Network Rail
Standards and Controls
Awareness Briefing

Issue: 103 March 2017 v.2.

Introduction

The purpose of this pack is to assist with Awareness Briefing of Network Rail standards and controls changes published in March 2017.

- *Detailed technical briefings to those who have a role or responsibility for applying the standard are planned and delivered by the Working Group that developed the standard.*
- *Where a person/manager identifies the need to receive a technical brief which has not been planned, this can be requested through the person identified as the Working Group Chair on the front cover of the standard.*
- *Where standards are of a particular interest to a team/person, they may seek further information by referring to the standard or its briefing note at the back of the standard.*

Line Managers may customise this pack by entering their [Function] at the top of each slide and by adding or deleting relevant slides from the pack.

***NOTE:** This pack does not contain any Railway Group Standards changes; these are communicated through a separate report issued from the RSSB. More detailed information on Railway Group Standards can be obtained by visiting the RSSB website at www.rssb.co.uk. All user enquiries should be directed to the Rail Safety & Standards Board Enquiry Desk on 020 3142 5400.*

Important Notice: Accessing the four Track Standards included in this pack

Users will notice a change in the way the four Track Standards included in this pack are delivered. Users will access the Standard landing pages via the Standards & Controls website in the usual manner but the actual documents will now be hosted on BCR Online. The reason for this change is to ensure one version of the truth.

Please follow the red reference link in the Purpose/Scope field on the Standards & Controls website which will direct you to BCR Online. Please log in to BCR Online using your Network Rail username and password and your document will open in a new tab in your browser. Please use the ***Download*** button to save a copy of the document to your computer.

Should you experience difficulties, or would like to leave feedback, please email the Standards Management Team:
STManage@networkrail.co.uk

Overview

Overview

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NR/L2/ADG/002 Asset Data Governance Framework Manual

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

These modular standards set out the processes within the quality management system for asset-related data and information and for asset data governance:

- data quality planning – the process to define data and information requirements and to set plans to maintain the required accuracy of asset related data;
- data architecture management – the process to maintain the asset data architecture and at a conceptual level to meet business information needs;
- data stewardship management – the process to define the responsibilities for asset data and deliver a stewardship model;
- data flow management – the process to identify where and how asset related data is used and maintained throughout Network Rail;
- data design – the process to translate data requirements into logical and physical designs to store and maintain asset related data;
- data quality criteria set-up – the process to define the measures and method to (assess) the accuracy of asset related data;
- data error cause analysis – the process to perform root cause analysis of identified errors and issues and to develop remediation plans;
- data processing – the processes to collect, maintain and provide asset related data for reporting and use;
- data quality measurement – the process to measure the accuracy of asset related data;
- data error correction – the process to correct asset related data issues and errors;
- verification and validation of asset related data – the process to perform self-assurance and cross functional assurance of the accuracy of asset related data and the effectiveness of the asset data governance framework; and (continued on next slide)

Scope

These modules apply to the entire asset management enterprise as defined within Network Rail's asset management strategy, both internal and external to Network Rail through the lifecycle of asset data.

These modules apply to data related to all assets ad to data that describes the operational railway (i.e. network models and attributes), but does not apply to operational geography related to infrastructure assets e.g. TIPLOC, STANOX and Network links.

It does not apply to data related to non-operational assets such as IT and office facilities assets.

NR/L2/ADG/002 Asset Data Governance Framework Manual

Purpose	Scope
• operate the asset data governance framework – the process to maintain and modify the asset data governance framework.	

What's new, what's changed and why

This is a new standard/control document.

These are two newly created modules for the process to perform assurance of asset data (Module 013: Verification and validation of asset data) and to operate the asset data governance framework (Module 14) which provide the processes to assess the effectiveness and drive continuous improvement of the processes described in the published modules contained in the manual NR/L2/ADG/002.

NR/L2/ADG/002 ISSUE 1 will be superseded, to incorporate these two new modules.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Head of Track	Safety, Technical and Engineering	No	Director, Route Asset Management	Route	No
Strategic Planning Manager	Planning and Regulation	No	Chief Engineer	Safety, Technical and Engineering	No
Head of Finance Systems and Processes	Finance	No	Director, Asset Information Services	Asset Information Services	No
ORBIS, Major Project and Programme Manager, Data	Digital Railway	No	Head of Supply Chain, Digital Railway	Asset Information Services	No
Chief Data Officer	Compliance	No	Principal Enterprise Architect, Route Services	Route Services – IT Services	No
Architect, Network Rail Telecommunications	Network Rail Telecommunications	No	Enterprise Solution Architect	Route Services – IT Services	No

NR/L2/ADG/002 Asset Data Governance Framework Manual

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Programme Engineering Manager	Infrastructure Projects	No			
Area Director	Network Operations	No			
Industry Performance Relationship Manager	Network Operations	No			
Head of Transformation (Western Route)	Network Operations	No			
ADG Technical Authority Member	ADG Technical Authority Member	No			

Impact on Function *(to be completed by Function)*

Further information contact	Davin Crowley-Sweet, Head of Asset Data Tel: 07920 509113

NR/L2/CIV/140 Model Clauses for Civil Engineering Works

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	12

Purpose

The purpose of this standard is to define the requirements for the production and use of Model Clauses for specifying Civil Engineering Works. The Model Clauses incorporated into the Technical Workscope should meet the relevant requirements of Group Standards and Network Rail standards and also reflect industry good practice, so that the Contact documentation for the Works will;

- contain all the necessary technical requirements for quality, buildability, maintainability, serviceability and decommissioning;
- be consistent in format and content;
- be able to be produced without undue time and effort.

Scope

This standard covers the use of Model Clauses for Civil Engineering Works that may be undertaken on the rail network.

The Clauses are appended to this standard, and an index of them is provided in **8**.

What's new, what's changed and why

These are new modules of NR/L2/CIV/140.

A new concrete specification has been added to the Model Clauses for Civil Engineering Works that complies with the Structural Eurocodes. This specification has the same basis as Highway's England guidance.

The previous concrete specifications are withdrawn as these are based on British Standards that have been superseded.

NR/L2/CIV/140 Model Clauses for Civil Engineering Works

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Chief Buildings and Civils Engineer	Safety, Technical and Engineering	No	Senior Design Engineer	Infrastructure Projects	No
Head of Engineering	Infrastructure Projects	No	Principal [Structures] Design Engineer	Infrastructure Projects	No
Head of Structures	Safety, Technical and Engineering	No	Programme Engineering Manager	Infrastructure Projects	Yes
Head of Buildings	Safety, Technical and Engineering	No	Senior Project Engineer	Infrastructure Projects	No
Buildings and Civils Team	Safety, Technical and Engineering	No	Senior Design Engineer	Infrastructure Projects	No
			Infrastructure Head of Design	Infrastructure Projects	No
			Route Asset Manager [Buildings and Civils]	Network Operations	Yes
			Senior Asset Engineer [Buildings and Civils]	Network Operations	No

Impact on Function *(to be completed by Function)*	
Further information contact	Ben Wilkinson, Principal Engineer, Track and Civils Tel: 07801334269

NR/L2/CIV/168 Asbestos Management

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	30/09/2021	New	1

Purpose

This business process sets out the process by which Network Rail will comply with the current Control of Asbestos Regulations (CAR) and associated approved code of practice and guidance L143.

Network Rail has a legal duty to prevent or reduce to, as low as is reasonably practicable, exposure to airborne asbestos fibres for its workforce and third parties. Failure to effectively manage asbestos containing materials (ACMs) could lead to:

a) disturbance of ACMs;
b) exposure to individuals, which could cause fatal and serious diseases;
c) stoppage of works;
d) closure of sites/areas and enforcement action from the ORR;
e) enforcement actions from the HSE including prohibitions notices.

This business process sets out how Network Rail will fulfil this legal duty and manage these risks.

Scope

This business process specifies the process to identify and manage *ACMs within Network Rail assets.*

It applies to:

a) all Network Rail staff;
b) Depot Facility Operators, Station Facility Operators, Transport Undertakings and tenants who occupy or maintain premises and have a duty under CAR;
c) staff who undertake works affecting assets, staff who instruct maintenance refurbishment and/or demolition work, and contractors; and
d) all asset disciplines.

Example asset types can be found in appendix A.

What's new, what's changed and why

This is a new standard/control document.

As well as providing up-to-date content on roles, responsibilities and definitions, the new standard covers management of asbestos, work with asbestos and record keeping in much greater detail, and incorporates training and competence.

This business process replaces NR/L3/MTC/SE0112 which has been withdrawn because it does not comply with current legislation and is out of date.

NR/L2/CIV/168 Asbestos Management

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Chief Health, Safety & Quality Officer	STE	Yes	Directors, Route Asset Management	Route	Yes
Head of Environment & Sustainability	STE	Yes	Route Assessment Managers	Route	Yes
Heads of Asset	STE	Yes	Managing Director, Property	Property	No
All NR employees	All	Yes	Property Managers	Property	No
Contractors	N/A		Head of Safety & Sustainable Development, Property	Property	No
NR Consultancy Staff	N/A		Route based staff, including: · Heads of Route Safety, Health & Environment (Net Ops) · Roles that control site safety · Roles that control access to buildings · Anyone liable to disturb asbestos during their work	Property	No

Impact on Function *(to be completed by Function)*	
Further information contact	Sacha Hind, Project Manager Tel: 07711 602135

NR/L2/CPR/306 Disposal of redundant railway assets

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

This business process sets out the rules governing the management and disposal of redundant and reusable railway assets. It enables Network Rail to achieve the principles set out in the HM Treasury document *Managing Public Money* so that:

a) assets are safely managed to avoid accidents, trespass and disruption to the day to day running of the railway;
b) transactions are executed in accordance with management's authorisation and have a business justification in line with business policies to optimise best value;
c) company assets are protected against damage, loss, misuse and from fraud;
d) materials are stored safely and securely;
e) financial activities are carried out in compliance with Managing Public Money (MPM);
f) financial risk is appropriately assessed and managed;
g) appropriate records are kept for accounting and tax.

Scope

The scope applies to all Network Rail employees and contractors under their instruction who are involved with the disposal of Network Rail assets as documented in this business process. It details:

a) management of applicable redundant and reusable assets;
b) accountabilities and responsibilities;
c) interoperability between the Routes and Supply Chain Operations (SCO);
d) use of the Materials Recovery or MR-1 Process Full details here: **http://connect/communities/NDS/MaterialsRecovery.aspx**
e) fraud and theft prevention.

This business process applies to redundant Network Rail assets. These assets might include:

a) rail;
b) switches and crossings;
c) concrete and timber sleepers (and cast and base plates);
d) cable;
e) trains;
f) on track machines or road vehicles;
g) station structures or architectural salvage;
h) signs;
i) cranes;
j) re-locatable buildings;
k) signal boxes and their equipment;
l) signalling or telecoms equipment artefacts or records designated by the Railway Designation Advisory Board (RHDAB).

NR/L2/CPR/306 Disposal of redundant railway assets

Purpose	Scope
	This business process does not apply to: a) the disposal of land or buildings (not named above); b) information technology assets; c) office furniture or equipment unless designated by the RHDAB; d) intellectual property rights; e) office or industrial waste not generated in the course of maintaining or renewing the railway infrastructure; *NOTE For information on waste management, refer to Connect, Guide to Purchasing, I Want to Buy, Waste Management. SCO does not provide a general waste collection service. A general waste collection service is provided by a contract put in place by SCO but managed at Route level.* materials or goods that belong to contractors. f) Materials or goods that belong to contractors.

What's new, what's changed and why

All the content of this standard/control document has been revised.
A summary of the changes can be found in the table below:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
Document Level	Amended	Document now revised as Level 2 vice level 3 to show that the standard is a *business process* vice work instruction
Contents	Amended	Content page amended to reflect standard revision
Section 1. Purpose	Amended	Reflection of requirement to adhere to the principles set out in HM Treasury document *managing public money*
Section 2. Scope	Amended	Revised to show accountabilities for all NR employees & stakeholders involved in disposal of NR assets

NR/L2/CPR/306 Disposal of redundant railway assets

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
Section 3. Responsibilities	Amended	1. Routes are responsible for notifying the SCO that redundant assets require collection via the MR-1 process 2. Route Services, specifically SCO (vice Director C&P) is accountable and responsible for the disposal or sale of redundant or reusable assets 3. Amended RACI
Section 4. Definitions	Amended	Definitions amended
Section 5. External sales of assets and materials	New	Additional content detailing authority and compliance guidelines regarding sale of assets and materials
Section 6. Control of fraud and theft	New	Additional content specific to the prevention of fraud and theft
Section 7. Transportation of redundant assets	New	Additional content specific to the transportation of redundant assets
Section 8. How to plan recovery of redundant railway assets	New / Amended	Replaces original Section 5 - *Procedure*
Section 9. How to monitor recovered volumes of redundant railway assets	New	1. Additional content detailing the procedure to be followed SCO on receipt of completed MR-1 form 2. SCO shall monitor and reconcile delivered volumes against expected volumes 3. Routes to investigate and provide detail where expected volumes are not delivered
Section 10. How to store redundant railway assets	New	Additional content specific to storage of redundant railway assets
Section 11. How to dispose of redundant railway assets	New	Details the disposal process for different types of redundant railway assets including transfer of ownership
Section 12. Sales	New	1. Route Services are solely responsible for the sale of redundant railway assets 2. Additional content regarding off charging, Invoicing, Tax, Reporting and accounting in regard to asset disposals

NOTE 1: *For revised standards/control documents you may summarise general changes to content and list significant new/revised content.*
NOTE 2: *For new standards/control documents you may summarise the content of the entire document rather than list each clause separately.*

NR/L2/CPR/306 Disposal of redundant railway assets

What's new, what's changed and why (continued)

Reasons for change:

1. As a result of an Internal Audit (Ref 201403181.0) highlighting the need to:
Co-ordinate the review and update current policy and supporting process and procedures
Communicate updated policy and procedures
2. Alignment with DfT Policies Managing Public Money (MPM) and the Green Book
3. Tighter anti-theft, fraud and trespass procedures
4. New controls intended to reduce instances of slips, trips and falls occurring lineside from personnel coming in to contact with redundant assets
5. Reduction in risks of derailment caused by trespassers wilfully moving redundant assets on to the running rail
6. Improved inventory management
7. Improved collection and storage procedure

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Route Financial Director	Finance	No	Project Manager Works Delivery (Track)	Network Operations	No
Route Financial Controller	Finance	No	Works Delivery Manager (Track)	Network Operations	No
Management Accountant	Finance	No	Works Delivery Manager (Track, MMT)	Network Operations	No
Senior Route Management Accountant	Finance	No	Project Engineer (Track)	Network Operations	No
Route Managing Director	Network Operations	No	Resource Planner (Works Delivery)	Network Operations	No
Route Asset Manager (Track)	Network Operations	No	Work Plan Coordinator (Works Delivery)	Network Operations	No
Route Asset Manager (Structures)	Network Operations	No	Operative (Works Delivery Track)	Network Operations	No

NR/L2/CPR/306 Disposal of redundant railway assets

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Route Asset Manager (Track Projects)	Network Operations	No	Asset Protection Project Manager	Network Operations	No
Route Programme Director (Works Delivery)	Network Operations	No	Materials Recovery Specialist	Network Operations	No
Principle Programme Controls Manager (Works Delivery)	Network Operations	No	Project Manager	Infrastructure Maintenance	No
Programme Manager (Works Delivery)	Network Operations	No	Project Planner	Infrastructure Maintenance	No
Workforce Health, Safety and Environment Advisor (Works Delivery)	Network Operations	No			
Project Planner (Works Delivery)	Network Operations	No			
Scheme Project Manager	Network Operations	No			
Principle Project Planner (Works Delivery)	Network Operations	No			
Team Leader (Works Delivery)	Network Operations	No			
Works Delivery Supervisor (Track)	Network Operations	No			
Stores Coordinator	Network Operations	No			
Planning and Reporting Manager (Works Delivery)	Network Operations	No			

NR/L2/CPR/306 Disposal of redundant railway assets

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Route Infrastructure Maintenance Manager	Infrastructure Maintenance	No			
Programme Manager	Infrastructure Maintenance	No			
Senior Project Engineer	Infrastructure Maintenance	No			

NOTE: *Contractors are responsible for arranging and undertaking their own Technical and Awareness Briefings in accordance with their owNn processes and procedures.*

Impact on Function *(to be completed by Function)*

Further information contact	Martin Bastiani, Programme Manager [Change] [Business Improvement] Tel: 07710 939890

NR/L2/ELP/1007 Specification for 25 kV A.C. Disconnectors, Earthing Switches and Switches

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

The purpose of this document is to define the specific requirements for Network Rail's 25 kV A.C. single-pole and two-pole disconnectors, earthing switches and switches for on-load applications, following as closely as possible those identified within the applicable British Standard BS EN 50152-2:2012.

Scope

This Product Specification is applicable to all stakeholders involved in procurement of 25 kV disconnectors, earthing switches and switches for use on Network Rail infrastructure.

The specific requirements, in addition to the general requirements of BS EN 50152-2, cover the following configurations of single-pole and two-pole indoor (open terminal and metal enclosed – GIS and AIS) and outdoor structure mounted switching devices that are used by Network Rail as part of their 25 kV A.C. overhead contact systems and associated distribution switchgear:

a) Two position disconnector
b) Two position earthing switch
c) Three position, combined disconnector and earthing switch
d) Fault make, load break, two position switch
e) Three position, combined fault make, load break switch and earthing switch

NR/L2/ELP/1007 Specification for 25 kV A.C. Disconnectors, Earthing Switches and Switches

What's new, what's changed and why

What's new / what's changed:

The content of this standard / control document has been revised. A summary of the changes can be found below.

NOTE: *It is the duty of those briefed or notified to read through this document and familiarise themselves with its content.*

This standard has been updated with a relaxation of the minimum acceptable short circuit fault current rating of 15kA to 12.5kA, with a consequent reduction in the short circuit make rating requirement. Furthermore, the standard incorporates a provision to allow for future remote securing technology.

Additionally, this standard has been updated to incorporate specific requirements for:

a) Mechanical endurance of Earthing switches (Section 4.1 (3) l);
b) Specific requirements covering the switching device control cabinets for motorised switches. This ensures appropriate separation and segregation of exposed electrical or moving parts and an appropriate level of security (Section 5.9);
c) Insulators to be polymeric type (Section 4.1 (3) p);
d) Switches to comply with a 42-58V d.c. range rather than 48V d.c. ±10% (as per the Normative Standard) (Section 5.3 vi).

A number of other minor clarifications and updates have also been made.

Reasons for change:

A number of variations have been noted against Issue 1 of standard NR/SPEC/1007. The changes are intended to capture best practice, improve clarity of Network Rail's requirements, increase electrical safety, take advantage of changes in technology, and minimise costs.
These requirements now replace all clauses relating to Disconnectors, Earthing Switches and Switches contained within NR/L2/ELP/27236, against which a derogation will be raised.

NR/L2/ELP/1007 Specification for 25 kV A.C. Disconnectors, Earthing Switches and Switches

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
E&P Maintenance Engineers	Network Operations	No	Route Asset Managers – Electrification & Plant	Network Operations	Yes
Engineering Assurance Director	IP	No	Heads of Engineering	IP	Yes
Procurement Managers	IP	No			

Impact on Function *(to be completed by Function)*

Further information contact	Alex Buchinger, Engineering Expert Tel: 07887 896630

NR/L2/ELP/21087 Risk Based Maintenance for Overhead Line Electrification Assets

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	04/03/2017	Superseded	7

Purpose

This document describes the process followed in order to apply a risk based maintenance analysis to Overhead Line Equipment (OLE) by assessing the risk of equipment failure in between maintenance interventions to produce the optimum frequencies for inspections and defect removal.

The document is to be used in conjunction with any other relevant, equipment specific, Network Rail maintenance standards.

Scope

This document applies to all persons responsible for planning or undertaking preventive or reactive inspection and maintenance activities on 25 kV a.c. or 1.5 kV d.c. overhead line electrification equipment.

This document describes the agreed method for Network Rail to demonstrate compliance with the ORR guidance to the common safety method on risk evaluation and assessment. Variations from the process within this document can only be granted where an alternative method of risk assessment is produced and agreed.

What's new, what's changed and why

The table below summarises all the sections/clauses that have been amended/deleted/added:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/Clause	Amended/deleted/new	Summary of changes
Appendix B	Amended	1 year periodicity has been included for Mentor Train run and the mentor train analysis has been revised
Appendix C	Amended	The defect list has been updated to take into account the installation of new Overheadline equipment.
Appendix E	Amended	Risk Assessment flow chart has been included to show the actions required when a Mentor Train Run has not taken place; to support the assessment of excessive longitudinal acceleration and contact force measurements.
Appendix F	Amended	Minor Change to Form E2 (E2.3 & E2.4 Actions from output have been reversed) previous typo error.

NR/L2/ELP/21087 Risk Based Maintenance for Overhead Line Electrification Assets

What's new, what's changed and why (continued)

Reasons for change:

To give clear guidance in the event the Mentor train does not run in the specified. Timescales, for excessive longitudinal acceleration and contact force measurements. In addition, new OLE components have an updated defect list to support defect management. The minor changes in Appendix F support the RBM process to achieve the correct periodicity for inspection.
Appendices B, C, D & F will be available in Electronic Format

Awareness Brief

Post	*Function*	*Cascade Brief?*
Infrastructure Maintenance Engineer	Network Operations	Yes
Infrastructure Maintenance Delivery Manager	Network Operations	No
Director of Route Asset Management (With OLE)	Network Operations	No

Technical Brief

Post	*Function*	*Cascade Brief?*
Electrification & Plant Maintenance Engineer (With OLE)	Network Operations	Yes
Assistant Electrification & Plant Maintenance Engineer (with OLE)	Network Operations	No
Section Manager (Overhead Line) (with OLE)	Network Operations	Yes
Route Asset Manager (Electrification & Plant)	Network Operations	Yes
Senior Asset Engineer (Electrification & Plant)	Network Operations	Yes
Asset Engineer (Electrification & Plant)	Network Operations	No

Impact on Function *(to be completed by Function)*

Further information contact	Sultan Parkar Tel: 07802 892162

NR/L1/ELP/27000 Policy Requirements for Electrical Power Assets

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

The purpose of the electrical power (EP) asset policy within Network Rail is to provide reliable and safe operation of the network to:

- Provide for the safety of employees, contractors, users of the infrastructure and third parties,
- Meet and maintain statutory obligations,
- Optimise the life and performance of assets and the network,
- Maintain quality of service by minimising disruption to customers.

This standard contains the specific requirements that enable the objectives set out above to be met. Prior to issue as this standard, the requirements were set out in Annex 1 – Policy implementation requirements and guidelines (December 2012) to the Electrical Power Asset Policy. This standard now supersedes that document and any requirements set out in NR/L1/ELP/27000 issue 1.

Scope

This standard applies to the asset management of all EP assets. Certain clauses also apply to the introduction of new EP assets to the rail network.

What's new, what's changed and why

All the content of this standard / control document has been revised. A summary of the changes can be found below.

NOTE: *It is the duty of those briefed or notified to read through this document and familiarise themselves with its content.*

This standard formalises the EP Asset Policy for CP5. Some of the original, primarily design-related, policy clauses have been amended for clarity and to assist understanding following a stakeholder consultation with IP during 2013/14. In addition, a small number of clauses have been removed where these are no longer considered relevant or appropriate, and some added, particularly in the area of electrical safety, to reflect latest thinking and ongoing initiatives in this area. This document **does not** contain the draft CP6 policy clauses developed with the aim of achieving legislative compliance in relation to electrical safety of E&P infrastructure, and which form the basis for a key element of E&P's CP6 IIP funding submission.

NR/L1/ELP/27000 Policy Requirements for Electrical Power Assets

What's new, what's changed and why (continued)

In addition, a small number of changes have been made within the following sections which precede the policy clauses: 2, 4.1, 4.2, 4.3 and 4.5.

Reasons for change:
Issue 1 of standard NR/L1/ELP/27000 reflected the CP4 EP Asset Policy. Issue 2 is now being published to bring the standard into line with the CP5 Asset Policy. This will avoid any possibility of confusion arising from the policy and the standard being out of step. The changes are intended to improve clarity, increase electrical safety, take advantage of changes in technology, and minimise costs.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
E&P Maintenance Engineers	Network Operations	No	Route Asset Managers – Electrification & Plant	Network Operations	Yes
Engineering Experts – M&EE	STE	No			
Engineering Assurance Director	IP	No			

Impact on Function *(to be completed by Function)*

Further information contact	Alex Buchinger, Engineering Expert Tel: 07887 896630

NR/L2/ELP/27009 Overhead Line Equipment Campaign Changes

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	3

Purpose

This document is a catalogue of all approved campaign changes which apply to overhead line equipment (OLE) installed on the Network Rail infrastructure. It enables improved OLE asset performance by achieving a clear understanding of the extent of the risk of the overhead contact system (OCS) failing. These campaign changes highlight the underlining problem and the action to be undertaken.

Scope

This document applies to all design types of OLE on the Network Rail infrastructure and requires:

- Site surveys to assess outstanding campaign changes
- The use of Ellipse to record and manage the campaign changes

It

- takes into account all approved campaign changes as defined in Appendix A.
- gives instructions on the necessary action for each individual campaign
- aligns with the CP5 campaign changes spreadsheet.

This document applies to all personnel involved in the asset management of the OLE including Route Asset Management and Infrastructure Maintenance teams.

The document can also be used by personnel in other parts of the business as a record of the historical lessons learnt from operating the different types of OLE on Network Rail Infrastructure.

What's new, what's changed and why

The list below summarises all the campaign changes that have been/added

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
Section 4	Amended	By 30th September 2017 the Delivery Unit Electrification & Plant Engineers (E&PMEs) shall survey the entire wire tension length identifying any safety critical Campaign Changes in station and other public areas as the highest priority. By 31st March 2018 the Delivery Unit Electrification & Plant Engineers (E&PMEs) shall survey the remaining line of route.

NR/L2/ELP/27009 Overhead Line Equipment Campaign Changes

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
Section 6	Amended	A plan shall also be in place at a route level by 31st December 2017 for the removal of all safety critical campaign changes identified from the survey in station & other public areas. The Campaign Changes identified in the plan shall be completed by 31st March 2019. A plan shall also be in place at a route level by 30th September 2019 which details the removal of non-public area priority campaign changes for the entire route. The Campaign Changes identified in the plan shall be completed by 31st March 2024.
CC80	New	Corrosion of earth wire in tunnels & Overbridges
CC86	New	Contact wire knuckle position
CC87	New	Worn Stainless Steel bridle on Mk1 equipment
CC90	New	Porcelain insulator replacement at metallic bridges
CC91	New	Removal of Auxiliary wire

Awareness Brief

Post	*Function*	*Cascade Brief?*
Infrastructure Maintenance Engineer	Network Operations	Yes
Infrastructure Maintenance Delivery Manager	Network Operations	Yes
Director of Route Asset Management (With OLE)	Network Operations	No

Technical Brief

Post	*Function*	*Cascade Brief?*
Electrification & Plant Maintenance Engineer (With OLE)	Network Operations	Yes
Assistant Electrification & Plant Maintenance Engineer (with OLE)	Network Operations	Yes
Section Manager (Overhead Line) (with OLE)	Network Operations	Yes
Route Asset Manager (Electrification & Plant)	Network Operations	Yes
Senior Asset Engineer (Electrification & Plant)	Network Operations	Yes
Asset Engineer (Electrification & Plant)	Network Operations	Yes

NR/L2/ELP/27009 Overhead Line Equipment Campaign Changes

Impact on Function *(to be completed by Function)*	
Further information contact	Sultan Parkar Tel: 07802 892162

NR/L3/ELP/27237 OLE Work Instructions

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	12

Purpose

The OLE work instructions are provided to establish the approved standard methods for overhead line work.

Scope

The work instructions cover all types of OLE construction and the following types of activity:

- Installation / construction
- Inspection
- Preventative and corrective maintenance
- Reconstruction following a dewirement.

They apply to maintenance teams and construction teams whether internal or external to Network Rail.

What's new, what's changed and why

The table below summarises all the sections / clauses that have been amended / deleted / added:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
NR/OLE B17	New	Pantograph – Contact Wire Interface Check. This work instruction covers the requirements for panning through OLE in identified areas of concern or on completion of OLE works, such as (but not limited to), OLE adjustments at converging/diverging wires, overlaps, knuckle installations, section insulators, neutral sections and new OLE.

NR/L3/ELP/27237 OLE Work Instructions

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
NR/OLE B01	Amended	Non-intrusive ground level visual inspections. Minor changes top section 3.3, now includes wording and additional sub section f. Droppers in converging / diverging wires and overlaps. Also sub-section l. Check all Mk1/UK1 swivel brackets for the presence of at least two-safety retaining "E" clips or other approved retaining device and if none are present it shall be reported immediately. This is not required if a dome head pin is fitted. Sub section n: Examine converging/diverging wires for abnormal wear and/or hard spots. Sub section o: Where possible, observe a pantograph through the site and listen for unusual noise. This should be carried out where practicable at crossovers, NS and SI's. Changes to 3.2 sub section f now includes two bullet points , (1) Check stainless steel wire rope and earth continuity jumpers for stranding (2) On independently tensioned equipment, check that catenary Tensorex setting is approximately the same as contact wire Tensorex setting. Minor changes to 3.11 now includes reference to: Ribe installed cross contact bar (Series 2 equipment only) please refer to NR/OLE D38
NR/OLE B16	Amended	Non-intrusive ground level visual inspection after an ADD operation. Minor changes top section 3.3, now includes the wording: This could be droppers, jumpers, feeder cables, cross contact assembly's or insulators
NR/OLE C11	Amended	Detailed examination and correlation of traction bonding. Minor change to Note: Auto Transformer Feeder Station (ATFS): Change to: Sub-station/ Feeder Station

Reasons for change:

OLE Working instructions NR/L3/ELP/27237 has constant revision changes that may include the introduction of new products requiring maintenance and installation instruction and revisions to current instructions, incorporating new knowledge, innovation or changes to design. This is essential work as without standardisation of tasks the business carries a high safety case risk that affects its employees and the general public. The remit incorporates a new OLE live line tool and new inspection instructions, also updates to existing instructions.

Technical Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
OLE Operatives	E&P	Yes	OLE Technicians	E&P	Yes
OLE Team Leaders	E&P	Yes	OLE Section Managers	E&P	Yes
OLE Technical Officers	E&P	Yes	Assistant E&P Maintenance Engineers	E&P	Yes

NR/L3/ELP/27237 OLE Work Instructions

Technical Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
E&P Maintenance Engineers	E&P	Yes	Route Asset Management Teams	E&P	Yes
Professional Development and Training	PD&T	Yes	PD&T Workforce Development Specialists	PD&T	Yes
OCR Operatives	OCR	Yes	OCR Supervisors	OCR	Yes
OCR Construction Engineers	OCR	Yes	Overhead Condition Renewals (OCR) Managers	OCR	Yes
Installation Contractors	IP	Yes	OLE Engineering Teams	IP	Yes
OLE Project Teams	IP	Yes	Contact Systems Engineering	STE	Yes

Impact on Function *(to be completed by Function)*	
Further information contact	Tony Daly Tel: 07734 479074

NR/L3/ELP/27240 Distribution Work Instructions

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	31/12/2017	Superseded	6

Purpose	Scope
This document contains Distribution Work Instructions for use by competent persons to carry out maintenance and fault rectification activities.	This document applies to all traction distribution equipment and associated equipment.

What's new, what's changed and why

All the content of this standard/control document has been revised.
Issue 04 and Issue 05 have now been combined to form one set of work instructions.
A summary of the changes can be found in the table below:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause NR/DIST	Amended/deleted (withdrawn)/new	Summary of changes
C03f	New	New Work Instruction
C03i	New	New Work Instruction
C03j	New	New Work Instruction
C03o	New	New Work Instruction
C16q	New	New Work Instruction
C22v	New	New Work Instruction
C22x	New	New Work Instruction
C22x	New	New Work Instruction
C22y	New	New Work Instruction
C25v	New	New Work Instruction
C25x	New	New Work Instruction
C25y	New	New Work Instruction
C25z	New	New Work Instruction

NR/L3/ELP/27240 Distribution Work Instructions

What's new, what's changed and why (continued)

Section/clause NR/DIST	Amended/deleted (withdrawn)/new	Summary of changes
C27a	New	New Work Instruction
C28b	New	New Work Instruction
C30c	New	New Work Instruction created to meet the intent of Kenton Recommendation R1.09.
C32a	New	New Work Instruction
C01a(a)	Withdrawn	
C03a(a)	Withdrawn	
C03a(b)	Withdrawn	
C20b	Withdrawn	
C20c	Withdrawn	
C03e	Amended	New number C09b
C03f	Amended	New number C09c
C16p	Amended	New number C17a
C01c	Amended	New number C04f
C31a	Amended	New number C17b
Index	Amended	Updated in format to show document status. Updated to capture new, renumbered and withdrawn work instructions
Periodicity	Amended	Periodicities added for equipment now captured by the new work instructions
C01	Amended	This work instruction has been amended to capture the routine maintenance tasks for 25 kV substations / buildings in one instruction. This was carried out to meet the intent of Kenton Recommendations R1.02 and R1.04.

NR/L3/ELP/27240 Distribution Work Instructions

What's new, what's changed and why (continued)

Section/clause NR/DIST	Amended/deleted (withdrawn)/new	Summary of changes
C20a	Amended	Now contains the requirements for the annual maintenance (ex- C20b) and the requirements for earth electrode / farm testing and the 5 yearly BS7671 testing on the LV domestic equipment. This was carried out to meet the intent of Kenton Recommendations R1.02 and R1.04.
C22g	Amended	Clause 3.2.3 (c) removed and new clause 3.2.4 added to mandate the requirement for pressure testing following the recent incident on this model of HV switchgear.
All remaining WIs (shown in index for issue 5)	Amended	All these WIs have been RAGged. No other change to content

NOTE 1: *For revised standards/control documents you may summarise general changes to content and list significant new/revised content.*
NOTE 2: *For new standards/control documents you may summarise the content of the entire document rather than list each clause separately.*

Reasons for change:

- To include missing work instructions for existing and new distribution equipment;
- To address Kenton Recommendations R1.02, R1.04 and R1.09 (Kenton Supplementary Report);
- To address a recent failure of switchgear installed at Kenton substation.

Awareness Brief

Post	*Function*	*Cascade Brief?*
Professional Development & Training	Human Resources	Yes
Workforce Development Specialists (D&P)	Human Resources	No
Mechanical & Electrical [Distribution] team	STE	No

Technical Brief

Post	*Function*	*Cascade Brief?*
Route Asset Manager (E&P)	Network Operations	Yes
E&P Maintenance Engineers	Network Operations	Yes
Assistant E&P Maintenance Engineers	Network Operations	No

NR/L3/ELP/27240 Distribution Work Instructions

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			D&P Section Managers	Network Operations	Yes
			D&P Team Leaders	Network Operations	No
			D&P Technicians	Network Operations	No
			Infrastructure Maintenance Engineers	Network Operations	No
			Senior Asset Engineers [D&P]	Network Operations	No
			Asset Engineers [D&P]	Network Operations	No
			D&P Working Supervisors	Network Operations	No

Impact on Function *(to be completed by Function)*	
Further information contact	Kyle.Windsor@networkrail.co.uk Tel: 07515620267

NR/L3/ELP/27250 Conductor Rail Equipment Working Instructions

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose	Scope
This document holds the index for the conductor rail working instructions modules that follow.	This document applies to all conductor rail equipment, d.c. positive and negative cables and associated components forming part of the electrical traction supply system.

What's new, what's changed and why

a) The table below summarises all the sections / clauses that have been amended / deleted / added:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
NR/CRE/012	Updated	New requirement when installing polymeric insulators to fit washers under the retaining screws
NR/L3/ELP/27250/CRE/023	New	Covers use of thermographic cameras in the maintenance of the 750V DC conductor rail and its connections, including negative bonding connections
NR/CRE/001	Updated	Minor update as a result of the issue of NR/L3/ELP/27250/CRE/023
NR/CRE/002	Updated	Minor update as a result of the issue of NR/L3/ELP/27250/CRE/023
NR/CRE/003	Updated	Minor update as a result of the issue of NR/L3/ELP/27250/CRE/023

Reasons for change:

Update to CRE/012 is to reduce the incidence of breakage of the insulator bases due to over-tightening of the screws.
New Work Instruction CRE/023 and updates to CRE/001, CRE/002 and CRE/003 are to allow for the use of this technology in improving maintenance processes.

NR/L3/ELP/27250 Conductor Rail Equipment Working Instructions

Technical Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
ETE Operatives	Network Operations	No	ETE Technicians	Network Operations	No
ETE Team Leaders	Network Operations	No	ETE Section Managers	Network Operations	Yes
ETE Technical Officers	Network Operations	Yes	Assistant E&P Maintenance Engineers	Network Operations	Yes
E&P Maintenance Engineers	Network Operations	Yes	Route Asset Management Teams	Network Operations	Yes
Professional development and training	Human Resources	Yes	PD&T Workforce Development Specialists	Human Resources	Yes
OCR Operatives	Network Operations	No	OCR Supervisors	Network Operations	No
OCR Construction Engineers	Network Operations	No	Overhead Condition Renewals (OCR) Managers	Network Operations	No
Installation Contractors	Projects	Yes	ETE Engineering Teams	Projects	Yes
ETE Project Teams	Projects	Yes	Contact systems engineering	Projects	No

Impact on Function *(to be completed by Function)*

Further information contact	Jim Snowdon Tel: 07930 433410

NR/GN/ELP/27600 Index of Standard Electrical Power Forms

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	N/A	Superseded	2

Purpose

This standard provides the index and version control for standard electrical power forms. These forms are used to control a range of risks across the electrification and power asset base. In particular, their use will reduce the risks associated with misunderstandings by enabling consistency of data capture and terminology.

Scope

This standard covers forms used in electrical distribution, contact systems (conductor rail and overhead line), low voltage systems (eg signalling power supplies), protection and control systems, and general aspects of electrical power supply including terminology. It is applicable to Network Rail staff and contractors using any such forms, as well as those drafting standards and control documents that refer to them.

The scope of each form is described either within the form itself or in the associated documents.

What's new, what's changed and why

The table below summarises all the forms and clauses that have been amended / deleted / added:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
Covering standard	Amended	Purpose and scope expanded, process for changing forms aligned with new issue of NR/L2/CSG/STP001/02, and index of forms fully updated.
EPF/OLE/005 (TRAMS)	Amended	Ownership and timing of splash screen updated.
EPF/OLE/018b (OLE damage)	New	Introduced as an alternative, substantially simpler, version of ELP/OLE/018. Both versions will be available for use.
EPF/Terms	New	Lists abbreviations and definitions regularly used in EP standards and other documents, in a form that can be referenced in the "Definitions" clause of EP standards.

Reasons for change:

The new "Terms" document is the result of a proposal made some time ago to create a "glossary" of EP terminology which could be used in place of the lists of definitions that appear near the start of many EP standards. The purpose is partly to avoid repetition, but more importantly to encourage the same definition to be used whenever a particular term is used. This reduces the risk of a term being misinterpreted or misunderstood. Authors of future issues of EP standards can refer to this document, instead of listing all terms used, in the "Definitions" clause of their documents.

NR/GN/ELP/27600 Index of Standard Electrical Power Forms

What's new, what's changed and why (continued)

Other changes are minor updates to align documents with current processes, organisational changes and practices.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Route Asset Managers – Electrification & Plant	Network Operations	No			
Professional Heads of Contact Systems and Distribution	STE	No			
Engineering Experts – M&EE	STE	No			
Principle and Senior Engineers – M&EE (to cascade to teams)	STE	Yes			

Impact on Function *(to be completed by Function)*

Further information contact	Sultan Parkar, Principle Engineer, Tel: 07802 892162 or Ruth Thomas, Senior Reliability Improvement Specialist, Tel: 07711 600643

NR/L3/MTC/MG0176 Ellipse Management Handbook

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	5

Purpose

Ellipse is Network Rail's primary asset register and Maintenance Work Management system. It is used by the Maintenance function to record details of cyclic tasks, work arising and other work.

The information held in Ellipse and the way it is used helps Network Rail to:

a) maintain accurate information about its assets;
b) maintain the infrastructure as efficiently as possible;
c) plan work in the most efficient manner;
d) identify what work needs to be done and when;
e) group different work activities so they can be carried out with minimal disruption to train service;
f) look forward to future work and use it to plan resources to:
    1) make best use of their time;
    2) plan their activities to be carried out in the safest way.

Ellipse is used for five key purposes:

a) as an asset register;
b) as a work bank management tool;
c) as a means of scheduling work and allocating it resources;
d) as a record of work carried out;
e) to record asset condition and associated condition monitoring data.

Accurately recorded completed work provides a history of the assets' performance. This is used to support renewals plans so that the right mix of maintenance, refurbishment and renewal is carried out.

Scope

This manual specifies the business rules for the functional use of Ellipse and how these are to be applied by users throughout Network Rail.

The manual is subdivided into the modules shown in table 1 for ease of use and reference.

NR/L3/MTC/MG0176 Ellipse Management Handbook

What's new, what's changed and why

Modules 2 and 3 of this standard/control document have been revised.

Module 1 is withdrawn and the content included in NR/L3/MTC/MG0176.

New modules on *Assets out of use recording and reporting* and *Prioritisations, reprioritisations and cancellations* have been added.

Reasons for change:

The previous version of the document is out of date and does not reflect the new technologies used by the Business. Reporting has moved on since 2010 (the last iteration of the handbook) as has work order management (now managed via mobile working)

Ellipse 8 has now gone live and is therefore reflected in the documentation.

Reporting is now performed using Business Objects and is therefore reflected in the documentation.

Awareness Brief

Post	Function	Cascade Brief?
Functional Engineers	Network Operations	No
Professional Heads	STE	No
3rd Line Support Staff	Route Services	No
2nd Line Support Staff	Asset Information	No
Section Manager	Network Operations	No
Infrastructure Maintenance Services Manager (IMSM)	Network Operations	No

Technical Brief

Post	Function	Cascade Brief?
System Support Managers	Network Operations	Yes
Planners	Network Operations	No
Section Administrators	Network Operations	No
Works Data Clerks	Network Operations	No

NR/L3/MTC/MG0176 Ellipse Management Handbook

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineer	Network Operations	No			
Infrastructure Maintenance Delivery Manager	Network Operations	No			
Compliance and Assurance Advisor	Network Operations	No			
Route Support Manager	Network Operations	No			
Works Delivery Manager	Network Operations	No			

Impact on Function *(to be completed by Function)*

Further information contact	Ken Lambert, Business Systems Owner Tel: 07710 344465

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/07/2017	Superseded	9

Purpose

The purpose of the standard is to control the risks to personnel from site risks, activity risks and train movements by requiring effective planning of work activities “on or near the line”, or which could affect the area termed “on or near the line”.

This standard sets out the process to manage the planning and delivery of work that:

a) enables local planning – those who do the work are involved in planning the work;
b) establishes the person in charge of delivering work on site;
c) embeds independent verification and authorisation of the planned work and controls and manages interactions between sites of work;
d) requires adequate risk assessment is carried out;
e) requires a check of risks and controls at the point of work;
f) identifies safety responsibilities and accountabilities; and
g) is consistent with the Rule Book GE/RT8000.

The standard requires a focus on the management of the significant risks and improving the quality of the safe work packs (SWP) by providing clear, concise, relevant information to the people who need it in order to maintain safety whilst working.

Scope

This standard applies to all persons involved in the planning and delivery of work on or near the line or which could affect the area termed “on or near the line”, carried out by or on behalf of Network Rail, outside parties, third parties, their contractors and sub-contractors.

This standard defines the process to keep people safe for work activities on or near the line and the development of a safe system of work through the production and issuing of a SWP.

This document is complementary to, and is to be used in conjunction with existing rule books, regulations, legislation, standards, processes and procedures.

This standard does not specifically cover the electrical risks associated with working on or near electrified lines.

A safe system of work can include the use of more than 1 module of this standard.

NOTE: *Throughout this standard and its modules it is presumed the person in charge also takes on duties of Controller of Site Safety (COSS), Safe Work Leader (SWL) or Individual Working Alone (IWA) as well as implementing task and site risk controls. Where the person in charge has delegated a COSS/SWL, the delegated person will undertake those duties in accordance with the Rule Book GE/RT8000.*

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

What's new, what's changed and why

All the content of this standard/control document has been revised.
A summary of the changes can be found in the table below:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
NR/L2/OHS/019	Amended	**Summary of key changes** **Introduction of Safe Work Pack (SWP)** • a new document which will be produced which includes risk controls for: • Operational Risk: Train movements/ OTP/OTM i.e. SSOWPS • Task / Activity Risk: e.g.. use of tools, plant and equipment; • Site Risk: e.g. Working in darkness, at height; • Welfare facilities to be included.
		Defining the 'person in charge' on site • a new capability, appointed by the responsible manager for every work group. • 'person in charge' is a capability, not a new competence and will be appointed on their ability to manage the work activity planned and have an understanding of the risks. • The person in charge on site will oversee all work under their supervision to make sure that all risk controls have been implemented. • Person in charge must hold a COSS competence and may act as the COSS or delegate the COSS duties • Person in charge will verify non-cyclic/repeat safe work packs (minimum 1 shift before).
		Planner has additional responsibilities • The planner will produce the safe work pack, with input from the person in charge who will understand the task & site risk controls required to be included. This is above the existing duties of a planner which focusses on operational risk control.

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
NR/L2/OHS/019	Amended	**Responsible manager has additional responsibility** • The RM will authorise every safe work pack non-cyclic/repeat safe work packs (minimum 1 shift before).
		Role of COSS/IWA/PC/SWL is unchanged • However, the person in charge will be the verifier of the safe work pack and will seek endorsement where COSS responsibility has been delegated.
		Planning for cyclical and repeated works • This is now known as cyclical/repeated works and is no longer limited to Network Rail Maintenance Scheduled Tasks (MSTs).
		Amendment to the hierarchy of control for operational risk • Some levels have been renamed for clarity and an extra level has been added to the list that identifies portable semi-automatic warning systems as their own level (increase from 7 to 8 levels).
		New terminology working 'under protection' or 'with warning' • Terms Red and Green zone have been replaced.
		Introduction of 'Table 3 – Protection and Warning Systems' • Table details the guidance for selection of protection and warning systems, based on the effectiveness of each system currently available.
		Introduction of NR/L2/OHS/019/F01 - SWP Validation Form • Replaces the existing 'Appendix C' form.
		Standard now in 'Modular' format – Standard and 4 modules include • Main standard – NR/L2/OHS/019 • Module 1 – Incident Response • Module 2 – Working in an engineering possession • Module 3 – Planning and working with protection • Module 4 – Planning and working with warning

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
NR/L2/OHS/019/mod01	New	Introduction of flowchart and step by step process for the planning and implementation of a safe system of work (including task, site and operational risk management) when attending incidents. Introduction of planning and use of an Incident Response Pack.
NR/L2/OHS/019/mod02	New	Introduction of flowchart and step by step process for the planning and implementation of a safe system of work (including task, site and operational risk management) when working within a possession.
NR/L2/OHS/019/mod03	New	Introduction of flowchart and step by step process for the planning and implementation of a safe system of work (including task, site and operational risk management) when using protection arrangements.
NR/L2/OHS/019/mod04	New	Introduction of flowchart and step by step process for the planning and implementation of a safe system of work (including task, site and operational risk management) when using warning arrangements.
Variation 8263: NR/L2/OHS/019 Issue 8: Clauses 11,12,13	Deleted	Global Crossing uses document that grants a derogation to the standard and allow them to use the Exceptional circumstances clause to undertake certain emergency repairs to their network. Exceptional circumstances no longer exists within issue 9.
Variation 8420: NR/L2/OHS/019 Issue 8: 11 - Verification	Amended	For T3 possessions with multiple COSS using an identical safe system of work. The requirement for each COSS to verify the plan a shift in advance is inefficient as it leads to a requirement for multiple COSS's to verify the same pack. This does not negate the requirement for all COSS to receive a copy of the pack a shift in advance for familiarisation purposes. Issue 9 now requires this process to be included in the person in charge verification and endorsed by the COSS.
Variation 8723: NR/L2/OHS/019 Issue 8: 7.1	No longer required	The TNC was required to allow the continued trialling of the OTM working on a line not in a T3 possession procedure by allowing the Technical Quality Supervisor (TQS) to inspect the quality of the work completed by the OTM from the 4ft of the line concerned. This will be now considered by the planner and in consultation with the person in charge when the SWP is being produced.
Variation 9860: NR/L2/OHS/019 Issue 8: 4.3 Hierarchy of Safe Systems of Work	No longer required	TNC was required to allow use of Semi-Automatic Track Warning System. Issue 9 now includes specific reference to Semi-automatic train warning systems within the standard.

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
Variation 14593: NR/L2/OHS/019 Issue 8: 10, 11, 12	No longer required	The Control of Work programme was developing a new process to manage the safe planning, delivery and hand back of work on NR infrastructure and is currently trialling new tools to support this process in three areas of Network Rail's business (Romford DU, Bristol DU and the Birmingham Gateway Project). Derogation was requested to allow early trials of PDSW documentation.
Variation 19980, 21175 & 21177: NR/L2/OHS/019 Issue 8:	No longer required	RT9909 is currently used to record briefings arrangements including when associated with Incident Response. The Non-compliance is sought to introduce an Incident Response Pad to replace the use of the RT9909 form for Incident Response. Issue 9 of standard requires an Incident Response Pack and will reflect the SWP format.
Variation 25315: NR/L2/OHS/019 Issue 8: 10.5 Records 12.1 Responsibilities of the COSS/IWA RT9909 form - signature box only	No longer required	Wherever a wet signature is required then updated wording is required for a wet signature, or where available, a sentinel card swipe. SSOWPS is being updated to reflect the changes In issue 9.
Variation 21175: NR/L2/OHS/019 Issue 8:	No longer required	Variation introduced an Incident Response Pad (IRP) to replace the use of the RT9909 form for Incident Response. No longer required as a result of updates to SSOWP and SWP arrangements.
Variation 21177: NR/L2/OHS/019 Issue 8:	No longer required	Variation introduced an Incident Response Pad (IRP) to replace the use of the RT9909 form for Incident Response. No longer required as a result of updates to SSOWP and SWP arrangements.

NOTE 1: *For revised standards/control documents you may summarise general changes to content and list significant new/revised content.*
NOTE 2: *For new standards/control documents you may summarise the content of the entire document rather than list each clause separately.*

Reasons for change:

Reduce the potential for unsafe events:

- *Occupational risks (e.g. Hand Arm Vibration Syndrome, Manual Handling related injuries and ill health, slip/trip/fall risks) will be considered days before the work and mitigation planned in advance.*
  019 planning will provide opportunity to reduce accidents/injury and keep people safe whilst at work on or near the line.
- *Operational Close Calls (e.g. Line Blockage and Isolation irregularities) will be reduced because 019 planning promotes familiarisation with the task and location. This will highlight potential issues in advance and resolve them before the shift of work.*

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

What's new, what's changed and why (continued)

Align with the introduction of CDM into the Maintenance organisation:

- *Introducing task and site risk information can be incorporated into the programme to introduce CDM into Mtce. They are mutually beneficial and provide opportunity to lessen the overall change impact of 019 by merging it into CDM. The new 019 principles should not present a significant impact to the Works Delivery organisation. The standard allows Work Package Plans/Task Briefing Sheets to be used alongside SSOWPS as the SWP.*

Briefing requirements:

Technical briefings are given to those who have specific responsibilities within this standard/control document.
Awareness briefings are given to those who might be affected by the content but have no specific responsibilities within the standard/control document.
Details of the briefing arrangements are included in the associated briefing programme.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Signallers	All	No	All COSS competent staff	All	No
All Incident Control Staff	All	No	All Safe Work Leaders (SWL)	All	No
All Staff holding a Track Safety Competence	All	No	All PDSW Planners	All	No
Various - appointed by each Train Operator	All	Yes	All safe system of work planner competent staff	All	No
Various - appointed by each Freight Operator	All	Yes	All PDSW Authorising Authorities	All	Yes
Principal Contractor Licence Holders Organisation	All	Yes	All Individuals Working Alone	All	No
Railway Contractor Certificate Holders	All	Yes	All Green Zone Access Co-ordinators (GZAC)	All	No

NR/L2/OHS/019 Safety Of People At Work On Or Near The Line.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
All senior managers as defined within the standard and including Infrastructure Maintenance Delivery Manager (IMDM), Current Operations Manager (COM), Area General Manager (AGM), Functional Director), Programme Manager, Local Ops Manager (LOM), Regional Director or equivalent in a contracting organisation.	All	Yes	All line managers of individuals holding the competence of COSS, IWA, SWL, safe system of work planner or PDSW planner	All	Yes
All Track Safety Contingent Labour Suppliers	All	Yes	All Rail Incident Officers	All	No
All Track Safety Training Providers	All	Yes			

NOTE: *Contractors are responsible for arranging and undertaking their own Technical and Awareness Briefings in accordance with their own processes and procedures.*

Impact on Function *(to be completed by Function)*	
Further information contact	David Burgess Tel: 07710939736

NR/L2/OHS/157 Health Surveillance for Silica and Asbestos and the Management of Diagnosed Occupational Respiratory Conditions

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose

The purpose of this standard is to mitigate the health risks associated with exposure to respiratory hazards through inhalation; specifically those health risks associated with silica and asbestos.

It can be applied to other respiratory hazards, such as, but not limited to, welding fumes.

Implementation of the processes defined within this standard will enable Network Rail to comply with its legal obligations and duty of care under *Control of Substances Hazardous to Health (COSHH) Regulations 2002* and the *Control of Asbestos Regulations (CAR) 2012*.

Scope

This standard describes the process of health surveillance for Network Rail employees, both current and prospective, who, by nature of their role, could potentially be exposed to a hazardous substance in the form of an airborne contaminant through the course of their work.

The standard describes health surveillance processes that:

a) establish the baseline respiratory status of a new employee, undergoing a level 1 competence specific medical;

NOTE: *For further information on competence specific medicals see NR/L2/OHS/00124.*

b) establish the respiratory status of current employees dependant on exposure;

c) detect the early signs of developing or worsening respiratory conditions linked to an exposure to an airborne contaminant used in the work environment;

d) identify and protect vulnerable employees such as those with pre-existing respiratory health conditions e.g. asthma, to prevent the condition from worsening;

e) confirm employees' fitness to continue undertaking work with an exposure to an airborne contaminant; and

f) support evaluation of mitigations implemented to control exposure to respiratory hazards.

This standard does not apply to other forms of exposure to hazardous substances, such as ingestion and absorption.

NR/L2/OHS/157 Health Surveillance for Silica and Asbestos and the Management of Diagnosed Occupational Respiratory Conditions

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose

Scope

This standard applies to:

a) new and existing employees who could potentially be exposed to a hazardous substance in the form of an airborne contaminant through the course of their work;
b) line managers of the employees in point 2.1.4 a);
c) occupational health providers/practitioners/physicians; and
d) Human Resources Shared Services (HRSS).

Network Rail expects contractors to have health surveillance arrangements in place at least equivalent to those described in this standard.

What's new, what's changed and why

What's new/ what's changed:

The standard has been developed to support the identification of at risk employees currently working with an exposure to hazardous substances, namely silica and asbestos and to define health surveillance where necessary.

This document and its associated processes will support Network Rail in achieving its duty of care and legal compliance to regulations, and clearly defines the responsibilities of line managers whose employees could potentially be exposed to a hazardous substance in the form of airborne contaminant. This standard is:

a) to identify employees at risk of an exposure to an occupational respiratory hazard;
b) to refer employees where a criteria for referral has been identified;
c) to provide a baseline respiratory assessment of employees undertaking a level 1 medical;

NR/L2/OHS/157 Health Surveillance for Silica and Asbestos and the Management of Diagnosed Occupational Respiratory Conditions

What's new, what's changed and why (continued)

What's new/ what's changed:

d) to provide guidance to line managers on how to manage an individual with an occupational respiratory diagnosis, so that employees do not continue being exposed to harmful levels of hazardous substances causing deterioration of health;
e) to enhance visibility of the organisation employees health through the ability to gather suitable intelligence from the health surveillance data; and
f) to support legal compliance to identified regulations.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Selected line managers whose employees could potentially be exposed to a hazardous substance in the form of airborne contaminant within the business functions listed	• Network Operations/Routes; • Route Services - Supply Chain Operations; - • Infrastructure Projects: Track - • Group Digital Railway; • Property.	Yes	Occupational Health and Wellbeing Managers	Network Operations/Routes	Yes
Human Resources Shared Services	Human Resources	No	Heads of Route Safety Health & Environment/Heads of Safety & Sustainable Development	• Network Operations/Routes; • Route Services - Supply Chain Operations; - • Infrastructure Projects: Track - • Group Digital Railway; • Property.	Yes

NR/L2/OHS/157 Health Surveillance for Silica and Asbestos and the Management of Diagnosed Occupational Respiratory Conditions

Impact on Function *(to be completed by Function)*	
Further information contact	Kris Jeffrey, Occupational Health Specialist Tel: 07711 601875

NR/L1/OHS/210 Management of Occupational Road Risk Policy

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	01/07/2017	New	1

Purpose

The implementation of this policy contributes to:

a) achieving a high standard of safety and risk management for Network Rail's road vehicle fleet and authorised drivers;
b) providing information to employees, contractors and suppliers on what actions are needed to reduce or remove road risk on business journeys;
c) the avoidance of unnecessary journeys made by road; and
d) Network Rail's goal of making sure that everyone gets home safely every day.

The implementation of this policy supports the following Network Rail Lifesaving Rules:

a) always use equipment that is fit for its intended purpose;
b) never use a hand-held or hands-free phone, or programme any other mobile device, while driving;
c) never work or drive while under the influence of drugs or alcohol; and
d) always obey the speed limit and wear a seat belt.

Network Rail encourages its employees to apply this policy when driving in their own time.

Scope

This policy covers:

a) the responsibilities of Network Rail and its employees when driving, selecting, inspecting, maintaining or disposing of vehicles, including those using their private cars for business use;
b) Network Rail's responsibilities when assessing driving competence and giving authority to drive, and of employees when assessing their own fitness to drive and planning, preparing for, making and ending any road journey.

The policy is applicable to all business journeys made in:

a) Network Rail vehicles;
b) short term hire vehicles; and
c) privately owned vehicles.

A business journey is any journey other than the commute from an employee's home to their permanent place of work (see also clause 3, *Definitions*).

This policy is applicable to journeys on public highways, Network Rail land and premises and any other location.

NR/L1/OHS/210 Management of Occupational Road Risk Policy

What's new, what's changed and why

What's new/ what's changed:

This new policy has been created as there is a lack of guidance or policy within Network Rail which documents Network Rail's approach to road risk.

Driving has been highlighted as a significant business risk following a number of road traffic accidents resulting in serious injury and the loss of life.

This policy provides guidance for Network Rail to manage its road risk across the business.

The policy outlines a defined approach to managing road risk for Network Rail which will set a benchmark standard for contract staff, contracting companies and the supply chain.

Section/clause	Amended/deleted/new	Summary of changes
5. Safe driver control measures	New	This section summarises the control measures implemented to reduce the risk to employees that are required to drive on business journeys.
6. Safe vehicle control measures	New	This section summarises the control measures implemented to increase the safety of Network Rail fleet vehicles.
7. Safe journey control measures	New	This section summarises the control measures implemented to reduce the risks associated with road journeys.
8.1. Line manager responsibilities	New	This section outlines the specific responsibilities of line managers to their direct reports that are required to undertake business journeys.
8.2 Driver responsibilities	New	This section outlines the specific responsibilities of Network Rail staff that drive on business journeys
8.3. Vehicle contact responsibilities	New	This section outlines the specific responsibilities for the Network Rail Vehicle Contacts.

Reasons for change:

The intention of the MORR Policy is to provide a documented means of managing road risk which is currently lacking in Network Rail standards.

The policy documents a defined approach to managing road risk for Network Rail. It provides guidance on managing key risks associated with driving within one document which eliminates the need to create a number of individual policy documents.

NR/L1/OHS/210 Management of Occupational Road Risk Policy

What's new, what's changed and why (continued)

Its implementation will lead to a reduction in road traffic incidents and improved driver behaviours.

By improving driver behaviours Network Rail will see a reduction in road traffic accidents leading to the improved safety of staff and other road users, and a reduction in the costs associated with road traffic accidents.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Health and Safety Business Partners	Safety, Technical, Engineering	No	Heads of Route Safety Health & Environment/Heads of Safety & Sustainable Development	• Routes • Infrastructure Projects • National Supply Chain	Yes
Line managers	All	Yes	National Supply Chain Fleet Team	National Supply Chain	Yes
			Authorised drivers	All	No
			Vehicle contacts / Fleet Managers	• Routes • Infrastructure Projects • National Supply Chain	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Stephanie Muffett, Safety Improvement Specialist Tel: 07711 600755

NR/L2/SIG/10157 Signal Sighting Assessment Process

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/04/2017	Superseded	3

Purpose

This business process describes the process to assess signal sighting of proposed or applied signalling assets to be read and understood by train drivers and staff influencing train movements.

The output of the assessment is a record of the considerations and judgements taken to define the recommendations of reasonable actions to optimise the interface between infrastructure and train driver. The record of assessment enables management of the risks associated with train operations controlled by new and existing signal assets.

Scope

This business process applies on all Network Rail managed infrastructure and all signal assets reading onto Network Rail managed infrastructure.

It applies:

a) to all new and altered signal assets;
b) when assessing signal sighting following Category ‘A’ Signal Passed at Danger (SPAD);
c) to signals that require an assessment of signal sighting by mutual consent of the affected stakeholders;
d) to retrospective re-sighting of signals where 1.3.3 or 1.3.5 applies.

It applies to Infrastructure managers, Operations Managers, Station operators and individuals introducing changes to signalling assets.

This business process does not apply to Signal Technicians Signal tasks for alignment and visibility of signals. This process is detailed in NR/L3/SIG/10663.

The full requirements for the testing and commissioning of signals are not included in the scope of this business process. The testing and commissioning requirements (NR/L2/SIG/30014) include a compliance check of the installed signal asset against the approved signal sighting assessment record.

NR/L2/SIG/10157 Signal Sighting Assessment Process

What's new, what's changed and why

What's new/ what's changed:

a) The table below summarises all the sections/clauses that have been amended/deleted/added:

Section/clause	Amended/deleted/new	Summary of changes
2	Amended	Definitions have been revised into terms and abbreviations with content rationalised
3	New	Responsibilities and accountabilities have been defined to align with RIS-0737-CCS with inclusion of RACI matrix
3.2	Amended	The requirements for competence have been transferred to NR/L1/CTM/001
4	Amended	The process has been aligned to RIS-0737-CCS, which drew upon the content of NR/L2/SIG/10157 issue 2, so the process is unchanged except for the addition of good practice in planning.
5	Amended	The requirement to store records of signal sighting assessments in the approved Network Rail tool (SSiFT) has been added.

The specification of signal sighting has been transferred to new document NR/L2/SIG/10158, to align to standards framework and give improved clarity.

Reasons for change:

The revision to GE/RT8037 by RSSB and subsequent issue of RIS-0737-CCS which supersedes has prompted revision of NR/L2/SIG/10157 to formally adopt the requirements of RIS-0737-CCS and remove undue duplication and conflicts between these documents. The opportunity has been taken to restructure the NR/L2/SIG/10157 and to improve the retention and access of signal sighting assessment records.

NR/L2/SIG/10157 Signal Sighting Assessment Process

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			Head of Engineering	Infrastructure Projects	Yes
			Programme Director	Infrastructure Projects	Yes
			Route Asset Manager (signalling)	Route	Yes
			Route Asset Manager (E&P)	Route	Yes
			Route, Operations, principles and standards	Route	Yes
			Operations Principles Specialist	STE	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Colin Gibbons, Principal Engineer (Principles) Tel: 07919470261

NR/L2/SIG/10158 Specification for Signal Sighting Assessment

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/04/2017	New	1

Purpose

This specification details the requirements to be applied when assessing signal sighting of proposed or applied signalling assets to be read and understood by train drivers and staff influencing train movements.

This specification gives clarity on, and additions to the requirements set out in RIS-0737-CCS for undertaking signal sighting assessments.

This specification supports the signal sighting committee when undertaking signal sighting assessments. The record of assessment enables management of the risks associated with train operations controlled by new and existing signal assets.

Scope

This specification applies to all Network Rail managed infrastructure and to all signal assets reading onto Network Rail managed infrastructure.

It applies:

a) to all new and altered signal assets;
b) when assessing signal sighting following Category 'A' Signal Passed at Danger (SPAD);
c) to signal assets that require an assessment of signal sighting by mutual consent of the affected stakeholders.

It applies to Infrastructure managers, Operations Managers, Station operators and individuals introducing changes to signalling assets.

What's new, what's changed and why

What's new/ what's changed:

The contents of this document has been transferred from sections of NR/L2/SIG/10157 with amendments as described below:-

a) The table below summarises all the sections/clauses that have been amended/deleted/added:

Section/clause	Amended/deleted/new	Summary of changes
2	Amended	Definitions have been revised into terms and abbreviations with content rationalised
3	Amended	The section has been aligned to RIS-0737-CCS, which drew upon the content of NR/L2/SIG/10157 issue 2, requirements contained in RIS-0737-CCS have not been included in this document
Appendix A	New	Guidance has been included on the responsibilities for checking and approving elements of the signal sighting assessment record

NR/L2/SIG/10158 Specification for Signal Sighting Assessment

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
Appendix B	New	Guidance has been included on completing Supplementary readable time assessments required by RIS-0737-CCS
Appendix C	New	Guidance has been included on configuration of signal equipment to optimise reading of all signal elements under expected conditions.

Reasons for change:

The revision to GE/RT8037 by RSSB and subsequent issue of RIS-0737-CCS which supersedes has prompted revision of NR/L2/SIG/10157 to formally adopt the requirements of RIS-0737-CCS The opportunity has been taken to restructure NR/L2/SIG/10157 and to create this specification to improve clarity and to incorporate guidance of best practice and also to support the requirements of RIS-0737-CCS

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			Head of Engineering	Infrastructure Projects	Yes
			Programme Director	Infrastructure Projects	Yes
			Route Asset Manager (signalling)	Route	Yes
			Route Asset Manager (E&P)	Route	Yes
			Route Asset Manager (civils)	Route	Yes
			Route, Operations, principles and standards	Route	Yes
			Operations Principles Specialist	STE	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Colin Gibbons, Principal Engineer (Principles) Tel: 07919470261

NR/L3/SIG/10661 Signalling Maintenance Task Intervals

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	31/05/2017	Superseded	15

Purpose

The purpose of this document is to set the safety and performance intervals applicable for carrying out signalling maintenance tasks and tests.
The intervals shown are intended to maintain the designed safety and reliability by detecting and correcting deficiencies to signalling infrastructure before there is deterioration or failure.

Scope

The intervals detailed in this document relate to the maintenance tasks defined in the Signal Maintenance Specification suite of documents.

What's new, what's changed and why

Issue 15 of this standard has been updated to reflect the March 2017 updates to Signal Maintenance Specifications. Task intervals for ROSE'd assets have also been incorporated.

A technical briefing has been produced to support this update and can be obtained from signalengineers@networkrail.co.uk.

Awareness Brief

Post	*Function*	*Cascade Brief?*
Works Delivery Managers	Network Operations	Yes
S&T Trainers (Workforce Development Specialists)	Human Resources	Yes
Infrastructure Maintenance Engineers	Network Operations	Yes
CCS Engineers	Safety Technical Engineering	Yes

Technical Brief

Post	*Function*	*Cascade Brief?*
Route Asset Manager (Signalling)	Network Operations	Yes
Signal & Telecoms Maintenance Engineer	Network Operations	Yes
Section Manager (Signals)	Network Operations	Yes
Signalling Technical Support Staff	Network Operations	Yes

NR/L3/SIG/10661 Signalling Maintenance Task Intervals

Impact on Function *(to be completed by Function)*	
Further information contact	Pardip Basran Tel: 07801 903854

NR/L3/SIG/10663 Signalling Maintenance Specifications (SMS)

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	31/05/2017	Superseded	7

Purpose	Scope
This L3 document contains the Signal Maintenance Specifications (NR/SMS) for maintenance of signalling assets on Network Rail Managed Infrastructure.	This L3 document applies to all staff who undertake preventative or corrective maintenance to signalling assets on Network Rail infrastructure.

What's new, what's changed and why

Please refer to the briefing note for NR/L3/SIG/10663 for full details of changes to Signalling Maintenance Specifications.

Reasons for change:

Issue 7 of this standard has been updated to include new asset types, amendments and corrections to the entries made in Issue 6 of the Signalling Maintenance Specifications (SMS). It also contains ROSE SMSs incorporated from NR/L3/SIG/10665.

A technical briefing has been produced to support this update and can be obtained from Connect and

signalengineers@networkrail.co.uk

NR/L3/SIG/10663 Signalling Maintenance Specifications (SMS)

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Manager (Signalling)	Network Operations	Yes
CCS Engineers	Safety, Technical and Engineering	Yes	Signal and Telecoms Maintenance Engineer	Network Operations	Yes
Head of Engineering	Infrastructure Projects	Yes	Section Manager (Signals)	Network Operations	Yes
Signalling Delivery Engineer	Infrastructure Projects	Yes	Works Delivery Managers	Network Operations	Yes
Project Engineer	Infrastructure Projects	Yes	Signalling Technical Support Staff	Network Operations	Yes
Signalling Designer	Infrastructure Projects	Yes	S&T Trainers (Workforce Development Specialists)	Human Resources	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Pardip Basran Tel: 07801 903854

NR/L3/SIG/10665 Reliability Centred Maintenance of Signalling Equipment

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	31/05/2017	Superseded	14

Purpose

This document contains the prerequisites, allowing Reliability-Centred Maintenance to be implemented on signalling equipment as an alternative to the default maintenance regime.

Scope

This document covers the conditions required to allow the transition from the default maintenance regime to a Reliability-Centred Maintenance regime for signalling equipment.

This document applies to:

a) Section Managers (Signals);
b) Signal & Telecoms Maintenance Engineers;
c) Route Asset Managers (Signals).

What's new, what's changed and why

Issue 14 has been updated for the removal of ROSE Signal Maintenance Specifications (SMS) and transferred to NR/L3/SIG/10663. Thus one document containing all SMSs regardless of the maintenance regime.

Modules 1 to 36 have been incorporated in NR/L3/SIG/10663 issue 7.

A technical briefing has been produced to supported this update and can be obtained from Connect and signalengineers@networkrail.co.uk

NR/L3/SIG/10665 Reliability Centred Maintenance of Signalling Equipment

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Manager (Signalling)	Network Operations	Yes
CCS Engineers	Safety Technical Engineering	Yes	Signal & Telecoms Maintenance Engineer	Network Operations	Yes
Head of Engineering (Infrastructure Projects – Signalling)	Infrastructure Projects	Yes	Section Manager (Signals)	Network Operations	Yes
Signalling Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	Works Delivery Managers	Network Operations	Yes
			Signalling Technical Support Staff	Network Operations	Yes
			S&T Trainers (Workforce Development Specialists)	Network Operations	Yes
			Route Asset Manager (Signalling)	Network Operations	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Pardip Basran Tel: 07801 903854

NR/L3/SIG/11231 Signal Maintenance Testing Handbook (NR/SMTH)

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	31/05/2017	Superseded	10

Purpose

This document contains the index to the Signal Maintenance Testing (NR/SMTH)

The SMTH provides a maintenance testing regime for the replacement or installation of signalling equipment that does not affect the application logic of the system, or the controls of the system that have previously been tested to signal works testing specifications.

Scope

Signalling equipment that is replaced or renewed on a like for like basis under corrective maintenance, temporary design as a result of an incident or engineering works and minor signalling renewals that do not affect the application logic of the system or the controls of the system that have previously been tested to signal works testing specifications.

What's new, what's changed and why

Please refer to the briefing note for NR/L3/SIG/11231 for full details of changes to the Signalling Maintenance Testing Handbook.

Reasons for change:

Issue 10 of this standard has been updated to include new Asset types, amendments and corrections to the entries made in Issue 8 of the Signal Maintenance Testing Handbook (NR/SMTH).

A technical briefing has been produced to supported this update and can be obtained from Connect and signalengineers@networkrail.co.uk

NR/L3/SIG/11231 Signal Maintenance Testing Handbook (NR/SMTH)

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Manager (Signalling)	Network Operations	Yes
CCS Engineers	Safety Technical Services	Yes	Signal & Telecoms Maintenance Engineer	Network Operations	Yes
Head of Engineering (Infrastructure Projects – Signalling)	Infrastructure Projects	Yes	Section Manager (Signals)	Network Operations	Yes
Signalling Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	Works Delivery Managers	Network Operations	Yes
			Signalling Technical Support Staff	Network Operations	Yes
			S&T Trainers (Workforce Development Specialists)	Human Resources	Yes

Impact on Function *(to be completed by Function)*	
Further information contact	Pardip Basran Tel: 07801 903854

NR/L2/SIGELP/27408 Product Specification for Signalling Power Distribution Cables

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	3

Purpose

This specification defines cable construction and performance requirements for signalling power distribution cables to be used in railway signalling systems.

NOTE: The implementation of this standard provides risk management of low quality cable being manufactured and introduced into the infrastructure that may give rise to electric shock, fire or performance risks.

Scope

Cables specified in this standard are intended for use in signalling power distribution systems where the nominal voltage is up to 650V a.c. and where the electrical systems are either TN or IT.

This specification details the construction and test requirements for armoured and enhanced unarmoured copper and aluminium multicore core cables intended to be used in signalling power distribution systems covering a range of nominal conductor cross-sectional areas. The specification details the requirements for stranded copper and stranded or solid aluminium conductors.

The specification details the requirements for armoured cable having a PVC sheath and unarmoured cable with enhanced sheath and insulation thickness. Both cable types are specified with options for a sheath with low emission of smoke and corrosive gases when affected by fire. This specification also details security, water blocking and rodent protection requirements.

What's new, what's changed and why

What's new/ what's changed:

The table below summarises all the sections / clauses that have been amended:

Section/clause	Amended/deleted/new	Summary of changes
1	Amended	Note added defining risk controlled by Standard.

NR/L2/SIGELP/27408 Product Specification for Signalling Power Distribution Cables

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
4.1	Amended	Alignment made with NR/L3/SIGELP/27427 regarding the selection of cable core colours.
6.2	Amended	Alignment made with NR/L3/SIGELP/27427 regarding the selection of cable core colours.
References	Amended	NR/L3/SIGELP/27427 added.

Reasons for change:

Alignment required with NR/L3/SIGELP/27427 (Identification and Colours for Signalling Power Distribution Cables), issued 03/09/2016, for compliance 09/01/2017.

In four-core cables, the two-core conductors of each phase are joined together at both ends to form one phase conductor. The previous version of the Standard specified two brown conductors and two black conductors. NR/L3/SIGELP/27427 now specifies the requirement that each conductor should be uniquely identifiable and hence proposes red, brown, black and grey. This Standard has now been updated to be in line with NR/L3/SIGELP/27427.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Managers (E&P)	Network Operations	Yes
Signalling Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	E&P Maintenance Engineers	Network Operations	Yes
E&P Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	Assistant E&P Maintenance Engineers	Network Operations	Yes
Professional Head (Telecoms)	Digital Railway	Yes	E&P Section Managers	Network Operations	Yes

NR/L2/SIGELP/27408 Product Specification for Signalling Power Distribution Cables

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			E&P Team Leaders	Network Operations	Yes
			Head of Engineering (E&P)	Infrastructure Projects	Yes
			Route Asset Manager (Signalling)	Network Operations	Yes
			S&T Maintenance Engineers	Network Operations	Yes
			Assistant S&T Maintenance Engineers	Network Operations	Yes
			S&T Section Managers	Network Operations	Yes
			S&T Team Leaders	Network Operations	Yes
			Head of Engineering (S&T)	Infrastructure Projects	Yes
			Works Delivery Managers	Network Operations	Yes
			Trainers (Workforce Development Specialists)	Human Resources	Yes
			Approved Manufacturers of existing cables	N/A	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Tahir Ayub, Principal Engineer (M&EE) [Distribution] Tel: 07801 775504

NR/L2/SIGELP/27416 Alterations to Signalling Power Systems

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose

This standard defines the functional and electrical requirements to be applied when undertaking alterations to existing Signalling Power Systems (SPSs).

Scope

This standard defines the requirements and provides guidance on the following areas:

- System Context of an SPS and its sub-systems (example diagrams included);
- Alteration Design Principles;
- Alteration Development Process Activities

The standard excludes:

- The requirements for a new SPS where the requirements of NR/L2/ELP/27243 and/or NR/L2/SIGELP/27410 apply;
- Functional Signalling Power Circuits as defined in NR/L2/SIG/30050;
- Maintenance works.

What's new, what's changed and why

What's new:

This is a new standard.

The standard sets out details for how alterations are to be designed and implemented in existing Signalling Power Supply systems. The standard gives guidance in the following areas: It details existing systems forming part of a Signalling Power Supply system.

It sets out the alteration design principles and gives guidance on how key electrical risks and performance indicators can be managed when undertaking alterations. The standard is supported with an Alteration Development Process, detailing the alteration process lifecycle; legacy baseline assessment; reasonable opportunity assessment; alteration system impact management; alteration categorisation; testing, commissioning and certification; and bringing into service.

NR/L2/SIGELP/27416 Alterations to Signalling Power Systems

What's new, what's changed and why (continued)

Reasons for change:

This standard defines the functional and electrical requirements to be applied when undertaking alterations to existing Signalling Power Systems (SPSs). This will drive a common approach across the industry when undertaking alterations to existing installations. It also sets out a standardised approach for introducing Reasonable Opportunity when undertaking alterations.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Managers (E&P)	Network Operations	Yes
Signalling Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	E&P Maintenance Engineers	Network Operations	Yes
E&P Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	Assistant E&P Maintenance Engineers	Network Operations	Yes
Professional Head (Telecoms)	Digital Railway	Yes	E&P Section Managers	Network Operations	Yes
			E&P Team Leaders	Network Operations	Yes
			Head of Engineering (E&P)	Infrastructure Projects	Yes
			Route Asset Manager (Signalling)	Network Operations	Yes
			S&T Maintenance Engineers	Network Operations	Yes
			Assistant S&T Maintenance Engineers	Network Operations	Yes
			S&T Section Managers	Network Operations	Yes

NR/L2/SIGELP/27416 Alterations to Signalling Power Systems

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			S&T Team Leaders	Network Operations	Yes
			Head of Engineering (S&T)	Infrastructure Projects	Yes
			Works Delivery Managers	Network Operations	Yes
			Trainers (Workforce Development Specialists)	Human Resources	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Tahir Ayub, Principal Engineer (M&EE) [Distribution] Tel: 07801775504

NR/L2/SIGELP/27725 Insulation Monitoring and Fault Location Systems for use on Signalling Power Systems

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose

This standard defines Network Rail's requirements for Insulation Monitoring Devices/Systems (IMDs) and Insulation Fault Location Systems (IFLSs).

Scope

This standard defines Network Rail's requirements for IMDs and IFLSs for use on Isolated Terra (IT) Electrical Systems where the nominal system voltage does not exceed 1000V a.c. or 1500V d.c. for the following applications:

a) the interface between the Principal Supply Point (PSP)/Auxiliary Supply Point (ASP) and the Functional Supply Point (FSP);
b) the interface between an FSP and another FSP;
c) the interface points along a distribution feeder where a Distribution Interface Transformer Assembly (DITA) or Booster or Isolation Transformer has been installed;
d) Signalling Functional Circuits (a.c. and d.c);
e) Traction derived power supplies interfacing with Principal Supply Point (PSP)/Auxiliary Supply Point (ASP);
f) Standby generator supplies interfacing with Principal Supply Point (PSP)/Auxiliary Supply Point (ASP);

The following integrated systems and sub-systems are specified:

- Integrated solutions for the deployment of IMDs and IFLSs using a Tier 1, Tier 2 or Tier 3 architecture (see section 6.1);
- The interface of IMDs and IFLSs with Intelligent Infrastructure Systems.

IMDs and IFLSs as specified in this specification may also be used in other railway LV applications, e.g. car park charging points, tunnel lighting, traction transformer to PSP distribution, etc.

NR/L2/SIGELP/27725 Insulation Monitoring and Fault Location Systems for use on Signalling Power Systems

What's new, what's changed and why

What's new / what's changed:
This is a new standard. It sets out Network Rail's vision for IMDs and IFLSs, comprising their system requirements, our network monitoring architectures, IMD and IFLS capabilities, our requirements for portable models, and IMD and IFLS integration with Intelligent Infrastructure systems.
NOTE: *It is the duty of those briefed or notified to read through this document and familiarise themselves with its content.*

Reasons for change:
The new standard sets out Network Rail's vision for new IMDs and IFLSs. It will drive the development of new technologies to :

- Provide additional parameters e.g. Capacitance to assess the safety of the SPS and further reduce risk of electric shock;
- improve detection of signalling power cable failure before it causes an interruption in power supply leading to loss of signalling;
- Improve the ability to pinpoint the position of faults to drive reduction in time & disruption caused by signalling power cable faults.

The new standard also provides a new platform and system architecture for making the case for reducing or eliminating the need for disruptive signalling power cables. This drives OPEX reduction opportunities in maintenance costs and disruption. It also provides alternative power supply architecture in replace of auto reconfiguration systems on some installations where the business case for auto reconfigurations system may be marginal. The specified technology architectures may also support asset decisions to extend the remaining life of existing cables and networks driving OPEX and CAPEX savings.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	Yes	Route Asset Managers (E&P)	Network Operations	Yes
Signalling Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	E&P Maintenance Engineers	Network Operations	Yes

NR/L2/SIGELP/27725 Insulation Monitoring and Fault Location Systems for use on Signalling Power Systems

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
E&P Delivery Engineers, Project Engineers and Signalling Designers	Infrastructure Projects	Yes	Assistant E&P Maintenance Engineers	Network Operations	Yes
Professional Head (Telecoms)	Digital Railway	Yes	E&P Section Managers	Network Operations	Yes
			E&P Team Leaders	Network Operations	Yes
			Head of Engineering (E&P)	Infrastructure Projects	Yes
			Route Asset Manager (Signalling)	Network Operations	Yes
			S&T Maintenance Engineers	Network Operations	Yes
			Assistant S&T Maintenance Engineers	Network Operations	Yes
			S&T Section Managers	Network Operations	Yes
			Head of Engineering (S&T)	Infrastructure Projects	Yes
			Works Delivery Managers	Network Operations	Yes
			Trainers (Workforce Development Specialists)	Human Resources	Yes

Impact on Function *(to be completed by Function)*	
Further information contact	Tahir Ayub Tel: 07801 775504

NR/L2/SIGELP/50000 Safe Working and Maintenance on or near Signalling Power Distribution Equipment above 175 V

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	3

Purpose

This standard describes the minimum requirements for working on or near signalling power distribution equipment above 175 Volts on Network Rail managed Infrastructure, which includes:

- Safe working practices.
- Maintenance and testing requirements.
- Active fault and defect management.

This standard describes the means of compliance with the requirements of the Electricity at Work Regulations 1989 when working on or near signalling power supplies. This has been written in accordance with HSE publication HSG85 – Electricity at Work Safe Working Practices (3rd Edition).

Scope

This standard defines the requirements for safe working practices, inspection and maintenance regimes, routine testing, defect and fault management of the following signalling power distribution equipment on Network Rail managed Infrastructure:

- Signalling Power distribution equipment above 175 V in equipment housings including FSPs, location cases, relay rooms, REBs, power pillars, etc.
- Signalling Power distribution supply cabling
- Insulation Monitoring equipment on signalling power supplies above 175 V.
- Interrupter cabling.
- Temporary preventative measures
- Electronic Protection Relays installed on signalling power supplies above 175 V
- Distribution Interface Transformer Assembly (DITA)
- 650 V Portable generation equipment

The requirements apply to any individual involved in working on or near signalling power supply equipment above 175 V.

The maintenance of Principal Supply Points is excluded from this document.

NR/L2/SIGELP/50000 Safe Working and Maintenance on or near Signalling Power Distribution Equipment above 175 V

What's new, what's changed and why

What's new/ what's changed:

Clause 16.2 has been amended to address an action from the national union consultation.

Defect tables in Appendix A updated.
A summary of the changes can be found in the table below:

Section/clause	Amended/deleted/new	Summary of changes
16.2	Amended	Clause amended to address electrical and non-electrical defects
Appendix A	Amended	Updated the defect tables to align with NR/SPS M002 issue 03

Reasons for change:
To address an action with regards to defect reporting and defect management raised at national union consultation.

Awareness Brief

Post	*Function*	*Cascade Brief?*
Route Asset Manager (E&P)	Network Operations	Yes
Assistant E&P Maintenance Engineers	Network Operations	No
Professional Development & Training	Human Resources	No
Infrastructure Maintenance Engineers	Network Operations	No

Awareness Brief

Post	*Function*	*Cascade Brief?*
E&P Maintenance Engineers	Network Operations	Yes
D&P Section Managers	Network Operations	No
Mechanical & Electrical [Distribution] team	STE	No
Route Asset Manager (Signalling)	Network Operations	Yes

NR/L2/SIGELP/50000 Safe Working and Maintenance on or near Signalling Power Distribution Equipment above 175 V

Awareness Brief			Awareness Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Signalling & Telecoms Maintenance Engineers	Network Operations	Yes	Assistant Signalling & Telecoms Maintenance Engineers	Network Operations	No
S&T Section Managers	Network Operations	No	Professional Head of Telecoms (NRT)	NRT	Yes
Head of Field Services	NRT	No	Works Delivery Teams	Signalling and D&P	No

Impact on Function *(to be completed by Function)*

Further information contact	Kyle.Windsor@networkrail.co.uk Tel: 07515620267

NR/L3/SIGELP/50001 Signalling Power Distribution Equipment above 175 V (Work Instructions)

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	07/12/2018	Superseded	3

Purpose	Scope
This manual contains the work instructions which are to be used when maintaining, fault finding and repairing signalling power distribution equipment above 175 V.	This manual applies to persons whose duties require them to maintain, fault-find and repair signalling power distribution equipment above 175 V.

What's new, what's changed and why

What's new/ what's changed:

NR/SPS M002 has been updated to capture the defect reporting process and defect classification of electrical and non-electrical.

A summary of the changes can be found in the table below:

Section/clause	Amended/deleted/new	Summary of changes
NR/SPS M002 Defect reporting	Amended	Clause amended to include the defect reporting process which captures electrical and non-electrical defects.
NR/SPS M002 Defect Tables	Amended	The defect codes and descriptions from issue 02 have been arranged into electrical and non-electrical.
NR/L3/SIGELP/50001 Index of SPS suite	Amended	Index updated to reflect issue 03 of NR/SPS M002.

Reasons for change:
To address an action with regards to defect reporting and defect management raised at national union consultation.

NR/L3/SIGELP/50001 Signalling Power Distribution Equipment above 175 V (Work Instructions)

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Professional Development & Training	Human Resources	No	Route Asset Manager (E&P)	Network Operations	Yes
Mechanical & Electrical [Distribution] team	STE	No	E&P Maintenance Engineers	Network Operations	Yes
			Assistant E&P Maintenance Engineers	Network Operations	No
			D&P Section Managers	Network Operations	Yes
			Infrastructure Maintenance Engineers	Network Operations	No
			Route Asset Manager (Signalling)	Network Operations	Yes
			Signalling & Telecoms Maintenance Engineers	Network Operations	Yes
			Assistant Signalling & Telecoms Maintenance Engineers	Network Operations	No
			Signalling Section Managers	Network Operations	Yes
			Signalling Team Leaders	Network Operations	No
			Signalling Technicians	Network Operations	No
			D&P Team Leaders	Network Operations	No
			D&P Technicians	Network Operations	No
			D&P Working Supervisors	Network Operations	No

NR/L3/SIGELP/50001 Signalling Power Distribution Equipment above 175 V (Work Instructions)

Impact on Function *(to be completed by Function)*	
Further information contact	Kyle.Windsor@networkrail.co.uk Tel: 07515620267

NR/L2/TEL/30160 Specification for Optical Fibre Network Design

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

The purpose of this standard is to set out the principles and considerations to be taken into account for additions to, or modifications of, Network Rail's optical fibre infrastructure. The objective of this is to maximise its potential capacity and apply a consistent approach that will perpetuate reliability, availability and maintainability of the network.

Compliance with these requirements will optimise the architecture and maximise the performance of Network Rail's optical fibre infrastructure and control the risk of its failure to support railway applications.

Scope

This standard specifies the:

a) parameters to promote consistent optical fibre cabling infrastructure throughout Network Rail's optical fibre network; and
b) permissible optical loss and configuration of the network that will extend and preserve the network's reliability, availability and maintainability.

The design principles and parameters set out in this standard apply to all designs that grow, change, or repair Network Rail's optical fibre infrastructure. This includes optical fibre infrastructure supporting Signalling circuits and Electrical Plant applications.

This standard applies to people responsible for designing additions to or modification of Network Rail's optical fibre infrastructure.

This standard does not apply to intra-building optical fibre infrastructure with no operational traffic.

NR/L2/TEL/30160 Specification for Optical Fibre Network Design

What's new, what's changed and why

What's new/what's changed:

A summary of the changes can be found in the table below:

- Inclusion of requirement to use ZHLS cables in tunnels that exceed 1,000 metres to comply with TSI 1303/2014
- The 400-metre restriction on cable connecting new nodes is extended to 750 metres; practical operational experience has indicated that the risk of outage is not significantly increased but ancillary costs and optical loss are reduced.
- Optical fibre Allocation tables updated to cover 48-fibre cables and FTNx requirements.
- Provision of optical fibre joints adjacent to equipment rooms to provide for service distribution.
- The spacing of consecutive joints to promote discrimination of optical events has been reduced from 250 metres to 100 metre owing to advances in testing equipment
- Resilience rules have been clarified to better control the risk of single points of failure that could have severe effects on railway operational services.
- Operation at 1310 nm added to cater for single fibre working, CWDM, and short-haul FTNx routers.
- Lockable E2000/APC optical connectors included to enhance optical safety in high-power optical systems
- Inclusion of additional content to generally cover requirements for the FTNx network's architecture.

Reasons for change:

A recently issued TSI requires that cables in tunnels that exceed 1,000 metres in length have reaction-to-fire performance that aligns with Network Rail's ZHLS cable requirements in order to reduce risk in the event of fire in a long tunnel. The requirements of the TSI are not retrospective but are mandated for all new installations.

Since completion of the Fixed Telecom Network, Network Rail has installed a DWDM and IP-based transmission system, known as FTNx, which will maximise the inherent capacity offered by the optical fibre network. The standard has been amended to additionally cover optical fibre design requirements for the FTNx network and serve as a single source of information for FTN and FTNx and thereby reduce the risk of needing to revisit optical fibre designs to include elements for FTNx.

NR/L2/TEL/30160 Specification for Optical Fibre Network Design

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Heads of NRT	Network Rail Telecom	Yes	Network Engineering Manager	Network Rail Telecom	Yes
Chief Engineer	Safety, Technical & Engineering	No	Network Planning Engineering Manager	Network Rail Telecom	No
Engineering Expert, STE	Safety, Technical & Engineering	No	Network Design Engineering Manager	Network Rail Telecom	No
Route Communications Engineers	Network Operations	Yes	Project Engineering Manager	Network Rail Telecom	No
Head of Signalling	Safety, Technical & Engineering	No	Discipline Project Engineers	Network Rail Telecom	No
			Project Engineers	Infrastructure Projects	No

Impact on Function *(to be completed by Function)*

Further information contact	Pete Farnsworth, Senior Engineer, NRT Tel: 07786 310382

NR/L3/TEL/30162 Work Instruction for Jointing, Terminating and Testing Optical Fibre Cables

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

This standard sets out the specific requirements and parameters for jointing, terminating and site acceptance testing of optical fibre cables that comprise, or connect to, Network Rail's optical fibre infrastructure.

Compliance with these requirements will maximise the performance of Network Rail's optical fibre infrastructure and control the risk of its failure to support railway applications.

Scope

This Network Rail standard specifies the:

a) principles and practices for jointing and terminating optical fibre cables; and
b) optical fibre test methods and values of permissible optical loss.

The requirements of this standard only apply to cables containing optical fibres generally to ITU-T Recommendations G.652 and G.657.

This standard applies to people undertaking jointing, terminating and site acceptance testing of optical fibre cables on Network Rail Controlled Infrastructure.

What's new, what's changed and why

Summary of Changes:

- Standard changed from Level 2 to Level 3 as the content sets out 'how to do' rather than 'what to do'.
- Inclusion of requirement to use ZHLS cables in tunnels that exceed 1,000 metres to comply with TSI 1303/2014
- Inclusion of single fibre working, CWDM, DWDM, and more optical wavelengths as means for providing increased capacity on optical fibres and therefore more efficient use of the existing optical fibre infrastructure.
- The length of optical fibre stored on splicing trays is reduced from 3 metres to 2 metres to provide more space and because operational experience indicates that 2 metres is sufficient for service restoration and future splicing requirements.
- Inclusion of optical fibre Characterisation testing to assess the suitability of optical fibres that are designated for supporting DWDM transmission.
- Inclusion of additional content to generally cover requirements for the FTNx network's architecture.

NR/L3/TEL/30162 Work Instruction for Jointing, Terminating and Testing Optical Fibre Cables

What's new, what's changed and why (continued)

Reasons for change:

A recently issued TSI requires that cables in tunnels that exceed 1,000 metres in length have reaction-to-fire performance that aligns with Network Rail's ZHLS cable requirements in order to reduce risk in the event of fire in a long tunnel. The requirements of the TSI are not retrospective but are mandated for all new installations.

Since completion of the Fixed Telecom Network, Network Rail has installed a DWDM and IP-based transmission system, known as FTNx, which will maximise the inherent capacity offered by the optical fibre network. The standard has been amended to additionally cover optical fibre design requirements for the FTNx network and serve as a single source of information for FTN and FTNx and thereby reduce the risk of needing to revisit optical fibre designs to include elements for FTNx.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Heads of NRT	Network Rail Telecom	Yes	Route Communications Engineers	Network Operations	Yes
			Head of Field Services	Network Rail Telecom	Yes

Impact on Function *(to be completed by Function)*

Further information contact	Pete Farnsworth, Senior Engineer, NRT Tel: 07786 310382

NR/L2/TEL/30182 Specification for Secure Configuration and Management of Network Rail Telecom Internet Protocol (IP) Networks, Systems and Devices

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose

The purpose of this standard is to specify the application of security controls required to protect Network Rail Telecom Internet Protocol (IP) networks in order to manage security risks to IP networks, network devices and connected systems throughout their operational lifecycle.

Scope

This standard specifies the minimum security requirements for configuring, managing and monitoring the Network Rail Telecom IP network, network devices and connected systems.

This standard applies to all Network Rail staff and contractors responsible for designing, building, configuring and maintaining Network Rail IP transmission networks and connected systems.

What's new, what's changed and why

This is a new standard/control document

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

The standard is new and has been introduced to mandate security requirements into the design, installation and maintenance of NRT IP networks, network devices and connected systems. It also recommends security best practise and references other NR Standards, and industry documents relevant to security to implementing installing and maintaining security controls.
Key Information includes:

- Mandating compliance with - EN 50159 Transmission of safety related information
- Mandating compliance with NR information security policies
- Mandating security requirements and security assurance
- Mandating physical security risk assessments and use of the NRT physical security control framework
- Secure design and security hardening
- Network security management and monitoring

NR/L2/TEL/30182 Specification for Secure Configuration and Management of Network Rail Telecom Internet Protocol (IP) Networks, Systems and Devices

What's new, what's changed and why (continued)

- Mandating vulnerability management and change management
- Mandating secure remote connectivity and codes of connection

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Technology Manager / Products	Group Digital Railway	Yes	Head of Delivery	Group Digital Railway	Yes
			Head of Telecoms (Asset & Performance Management)	Group Digital Railway	Yes
			Head of Field Services	Group Digital Railway	Yes
			Network Engineering Manager	Group Digital Railway	Yes
			Infrastructure Projects (via Network Engineering Manager)	Infrastructure Projects	Yes
			Head of Operations	Group Digital Railway	Yes

NR/L2/TEL/30182 Specification for Secure Configuration and Management of Network Rail Telecom Internet Protocol (IP) Networks, Systems and Devices

Impact on Function *(to be completed by Function)*	
Further information contact	Wayne Watson Tel: 07739 776307

NR/L3/TEL/40047 Process for the Management of Safety Related Reports for Telecoms Failures

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	2

Purpose

This process contains the hazard index system of safety related failures of telecommunications equipment and services, owned by Network Rail or provided by third parties for railway operational purposes.

The hazard index system supports the unified national system of classification and review of safety related failures of signalling and telecommunications requirement specified in NR/L2/SIG/10047.

Scope

This process specifies the hazard index system for the management of safety related reports for all telecommunications failures for:

a) equipment and services provided by Network Rail Company or third parties (including bought in equipment or services); and
b) equipment not belonging to Network Rail or away from Network Rail infrastructure which Network Rail agrees to manage

This process applies to people who manage safety related reports of telecommunications failures.

This process meets the requirements of Group Standard RIS-0707-CCS.

What's new, what's changed and why

All the content of this standard/control document has been revised.
A summary of the changes can be found in the table below:

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

Section/clause	Amended/deleted/new	Summary of changes
Reference documentation	Amended	Obsolete standards removed
2 SCOPE	Amended	Re-Formatted
3 Definitions	Amended	FTS added; "Not a fault" removed; TD added; additional examples added
All sections	Amended	Updated with minor text formatting changes. Specific clause content changes are captured below

NR/L3/TEL/40047 Process for the Management of Safety Related Reports

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
4.2	Amended	Additional reference that the maintainer is required to have review meetings with the asset owner
4.2.9	Amended	Change that ALL criteria have to be met for closing long running open records
4.3	Amended	More detail provided regards the requirement on assurance monitoring and audits covering both competence and data quality assessments to align and comply with NR/L2/SIG/10047
5 Hazard Index rating system	Amended	Updated and expanded for additional clarity and combines the V1 details from section 6 (Adjustment factor) and section 7 (Hazard Index) as subsections of 5.
Table 2 –Adjustment factor – C/ADJ/04	Amended	Added reference to known issues but with no known timescales for resolution
Table 3 Failure ratings	Amended	Item K removed – NRN/ORN services due to these now being fully replaced by GSMR
(A) Signal post telephones	Amended	Amended - C/SPT/11 added
(B) Crossing Telephones – Uncontrolled	Amended	Amended RIDDOR reference added C/XIN/11a and 11b combined
(C) Crossing Telephones – Automatic	Amended	RIDDOR reference added NOTE added regards conditional RIDDOR classification of C/AHB/10
(D) Crossing Telephones – Controlled	Amended	Amended RIDDOR reference added C/MCC/11a and 11b combined
(F) Designated emergency telephone	Amended	Foot NOTE amended regards alternative telephone
(G) Direct Lines	Amended	(Non PETS) LCU telephones added to heading definition
(H) Concentrators	Amended	RIDDOR reference added C/CON/10 added to capture non presentation or incorrect presentation of PETS system alarms Clarification in notes that table excludes TOC/FOC/Route control concentrator systems
(I) Access to emergency services	Amended	Table header updated to include failure modes being relevant also to ECR access to emergency services

NR/L3/TEL/40047 Process for the Management of Safety Related Reports

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
(J) Electrification control room voice services	Amended	Table header updated to clarify that this is not for GSMR terminal voice services located within the ECR which are captured in table (T)
(K) NRN / ORN	Amended	REMOVED – due to radio system no longer being in service
(L) CSR	Amended	Note added to clarify remaining usage of CSR at Heathrow express and expected decommissioning in 2018
(T) GSMR System	Amended	Full review and rework with additions, deletions and amendments

Reasons for change:
The driver for the change was a review of the GSMR failure mode and hazard rating table (T). Following widespread introduction in 2014 of the GSMR network, a review of the known failure modes was required.
It also adds emphasis on the requirements of correctly identifying which failures are deemed RIDDOR reportable.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Head of Telecoms (Network Operations)	Group Digital Railway	No	Professional Head of Telecoms (NRT)	Group Digital Railway	Yes
Head of Telecoms (Asset & Performance Management)	Group Digital Railway	No	Current Operations Managers	Network Operations	Yes
Head of Field Services	Group Digital Railway	No	Professional Head team – Senior Engineers	Group Digital Railway	No
Head of Delivery	Group Digital Railway	No	STINCS Engineers	DRAM	No

NR/L3/TEL/40047 Process for the Management of Safety Related Reports for Telecoms Failures

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Head of Customer Development	Group Digital Railway	No	NTAPM Teams	Group Digital Railway	Yes
Infrastructure Maintenance Engineers	Infrastructure Maintenance	No			
Route Communications Engineers	DRAM	No			

Impact on Function *(to be completed by Function)*

Further information contact	Fraser Allan - National Telecoms Asset Performance Manager. Tel: 085 33395

NR/L3/TRK/003 Index of Track Engineering Forms

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	23

Purpose	Scope
This standard provides the index and version control to the Track Engineering Forms (TEFs) to meet the inspection, maintenance and renewals requirements of Network Rail track standards and the associated Standard Maintenance Procedures and Method Statements.	This Network Rail standard comprises a controlled list of TEFs, referenced to applicable standards. Each TEF forms a clause of this standard and is referenced as NR/L3/TRK/003/TEF3001 etc. The TEFs define the necessary data to be captured and consistently presented to comply with the requirements of Network Rail standards applicable to track maintenance and renewal works.

What's new, what's changed and why

What's new/ what's changed:
The table below summarises all the sections/clauses that have been amended/deleted/added:

Section/clause	Amended/deleted/new	Summary of changes
6 Index of Forms	Amended	Index updated to reflect changes to the following TEFs: New TEFs: TEF 3267 issue 1 "Manual track geometry measurement – method selection tool" (re. NR/L2/TRK/001/mods 11 and 17) Revised TEFs: TEF 3020 issue 4 "Sidewear inspection record (Forms A and B)" (re. NR/L2/TRK/001/mod09) TEF 3029 issue 9 "Switch inspection form" (re. NR/L2/TRK/0053) TEF 3054 issue 8 "Switches and crossings weld repair/replacement form" (re. NR/L2/TRK/0053) TEF 3218 issue 2 "Mobile flashbutt weld production report" re. (RT/CE/S/130)

NR/L3/TRK/003 Index of Track Engineering Forms

What's new, what's changed and why (continued)

Reasons for change:

New TEF 3267 issue 1 has been introduced to provide an assessment tool which can be used to determine which method, and frequency of, manual geometry measurement is appropriate for a particular location.

TEF 3054 revised in line with changes introduced by NR/L2/TRK/053 issue 6.

TEF 3218 revised to amend timescales for completion of form, to detail works completed and mitigation measures applied for any shortfall in planned work.

TEFs 3020 and 3029 revised to correct errors in form.

Briefing Requirements

Changes to TEFs will be briefed at the Quarterly Track & Lineside Governance and Safety Briefing on 30/03/17 for onward cascade.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Senior Asset Engineers (Support) [Track]	Network Operations	No	Route Asset Managers [Track]	Network Operations	Yes
Senior Asset Engineers (R&E) [Track]	Network Operations	No	Track Maintenance Engineers	Network Operations	Yes
Infrastructure Maintenance Engineers	Network Operations	No	Assistant Track Maintenance Engineers	Network Operations	No
Senior Project Engineers	Infrastructure Projects	Yes	Principal Technical Officers [Track]	Network Operations	No
Project Engineers	Infrastructure Projects	No	Rail Management Engineers	Network Operations	No

NR/L3/TRK/003 Index of Track Engineering Forms

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Senior Design Engineers [Track]	Infrastructure Projects	Yes	Section Managers [Track]	Network Operations	Yes
Design Engineers [Track]	Infrastructure Projects	No	053 inspectors	Network Operations	No
			Section Managers [Rail Testing & Lubrication]	Network Operations	No
			Section Managers [Welding & Grinding]	Network Operations	No
			Programme Manager [Rail Services]	Route Services	Yes
			Project Managers [Mobile Flash/butt Welding]	Route Services	Yes
			Works Delivery Supervisors [Mobile Flash/butt Welding]	Route Services	No
			Team Leaders [Mobile Flash Butt Welding]	Route Services	No

Impact on Function *(to be completed by Function)*	
Further information contact	Melanie Denley, Senior Engineer [Track & Lineside] Tel: 07771 830204

NR/L3/TRK/1015 Management of Basic Visual Inspection

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	Superseded	4

Purpose

This modularised standard describes the management of Basic Visual Inspection by patrolling or other recognised alternative methods of providing tier 1 Safety Inspections (see figure 1 – Hierarchy of track inspection NR/L2/TRK/001). Each recognised method's process is described to achieve a consistent approach across the network to maintain the reliability and quality of Basic Visual Inspection and develop the skills and competence of staff.

Scope

The processes described in these modules of this standard apply to the management of inspection by the following methods on running lines and sidings as
applicable:
a) Track Patrolling
b) Track Inspection by PLPR System
Future modules include
a) Risk Base Maintenance Regimes
b) Design Patrolling

What's new, what's changed and why

What's new/ what's changed:

A major revision to NR/L3/TRK/1015 Module 02 Plain Line Pattern Recognition Management and Introduction (NR/L3/TRK/1015 has been up-issued just to show the up-issue to module 02).

A summary of the changes to module 02 can be found in the table below:

The Key areas which have altered are

- Clearly defined accountabilities for the PLPR process. Who does what and when that will be carried out
- Clarity of
  - PLPR live Inspection process
  - Phraseology,
  - TEF forms, which TEF are to be used and when
  - PLPR introduction process
- Process timescales
- Actions to be taken for missed or partially missed patrols

NR/L3/TRK/1015 Management of Basic Visual Inspection

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
1 Purpose	Amended	Better states actual Purpose
2 Scope	Amended	Better states actual Scope
3 Definitions	Amended	Checked and clarified
4 PLPR inspection system boundaries	Deleted	
5 Management of Plain Line Pattern Recognition (PLPR) inspection 16	Deleted	
Appendix A A.1 Management of Inspection diagrams 32	Amended	Updated and aligned with current process
Appendix B B.1 Obscured fastenings 34	Amended	Updated and aligned with current process
Appendix C C.1 Inspection train planning process 36	Deleted	
Appendix D D.1 Updating Operating context or implementing PLPR inspection system updates	Deleted	
Appendix E E.1 Additional requirements for temporary assets	Deleted	
4 PLPR Background	New	Brief explanation of the PLPR system. This has been added to improve on the current understandings of what is used to find what.
5 PLPR live Inspection process	New	Explains the process/procedures, for operating PLPR in a live environment. Who is responsible for what and when it should be undertaken.
6 PLPR inspection system introduction process	New	Explains the process/procedures, of how to request PLPR, go to parallel running of PLPR and how to switch to Live PLPR.

NR/L3/TRK/1015 Management of Basic Visual Inspection

What's new, what's changed and why (continued)

Section/clause	Amended/deleted/new	Summary of changes
7 Amendments to patrol	New	Explains the process/procedures, for Live PLPR sites which require amendments to the patrol.
8 Reports retention	New	This clause clarifies where reports retention is derived from.

Reasons for change:

A review of NR/L3/TRK1015 Module 02 highlighted a number of concerns especially with the wording of the document, areas of duplication, confusion with responsibilities and unclear processes.

This module has been rewritten to:-

- Reduce duplication
- Enhance comprehension
- Eradicate conflicting sections
- Align the processes
- Remove unnecessary detail

This streamlined, clear and concise standard, which used lessons learned, will allow for a smoother transition from BVI to PLPR, and a straight forward inspection/maintenance process.

NR/L3/TRK/1015 Management of Basic Visual Inspection

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Senior Asset Engineer	Route Asset Management	No	Senior Delivery Manager	Data Collection Services	Yes
Asset Engineer	Route Asset Management	No	Delivery Manager	Data Collection Services	Yes
Assistant Track Maintenance Engineer	Route Asset Management	No	On Train Technicians	Data Collection Services	No
Assistant Section Manager [T]	Route Asset Management	No	Examination Inspectors	Data Collection Services	No
Business Change Manager	Safety, Technical & Engineering	Yes	Planning & Logistics Manager	Data Collection Services	Yes
Business Change Specialist	Safety, Technical & Engineering	No	Planning & Logistics Specialist	Data Collection Services	Yes
			RAM [T]	Route Asset Management	Yes
			Track Maintenance Engineer	Route Asset Management	Yes
			Section Manager [T]	Route Asset Management	Yes

Impact on Function *(to be completed by Function)*	
Further information contact	Ian Barber, Senior Engineer Tel: 07919470473

NR/L3/TRK/02201 Management of Risks arising from Deferred Renewals (Track)

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	03/06/2017	New	1

Purpose	Scope
This standard sets out how to manage the deferred renewal process and the actions required during each stage	This standard applies to all Track asset renewals, refurbishments, enhancement schemes and major projects funded by Route Asset Manager (Track)

What's new, what's changed and why

This is a new standard/control document.

This Level 3 standard has been created to enhance the Level 2 document (NR/L2/HAM/02201) by making it more Track specific and giving clearer guidelines to the deferred renewal process.

The benefits of this standard are that is has simplified and defined the deferred renewal process for Track

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Area Directors or equivalent	Network Operations	No	Route Asset Managers	Network Operations	Yes
Director of Asset Management	Network Operations	No	Track Maintenance Engineers	Network Operations	Yes

NR/L3/TRK/02201 Management of Risks arising from Deferred Renewals (Track)

Impact on Function *(to be completed by Function)*	
Further information contact	Steve Richmond, Senior Engineer Tel: 07810 058416

NR/GN/TRK/7001 Index of Track Work Information Sheets (TWI)

Issue Date	Compliance Date	New/Superseded	Issue
04/03/2017	N/A	Superseded	12

Purpose

This Guidance Note provides the index and version control to the Track Work Information Sheets (TWIs) to be used in connection with Standard Maintenance Procedures, Method Statements, Work Instructions and Track Training Framework training documentation.

Scope

The TWIs may be applied by anyone who has been assessed and is deemed competent under the Network Rail competency management programme and is working on the track asset controlled by either:

- a standard maintenance document (e.g. SMP, Method Statement, Work Instruction); or
- an approved Method Statement on a renewals or project site.

The details within the TWIs may be used as the basis for “tool-box talks” provided that the briefer meets the competency assessment criteria. The TWIs should not be applied or interpreted in stand-alone mode.

What’s new, what’s changed and why

The table below summarises all the sections/clauses that have been amended/deleted/added:

Section/clause	Amended/deleted/new	Summary of changes
Contents	Amended	Correction of errors.
2 Scope	Amended	Minor amendments to formatting; no change to content.
4 Introduction to TWIs	Amended	Minor amendments to formatting; no change to content.
Appendix A Index to TWIs	Amended	Index updated to reflect the introduction of the following TWIs: <u>New TWIs:</u> TWI 2L008 issue 1 “How to inspect class III boundary measures” TWI 3L017 issue 1 “How to use LiDAR risk models”

NR/GN/TRK/7001 Index of Track Work Information Sheets (TWI)

What's new, what's changed and why (continued)

Appendix A Index to TWIs (continued)	Amended	New TWI (previously shown as pending): TWI 3G131 issue 1 "How to manage residual risk when specifying work to the asset" (title amended)

Reasons for change:

New TWI 2L008 issue 1 introduced to provide guidance for inspection of class III fences of the type associated with control of incursion by livestock; typically a tensioned wire design with stock proofing measures. The guidance includes the key elements that contribute to a successful inspection.

New TWI 3L017 issue 1 introduced to provide guidance on preparation of an action plan following receipt of Light Detection and Ranging (LiDAR) risk model data identifying trees that pose a risk to the safe operation of the railway if they were to fail.

New TWI 3G131 issue 1 introduced to provide guidance for implementation of criteria for when it is necessary to formally assess the need to bring existing track assets in line with current design standards; and to record the findings of such assessments.

Briefing Requirements:

Changes to TWIs will be briefed at the Quarterly Track & Lineside Governance and Safety Briefing on 30/03/17 for onward cascade.

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
Infrastructure Maintenance Engineers	Network Operations	No	Route Asset Managers [Track]	Network Operations	Yes
Section Managers [Track]	Network Operations	No	Senior Asset Engineers (Support) [Track]	Network Operations	No
			Senior Asset Engineers (R&E) [Track]	Network Operations	No
			Route Asset Manager (Geotechnics, Drainage & Off Track)	Network Operations	Yes

NR/GN/TRK/7001 Index of Track Work Information Sheets (TWI)

Awareness Brief			Technical Brief		
Post	***Function***	***Cascade Brief?***	***Post***	***Function***	***Cascade Brief?***
			Route Asset Manager (Drainage & Off Track)	Network Operations	Yes
			Senior Asset Engineer (Support) [Lineside]	Network Operations	No
			Senior Asset Engineer (Drainage & Off Track)	Network Operations	No
			Track Maintenance Engineers	Network Operations	Yes
			Section Manager [Off Track]	Network Operations	Yes
			Section Supervisor [Off Track]	Network Operations	No
			Team Leader [Off Track Inspection]	Network Operations	No
			Senior Project Engineers	Infrastructure Projects	Yes
			Project Engineers	Infrastructure Projects	No
			Senior Design Engineers [Track]	Infrastructure Projects	Yes
			Design Engineers [Track]	Infrastructure Projects	No

Impact on Function *(to be completed by Function)*	
Further information contact	Melanie Denley, Senior Engineer [Track & Lineside] Tel: 07771 830204

Forms

Document Reference	Title	Issue
SMF/PL/0253	OTP Work Plan	9

Withdrawn Documents

Withdrawn Document	Title	Issue	Replacement Document(s)
NR/L3/CIV/140/80C	Section 80 - Structural Concrete	2	NR/L2/CIV/140 Issue 12
NR/L3/CIV/140/80N	Section 80 - Structural Concrete	2	NR/L2/CIV/140 Issue 12
NR/L3/MTC/MG0176/01	Purpose, Scope, Definitions and Abbreviations	4	NR/L3/MTC/MG0176
NR/BS/LI/385	Standard affected: NR/L2/OHS/019 (Issue 8) Safety of People Working On or Near the Line	1	NR/L2/OHS/019 Issue 9
NR/L2/OHS/133	Code of Practice for Planning and Delivering Safe Work (PDSW)	1	NR/L2/OHS/019 Issue 9
NR/BS/LI/352	Standard affected: NR/L2/OHS/133 (Issue 1), Code of Practice for Planning and Delivering Safe Work (PDSW)	1	NR/L2/OHS/019 Issue 9
NR/BS/LI/355	Standard affected: NR/L2/OHS/133 (Issue 1), Code of Practice for Planning and Delivering Safe Work (PDSW)	2	NR/L2/OHS/019 Issue 9
TI 011	Post Cat 'A' SPAD Signal Sighting Committees	4	Please see NR/L2/SIG/10158 Issue 1
TI 168	Evaluation of Minimum Reading Time	1	Please see NR/L2/SIG/10158 Issue 1
NR/L3/SIG/10665 Modules 1 - 36	N/A	N/A	Incorporated in NR/L3/SIG/10663 Issue 7
NR/GN/CIV/004	Index of Building and Civil Engineering Forms	2	N/A
RT/CE/P/034	Reporting of Track Buckles	1	NR/L2/TRK/001/mod14 Issue 6 TEF3032
NR/L2/SIG/10660	Signalling Maintenance Specifications (SMS)	8	NR/L3/SIG/10663 NR/L3/SIG/10663/A04

Current Letters of Instruction

Document Reference	Title	Issue	Date
~~NR/BS/LI/385~~	~~Standard affected: NR/L2/OHS/019 (Issue 8) Safety of People Working on or Near the Line~~	~~1~~	~~13/10/2016~~
NR/BS/LI/384	Standard affected: NR/WI/ELP/27051 Issue 4 Works Instructions Section D for DC Electrified Lines in the Liverpool Area	1	21/10/2016
NR/BS/LI/383	Standard affected: NR/L2/CTM/021 (Issue 4), Competence and Training	2	09/09/2016
NR/BS/LI/380	Standard affected: RT/CE/S/130 (Issue 1), Flash-welded rails – site-welded strings	1	19/09/2016
~~NR/BS/LI/378~~	~~Standard affected: NR/L1/INI/PM/GRIP/100 (Issue 3), Governance for Railway Investment Projects (GRIP) - Policy~~	~~1~~	~~21/06/2016~~
NR/BS/LI/377	Standard Affected: NR/L2/TEL/0092 Disconnection and at risk processes for Telecom bearer circuits and systems including GSM-R equipment	1	07/07/2016
NR/BS/LI/375	Standard affected: NR/WI/ELP/27051 (Issue 4), Working Instructions for DC Electrified Lines in the Liverpool Area	1	14/06/2016
NR/BS/LI/374	Standard affected: NR/WI/ELP/27051 (Issue 4), Working Instructions for DC Electrified Lines in the Liverpool Area	1	13/06/2016
NR/BS/LI/372	Standard affected: NR/L3/MTC/EP0203 (Issue 2) – Control and amendment of electrification isolation documentation	1	29/07/2016
NR/BS/LI/371	Standard affected: NR/L2/CIV/162 (Issue 2), Platform Extensions. Location of metal structures on Third Rail area Station Platforms	1	02/03/2016
NR/BS/LI/370	Standard affected: RT/E/S/21331 (Issue 1), Warning and other signs for a.c. and d.c. electrified lines	1	26/10/2016
~~NR/BS/LI/368~~	~~Standards Affected: NR/WI/ELP/3091 Issue E 2, NR/L3/ELP/27115 Issue 3, NR/WI/ELP/27140 Issue 2~~ (**Note**: This Letter of Instruction currently awaiting up-issue).	~~1~~	~~22/01/2016~~
NR/BS/LI/367	Standard affected: NR/L3/ELP/29987 (Issue 4), Working On or About 25kV A.C. Electrified Lines	1	07/01/2016
NR/BS/LI/366	Standard affected: NR/L2/ELP/27229 (Issue 2) Specification for remote control equipment for electrical distribution systems	1	22/02/2016
NR/BS/LI/365	Standard affected: NR/L3/TRK/4004 (Issue 2), Switch and Crossing Assemblies	2	16/06/2016

Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
NR/BS/LI/359	Standard affected: NR/L1/INI/PM/GRIP/100 (Issue 3), Governance for Railway Investment Projects (GRIP) - Policy	1	23/07/2015
NR/BS/LI/359/BRIEFING	Standard affected: NR/L1/INI/PM/GRIP/100 (Issue 3), Governance for Railway Investment Projects (GRIP) - Policy	1	23/07/2015
~~NR/BS/LI/355~~	~~Standard affected: NR/L2/OHS/133 (Issue 1), Code of Practice for Planning and Delivering Safe Work (PDSW)~~	~~2~~	~~21/07/2015~~
~~NR/BS/LI/354~~	~~NR/L3/TRK/3101 (Issue 1), Topographic, Engineering, Land and Measured building surveying – Track~~	~~1~~	~~05/11/2015~~
~~NR/BS/LI/352~~	~~Standard affected: NR/L2/OHS/133 (Issue 1), Code of Practice for Planning and Delivering Safe Work (PDSW)~~	~~1~~	~~17/04/2015~~
NR/BS/LI/349	Standards affected: NR/L2/CIV/003 Engineering Assurance of Building and Civil Engineering Works [Issue 4]	1	02/02/2015
NR/BS/LI/348	Requirements for undertaking the roles of Lead Examiner and Examining Engineer for the examination of Tunnels.	1	23/02/2015
NR/BS/LI/347	Standard affected: NR/L2/CTM/028 (Issue 2), Competence and Training in OLE Construction Engineering	1	16/01/2015
NR/BS/LI/346	Standard affected: NR/WI/ELP/27051 (Issue 4) – Work Instruction for D.C. Electrified Lines in the Liverpool area	1	16/12/2014
NR/BS/LI/342	Standard affected: NR/SP/ELP/21028 (Issue 3), Specification for ancillary wiring of electrical distribution equipment on A.C. and D.C electrified lines	1	13/04/2016
NR/BS/LI/340	Standard affected: NR/L3/TRK/4004 (Issue 2), Switch and crossing assemblies	1	07/01/2015
NR/BS/LI/331	Standards affected: NR/L3/CIV/020 (issue 1), Design of Bridges	2	07/08/2015
NR/BS/LI/328	Standard affected: NR/SP/ELP/21104 (ISSUE 2), Design and Installation of Electric Track Equipment for DC Electrified Lines	1	28/03/2014
NR/BS/LI/326	Standard affected: NR/L2/OHS/050 (Issue 4), Sentinel Scheme Rules	1	16/04/2014
~~NR/BS/LI/323~~	~~Standard affected: NR/L2/SIG/10064 (Issue 04), General Instructions to Staff Working on S&T Equipment & NR/GI/E022 (Issue 02), Rectification of Power Supply Earth Faults Protected by Automatic Disconnection~~ **Note**: This LoI will expire on the 31st March 2017	~~2~~	~~29/02/2016~~
NR/BS/LI/322	NR/BS/LI/322, Issue 1 Framework for the consistent assessment of fencing repairs based on risk	1	28/03/2014
NR/BS/LI/315	Standards affected: NR/SP/TRK/055 (Issue 1A), Rail Testing: UltrasonicProcedure – U1S IsolierstoB IVB 30o Scarf Joints	1	06/05/2016
NR/BS/LI/309	Standards affected: NR/PLANT/0200/Module P501 (Issue 1), Systems of Work & NR/PLANT/0200/Module P509 (Issue 1), Trailers and Attachments	1	17/09/2013
NR/BS/LI/308	Standard affected: NR/L2/SIG/11704 (Issue 3), Signalling Requirements for the Application Design and Management of Points	2	30/11/2014

Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
NR/BS/LI/306	Standard affected: NR/L1/CIV/032: The Management of Structures [Issue 2]	2	26/09/2014
NR/BS/LI/305	Standards affected: - NR/L2/TRK/001, Issue 6 - NR/L2/TRK/2102, Issue 6 - NR/L2/TRK/3038, Issue 5 - NR/L2/TRK/0032, Issue 5 - NR/L2/TRK/0132, Issue 6 - NR/L3/TRK/3510/A01, Issue 1 - NR/L3/TRK/3510/B01, Issue 1 - NR/L3/TRK/1015, Issue 2	2	31/01/2014
~~NR/BS/LI/304~~	~~Standard affected: NR/L2/EBM/STP001 [Issue 5] Managing Standards~~	~~4~~	~~29/09/2014~~
NR/BS/LI/298	Standard affected: NR/L3/OCS/044 Managed Stations Manual – Procedure MS-02 (Issue 3)	3	16/11/2015
NR/BS/LI/296	Standard affected: NR/L3/OCS/043 – National Control Instructions – Procedure 5.2 (Issue 4), Procedure For The Planned Response to GSM-R System Failures	2	16/06/2014
NR/BS/LI/292	Standard affected: NR/L3/TRK/1010 (Issue 2), Management of responses to extreme weather conditions at structures, earthworks and other key locations	1	18/07/2013
NR/BS/LI/283	Standard affected: NR/L3/TRK/4004 (Issue 2), Switch and Crossing Assemblies	2	14/09/2015
NR/BS/LI/282	Standard affected: NR/WI/ELP/3091 (Issue 2), DC Electrified Lines Working Instructions	1	24/01/2013
NR/BS/LI/281	Standard affected: NR/SP/ELP/21060 (Issue 2), Issue of Safety Documentation for Work on 650/750 V dc Apparatus	1	24/01/2013
NR/BS/LI/273	Standard affected: NR/L3/OCS/043 National Control Instruction - Procedure NR/L3/OCS/043/5.11 (Issue 1), Emergency Services Personnel On or Near the Line	4	10/07/2014
NR/BS/LI/269	Standard affected: NR/L1/ELP/27000 [Issue: 1] Asset management policy for Electrical Power assets	2	18/04/2013
NR/BS/LI/256	Standard affected: NR/SP/ELP/27243 (Issue 1), Specification for Signalling Power Supplies	2	24/10/2016
NR/BS/LI/217	Standards affected: NR/SP/ELP/27224 [Issue: 2] Specification for the installation of cable routes forming part of the traction distribution system	4	25/01/2016
NR/BS/LI/193	NR/L3/CIV/006 Part 11A: Reporting and recording examinations of Structures in CARRS [Issue 2]	2	03/09/2014
NR/BS/LI/185	Standard affected: NR/L2/TRK/5100 (Issue 2), Management of fencing	2	22/10/2015
NR/BS/LI/174	DC Electrified Lines Working Instructions	1	18/04/2010
NR/BS/LI/163	Acceptance Requirements for On Site Mobile Flash Butt Welding of Rails	2	01/10/2010
NR/BS/LI/154	Use Of The Geismar THR542 Lightweight Stressing Equipment In Tandem, Standard affected: NR/L2/TRK/3011 (Issue 6)	1	18/01/2010
NR/BS/LI/146	Standard affected: NR/L2/TRK/5100 (Issue 2), Management of fencing and other boundary measures	1	31/10/2009

Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
NR/BS/LI/119	Standard affected: NR/WI/ELP/3091 (Issue E2), DC Electrified Lines Working Instructions	1	12/12/2008
NR/BS/LI/118	Standard affected: NR/WI/ELP/3091 (Issue E2), DC Electrified Lines Working Instructions	3	21/04/2011
NR/BS/LI/106	Standard affected: NR/L2/ELP/40045 (Issue 06), Electric point heating	2	01/09/2011
NR/BS/LI/101	Standard affected: RT/CE/S/077 Storage, Installation &Testing of TSR &ESR AWS	1	08/09/2008
NR/BS/LI/099	Changes to NR/WI/ELP/27051	1	16/09/2008
NR/BS/LI/097	Standard affected NR/WI/ELP/27052 Work Instructions for DC electrified lines in the Northern city line	1	04/06/2008
NR/BS/LI/096	Standard affected NR/WI/ELP/27051 - Work Instructions for DC electrified lines in the Liverpool area	1	04/06/2008
NR/BS/LI/095	Standard affected NR/WI/ELP/3091, DC electrified lines and working instructions	1	04/06/2008
NR/BS/LI/091	Use of CEMBRE Rail Web Connection Systems on DC Conductor Rail	1	27/05/2008
NR/BS/LI/090	Standard affected: NR/WI/ELP/3091, DC electrified lines working instructions, Issue E2	4	07/06/2008
NR/BS/LI/084	Project D686: Western Territory 650 V Cable Renewals	1	18/08/2008
NR/BS/LI/083	Rail Defect Classification Codes & Summary of Changes	1	15/05/2008
NR/BS/LI/074	DC Certificates of Isolation associated with circuit breaker	1	25/10/2007
NR/BS/LI/072	STL Auxiliary Transformer Failures at Traction Substations or Switching Stations	4	19/10/2007
NR/BS/LI/061	Dangerous Incident Notification: 11Kv indoor switchgear type YSF6 manufactured by Yorkshire Switchgear	1	23/11/2006
NR/BS/LI/060	Traction electrical distribution sites with compromised earthing due to theft of cables	1	23/11/2006
NR/BS/LI/058	Train Based Grinding Specification for Switches and Crossing Grinding	1	26/09/2006
NR/BS/LI/057	Train Based Grinding Specification For Plain Line Grinding	1	26/09/2006
NR/BS/LI/056	Permali Bushings: Access Restrictions	1	11/09/2006
NR/BS/LI/054	Maintenance and Operation of WS Switchgear	1	04/08/2006
NR/BS/LI/047 – E&P	Bimold Connections on Rectifier Transformers at DC Traction Substations	1	05/05/2006
NR/BS/LI/045	Monitoring Track Over Or Adjacent To Civil Engineering Works: Procedure And Intervention Levels	2	23/04/2007
NR/BS/LI/040	650 V D.C. Traction Power Cables – Support Systems	1	20/12/2005
NR/BS/LI/037	Letter of Instruction re Neutral Section trippings at Hayes	1	10/11/2005
NR/BS/LI/034	Programme to replace components in d.c. circuit breakers comprising asbestos containing materials	1	31/10/2005
NR/BS/LI/032	Labelling of Track Isolating Switches (T.I.S)	1	17/10/2005
NR/BS/LI/028	Segregation of D.C. Track Feed Cables	1	22/08/2005
NR/BS/LI/025	Paralleling of EDFE Supply Points New Cross – Croydon, Wimbledon, Northfleet: Restrictions	3	07/01/2008
NR/BS/LI/011	Substation Entry Restrictions for Locations Containing ASEA Minimum Oil 25 kV Switchgear	6	17/10/2006

Important reminder

Network Rail standards are mandatory and shall be complied with by Network Rail and its contractors where applicable. Each Network Rail Standard contains requirements that are colour coded according to the User information classification below.

User information

This Network Rail document contains colour-coding according to the following Red–Amber–Green classification.

Red requirements - *no variations permitted*

- Red requirements are to be complied with and achieved at all times.
- Red requirements are presented in a red box.
- Red requirements are monitored for compliance.
- Non-compliances will be investigated and corrective actions enforced.

Amber requirements - *variations permitted subject to approved risk analysis and mitigation*

- Amber requirements are to be complied with unless an approved variation is in place.
- Amber requirements are presented with an amber sidebar.
- Amber requirements are monitored for compliance.
- Variations can only be approved through the national non-compliance process.
- Non-approved variations will be investigated and corrective actions enforced.

Green guidance - *to be used unless alternative solutions are followed*

- Guidance should be followed unless an alternative solution produces a better result.
- Guidance is presented with a dotted green sidebar.
- Guidance is not monitored for compliance.
- Alternative solutions should be documented to demonstrate effective control.

Are you new to the Standards & Controls Management process?
Follow these links for helpful guidance:

Principles
Change Management
Drafting
Management of Deviations (Tracker)

NETWORK RAIL STANDARDS			
BRIEFING NO. 103			
Date of Briefing:			
Name of Person Briefing the Changes	Title	Company / Department	

The undersigned confirm that they have received this awareness briefing.

Name	Title	Position/Company	Signature

*NOTE: You may use and retain this form as a record of your Standards Briefing