 routes, but producing results at a route level may not easily map to functional territories.

7 Conclusions

Three of the recommendations made in our review of last year's Annual Return have been put in place. Recommendation 2010.AR.5 to put in place a rigorous checking process was also implemented, although there was not enough time for the final proof read which might have picked up some of the typographical errors. The process for pulling together text and figures from the various Data Champions and gaining sign off by the Corporate Owners and Executive Directors has worked better this year than last year. The Data Champions generally welcomed having a template to fill in.

The accuracy of many of the figures reported was high. We did find some errors which were because of wrong versions of data given to us for checking. In some cases, the reasons for the discrepancies were unclear (not helped by people in Network Rail being on holiday during the time of this review) which is a potential concern. There were also a few typographical errors in the tables, and some formatting problems - for example footnote numbers - which seem to have been introduced in the final publication.

The reporting of the Confidence Grades awarded by Arup was more patchy and this needs to be more consistent in future Annual Returns. The recommendation 2010.AR.1 is therefore ongoing.

8 Recommendations

No.	Recommendation to Network Rail	Locations in Text	Data Champion Responsible	Due Date
2011.AR.1	Proof read final version of Annual Return prior to publication.	2.1	Arup	July 2012
2011.AR.2	Data Champions to file their source datasets along with their tables and text for the Annual Return. A note explaining how the data was used to produce the report should also be filed in the same place. This should provide greater assurance on the accuracy of reporting.	3.1, 3.2, 3.5, 3.9	Strategic Planner (NR)	June 2012
2011.AR.3	To investigate opportunities for further automation of the process for compiling the Annual Return in order to avoid as much as possible having to manually copy figures in tables. This should help to minimise typographical errors.	6	Strategic Planner (NR)	April 2012
2011.AR.4	Consider with Data Champions the practicalities of introducing any route-based disaggregation of results, where disaggregated data is available.	6	ORR & Strategic Planner (NR)	Dec 2011
2011.AR.5	Remove the 'dampening' factor in calculating the SICA score to be reported (Signalling Asset Condition M10).	6	ORR & Senior Business Planning Specialist [S&T]	Dec 2011
2011.AR.6	In future Annual Returns, quote all the Confidence Grades awarded by Arup and Halcrow, whichever is the most recent.	5	Strategic Planner (NR)	June 2012

Appendix A

Mandate

Mandate for Independent Report Part A – Annual Return 2011 Review

Audit Title:	Annual Return 2011 Review
Mandate Ref:	AO0 TBC
Document version:	Draft A
Date:	17 May 2011
Draft prepared by:	Chris Fieldsend
Remit prepared by:	AO016
Network Rail reviewer:	Angelique Tjen

Authorisation to proceed

ORR	Chris Fieldsend	
Network Rail	Angelique Tjen	

Purpose

This mandate sets out the scope of work for the Part A Independent Reporter (Arup) to review the 2011 Annual Return.

Background

The Annual Return is the formal statement from Network Rail on its performance against its regulated outputs at the end of each year (31st March). It is provided by Network Rail as part of the information reporting requirement (licence condition 10). Under the terms of the licence, Network Rail provides outputs that can be measured against the regulatory targets that are defined for the control period, and agreed with in advance by ORR in a formal specification.

Scope

The review should consider the process used by Network Rail to compile the 2011 Annual Return, including reference to previous processes. The review should include a summary of confidence gradings for all Annual Return measures (where reviewed by the Part A Reporter in 2010-2011). Recommendations should be made that support the continuous improvement of processes and the accuracy / reliability of measures. Annex A presents the specification for the 2011 Annual Return.

Methodology

The Reporter should meet with Network Rail to understand the processes used in the production of the Annual Return. This should include interviewing both those coordinating and contributing towards the development of the Annual Return. The Reporter should also review all Annual Return documentation and systems, and comment upon their quality and fitness for purpose.

The Reporter should review all quantitative outputs within the Annual Return, and comment upon their consistency against the source data. This will involve liaising with data champions to identify and collate the data, along with a comparison of the source data and reported figures.

Deliverables

The Reporter should provide a publishable report, including findings, conclusions and recommendations. The report should be prepared in draft form and sent electronically to Network Rail and ORR, at the same time. The Reporter should facilitate feedback (via a tripartite feedback

session if appropriate) and provide a revised report with track changes. This should be followed by a final report for publication on ORR's website.

Timescales and budget

A fully costed proposal for this work is required by 8 June 2011. Work is expected to commence early July 2011, following approval by NR and ORR. A draft report is required by 29 July 2011 and a final report is required by 26 August 2011.

Independent Reporter remit proposal

The Independent Reporter shall prepare a fully costed proposal for review and approval by NR and ORR on the basis of this mandate. The approved remit will form part of the mandate and shall be attached to this document.

The proposal will detail methodology, tasks, programme, deliverables, resources and costs.

Annex A – Specification for 2011 Annual Return

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Key regulated issues	Commentary on key regulatory issues	Network wide

Safety and health

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Safety improvement	Commentary on measures taken to improve safety. Include commentary on measures taken to improve the Safety Management System as a whole and provide an overview of system safety performance with any improvements made.	Network wide: Scotland; England & Wales.
Workforce safety	Risk expressed as fatalities and weighted injuries (FWI) normalised per million employee hours.	
Passenger safety	Risk expressed as fatalities and weighted injuries (FWI) normalised per million passenger kilometres	Network wide

Train performance

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Improvement in the public performance measure (PPM)	% of trains arriving on time, i.e. within five/ten minute time-bands and having called at all advertised stations	Network-wide; Scotland; England & Wales; by sector
Delays to all passenger train operators attributable to Network Rail	Delay minutes	Network-wide; Scotland; England & Wales;
Delays to freight services attributable to Network Rail	Delay minutes per 100 train kilometres	By Major Freight operators; Minor operators to be grouped into Minor Freight.
Cancellations and significant lateness	Number and percentage of passenger trains (franchised and open access operators) arriving at final destination 30 or more minutes later than the time shown in the public timetable. Partial and full cancellations to be regarded as ‘significantly late’	England & Wales; by sector

Environmental performance

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
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Carbon dioxide emissions	CO ₂ emissions relating to managed stations offices and depots	Network-wide
Water recovered	Volume of ground or spring water recovered and sold on or used from tunnels as a % of total (deployable) water removed from tunnel (against delivery plan target)	Network-wide
Non-track waste (Operational recycling)	Stations, office and depot waste mass recycled or re-used (against delivery plan target)	Network-wide
Waste (Infrastructure recycling)	Renewals and enhancement activity waste mass recycled or re-used	Network-wide
SSSIs (Land management)	The number of SSSIs classified as favourable or recovering status (against delivery plan target).	Network-wide

Network Capability

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Linespeed	Length of running track (kms) by speed band; changes to the network	Network-wide; England & Wales; Scotland;
Gauge	Length of route (kms) capable of accepting different freight vehicle, by five gauge bands	
Route availability	Length of track (kms) capable of accepting loaded vehicle types, by RA value	
Electrified track capability	Length of electrified track (kms) by type	
Discrepancies between actual and published capability	Number of outstanding discrepancies, by type and proposed resolution	Network-wide; England & Wales; Scotland;
Ongoing short-term network change proposals	Number of ongoing proposals by type of discrepancy, and time remaining before review	

Network availability

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Disruption to passengers as a result of planned engineering possessions	Possession disruption index (passenger) - economic value of the excess journey time passengers experience, normalised by total train-km	Network-wide
Disruption to freight as a result of planned engineering possessions	Possession disruption index (freight) - 'unavailability' of track for freight use, weighted by the level of freight traffic operated over each section of track	Network-wide

Asset condition and serviceability

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Broken Rails	Number of broken rails per 100 kms	Network-wide; Scotland; England & Wales
Rails defects	Immediate action rail defects per 100 kms (primary and secondary)	Network-wide; Scotland; England & Wales
	Length of continuous rail defects	
Track Geometry	Good track geometry, based on index measure of track quality	Network-wide; Scotland; England & Wales
	Poor track geometry based on index measure of track quality	
	Geometry faults per 100 track km	Additional disaggregation by primary and secondary
	Immediate action geometry faults per 100 track km (if available. Please include a table showing 'under development' if not available)	
Track buckles per 100km	As defined in the delivery plan	Network-wide; Scotland; England & Wales
Condition of Asset TSRs	Number of TSRs by cause and route (track; structures; earthworks) and cause (condition of track; RCF; work in progress; other)	Network-wide; Scotland; England & Wales
	TSR data – Condition of track; rolling contact fatigue; work in progress; other	
Bridge condition	Number of bridges examined and assessed condition grade	Network-wide; Scotland; England & Wales
Tunnels condition	Tunnel condition examined and assessed condition (TCMI)	Network-wide; Scotland; England & Wales
Earthwork failure	Number of embankment or cutting sites which have become unstable; assessed risk (hazard rating assessment)	Network-wide; Scotland; England & Wales
	Slope stability index	
	Rock hazard index	
Signalling failures	Number of signalling failures causing delay of more than 10 minutes per incident	Network-wide; Scotland; England & Wales
Signalling asset condition	Number of assets assessed and assessed condition grade	Network-wide; Scotland; England & Wales
	Level crossing condition index	
AC traction power incidents	Number of OLE failures resulting in train delays of more than 500 minutes	Network-wide; Scotland; England & Wales
DC traction power incidents	Number of conductor rail failures resulting in train delays of more than 500 minutes	Network-wide; Scotland; England &

		Wales
AC electrification condition	Assessed condition grade of AC traction feeder stations and track sectioning points	Network-wide; Scotland; England & Wales
DC electrification condition	Assessed condition grade of DC traction substations	Network-wide; Scotland; England & Wales
AC contact system condition	Assessed condition grade of AC contact systems	Network-wide; Scotland; England & Wales
DC contact system	Assessed condition grade of DC contact systems	Network-wide; Scotland; England & Wales
Signalling (for at least interlocking)	Remaining life	Network-wide; Scotland; England & Wales
Electrification	Condition grades	Network-wide; Scotland; England & Wales
Civils	Capability (no. of structures split by RA Bands)/Measures currently used within Network Rail business (a meeting to agree the exact measures from Network Rail will be arranged)	Network-wide; Scotland; England & Wales
	Asset subject to additional inspections (number)	
Reliability forecasts	Track failures	Network-wide; Scotland; England & Wales

Activity levels

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Volume renewals	Volume achieved and % of activity compared with plan	Network-wide; Scotland; England & Wales
Rail renewals	Length of track (kms) where re-railing has been carried out	Network-wide; Scotland; England & Wales
Sleeper renewals	Length of track (kms) where re-sleeping has been carried out, by type	Network-wide; Scotland; England & Wales
Ballast renewals	Length of track (kms) where re-ballasting has been carried out, by type	Network-wide; Scotland; England & Wales
Bridge renewals and remediation	Number and area of bridge decks subject to renewal or remediation	Network-wide; Scotland; England & Wales
Signalling renewals	Number of SEUs renewed including SEU's completing GRIP stage 4. Progress and delivery against plans, to be broken down by major works,	Network-wide; Scotland; England & Wales

	minor and complementary works, level crossings and centrally contracted work	
Level crossing renewals	Number of LXEU's renewed	Network-wide; Scotland; England & Wales
Telecom renewals	A report on renewal of telecom equipment, to include concentrators, PETS, DOO CCTV systems	Network-wide; Scotland; England & Wales
S&C renewals	Number of S & C units renewed, including partial renewal	Network-wide; Scotland; England & Wales
Culvert renewals and remediation	Number of culverts renewed or where major components replaced	Network-wide; Scotland; England & Wales
Drainage renewals	Expenditure on drainage scheme renewals and volume	Network-wide; Scotland; England & Wales
Retaining wall renewals	Number and area of retaining walls subject to renewal	Network-wide; Scotland; England & Wales
Earthworks remediation	Number of earthwork schemes subject to remediation	Network-wide; Scotland; England & Wales
Tunnel renewals	Number of remediation schemes on tunnels	Network-wide; Scotland; England & Wales

Operational property

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Station stewardship measure	Assessed average condition grade of stations where trains make timetabled stops	Average station condition score for: (a) Each category of station (A-F) across GB network; (b) All stations (A-F) in Scotland; and (c) Each category of station (A-F), and disaggregation by: (i) excluding stations benefiting from NSIP funding; and (ii) only those stations benefiting from NSIP funding.
Light maintenance depot stewardship measure	Assessed average condition grade of LMDs	Network-wide

Enhancement schemes

<i>Specified target/output</i>	<i>Measure</i>	<i>Disaggregation</i>
Project / Fund / Programme	Progress against milestones and expenditure	As per table delivery plan

Appendix B

Meetings held with Network Rail Data Champions

B1 Meetings

The following meetings were held during the course of this review.

Section of Annual Return	Date of Meeting
Signalling Condition & Renewals	27-Jul-11
Environmental Performance	28-Jul-11
Infrastructure Capability Programme	28-Jul-11
Enhancements	28-Jul-11
Track & Drainage Renewals	01-Aug-11
Operational Property	03-Aug-11
Safety & Health	03-Aug-11
Asset Management and some Network Capability KPIs	04-Aug-11
Network Availability	04-Aug-11
Earthworks Failure & Remediation	05-Aug-11
Train Performance	05-Aug-11
Electrified Track Capability	15-Aug-11
Bridge, Tunnel & Civils conditions	17-Aug-11
Condition of Asset TSRs	18-Aug-11