

# **Network Rail**

# **Standards and Controls**

## ***Awareness Briefing***

*Issue: 101. September 2016*

# Introduction

The purpose of this pack is to assist with Awareness Briefing of Network Rail standards and controls changes published in September 2016.

- *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](http://www.rssb.co.uk). All user enquiries should be directed to the Rail Safety & Standards Board Enquiry Desk on 020 3142 5400.*

## Overview – New or Superseded

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# NR/L2/INF/02242 Information Security Manual

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/12/2016	Superseded	3

## Purpose

The purpose of this manual is to:

- support the consistent identification, understanding and assessment of information security risks;
- provide up to date information against government guidelines, legislation, information security industry best practise and relevant ISO standards; and
- provide guidance to those impacted to help them make the changes necessary to people, process and technology.

Through consistent identification, understanding and assessment of information security risks, Network Rail is able to apply appropriate controls in order to manage information security risk at the appropriate level for the company.

## Scope

This manual describes the framework for governance management and of security requirements for information and information systems. This manual provides the baseline security principals to support the level 1 Information Security Policy.

This applies to all authorised Users of all Network Rail networks, IT systems, data and telecommunication equipment.

It covers the management of all accounts which are administered by Network Rail and by third parties on behalf of Network Rail.

## What's new, what's changed and why

Module/Section	New information to conform to national standards and reflect best practise
<b>Module 01 – Acceptable Use of Information and Information Systems</b>	<p>New content added to Section 5, <i>Access control</i>.</p> <p>New content added to section 7 on mobile devices.</p>

## NR/L2/INF/02242 Information Security Manual

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

Module/Section	New information to conform to national standards and reflect best practise
Section 5.4  Protecting passwords	Additional user responsibilities: <ul style="list-style-type: none"> <li>• To keep passwords secret</li> <li>• Not to store passwords in a file without encryption</li> <li>• Not to use the 'Remember Password ' feature</li> </ul>
Section 5.5  Password good practice	Additional content on password good practice for users: <ul style="list-style-type: none"> <li>• Not to use the same password for different accounts;</li> <li>• To change at least 3 characters when resetting passwords;</li> <li>• Not to use the same password for corporate accounts as for personal accounts</li> <li>• Not to rotate through a list of favourite passwords.</li> <li>• To change Passwords entirely each time;</li> <li>• Passwords should not contain usernames</li> <li>• Not to use single dictionary words within passwords.</li> </ul>
Section 7.4  Mobile devices	Additional content added on: <ul style="list-style-type: none"> <li>• describing mobile devices security issues;</li> <li>• restrictions on device use; and</li> <li>• mobile device solution design.</li> </ul>
Section 7.5  Limited personal use of mobile devices	New section added on personal use of mobile devices.

## NR/L2/INF/02242 Information Security Manual

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

Module/Section	New information to conform to national standards and reflect best practise
Section 7.6.1 Laptops	New section added on designing laptops including content on: <ul style="list-style-type: none"> <li>• whole disk encryption (FIPS 140-2); and</li> <li>• Up to date approved anti-virus software.</li> </ul>
Section 7.6.2 Smart phones and tablets	New section added on smart phones and tablets including content on: <ul style="list-style-type: none"> <li>• devices not being used for long term data storage;</li> <li>• all repairs arranged via IT Helpdesk or route equivalent;</li> <li>• Users not attempting jailbreaking on the device;</li> <li>• wiping configuration limit of 8 password attempts; and</li> <li>• approved application download locations.</li> </ul>
Section 7.6.3 Removable media	New section added on removable media including content on using removable media for the temporary storage and transport of Network Rail's information.
Section 7.6.4 Information security incidents	New section on information security incidents including content on: actions to be carried out following an Information Security incident; and encouraging Users to back-up their personal data on a regular basis.
<b>Module 02 – Information access management</b>	New content added to section 6. Removal of section 8.
Section 6 User authorisation	Added <ul style="list-style-type: none"> <li>• Include controls to prevent the reactivation of suspended or disabled user accounts without authorisation;</li> </ul>

## NR/L2/INF/02242 Information Security Manual

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

Module/Section	New information to conform to national standards and reflect best practise
Section 8	<p>Removed Content incorporated into module 01 – Acceptable Use of Information and Information Systems.</p>
<p><b>Module 03 – Password requirements for system development and system architecture</b></p>	<p>New module added.</p> <p>Purpose: This module establishes requirements for password creation, use and management. It supports Network Rail to implement security controls that mitigate risks to the confidentiality, integrity and availability of networks, information systems, devices and applications and the information assets stored therein.</p> <p>Scope:</p> <p>This module specifies the requirements for password creation, use and management.</p> <p>This module applies to all:</p> <ul style="list-style-type: none"> <li>a) people responsible for designing, developing or managing Network Rail networked systems and services;</li> <li>b) people within Network Rail who are involved in password management within application development and system architecture; and</li> <li>c) users who have access to Network Rail's information and information systems.</li> </ul>

## NR/L2/INF/02242 Information Security Manual

Awareness Brief		Technical Brief	
<i>Post</i>	<i>Function</i>	<i>Post</i>	<i>Function</i>
All staff	All functions	Business Systems Owners	All functions
All contractors	Via Capita	Application Developers	All functions
All suppliers and service integrators	All functions	System Administrators	All functions
NR Consulting	All functions		



## ***NR/L2/INF/02242 Information Security Manual***

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

### **Further information contact**

Amy Williams - Governance & Compliance Manager  
(Information Security) GBS. Tel: 01908 782962

## NR/L1/INI/CP0095 Network Rail Requirements Policy

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	30/06/2017	New	1
<b>Purpose</b>		<b>Scope</b>	
<p>The purpose of this policy is to formalise Network Rail's commitment to embedding good requirements practice across its business; not only to improve project / programme outcomes, but to meet client expectations, legislative governance and assurance requirements.</p> <p>Implementation of an enforceable requirements policy will enable the business to manage the risks associated with:</p> <ul style="list-style-type: none"> <li>a) delivering solutions based on incomplete, unverifiable, erroneous or missing requirements;</li> <li>b) ability to demonstrate/assure requirements for completeness;</li> <li>c) ability to control scope, time and cost;</li> <li>d) achieving compliance with current legislations and standards;</li> <li>e) internal and external stakeholders confidence in our ability to deliver infrastructure change projects to meet client requirements.</li> </ul>		<p>This policy specifies principles to be adopted, along with roles and responsibilities, associated with requirements development and management.</p> <p>This policy applies to all projects and programmes that: enhance or renew the operational railway; and / or are carried out in a high street environment, e.g. car park developments, where investment approval is required, as defined within IR01, Investment Regulations.</p> <p><i>NOTE: IR01, Investment Regulations, is available internally on Connect: <a href="http://connectdocs/NetworkRail/Documents/CorporateServices/Finance/FinancialControl/Investment%20Regulations.pdf">http://connectdocs/NetworkRail/Documents/CorporateServices/Finance/FinancialControl/Investment%20Regulations.pdf</a></i></p>	

### What's new, what's changed and why

This is the first issue of NR/L1/INI/CP0095; a policy which introduces a mandatory process throughout Network Rail for effective requirements management.

Capturing precise requirements from the outset is fundamental for any successful project or programme. With the adoption of a systematic and mandated requirements process the probability of delivering solutions based on incomplete, unverifiable, erroneous or missing requirements is reduced.

The policy seeks to increase the ability to demonstrate/assure project requirements sets for completeness and full compliance with safety legislation and regulations such as Construction (Design and Management) CDM, Railways and Other Guided Transport Systems (Safety) (ROGS), European railway safety legislation and the Technical Specifications for Interoperability (TSI).

## **NR/L1/INI/CP0095 Network Rail Requirements Policy**

### **What's new, what's changed and why (cont)**

The reduction of executive level risks as identified in IP-ENG-002 (Project outputs may not satisfy Project Requirements) and PE-SysEng-011 (Benefits not delivered due to lack of whole-system, whole-life approach to Programme and Project requirements) is an important expected benefit of this policy.

The policy identifies the high level principles relating to requirements management and supports information detailed within both the Sponsors Handbook and Clienting Principles.

It is expected that this mandatory requirements process will provide increased internal and external stakeholder confidence in Network Rail's ability to deliver projects that meet all the necessary safety regulations and legislation.

Note 1: NR/L2/INI/CP0069 is no longer a valid Network Rail standard. It was withdrawn with effect from 02/03/2015.

Note 2: Where there is a conflict between this policy and legislation or licence conditions, then the legislation or licence conditions will take precedence.

## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Principal Programme Engineers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Digital Railway	Director, Engineering Assurance	Infrastructure Projects
Senior Programme Engineers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Digital Railway	IP Discipline Review Group Members	Infrastructure Projects
Engineering Process & Assurance Manager	Infrastructure Projects;	Engineering Capability Lead	Infrastructure Projects
Project Engineers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Digital Railway	IP Heads of Engineering	Infrastructure Projects
IP Principal Design Engineer	Infrastructure Projects	IP Head of Risk and Value Management	Infrastructure Projects
IP Lead Design Engineer	Infrastructure Projects	IP Head of Sponsorship	Infrastructure Projects
IP Design Engineer	Infrastructure Projects	IP Project Director (Engineering & Innovation)	Infrastructure Projects
Sponsors	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Network Strategy & Capacity Planning; Digital Railway	Director Route Asset Managers	Networks Operations
IP Business Improvement Manager	Infrastructure Projects	Head of Asset Management Strategy	Safety, Technical & Engineering
IP Innovations Engineering Manager	Infrastructure Projects	Head of Whole Lifecycle Costing	Safety, Technical & Engineering
All IP Disciplines	Infrastructure Projects	Strategy & Planning Director	Network Strategy & Capacity Planning
IP Special Projects Manager	Infrastructure Projects	Principal Engineers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Network Strategy & Capacity Planning; Digital Railway

## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
IP Major Programme Director	Infrastructure Projects	Principal Engineers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Network Strategy & Capacity Planning; Digital Railway
IP Director of Engineering & Design	Infrastructure Projects	Programme Engineering Managers	Safety, Technical & Engineering; Infrastructure Projects; Network Operations; Network Strategy & Capacity Planning; Digital Railway
IP Alliance Director	Infrastructure Projects	Head of Route Safety Health & Environment	Networks Operations
Head of Programme Planning & Integration	Infrastructure Projects	Principal Programme Sponsor	Network Operations, Infrastructure Projects
IP Systems Integration Manager	Infrastructure Projects	IP Head of Programme Management	Infrastructure Projects
IP Head of Safety and Sustainability Development	Infrastructure Projects	Head of Risk Management	Safety, Technical & Engineering
IP Heads of Safety Health & Environment	Infrastructure Projects	Head of High Speed Rail Development	Network Strategy & Capacity Planning
IP Health & Safety Manager	Infrastructure Projects	Head of Analysis and Forecasting	Network Strategy & Capacity Planning
IP Safety Improvement Specialist	Infrastructure Projects	Senior Sponsor	Safety, Technical & Engineering; Infrastructure Projects; Network Operations Strategy & Operations; Network Strategy & Capacity Planning; Digital Railway
IP Programme Controller	Infrastructure Projects	Lead Programme Development Manager	Network Strategy & Capacity Planning

## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
IP Planning & Scheduling Manager	Infrastructure Projects	Senior Programme Development Manager	Network Strategy & Capacity Planning
IP Senior Validation & Verification Engineer	Infrastructure Projects	Network Engineering Manager	Digital Railway
IP Head of Estimating Business Analyst (DR)	Infrastructure Projects	Chief Systems Engineer	Digital Railway
Head of Customer Development (DR)	Digital Railway	Head of Programme Engineering Requirements Managers	Digital Railway
Head of Delivery (DR)	Digital Railway	Senior Requirements Engineer (TM)	Safety, Technical & Engineering; Infrastructure Projects; Digital Railway
Head of Operations (DR)	Digital Railway	IP Requirements Engineers	Digital Railway
Professional Head (DR)	Digital Railway		Infrastructure Projects
Head of Field Services	Digital Railway		
Programme Engineers (Telecoms)	Digital Railway		
Senior Project Engineer (Telecoms)	Digital Railway		
Project Engineer (Telecoms)	Digital Railway		
Senior Asset Engineer (Support) [Telecoms]	Digital Railway		
Asset Engineer [DR]	Digital Railway		
Programme Manager (DR)	Digital Railway		
Senior Project Manager (DR)	Digital Railway		
Technology Manager [Telecommunications]	Digital Railway		

## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Senior Technology Engineer [Analogue Radio]	Digital Railway		
Technology Engineer [Telecoms]	Digital Railway		
Chief Network Architect	Digital Railway		
Senior Network Architect (DR)	Digital Railway		
Senior Maintenance Support Engineer	Digital Railway		
Senior Network Engineer [Optimisation]	Digital Railway		
Senior Renewal & Enhancement Engineer [Telecoms]	Digital Railway		
Renewal & Enhancement Engineer [Telecoms]	Digital Railway		
Industry Team Leaders	Digital Railway		
Professional Heads	Digital Railway		
Integration Managers	Digital Railway		
People & Cultural Change Manager	Digital Railway		
Railway Undertakings Capability Manager	Digital Railway		
Sponsor	Digital Railway		
Principal Engineer (STE)	Safety, Technical & Engineering		
Infrastructure Safety Specialist (STE)	Safety, Technical & Engineering		
Public Safety Specialist (STE)	Safety, Technical & Engineering		
Operations & Freight Safety Specialist (STE)	Safety, Technical & Engineering		

## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Engineering Verification Manager (STE)	Safety, Technical & Engineering		
Level Crossing Assurance Specialist [LX Development] (STE)	Safety, Technical & Engineering		
Principal Reliability Engineer (Risk A&A) STE	Safety, Technical & Engineering		
Senior Modelling Engineer (Risk A&A) STE	Safety, Technical & Engineering		
Principal Modelling Engineer(Risk A&A) STE	Safety, Technical & Engineering		
Systems Modelling Specialist(Risk A&A) STE	Safety, Technical & Engineering		
Director of Risk Analysis & Assurance STE	Safety, Technical & Engineering		
Senior Engineer [Asset Management Modelling] STE	Safety, Technical & Engineering		
Senior Systems Reliability Engineer Risk A&A) STE	Safety, Technical & Engineering		
Senior Asset Engineer STE	Safety, Technical & Engineering		
Compliance Auditor (Risk A&A) STE	Safety, Technical & Engineering		
Corporate Investigation & Assurance Manager (Risk A&A) STE	Safety, Technical & Engineering		
Head of Risk Management STE	Safety, Technical & Engineering		
Risk and Validation Specialists	Safety, Technical & Engineering		
Infrastructure Maintenance Engineers	Network Operations		



## NR/L 1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Project Interface Co-ordinators	Network Operations		
Project Managers	Network Operations		
Track Maintenance Managers	Network Operations		
Signal & Telecoms Maintenance Engineers	Network Operations		
Electrification & Plant Maintenance Engineers	Network Operations		
Programme Manager	Network Operations		
Senior Route Asset Managers	Network Operations		
Senior Commercial Scheme Sponsor	Network Strategy & Capacity Planning		
Commercial Scheme Sponsor	Network Strategy & Capacity Planning		
Principal Sponsor - Route Investment	Network Strategy & Capacity Planning		
Associate Sponsor	Network Strategy & Capacity Planning		
Senior Programme Development Manager	Network Strategy & Capacity Planning		
Programme Development Manager	Network Strategy & Capacity Planning		
Scheme Sponsor	Network Strategy & Capacity Planning		
Project Sponsor	Network Strategy & Capacity Planning		

## NR/L1/INI/CP0095 Network Rail Requirements Policy

Awareness Brief		Technical Brief	
<i>Post</i>	<i>Function</i>	<i>Post</i>	<i>Function</i>
Sponsor Assistant	Network Strategy & Capacity Planning		
Project Manager (Business Change)	Group Business Services		
Head of Information Systems Strategy	Group Business Services		
Head of IT Support Services	Group Business Services		

## NR/L1/INI/CP0095 Network Rail Requirements Policy

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

**Further information contact**

Mahluli Khumalo, Systems Engineer, Infrastructure Projects 07710 959078

## NR/L2/MTC/MG0012 (formerly NR/L3/MTC/MG0012) Network Operations [Non-operations] briefing process

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/06/2017	Superseded	5
Purpose		Scope	
<p>This business process describes the communication process for the briefing of general, safety and technical information to:</p> <ul style="list-style-type: none"> <li>a) staff employed in Network Rail's Network Operations within the scope of this business process; and</li> <li>b) its infrastructure contractors employed in contracts administered in Network Operations.</li> </ul> <p>This business process is designed to achieve a thorough and consistent approach to briefing to mitigate the risk of staff (including contractors) not being made aware of key safety messages and changes to standards and controls.</p>		<p>This business process applies to Network Operations staff who:</p> <ul style="list-style-type: none"> <li>a) work on the railway infrastructure to carry out inspection, maintenance, renewal or enhancement activities, and members of their teams;</li> <li>b) supervise and manage staff in a) at all levels in the organisation;</li> <li>c) provide support activities (for example planning, resourcing, administration, safety, health, welfare and environment advice) to enable the work by staff in a) to take place; and</li> <li>d) employing managers of contracts administered by or for Network Operations which involve work on the railway infrastructure.</li> </ul> <p>It also applies to staff in other functions who have defined accountabilities in this business process (for example involved in contracts and procurement) and to other groups who operate under this process (for example a group in Route services delivering direct works on the infrastructure).</p> <p>The business process specifically covers two processes:</p> <ol style="list-style-type: none"> <li>1. a period safety brief to cascade key safety messages and information; and</li> <li>2. a quarterly standards and controls awareness briefing process to brief changes to standards and controls.</li> </ol> <p>It is not intended to be used for the management of day-to-day correspondence or other ad hoc documents.</p>	

## NR/L2/MTC/MG0012 (formerly NR/L3/MTC/MG0012) Network Operations [Non-operations] briefing process

Purpose	Scope
	<p>This business process does not cover the requirements for Technical Briefing. They are set out in NR/L2/EBM/STP001.</p> <p>General requirements for safety management of contractors are provided in NR/L3/MTC/SE0212. The key role which is accountable under that standard is the Employing Manager. NR/L3/MTC/SE0212 does not cover general briefing requirements which are included in this standard.</p>

### What's new, what's changed and why

The standard has been completely refreshed and orientated around three specific sets of requirements within the Network Operations function:

- 1) The production, review, authorisation, use, cascade and recording of a safety brief each period;
- 2) The production, cascade and recording of a customised standards and controls awareness briefing every quarter in conjunction with the standards management process; and
- 3) The briefing arrangements for contractors for matters relevant to them arising from both the period safety brief and the quarterly standards and controls awareness briefing.

## NR/L2/MTC/MG0012 (formerly NR/L3/MTC/MG0012) Network Operations [Non-operations] briefing process

Awareness Brief		Technical Brief	
Post	Function	Post	Function
		Head of Corporate and Passenger Safety	Safety, Technical and Engineering
		Managing Director, England and Wales	Network Operations
		ScotRail Alliance Managing Director	Network Operations
		Route Managing Director	Network Operations
		Head of Route Safety, Health and Environment	Network Operations
		Area Director	Network Operations
		Route Infrastructure Maintenance Director	Network Operations
		Director, Route Asset Management	Network Operations
		Route Programme Manager	Network Operations
		Compliance and Assurance Advisor	Network Operations
		Contracts and Procurement Manager	Network Operations

## **NR/L2/MTC/MG0012 (formerly NR/L3/MTC/MG0012) Network Operations [Non-operations] briefing process**

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

**Further information contact**

Mark Sturgess, Engineering Assurance Manager 07802 890446

## NR/L3/OPS/041 (formerly NR/L3/OCS/041) Operations Manual – Contents and Responsibilities Matrix

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/12/2016	Superseded	38
Purpose		Scope	
<p>This Standard bears the authorising signatures for the Operations Manual and contains the Contents &amp; Responsibilities Matrix of the procedures contained therein. It shall be issued every time there is a change to procedures in the manual.</p> <p>The Operations Manual provides mandatory procedures applicable to employees in the Network Operations function. Its purpose is to provide a unified suite of procedures for managers with operational responsibilities throughout the function.</p>		<p>This Standard and the procedures in the Operations Manual apply only to the actions of Operations staff who are competent to work within the operations environment.</p>	

### What's new, what's changed and why

#### NR/L3/OPS/041 – Contents and Responsibilities Matrix

Updated to reflect the withdrawal of the procedure listed below.

#### NR/L3/OCS/041/2-05 – Action to be Taken with Employees Following Incident

Following the update of NR/L1/OHS/051 *Drugs and Alcohol Policy* and NR/L2/OHS/00120 *Testing for drugs and alcohol* in December 2015, the information contained in NR/L3/OCS/041/2-05 *Action to be Taken with Employees Following an Incident* can now be found in these standards. On this basis NR/L3/OCS/041/2-05 is obsolete and can be withdrawn.



# NR/L3/OPS/041 (formerly NR/L3/OCS/041) Operations Manual – Contents and Responsibilities Matrix

Awareness Brief		Technical Brief	
<i>Post</i>	<i>Function</i>	<i>Post</i>	<i>Function</i>
Current Operations Managers	Network Operations		
Operations Managers	Network Operations		
Route Control Managers	Network Operations		
Local Operations Manager	Network Operations		
National Control Manager	Network Operations		
Operations Risk Advisor	Network Operations		
Area Manager	Network Operations		
General Manager	Network Operations		
National Operations Controllers	Network Operations		
Head of High Speed Operations	Network Operations		
Heads of Route Safety, Health & Environment	Network Operations		
Incident Controllers	Network Operations		

## **NR/L3/OPS/041 (formerly NR/L3/OCS/041) Operations Manual – Contents and Responsibilities Matrix**

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

**Further information contact**

Tony Raine, Operations Principles Specialist (Network Operations) 07860 742918

## NR/L3/OPS/044 (formerly NR/L3/OCS/044) Managed Station Manual - Contents, Procedures and Responsibilities Matrix

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/12/2016	Superseded	13
Purpose		Scope	
<p>The Managed Stations Manual provides mandatory procedures applicable to employees and the contractors working for the Operations staff. Its purpose is to provide a unified suite of procedures for managers with the Managed Stations responsibilities throughout the function.</p> <p>This Standard Operations Procedure bears the authorising signatures for the Managed Stations Manual and contains the Contents &amp; Responsibilities Matrix. This Standard Operations Procedure is issued every time there is a change to the procedures in the Managed Stations Manual.</p>		<p>This Work Instruction Standard and the procedures in the Managed Stations Manual apply to the actions of employees and contractors working for the Network Operations function who are working within the station environment.</p>	

### What's new, what's changed and why

#### NR/L3/OCS/044 – Contents and Responsibilities Matrix

Updated to reflect the withdrawal of procedure listed below.

#### NR/L3/OCS/044/MS-16 – For Cause Testing

Following the update of NR/L1/OHS/051 *Drugs and Alcohol Policy* and NR/L2/OHS/00120 *Testing for drugs and alcohol* in December 2015, the information contained in NR/L3/OCS/044/MS-16 *For Cause Testing* can now be found in these standards. On this basis NR/L3/OCS/044/MS-16 is now obsolete and can be withdrawn.

## NR/L3/OPS/044 (formerly NR/L3/OCS/044) Managed Station Manual - Contents, Procedures and Responsibilities Matrix

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Stations Operations Specialist (Jason Manley)	Network Operations		
Station Managers	Network Operations		
Shift Station Managers	Network Operations		
Head of Route Safety, Health & Environment	Network Operations		

## **NR/L3/OPS/044 (formerly NR/L3/OCS/044) Managed Station Manual - Contents, Procedures and Responsibilities Matrix**

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

**Further information contact**

Jason Manley, Stations Operations Specialist 07979 692995

## NR/L2/SIG/19809 Business Process for Selection of Point Operating Equipment

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	04/03/2017	Superseded	2
<b>Purpose</b>		<b>Scope</b>	
<p>This document enables Routes to select the Point Operating Equipment (POE) to meet the company's safety, reliability and performance objectives in line with whole life costs.</p> <p>Legacy POE has limited future performance improvement capability and presents an obsolescence risk, this document aims to remove this risk. The strategic aim is to install equipment which has the capability to enable Digital Railway migration, optimise Remote Condition Monitoring and utilise Plug and Play initiatives for future benefit.</p>		<p>This document is the selection process for POE and power supply option's enabling Routes to select their most cost effective solution.</p> <p>This document applies to the selection of POE for use on Network Rail Managed Infrastructure.</p> <p>This document also provides guidance on the selection process for POE when the Track components within the switch panel are not being replaced / renewed, i.e. functional equivalent replacement.</p>	
<b>What's new, what's changed and why</b>			
<p>The opportunity has been taken to remove TI134 and TI143 and provide a more customer focused document. Selection process is provided via a flow diagram which is design to provide the appropriate POE to meet the company's safety, reliability and performance objectives in line with whole life costs.</p>			

## NR/L2/SIG/19809 Business Process for Selection of Point Operating Equipment

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Section Manager (Signals)	Route	Route Asset Manager (Signalling)	Route
Works Delivery Managers	Route	Signal & Telecoms Maintenance Engineer	Route
Signalling Technical Support Staff	Route	Head of Engineering (Infrastructure Projects – Signalling)	IP
Signalling Delivery Engineers, Project Engineers and Signalling Designers	IP		
Route Asset Manager (Track)	Route		

## **NR/L2/SIG/19809 Business Process for Selection of Point Operating Equipment**

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

**Further information contact**

Bleddyn-James Davies, Senior Technology Engineer [Signals] 07825 257807



## NR/L1/SIG/50021 Signalling Asset Policy

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	01/04/2019	Superseded	2
<b>Purpose</b>		<b>Scope</b>	
<p>The purpose of this document is to specify the asset management policy for Control, Command and Signalling (CCS) systems for CP6 and beyond.</p> <p><b>NOTE:</b> It should be read in conjunction with other asset policies.</p> <p>The CCS asset management policy seeks to optimise the performance, risk and cost of ownership of the Signalling estate across all of its life cycle stages from concept to disposal to deliver minimum whole life cost.</p> <p>The policy is structured around the six main subject areas and 39 sub-groups identified in the Institute of Asset Management document 'Anatomy of Asset Management':</p> <ul style="list-style-type: none"> <li>• strategy and planning;</li> <li>• asset management decision-making;</li> <li>• life cycle delivery;</li> <li>• asset information;</li> <li>• organisation and people; and</li> <li>• risk and review.</li> </ul> <p>The Institute of Asset Management guidance is recognised as best practice against which Network Rail is measured by the Office of Rail and Road, 'The Regulator'.</p>		<p>The policy applies to all employees and others engaged in activities connected with any aspect of a Signalling asset life cycle.</p>	
<b>What's new, what's changed and why</b>			
Very minor correction to Level 1 standard confirming compliance date.			

## NR/L1/SIG/50021 Signalling Asset Policy

Awareness Brief		Technical Brief	
<i>Post</i>	<i>Function</i>	<i>Post</i>	<i>Function</i>
Route Asset Manager (Signalling)	Route		
Head of Engineering (Infrastructure Projects – Signalling)	Infrastructure Projects		

## NR/L1/SIG/50021 Signalling Asset Policy

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

**Further information contact**

Stephen Franklin, Principal Engineer [Control, Command & Signalling] 07734 133188

## NR/L3/SIGELP/27425 Equivalent Cable Sizes for Signalling Power Distribution Cables

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	09/01/2017	New	1
Purpose		Scope	
<p>This standard authorises, subject to constraints specified, the replacement of signalling power supply cables complying with BR 880, BR 872 or RT/E/PS/00005 with cables complying with NR/L2/SIGELP/27408. This standard is intended to facilitate replacement of cables without resorting to design, subject to exclusions, in order to improve the availability and safety of signalling power supply systems.</p> <p>This standard will mitigate against the risk of selecting inappropriately sized cables when carrying out emergency repairs or undertaking functionally equivalent replacement of existing cable sections.</p> <p>NOTE: Selection of incorrectly sized cables may lead to excessive voltage drop, reduced short-circuit current capacity and increased capacitance of the signalling power supply system.</p>		<p>This standard applies to the selection and installation of replacement power cables in existing signalling power distribution systems. This standard specifies the equivalent modern cables sizes complying with NR/L2/SIGELP/27408 for the following legacy cables:</p> <p>a) B2 and D2 cables complying with RT/E/PS/00005;</p> <p>NOTE 1: D2 cables are the LSZH equivalent cables of B2 cables.</p> <p>b) MD2 and D2 type cables (pre 1986 nomenclature) complying with BR 872;</p> <p>NOTE 2: MD2 indicates metric sized cables and D2 indicates imperial sized cables.</p> <p>c) B2 and D2 type (post 1986 nomenclature) cables complying with BR 872; Twin and four-core aluminium PVC insulated armoured cables complying with BR 880; and</p> <p>e) PVC insulated cables complying with BS 6346.</p> <p>This standard may also be used to derive the equivalent cables, without the need for design, for the following:</p> <p>a) Equivalent aluminium conductor cables for copper conductor cables; and</p> <p>b) Equivalent four-core cables for two-core cables.</p>	

## NR/L3/SIGELP/27425 Equivalent Cable Sizes for Signalling Power Distribution Cables

Purpose	Scope
	<p>Exclusions</p> <p>This standard is not intended to be used for wholesale cable renewals of signalling power feeder cables where electrical circuit parameters are likely to be significantly affected.</p> <p>NOTE 3: Wholesale cable renewal requires design to be carried out so that current standards are satisfied.</p> <p>This standard shall not be applied when undertaking system configuration changes where designs are required. Such works are subject to NR/L2/ELP/27311.</p>

### What's new, what's changed and why

This standard will mitigate against the risk of selecting inappropriately sized cables when carrying out emergency repairs or undertaking functionally equivalent replacement of existing cable sections. It may also be used by designers to derive equivalent cables without the need to undertake design within the constraints specified in the standard.

This standard specifies the equivalent modern cables sizes complying with NR/L2/SIGELP/27408 for the following legacy signalling power cables:

- a) B2 and D2 cables complying with RT/E/PS/00005;
- b) *NOTE 1: D2 cables are the LSZH equivalent cables of B2 cables.*
- c) MD2 and D2 type cables (pre 1986 nomenclature) complying with BR 872;
- d) *NOTE 2: MD2 indicates metric sized cables and D2 indicates imperial sized cables.*
- e) B2 and D2 type (post 1986 nomenclature) cables complying with BR 872;
- f) Twin and four-core aluminium PVC insulated armoured cables complying with BR 880; and
- g) PVC insulated cables complying with BS 6346.

This standard may also be used to derive the equivalent cables, without the need for design, for the following:

- a) Equivalent aluminium conductor cables for copper conductor cables and
- b) Equivalent four-core cables for two-core cables.

## NR/L3/SIGELP/27425 Equivalent Cable Sizes for Signalling Power Distribution Cables

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

## **NR/L3/SIGELP/27425 Equivalent Cable Sizes for Signalling Power Distribution Cables**

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

**Further information contact**

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## NR/L3/SIGELP/27427 Identification and Colours for Signalling Power Distribution Cables

Issue Date	Compliance Date	New/Amended	Issue
03/09/2016	09/01/2017	New	1

### Purpose

This standard specifies the cable identification requirements for signalling power supply distribution cables. This reduces the risk of cables being mis-identified during installation, isolations and incorrect connections leading to potential mal operation of signalling systems.

### Scope

This standard specifies the following:

- a) The requirements for identification and colours to be adopted for the signalling power supply distribution cables in new installations; and
- b) How to interface new colour identification system with old colour identification schemes when making alterations to old signalling power systems and assets.

NOTE Conductors cores identified in accordance with BS 7671:2001+A2:2004 (and subsequent versions) are referred to as 'new colours', and conductors identified to versions of BS 7671 prior to 2004 is referred to as 'old colours'.

This standard applies to all Network Rail staff and contractors designing or working on new signalling power installations or alterations to existing ones.

This standard does not cover cable colours and identification for d.c. distribution systems, e.g. battery supplies or uninterruptible power supplies etc., which should follow NR/L2/SIG/11201 and BS 376-2, or BS 7671, as appropriate.

### What's new, what's changed and why

The standard sets out the requirements for the identification and colours to be adopted for the signalling power supply distribution cables in new installations. This intended to reduce the risk of cables being mis-identified during installation, isolations and incorrect connections leading to potential mal operation of signalling systems. The standard sets out how cables shall be marked to show:



## **NR/L3/SIGELP/27427 Identification and Colours for Signalling Power Distribution Cables**

### **What's new, what's changed and why (cont)**

- a) Their function or purpose;
- b) Cable specification and attributes;
- c) Core identification at each end of the cable;
- d) Identification to the drawings;
- e) Conductor core identification in different signalling power supply systems;
- f) Single phase distribution feeders from three-phase busbars.

The standard also sets out how to interface new colour identification system with old colour identification schemes when making alterations to old signalling power systems and assets. This includes:

- a) Interface between old and new cable identification;
- b) Warning notices for non-standard colours;
- c) Interface between signalling power cables and signalling functional circuits.

## NR/L3/SIGELP/27427 Identification and Colours for Signalling Power Distribution Cables

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

## **NR/L3/SIGELP/27427 Identification and Colours for Signalling Power Distribution Cables**

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

**Further information contact**

Tahir Ayub, Principal Engineer (Energy) 07801 775504

## NR/L2/TRK/001 Inspection and Maintenance of Permanent Way

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/09/2016	Superseded	10

### Purpose

To prescribe the inspections, limits and actions required to prevent track caused derailments, and  
 To describe the inspections, limits and actions required to optimise track performance, cost and asset life.

### Scope

The requirements of the modules in this standard apply to the inspection and maintenance of the following assets on running lines and sidings:

- a) Plain line track;
- b) switches and crossings (S&C).

The scope of the standard excludes Off track assets and closed lines.

TMEs and SM[T]s are responsible for implementing the requirements of this standard.

Infrastructure Maintenance Engineers (IMEs) are responsible for monitoring compliance with the requirements of this standard.

### What's new, what's changed and why

Any changes to these instructions have been agreed by the Standards Steering group. The standards change mitigates the risk of operational staff not working to aligned procedures.

TRK/001 module 03 is being re-issued to reaffirm the requirement to overlap 90 metres into existing CWR each side of a disturbance when stressing or re-stressing is carried out.

## ***NR/L2/TRK/001 Inspection and Maintenance of Permanent Way***

### **What's new, what's changed and why (cont)**

a) Confusion has arisen about this requirement because the contents of clause 12.2.3 of NR/L2/TRK/3011 issue 7 were not transferred to NR/L2/TRK/001/mod03 as intended.

b) Not including the first 90 metres of existing CWR in the stressing operation could result in a failure to retain the target SFT in the new works.

Also, In preparation for the re-issue of TRK/3011, the opportunity has been taken to include the existing re-stressing length restriction (36 metres) into this module.

## NR/L2/TRK/001 Inspection and Maintenance of Permanent Way

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Route Programme Director (Works Delivery)	Network Operations	RAM [Track]	Network Operations
Route Infrastructure Maintenance Manager – Western	Network Operations	Track Maintenance Engineer	Network Operations
Learning & Development Specialist Training Centres	Network Rail Training	Programme Engineering Manager	Infrastructure Projects
		Works Delivery Manager	Network Operations
		All holders of Tr09 competency	ALL

## ***NR/L2/TRK/001 Inspection and Maintenance of Permanent Way***

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

**Further information contact**

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

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/12/2016	Superseded	21
Purpose		Scope	
<p>This standard provides the index and version control to the Track Engineering Forms (TEFs) which shall be applied to meet the inspection, maintenance and renewals requirements of Network Rail track standards and the associated Standard Maintenance Procedures and Method Statements.</p>		<p>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.</p>	

### What's new, what's changed and why

Index updated to reflect changes to the following TEFs:

New TEF:

TEF 3263 issue 1 "Track geometry recording RAM[T] authorisation" (re. NR/L2/TRK/001/mod11)

Revised TEF:

TEF 3025 issue 4 "UTU compliant track segment RAM[T] authorisation" (re. NR/L2/TRK/001/mod06)

Number assigned for TEF:

TEF 3262 issue 1 "S&C Design - Risk Categorisation Tool" (re. NR/L2/TRK/2102)



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

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Route Asset Managers [Track]	Network Operations		
Senior Asset Engineers (Support) [Track]	Network Operations		
Senior Asset Engineers (R&E) [Track]	Network Operations		
Infrastructure Maintenance Engineers	Network Operations		
Track Maintenance Engineers	Network Operations		
Rail Management Engineers	Network Operations		
Section Managers [Track]	Network Operations		
Senior Project Engineers	Network Operations		
Project Engineers	Network Operations		

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

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

**Further information contact**

Melanie Denley, Senior Engineer 07771 1830204

## NR/L3/TRK/055 Work Instructions for Ultrasonic Rail Testing

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	03/12/2016	Superseded	2
Purpose		Scope	
This document defines the ultrasonic inspection procedures to be used to inspect track as specified in NR/L2/TRK/001 Inspection and Maintenance of Permanent Way to detect cracks in the rail and prevent rail breaks.		This standard specifies the ultrasonic inspection procedure to be applied on running lines and sidings: a) plain line track; b) switches and crossings (S&C).	

### What's new, what's changed and why

Letters of instruction NR/BS/LI/276 and NR/BS/LI/353 have been incorporated into this standard.  
The procedures contained within NR/SP/TRK/055 have been reviewed and withdrawn where no longer required or improved and published as individual modules specifying a particular type of ultrasonic test based on the original U numbering scheme.

The following procedures (in NR/SP/TRK/055 issue 1) have been withdrawn - U2, U3, U4, U14

The following procedures have been revised and published as separate modules to this standard: U1, U5, U6, U7, U8 U15 U16 U17 U18

Two new modules have been added:

U19 following a gap analysis around ultrasonic testing of S&C

U20 for the testing of Scarf Joints.

## NR/L3/TRK/055 Work Instructions for Ultrasonic Rail Testing

Awareness Brief		Technical Brief	
<i>Post</i>	<i>Function</i>	<i>Post</i>	<i>Function</i>
Chief Track & Lineside Engineer	STE	Head of Track	STE
Head of Training Services	HR	Ultrasonic Operators	Network Operations Route
Route Asset Manager Track	Network Operations Route		
SAE (Track)	Network Operations Route		
TME Track	Network Operations Route		
RME	Network Operations Route		
Section Manager Ultrasonics	Network Operations Route		
Contracts and Procurement	Network Operations Route		
Infrastructure Maintenance Directors	Network Operations Route		

## NR/L3/TRK/055 Work Instructions for Ultrasonic Rail Testing

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

**Further information contact**

John Harris, Senior Engineer 07771 612847

## NR/L2/TRK/2102 Design and Construction of Track

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	04/03/2017	Superseded	8

### Purpose

This standard is intended to control the risk of incorrect materials and components being specified and to control the required quality of installation of track. It specifies the design principles and minimum standards for the construction of new or relayed track, including the materials to be used. It also specifies acceptance criteria for new or relayed track in terms of workmanship and the track geometry requirements for both newly installed and existing track.

### Scope

This Network Rail standard specifies the requirements for the design and construction of track with line speeds up to 140mph. This includes:

- a) the construction of new sections of track and routes;
- b) the replacement of contiguous lengths of track components or switch and crossing layouts, either singly or in combination, as part of project or renewal activities;
- c) the replacement of new construction of trackbed layers, drainage, level crossings, direct fastening systems, buffer stops or other track features;
- d) the replacement of components of the track system, carried out during maintenance, that significantly changes its design or configuration (for instance, the installation or removal of check rails or the installation of cast crossings with welded extension legs in place of semi-fabricated crossings);
- e) the requirements to be met whenever existing tracks are upgraded to carry higher speeds or tonnages of rail traffic; and
- f) the requirements for the design of track geometry for both newly installed and existing track.

### What's new, what's changed and why

- 1) Correction of errors in issue 7.
- 2) New content in 'Definitions' section to include omitted items and new components.
- 3) Clarification of a number of points and clauses where "design, construct and measure" requirements were unclear.
- 4) Clarification of the length of rail in jointed track.
- 5) Section on "structure adjustment switch" expanded to include location, use and stressing requirements.
- 6) Section on "ballast gluing" expanded to include use in transitions.
- 7) Clarification of requirements for horizontal and vertical alignment and the provision of transitions.

## ***NR/L2/TRK/2102 Design and Construction of Track***

### **What's new, what's changed and why (cont)**

- 8) Clarification of design and use of guard rails.
- 9) Section on "track lowering" expanded to clarify vertical alignment requirements.
- 10) Introduction of a new requirement for designers to review new designs with an S&C risk categorisation tool (TEF 3262).
- 11) Minor amendments to text for guidance and clarification.

Technical briefing material giving a detailed explanation of all key changes included in issues 7 and 8 is available separately.

## NR/L2/TRK/2102 Design and Construction of Track

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Project Director [Engineering & Innovation]	Investment Projects	Senior Project Engineers [Track], Project Engineers [Track], Assistant Project Engineers [Track]	Investment Projects
Senior Engineers, Engineers	STE	Senior Design Engineers [Track], Design Engineers [Track], Assistant Design Engineers [Track]	Investment Projects
Principal Reliability Improvement Specialist, Senior Reliability Improvement Specialist	STE	Programme Engineering Managers	Investment Projects
Senior Engineers, Engineers	STE	Route Asset Managers [Track]	Network Operations
Principal Engineers	STE	Senior Asset Engineers (Support) [Track]	Network Operations
		Senior Asset Engineers (R&E) [Track]	Network Operations
		Work Delivery design teams	Network Operations
		Principal Engineers	STE
		Principal Vehicle Track Dynamics Engineer	STE
		Reliability Improvement Manager [Track & Lineside]	STE
		Principal Engineers	STE
		Supplier design lead engineers	External



## ***NR/L2/TRK/2102 Design and Construction of Track***

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

**Further information contact**

Brian Whitney, Principal Engineer [Track] 07990 533768

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

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	N/A	Superseded	10

### 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.

TWIs provide guidance about how to obtain quality outputs from physical work on the track.

### Scope

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 shall under no circumstances be applied or interpreted in stand-alone mode.

### What's new, what's changed and why

#### Revised TWI:

TWI 2S003 issue 2 "How to recognise switch types"

#### Numbers assigned for TWIs:

TWI 2P049 issue 1 "How to inspect, adjust and maintain structure adjustment switches " and 3G131 issue 1 " How to maximise the reduction in residual risk when specifying work to the asset "

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

Awareness Brief		Technical Brief	
Post	Function	Post	Function
RAM[T], SAE (Support) [Track], SAE (R&E) [Track]	Network Operations		
IME, TME, SM[T] and Team Leaders [Track Inspection and Track Maintenance]	Network Operations		
Senior Project Engineers, Project Engineers	Infrastructure Projects		
Training Delivery Specialists	Human Resources		

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

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

**Further information contact**

Melanie Denley, Senior Engineer 07771 1830204

## NR/L1/XNG/100/02 Level crossing asset management policy – Technology strategy

Issue Date	Compliance Date	New/Superseded	Issue
03/09/2016	01/04/2019	New	1
Purpose		Scope	
<p>The purpose of this module is to set out Network Rail’s strategy for level crossing technology development and selection for the remainder of CP5 going into CP6 and beyond. It supports the level crossing asset management policy.</p> <p>The technology strategy has been designed to be informative and accessible at all levels of Network Rail and to the industry at large. It provides clarity about Network Rail’s current strategic thinking and intentions in the key technology areas. It also gives broad guidance to suppliers and potential suppliers of level crossing technology, informing their strategic technology decision making and investments in product development.</p> <p>The technology strategy comprises a set of high level principles, statements of aims and functional requirements. Together, these map out a technology path from today’s railway to our future vision.</p> <p>This module is one of a suite of modules detailing information and guidance on the level crossing asset management policy. It should be read in conjunction with other associated policy modules.</p>		<p>The scope of the level crossing technology strategy includes:</p> <ol style="list-style-type: none"> <li>any technology used by the signaller for the management, control and/or supervision of a level crossing;</li> <li>any technology that members of the public might be required to use in the process of crossing at a railway crossing point;</li> <li>any technology that interfaces with signalling system for the purpose of the management and control of a level crossing; and</li> <li>auxiliary or complimentary systems associated with level crossings but which have no direct interface to the signaller, user or signalling system in the management and control of level crossings. For example Red Light Safety Cameras, event recording systems or surveillance camera systems.</li> </ol> <p>The Level Crossing technology strategy focuses on four key areas:</p> <ul style="list-style-type: none"> <li>reducing level crossing safety risk;</li> <li>reducing the overall operational cost of level crossings through increased automation;</li> <li>reducing the overall total cost of ownership of level crossings including initial capital cost of installation, on-going maintenance and lifetime support; and</li> <li>moving reliance for the management of level crossings from people to technology.</li> </ul>	

## ***NR/L1/XNG/100/02 Level crossing asset management policy – Technology strategy***

### **What's new, what's changed and why**

This is a new module which supports NR/L1/XNG/100 Level crossing asset management policy. Compliance date for the module is 1<sup>st</sup> April 2019 (CP6). We wish to publish in September to establish a controlled reference for further update between September 2016 and the start of CP6.

There remain open points in the technology strategy module which have been clearly identified. These will be considered by the working group prior to the compliance date.

## NR/L1/XNG/100/02 Level crossing asset management policy – Technology strategy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
Level Crossing Managers	Route	Principal Engineer (Technology)	STE
Renewals Engineers (Track, Signalling, Lineside, Electrical Power)	Route	Principal Engineer (Standards)	STE
		Head of Level Crossing Safety	STE
		Head of Passenger and Public Safety	STE
		Head of Lineside	STE
		Head of Track	STE
		Head of Power Distribution HV/LV	STE
		Head of Contact Systems AC/DC	STE
		Head of Signals Engineering	STE
		Professional Head of Telecoms	Digital Railway
		Head of Data	STE
		Route Asset Manager (Signalling)	Route
		Route Asset Manager (Off Track)	Route
		Route Asset Manager (Electrical Power)	Route
Route Asset Performance Manager (Telecoms)	Route		
Dir. Route Asset Management	Route		
Head of Route Safety Health & Environment	Route		

## NR/L1/XNG/100/02 Level crossing asset management policy – Technology strategy

Awareness Brief		Technical Brief	
Post	Function	Post	Function
		Route Level Crossing Manager	Route
		Operations Risk Advisor (Wales and Scotland)	Route
		Chief Systems Engineer	Digital Railway
		Industry Team Leader	Digital Railway



## **NR/L1/XNG/100/02 Level crossing asset management policy – Technology strategy**

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

**Further information contact**

Alex Hill, Principal Engineer [Control, Command & Signalling] 07825 949760

# Withdrawn Documents

Withdrawn Document	Title	Issue	Replacement Document(s)
NR/L3/OCS/041/2-05	Action to be Taken Following an Incident Involving Network Rail Operational Staff (NR/L3/OPS/041/2-05)	3	NR/L1/OHS/051 Issue 6 NR/L2/OHS/00120 Issue 5
NR/L3/OCS/044/FS-16A	Healthcare Call-Out Form 'For Cause' Testing (NR/L3/OPS/044/FS-16A)	1	NR/L1/OHS/051 Issue 6 NR/L2/OHS/00120 Issue 5
TI 134	Point Batteries for Point Operation	1	NR/L2/SIG/19809 Issue 2
TI 143	Point Operating Equipment	1	NR/L2/SIG/19809 Issue 2
NR/BS/LI/276	Standard affected: NR/SP/TRK/055 (Issue 1A), Rail Testing: Ultrasonic Procedures - U15, U16 and U17 Testing	1	NR/L3/TRK/055 Issue 2
NR/BS/LI/353	Standard affected: NR/SP/TRK055 - Rail Testing: Ultrasonic Procedure U5	1	NR/L3/TRK/055 Issue 2
NR/GN/OHS/0047	Guidance for assessment of construction (design and management ) regulation competencies	1	Withdrawn
RT/CE/S/015	Welding Process – Aluminothermic Suppliers' Manuals	1	Withdrawn
NR/WI/TRK/00116	Welding Process – Aluminothermic Suppliers' Manuals	E1	Withdrawn

# Current Letters of Instruction

Document Reference	Title	Issue	Date
NR/BS/LI/382	Standard affected: NR/L2/TRK/001/mod03 (Issue 7), Plain line track	1	22/07/2016
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/376	Standard Affected: NR/L2/TEL/30088 Specification for mast inspections and maintenance of antenna systems and feeders	1	06/07/2016
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), NR/L3/MTC/EP0203 - 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/369	Standard Affected: NR/L3/SIGELP/50001 NR/SPS T001 issue 1, Earth Electrode Testing	1	15/03/2016
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	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
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/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	2	24/05/2016
NR/BS/LI/353	Standard affected: NR/SP/TRK055 – Rail Testing: Ultrasonic Procedure U5	4	04/06/2015
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

# Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
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	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	Standard affected: NR/SP/TRK/055 (Issue 1A), Rail Testing: Ultrasonic Procedure – 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
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

# Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
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/284	Standard affected: NR/L2/TRK/0053 (Issue 5) Inspection and repair to reduce the risk of derailment at switches	4	16/11/2015
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/276	Standard affected: NR/SP/TRK/055 (Issue 1A), Rail Testing: Ultrasonic Procedures – U15, U16 and U17 Testing	4	24/10/2012
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/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
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

## Current Letters of Instruction (cont.)

Document Reference	Title	Issue	Date
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	Permal 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



# INM Impact on standards September 2016 briefing notification

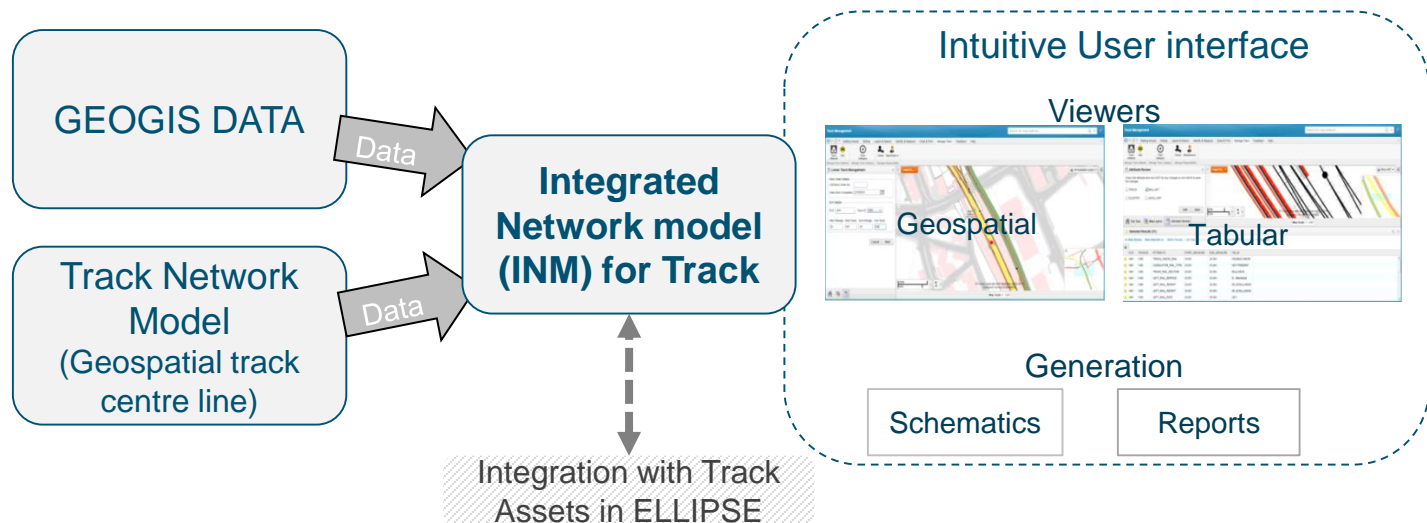
# What is INM and how will it impact standards?

## What is the Integrated Network Model?

- There is a regulated milestone to deliver a track asset register to replace GEOGIS.
- The Integrated Network Model (INM) will become the master asset register for Track related assets replacing GEOGIS and integrating with Ellipse (S&C held in Ellipse). INM will provide an intuitive geospatial view of track asset data improving usability compared to GEOGIS and can be used to generate reports and schematics.
- Extensive work has been carried out with members of Net ops, Track, AIS and IP to refine/update existing processes and introduce INM system use cases
- Our work with these stakeholders has identified a number of standards that may need slight changes

## Timelines:

- INM is due to go live early October 2016 and we aim to have approvals for all standard changes by then however it is understood that the next window for updating and adoption of standards is December 2016
- This briefing is to notify of potential upcoming changes to specific standards in December (detail on next slide)





# Standards potentially impacted by INM

Our review of INM processes and use cases with Track / IP / AIS and Net Ops communities has identified standards that may be in need of slight change. These changes are related to a few key triggers, such as:

- The Introduction of a new track asset database
- Changes to timeline for handing over IP project data
- The integration of INM, Ellipse and Network Model
- Method for data collection following maintenance

**We have identified the following standards as candidates to assess impact**

NR/L2/MTC/089 – Asset Management Plan

Net Ops

NR/L3/TRK/002 – Track Maintenance Handbook

TSG

NR/L2/TRK/001 - Inspection and Maintenance of Permanent Way

TSG

**Also potentially the standards that routes issue to the projects as part of the AMP process, including:**

NR/L3/AIF/003 – Asset data Management for Ellipse and GEOGIS

AIS

NR/L2/MTC/088 – Arrangements for Maintenance of new and changed assets

Net Ops

NR/L3/INF/02226 – Corporate Records Retention Schedule

GBS

We will also look into Business Critical Rules to assess the need for updates to reflect INM – ( All identified)

## 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. 101**

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