Level 1	
Effective Date	January 2022
Ref No:	TA/HSMS/001
Issue No.:	6.0

Title:

Network Rail (Infrastructure) Ltd (NRIL) Health & Safety Management System

Custodian: Group Safety, Technical & Engineering Director

Synopsis:

This document is an update of Network Rail (Infrastructure) Ltd.'s (NRIL) Health & Safety Management System as Infrastructure Manager of the mainline railway and operator of the Managed Stations.

Approval and authorisation:

Prepared by:

Abigail Patterson Date: 08 03 2023
Principal Operations Safety Specialist

Approved by:

Rupert Lown Date: 09 03 2023
Chief Health & Safety Officer

Authorised by:

Martin Frobisher Date: 09 03 2023
Group Safety & Engineering Director

Issue No.	Date	Comments
2.0	May 2007	New Document
2.1	February 2008	Updates to: H&S Policy Statement; VPF figure; table of Professional Heads; signal and telecoms engineering competence; Fitness to Work section; CDM responsibilities section; Structures section; Level Crossings section; Route Crime section; SPADs section; Weather section; Transport Operators section; Suppliers section; Change Control section in respect of Infrastructure, Rail Vehicle and Safety Critical Plant & Equipment; Accident Reporting and Investigation section.
2.2	April 2008	Updates to Transport Operators section.
2.3	October 2008	Maintenance Phase 2A / Engineering organisation changes.
2.4	October 2008	Updates to: Network Rail standards management – process requirements; Professional Heads.
2.5	April 2009	Updates to: Professional Heads; project safety and assurance requirements; leadership commitment and safety risk profile; safety enhancement fund reference; Level Crossing section; Route Crime section; SPAD section; include arrangements for rail mounted vehicles and plant and private wagon and locomotive owners; title of Chief Engineer to Director, Engineering.
2.6	November 2009	Updates to take account of: ERTMS; the implementation of the Process Led Organisation (PLO).
2.7	May 2011	Updates to: the definition of Network Rail Managed Infrastructure; title of Timetable Change Assessment Group to Timetable Change Assurance Group; title of Head of Operations to Director, Operational Services; VPF value for 2010/11; the frequency of SRM update; MBR references to Executive Review Meeting (ERM); reference to standard for competence specific medical requirements; reference the new NR Plant and Traction and Rolling Stock Policy; management of the Private Wagon Registration Agreements; Supplier section; the arrangements for audit of contractors; Design and Construction sections; the procedures referenced from the Managed Stations Manual; Consultation section; Safety and Welfare procedure; include summary of arrangements for complying with the requirements of the Common Safety Method (CSM) on Risk Evaluation and Assessment; take account of Devolution Phase 1.

Issue No.	Date	Comments
2.8	June 2011	Updates to post titles to take account of the Network Operations and Investment Projects organisational changes.
2.9	July 2011	Update to Chief Executive's Health & Safety Policy statement.
2.10	September 2011	Updates to VPF value; post titles to take account of the Telecoms Asset Management organisation changes; title of Director, Safety & Sustainable Development.
2.11	November 2011	Updates to take account of the Devolution Phase 2 and central Asset Management organisational changes.
3.0	February 2012	Updates to take account observations raised by ORR following stakeholder consultation in support of renewal of Safety Authorisation.
3.0	July 2012	Updates to take account of the Central Asset Management (Phase 1), Devolution (Phase 2), Project DIME (Phase 3) and Wessex Alliance (Phase 1) organisation changes – various clauses.
3.01	December 2012	Updates to take account of Asset Management changes and changes to Key Safety Posts. Updates to the content of the 'Construction' section to provide better clarity. Minor updates to take account of changes to management arrangements for Fenchurch Street station.

Issue No.	Date	Comments
3.02	December 2013	Updates to take account of post title changes in the Safety & Sustainable Development function. Updates to take account of Asset Management Services (AMS) changes and corresponding changes to Key Safety Posts. Change GRIP (Governance for Railway Investment Projects) for Change reference to Managing Successful Programmes for Network Rail (MSP4NR). Network Operations – Introduction of Area Director post. Updates following a review of Professional Head (Asset-based) job descriptions and role, AMS Energy Services restructure, and Network Rail Telecom (NRT) introduction of Professional Head [Telecoms] and corresponding changes to Key Safety Posts. Updates to reflect 2013 amendments to ROGS. Updates to reflect introduction of new Sentinel and the withdrawal of the authority-to-work paper form. Updates to reflect the withdrawal of the Safety Tours standard NR/SP/OHS/040 Safety Tours and replacement with Leading Safety Conversations.
3.03	October 2014	Control Period 4 document links updated to signpost to Control Period 5 documents. General update to hyperlinks where required. Update of wording to align with OHSAS (Occupational Health & Safety Assessment Series) 18001 principles. Addition of CEO's (Chief Executive's) Safety Vision. Updates to post titles and relevant activities, where positions have changed due to the Management Efficiency Programme organisational restructure. Updates to post titles and relevant activities, where positions have changed due to the Matrix Organisation organisational restructure. Removal of S&SD Executive Meeting and replaced with STE Business Performance Management Group Meeting. Update to include for Enterprise Risk Management.

Issue No.	Date	Comments
3.04	December 2014	Updated section 5 to include monitoring activities. Corporate Engineering Verification process updated to reflect current arrangements. Addition of the Integrated Plan to section 2.3. Near miss references updated to reflect Close Call arrangements. References to S&SD Executive meeting and STE Business Performance meeting changed to the National Safety, Health and Environment review meeting. Legal references changed to “current” rather than stating the year of the legislation. Track safety and access to infrastructure updated to reflect current arrangements. Reference to Network Rail’s legal register has been added. Arrangements for the Network Rail Acceptance Panel (NRAP) updated to reflect current arrangements. Arrangements for Engineering Verification updated to reflect current arrangements.
3.05	August 2015	Updated section 2.1 to include the Safety Vision Addendum. Arrangements for the STE Matrix organisation have been added. Updated arrangements relating to Construction [Design and Management] Regulations (CDM) and new issue of NR/L2/OHS/0047. Reference to Network Rail’s Crisis Management arrangements has been added. Reference to High Output and S&C arrangements has been added. Section 4.4 on ‘Managing Standards’ has been updated to reflect the Business Critical Rules Programme. Reference to non-Network Rail Managed Infrastructure arrangements has been added. Updated arrangements for Contractor Licencing have been added.

Issue No.	Date	Comments
3.06	March 2016	Link added to the business performance management framework (BPMF) page on Connect. Table updated to include specific job titles for Scotland Route. Updated to reference the new Level 1 Standard/Policy for Network Rail Risk Management. Reference added to the Alliance arrangements in the Scotland Route and the ScotRail Alliance handbook. Professional Head of Telecoms (NRT) added to table. Updated to include specific job titles for Scotland Route. Reference added to Technical Specifications for Interoperability (TSI's). New section added to reflect arrangements for Managed Stations Light. New section added to reflect arrangements for Mainline Operations. Updated to identify the integration with Planning and Delivery of Safe Work Programme. Added frequency of updates for the H&S Legal Register. Updated in line with new NRAP Standard for compatibility. Updated to reflect STE Matrix Phase 3 move of Principal Contractor Licencing to Safety, Technical and Engineering Function. Updated requirements in line with Safety Validation Standard update. Change of Panel name from Acceptance Panel to Assurance Panel. Removal of statement that governing protocols supersede application of CSM RA in Standards Change. Added references to Audit & Risk Committee. Clause amended to clarify arrangements for external assurance of Internal Audit team. Clause detail condensed by removal of non-essential information.
3.07	January 2017	Changes in support of Safety Authorisation and Safety Certificate submissions.

Issue No.	Date	Comments
4.0	May 2017	Changes consequent to affected parties' consultation: Clarification on internal audit processes. Clarification on NCR close-out processes during functional audits. Clarification on review processes during functional audits. Reference included to recently issued 'Transforming Level Crossings. A long-term strategy to improve safety at level crossings. Network Rail 2015-2040'. Clarification on the terminology agreed with DfT, ORR and industry stakeholders used in connection with level crossing misuse. Reference to AOCL+B type level crossings included. Clarity on the embracing of new technologies and the control of level crossings. Clarification on the management of risk by external parties. Reference included to recently issued NR/L2/OHS/157 – Health surveillance for silica and asbestos and the management of diagnosed occupational respiratory conditions, and clarity on supporting processes. Reference to recently revised NR/L2/OHS019 – Safety of people at work on or near the line, which emphasises planning to identify and agree risk management measures and hierarchy of controls. Clarity on the measures to deliver compliance with the Electricity at Work Regulations. Reference included to TfL, its subsidiaries and concession. Clarification of SPAD risk mitigation including reference to trainstops, ETCS (Indusi), both Automatic Train Protection systems used on the network and the European Train Control System, which are all examples of such engineering controls. Amendment of LU's National Operations Centre to the London Underground Control Centre (LUCC). Amendment of reference to key track standards, and that the full suite of 133 track standards will be converted to the Business Critical Rules framework. Amendment from 'Jubilee, District Lines' to 'Bakerloo, District Lines'.

Issue No.	Date	Comments
		Amendment to reflect organisational changes, including Managing Director, England & Wales, Scotrail Alliance Managing Director, and Chief Operating Officer.
4.1	July 2017	Changes consequent to Director of Risk, Analysis & Assurance reorganisation, and review of the Chief Engineer's organisation.
4.2	July 2017	Changes consequent to review by the Chief Engineer, STE
4.3	July 2017	Minor changes consequent to review by the Principal Standards and Controls Manager.
4.4	September 2017	Minor changes consequent to introduction of Route Supervisory Boards, and review of alliance partnering. Minor change consequent to Network Strategy and Capacity Planning organisation changes. Minor changes due to Digital Railway organisation review.
4.5	May 2018	Minor changes consequent to additional detail on Safety Critical Work Posts. Minor changes to take account of the introduction of Crossrail Elizabeth Line services, including interfaces and accountabilities. Minor organisational changes for the Managed Stations Lite Project on Wessex route, including the transfer of Clapham Junction and Guildford stations to Managed Station Lite status. Amendment to reference to NR Standard NR/L2/OHS/00102
4.6	August 2018	Minor change as consequence of CSM RA review by Controlled Publications Service. Minor change to take account of revised contract arrangements with Heathrow Airport Ltd (HAL). Minor change to take account of the proposed implementation of an Integrated Management System.

Issue No.	Date	Comments
5.0	November 2020	Changes resulting from further devolution of accountability and decision-making to Network Rail Regional and Route organisations under the Putting the Passenger First (PPF) transformation programme. Modifications to reflect changes to Network Rail's organisational structure to support the PPF transformation programme. The principal changes are: Creation of five new Regions containing 13 Routes that form part of Network Rail Infrastructure Ltd and a fourteenth Route that has separate Safety Authorisation, as Network Rail High Speed Ltd. Establishment of an expanded Executive Leadership Team (ELT) to replace the Executive Committee (ExCom) Formation of a new service directorate (Network Services) containing activities of: Route Businesses Centre; Freight and National Passengers Operators (FNPO) organisation; Group Digital Railway (GDR) function; Network Rail Telecoms; Property Stations team; part of the Safety Technical & Engineering (STE); and the Network Technical Head or Professional Head of Operations. Foundation of the Technical Authority (TA) to assume the majority of activities and accountabilities discharged by STE which is consequently abolished. Those activities not assumed by the TA are transferred to Network Services and the Regions Dissolution of the Infrastructure Projects (IP) function and consequential transfer of its activities to the Regions, Service Directorates and Network Corporate Functions. Disbandment of the Group Digital Railway function and transfer of its activities primarily to Network Services except for Asset Information Services which moves to the Route Services directorate. Amendments to update references, remove description and references that have become obsolete since the publication of version 4.6, and reflect changes in arrangements and processes not associated with the PPF transformation programme
6.0	January 2022	Revisions and updates to support submission for further safety authorisation. Dissolution of Network Services function and consequential transfer of its activities primarily to the System Operator and Route Services Functions.

Issue No.	Date	Comments
6.1	November 2022	Organisational change for North West & Central Region (NW&C)under the Modernising Management programme(MM)for Band 1-4 posts. The baseline is the NW&C Region organisation and processes at the completion of Tranche 3 of the Putting Passengers First (PPF) Programme. The change acknowledges where the organisational structure has evolved since the implementation of PPF, it through local changes in routes and functions in line with the demands of the business. Addition of a Key Safety Post with the addition of Train Service Delivery Director. (Regional Head of Enhancement and Renewals Engineering to be added as missing)
6.2	March 2023	Updates to Appendix 4 Key Safety Posts & Safety Critical workers posts following the Modernising Management re-organisation, including updates from Route Services, Technical Authority and System Operator.

Contents

1 Health and Safety Management System (HSMS)

1.1 Overview

1.1.1 Network Rail Infrastructure Ltd.'s (NRIL's) core obligation is to secure the effective and efficient operation, maintenance, renewal and enhancement of its network in order to satisfy the reasonable requirements of persons providing services to railways and funders. This is in respect of the quality and capability of the network and the facilitation of railway train service performance.

1.1.2 The requirements of the Railways and Other Guided Transport Systems (Safety) Regulations (ROGS) (2006), and subsequent amendments, apply to NRIL, which has an established health and safety management system (HSMS) that details how safety critical work is managed.

1.1.3 This NRIL HSMS describes the principles, roles, responsibilities, systems and processes, which are in place within NRIL to ensure the health, safety, welfare, and security of its employees and supply chain, and arrangements in place to deliver the organisation's vision of Everyone Home Safe Every Day.

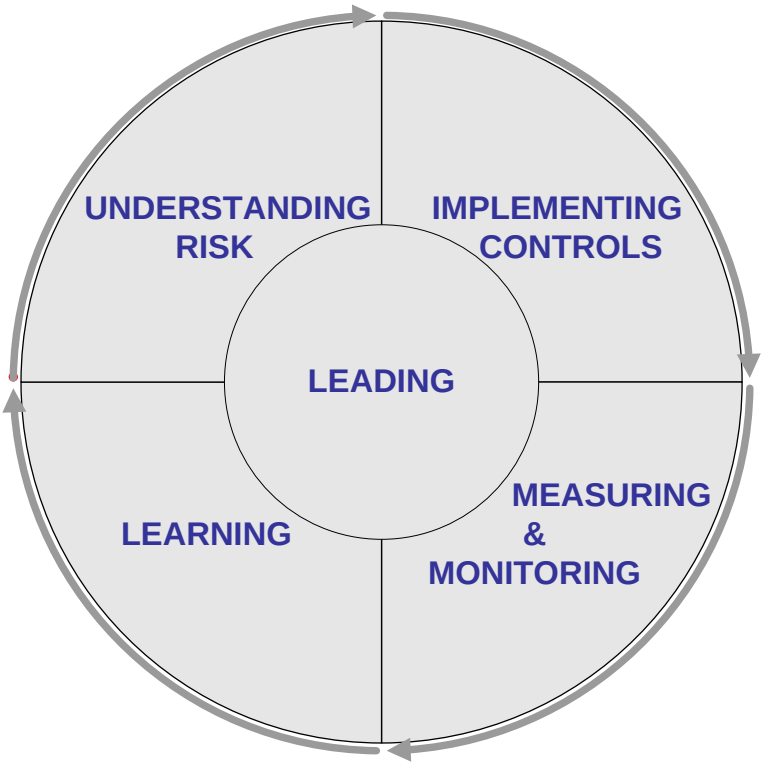
1.1.4 The health and safety of its employees and others affected by its activities is assured through the effective design, construction, maintenance and operation of the railway infrastructure. The HSMS is underpinned by rules, standards, specifications and procedures, which form an intrinsic part of the overall system.

1.1.5 The HSMS describes the specific arrangements in place for controlling health and safety risks. It is modelled on the structure shown below which provides for a thorough understanding of:

- Health and safety risks
- Planning and implementation of effective controls
- Measurement of results to inform continual learning and improvement, driven by strong and committed leadership at every level of the organisation

1.1.6 The HSMS supports the Management of Health and Safety at Work Regulations (MHSWR) 1999**,** which require employers to assess risks arising from their operations, and to put in place effective arrangements for the planning, organisation, control, monitoring and review of these controls.

1.1.7 It is also in conformance with the requirements of the British Standard for occupational health and safety management system BS ISO45001 as shown below:



Arrows denote a cycle of continual improvement

NRIL's Health & Safety Management System model

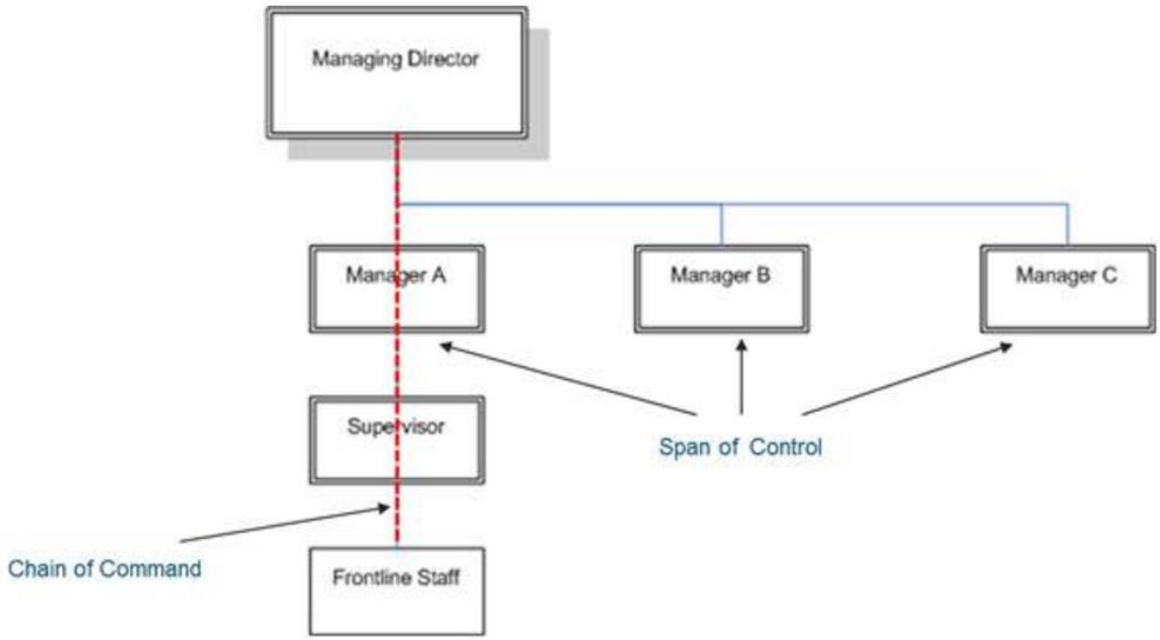
1.1.8 Changes to the legal register are checked by the HSMS Specialist, and an impact assessment is undertaken through the Company Standards and Controls Group (CSCG) and each of the standards steering groups.

1.1.9 The Director of HR (Human Resources) sets out overall framework for competence management, which is supported by the Heads of Disciplines.

1.1.10 The HSMS supports the introduction of an overarching Integrated Management System (IMS) which references discrete systems across NRIL through a single source repository or portal containing all company information in a structured framework.

1.2 Chain of Command

1.2.1 NRIL operates an organisation structure where there is a clear chain of command to provide a formal hierarchy of authority, enable cascade of communications, and discharge accountability and responsibility within the organisation for both safety and business decisions. This is reflected in the following organisational hierarchy chart.



Controls are in place for new appointments to posts in the organisation so that employees are aware of their role in the chain of command. These include:

- Job descriptions (JDs) set essential candidate requirements, and depending on the criticality of the role, internal and external candidates may be required to have demonstrable experience/qualifications to carry out the duties of the role upon appointment
- JDs describe the purpose of a role and set its accountabilities
- Transfer of objectives and ownership of initiatives, and handover information provided by previous postholders
- A Network Rail On-boarding Checklist is briefed to new entrants or appointees by their line manager. It includes confirmation of access to essential systems and organisational charts, to allow new role holders to understand their position in the chain of command
- For posts that are classified as key safety posts (KSP) in the organisation structure, briefing of their safety accountability within the organisation hierarchy is provided. This briefing is shared with individuals that are nominated as a deputy to a KSP. Virtual communities exist to support and to share good practice e.g. DRSAM community, RAM asset forums, Heads of Safety Integrated community and the network-wide coordination meetings specified in the Business Performance Management Framework (BPMF).

1.3 Leadership

1.3.1 Leadership creates the vision, sets the strategic direction and inspires people to follow. Managers at all levels are required to demonstrate clear commitment to health and safety, promote the right attitudes and behaviours throughout the workforce and drive continual improvement. The overall intention and direction is communicated within the chief executive's Safety Vision statement.

1.4 Understanding Risk

1.4.1 A thorough understanding of health and safety risks is essential in managing risk effectively. NRIL adopts a standardised approach to identify, evaluate and understand its health and safety risks, making appropriate use of industry wide

risk models and specialist tools and techniques, applied with appropriate consideration of local factors.
NRIL applies standard safety decision criteria, through compliance with standards and procedures, to provide consistency in the application of measures to reduce risks so far as is reasonably practicable (SFAIRP).

1.5 Implementing Controls

1.5.1 Planning and implementing arrangements for effective control of risks are defined in the NR standards, specifications and procedures. This includes the arrangements for effective design, construction, maintenance and operation of the network and specific arrangements for control of health and safety risks.

1.6 Measuring and Monitoring

1.6.1 NRIL measures compliance with and the effectiveness of its health and safety management arrangements using a wide variety of sources and techniques. Measurement is based on both leading indicators, which focus on control activities, and lagging indicators based on safety performance outputs covering both personal and system safety. Measurement data is assessed and analysed to produce safety intelligence for the business. This section also describes the arrangements for meeting the requirements of the Common Safety Method (CSM) for Monitoring.

1.7 Learning

1.7.1 NRIL uses the knowledge derived from measurement activities, combined with planned and targeted research and external information sources, to review the effectiveness of its health and safety management arrangements and drive continual improvement. This deepens NRIL's understanding of risk and informs the development of systems and controls based on a philosophy of predict and prevent.

1.7.2 NRIL recognises the importance of learning with other organisations such as train operating companies (TOCs) and supply chain, which is made possible through industry groups such as Operational Risk Reduction and Mitigation (OPSRAM). Learning is also achieved through making appropriate representation at formal liaison meetings including interface meetings on matters of proposed changes, statutory obligations etc. with other transport operators to discuss respective safety performance. Further details are referenced in HSMS 6 Managing Interfaces and HSMS 4.8 Consultation and Communication.

2 Leading

2.1 Safety Vision Statement

2.1.1 NRIL recognises the importance of having a clear policy and strategies embedded in the business that demonstrate its commitment to the health, safety and wellbeing of employees, supply chain, passengers, stakeholders and members of the public who may be impacted by its undertaking.

2.1.2 NRIL understands its legal obligations, and is determined to work with its employees, contractors, passengers, stakeholders and members of the public to deliver a regime that is directed towards assuring that legal compliance is the starting point for safety, health and wellbeing performance.

2.1.3 This has been implemented as an updated safety statement, driven by our vision of Everyone Home Safe Every Day, which together with supporting commitments, has provided a common approach for all interventions and communications around safety. It is at the core of the safety elements of its Strategic Business Plan (SBP).

2.1.4 The Safety Vision provides NRIL's commitment to the safety of employees, rail passengers and others who may be affected by its operations. Signed by the chief executive, it establishes the corporate attitude to safety and provides a formal corporate statement on the approach to effective safety, health and wellbeing management, including the prevention of injury and ill health.
NRIL is absolutely committed to improving safety performance in the railways, whether that is passenger, public, or among the workforce. It explains to staff and contractors the expectations that NRIL has of them regarding safety and safety behaviours. It is underpinned by the arrangements outlined in this HSMS.

2.1.5 NRIL's vision, and belief, is that safety and business performance go hand-in-hand, and personal commitments to safety are underpinned by its safety and health and wellbeing strategies. The vision and underpinning strategies demonstrate NRIL's determination to focus efforts on delivering an environment that recognises the importance of providing an effective management system, with supporting processes that enable NRIL to meet its safety, health and wellbeing objectives.

2.1.6 The essence of the Safety Vision and our safety, health and wellbeing management arrangements is the management of risk through a regime of legal compliance, clear strategies for safety, health and wellness and a set of business objectives that will deliver the required reduction in accident rates, provide for continual improvement of the management system, reduce the risk of long term potential health and safety hazards and improve business performance through optimised safety and wellbeing.

2.1.7 NRIL has a structured safety, health and wellbeing governance meetings regime in place, that monitors and reviews the implementation and effectiveness at regular intervals of the policy, strategies and objectives of the organisation.

2.1.8 The Safety Vision is brought to the attention of new employees through the induction process. Significant changes are brought to the attention of employees through the organisation cascade briefing process.

2.1.9 The Safety Vision is published on MyConnect and is shown overleaf.


NetworkRail
Safety
Our vision
Everyone Home Safe Every Day
Our belief
There is no choice to be made between safety and reliability. World-class railways deliver both, day in, day out.
Our personal commitments
Whether you are an employee, contractor or subcontractor, by delivering on our commitments we will achieve safe and outstanding performance. This is key to providing passengers and freight users with the safe, reliable and efficient railway they deserve.
• Safe behaviour is a requirement of working for Network Rail.
• We will always comply with our Lifesaving Rules.
• We will plan work to ensure that it can be done safely.
• Our work environments will be tidy – and we will leave them tidy when we've finished.
• We will ensure people have the skills and the equipment required to work safely.
• We will stop work if it cannot be done safely.
• We will personally intervene if we feel a situation or behaviour might be unsafe.
• We will use Close Calls to report unsafe behaviours and conditions.
• We will use our Fair Culture principles to investigate incidents and learn lessons to prevent them occurring again.
• We will relentlessly strive to find new ways to keep ourselves, colleagues, passengers and the public safe.
• We will design, construct, inspect, operate and maintain the railway to keep everyone safe.
• Safety leadership is key to how we assess our people's performance and readiness for progression.
Andrew Haines
Chief executive
everyone home safe every day

2.2 Leadership Commitment

2.2.1 All managers have a responsibility for health and safety, as well as security, and are required to demonstrate this clearly and promote the right attitudes and behaviours and drive continual improvement. This covers all aspects of safety risk associated with the design, construction, maintenance and operation of the railway network. In demonstrating this commitment, all managers are encouraged to work positively with health and safety representatives, recognising the positive contribution that they make to the management of health and safety (also refer to HSMS 4.8 – Consultation and Communication).

2.2.2 Every manager is accountable for the health and safety performance of their own team. Managers should confirm that all employees understand their roles, objectives (where there is a requirement to set these for individuals), relevant processes and they have sufficient resources, materials, equipment, information, are fit and competent and have appropriate feedback on performance.

2.2.3 Managers help their people understand what is expected of them through briefing of JDs, confirmation that they are aware of, and understand, any standards and procedures relevant to their role, and setting of annual objectives. Managers arrange for new team members to undergo appropriate induction, including local induction.

2.2.4 Every manager has a responsibility to monitor the health and safety performance of their team, including compliance with mandatory standards and procedures. Specifically, managers are required to:

- Review the output of their teams work to confirm compliance. This may include:
    - The routine sign-off of work
    - Sample checking
    - Regular one-to-one reviews
    - Team meetings and formal performance reviews

The extent of this monitoring will depend on the complexity of the work, the experience of employees and the degree of risk

- Comply with any specific line management monitoring arrangements specified in relevant procedures
- Conduct formal performance reviews with direct reports as specified in the formal performance review process, including performance against objectives, where set, and how these were achieved, and identify any training and development needs

2.3 Safety, Health and Wellbeing Strategies and the Health, Safety and Environment Plan

Safety

2.3.1 The safety strategy builds on the Safety Vision and provides a structured approach to improving the safety of passengers, the public and its workforce. It has helped shape the safety components of the Strategic Business Plan (SBP) for the current control period. The strategy together with the work being undertaken to understand key risks has provided the context for its Health, Safety and Environment Delivery Plan (formerly the Home Safe Plan).

Health and Wellbeing

2.3.2 NRIL aims to optimise its employees physical, mental and social wellbeing through a five-year strategy Back to Basics – Network Rail's Occupational Health and Wellbeing Strategy 2019 – 2024 which has replaced Everyone Fit for the Future: 2013 - 2024. The strategy is underpinned by an implementation plan which will be resourced at central and region/route level to enable its effective delivery. The way NRIL communicates health to its employees has been considered and the vision of Back to Basics is now being communicated through the development of a range of educational resources, including podcasts, presentations and videos on topics such as general wellbeing, hand arm vibration syndrome, noise-induced hearing loss and workplace stress.

Health, Safety and Environmental Delivery Plan

2.3.3 The Health, Safety and Environment Delivery Plan (previously identified as the Home Safe Plan), consists of national projects which have been identified to provide the biggest risk reduction to its work force, public and passengers.

The plan is a product of a risk ranking exercise. Collaboration between the central health and safety team and the business areas has resulted in the creation of the consolidated plan.

The projects all fit into six key areas of health and safety:

- Workforce safety
- Public safety
- Train accident risk
- Health and wellbeing
- Ergonomics
- Management system

2.4 Safety Culture and Leadership

2.4.1 A safety critical organisation such as NRIL has its reputation, performance, status as an employer, and credibility, based on delivering efficiency while ensuring the safety of its passengers, public, workforce, and supply chain.

2.4.2 The culture and behaviours required to deliver this will also deliver key agendas such as health and well-being, sustainable development, transparency, diversity and inclusion and engagement. In regard to cultural change, Everyone Home Safe Every Day is a simple idea that employees can easily commit to.

2.4.3 Safety leadership creates change in environment (culture), so desired individual behaviours are supported and enabled to grow, which in turn, inspires people. The change is being delivered through a combination of system and process change, and development of effective safety leadership behaviours within and beyond the organisation. Safety leadership will be transparent from the chief executive, throughout the business, and into the supply chain.

2.4.4 NRIL's Lifesaving Rules are at the heart of this change in culture – everyone home safe every day – and of its ongoing commitment to eliminate all injuries and fatalities in NRIL and the industry. They underpin safety values and vision, and they are for everyone, whether office based or working on the front line.

2.4.5 NRIL understands that its workforce safety performance needs to improve and the focus is to deliver this is via the Health, Safety and Environment Delivery Plan. The plan will improve the risk control surrounding the safety of our workforce with regard to the highest risks they are exposed to:

- Core workforce safety risk assessment via the WARA (Work Activity Risk Assessment project)
- Driving safety through the management of occupational road risk
- Manual handling
- Fatigue
- Planning and delivering safe work
- Improving trackside worker safety

2.4.6 NRIL will define the expected behaviours of safety leaders and relate these to the corporate behaviours. These will be used to recognise performance (ratings include - good, exceeded and outstanding, or poor/in need of development), and be linked to recruitment, training, development, appraisals, disciplinary processes, and requirements during procurement.

2.4.7 NRIL will develop individual behavioural change such that all staff can take ownership for their own, their colleagues, the infrastructure, passenger and public, safety. Staff will be provided with the skills to make the change, as well as the opportunities to practice. This includes appropriate behaviours and decision-making for safety, within effective design, construction, maintenance, and operation (systemic risk).

2.4.8 NRIL will increase conscious risk awareness and management, of both personal safety and process safety (latent conditions), within the organisation.

2.4.9 A key role of the Chief Health & Safety Officer (CHSO) and team is to lead business transformation programmes for safety culture and leadership and provide effective coordination of these programmes, along with influencing other work streams that impact on safety culture and leadership.

2.4.10 NRIL has established an industry collaboration group for Safe and Sustainable by Design, which is sponsored by the CHSO and the Head of Sustainability & Consents (HoS). The aim of the industry group is to provide strategic direction and to coordinate the collaborative efforts by supply chain and NRIL to make a step change in the way occupational health and safety, system safety and sustainability are considered and embedded to deliver on the industry safety strategy.

2.4.11 Leadership behaviours deliver health, safety and environment objectives, which support the work of the Technical Authority. They are the accountability of the chief executive, and the responsibility of the Group Safety & Engineering Director. Topic specific initiatives occur around system and processes, with the accountabilities as follows:

- The Chief Health & Safety Officer (CHSO)
- Health and wellbeing delegated to the Chief Medical & Wellbeing Officer (CMWO),
- Engineering delegated to the Chief Engineer Technical Authority (CETA)
- Environment delegated to the Chief Environment and Sustainability Officer
- Assurance framework for engineering, system safety and asset management delegated to the Head of Compliance and Capability

2.5 Individual Accountability

2.5.1 The overall health and safety performance of an organisation depends on the individual health and safety performance of its people. The performance of each and every individual has an impact on the effectiveness and efficiency of its key delivery processes. As such, every employee is held accountable for their own health and safety performance.

2.5.2 This accountability is achieved by clearly identifying, and formally allocating, health and safety responsibilities where appropriate, and by reviewing performance against these as part of the formal performance review process. Where the review identifies unsatisfactory aspects of performance, plans are agreed between the manager and employee to address these.

2.5.3 Every employee has a duty to comply with any mandatory standards and procedures relevant to their role that indicate how particular processes are to be carried out.

2.5.4 All safety leaders within the organisation are to have a working knowledge of the Be Safe Handbook, including their legal accountabilities and responsibilities, and understand and demonstrate effective working relationships with the trade unions. NRIL ensures that all senior managers receive this information as part of their induction to the business, and also when they change roles. Local safety information, which will support safety leadership, is the responsibility of the local route, region or function.

2.5.5 The Technical Authority function will be responsible for informing all staff about relevant health and safety (H&S) information, and safety leadership accountabilities, through appropriate communications and inductions.

2.5.6 The NRIL safety leadership strategy is built to deliver on the requirements of the industry safety strategy - Rail Safety & Standards Board (RSSB), RM3 reporting to ORR, and to plan for the organisational safety culture maturity measurement by ERA in 2020-2024 (work completed by PRIME/UIC (International Union of Railways) safety culture groups).

2.5.7 NR Standard NR/CS/OHS/002 Policy on Working Safely requires the establishment of Safe Systems of Work (SSOW), delivered by a competent workforce demonstrating the correct safety behaviours. To meet these requirements, it places responsibilities on-line managers, supervisors and employees.

2.6 Safety Leadership Development

2.6.1 Safety leadership is a key requirement within the induction arrangements for directors, senior managers, and those in safety critical and key safety roles. The content and updating of this will be the responsibility of the Principal Safety Culture Specialist.

2.6.2 All directors, senior managers, safety critical and key safety roles will undergo a safety specific induction, in addition to the national or local induction. This will occur within three months of starting their new role. This induction will include an introduction to the Technical Authority, which is responsible for safety.

2.6.3 The on-boarding process for all new starters will include key safety information, and expectations of safety leadership, for NRIL. Governance and updating will be

the responsibility of the Principal Safety Culture Specialist. The HR function will be responsible for a baseline level of safety induction for all staff.

2.6.4 Front line staff, including contractor personnel, will complete the Industry Common Induction (ICI).

2.6.5 All staff will be briefed on the Safety Vision as part of their induction, and this process will be tracked as part of the Chief Medical & Wellbeing Officer (CMWO) line manager assurance.

2.7 Safety Leadership – Upskilling

2.7.1 Senior leaders can create an environment where people feel safe to speak up about safety issues, where raising concerns is rewarded, and where safety is experienced as paramount.
Senior leaders need to be visible in their commitment to safety in all they do.

2.7.2 Safety Conversations will be delivered appropriately for different leadership levels in the organisation dependent on the degree of working knowledge of the leader. As the organisation matures, the requirements for this training will be reviewed.

2.7.3 This review, carried out jointly between the CHSO and NRIL training, is to occur no less frequently than bi-annually.

2.7.4 All leaders in NRIL should expect to complete a safety conversation each week. Normally this will be part of business as usual (BAU) activity, with a line-report, colleague, or supply chain.

2.7.5 Six times a year, a safety conversation is recorded in the Think4safety app (or equivalent) available through the NRIL app store. The Technical Authority function will complete periodic safety conversation audits to ensure quality.

2.7.6 The CHSO will complete an audit of the app responses each year.

2.7.7 The Think4safety app will allow for thematic trending for both safety issues, and also safety conversation skills development needs. The CHSO will review and report this thematic information yearly.

2.7.8 Where a route, region or function has chosen an alternative means of recording, local analysis will be shared with the Technical Authority function for annual reporting.

2.8 Work Safe Procedure

2.8.1 No employee of NRIL, or any contractor, or visitor working for NRIL is expected to carry out any task where the risk to themselves or any other person is considered to be unacceptable. NR Standard NR/L2/OHS/00112 Worksafe Procedure identifies the process by which employees should bring unsafe work activities to the attention of their line manager. It supports NRIL's commitment to the development of a blame free culture and which recognises that workers invoking the NR Standard NR/L2/OHS/00112 Worksafe Procedure, reporting near misses or accidents shall do so free from the fear of sanctions. Safe Systems of Work (SSOW) are required to be clearly defined when planning work. Systems of work must also take due cognisance of the nature of the task, the method of working, the associated risks and the environment in which the task is to be undertaken.

2.8.2 The NR Standard NR/L2/OHS/00112 Worksafe Procedure also describes the subsequent procedures to resolve the matter. If the line manager is unable to identify an SSOW to the satisfaction of the person who has ceased work, the decision is reviewed by another manager. Any instance of initiation of the standard is reported and investigated.

2.8.3 Violations of rules, SSOW and other safety related instructions are investigated to identify direct and underlying causes and appropriate remedial action. This may include instigation of the Fair Culture process.

2.9 Principles of a Fair Culture

2.9.1 NRIL, the National Union of Rail, Maritime and Transport Workers (RMT), Unite and the Transport & Salaried Staff Association (TSSA) are committed to ensuring everyone home safe every day. To help make this possible, NRIL has jointly agreed to the following principles of a fair culture:

Behaviours

- It will be clear to everyone, through the Lifesaving Rules, what behaviours are expected of them at work
- NRIL aims for a fair culture where NRIL can have honest and open discussions about safety
- Reporting will be encouraged, valued and listened to
- Anyone who reports a Close Call (see HSMS 7.1 Health and Safety Performance Indicators), unsafe behaviour, unsafe condition or unsafe asset should be able to do so in a blame-free environment and will be supported by the organisation
- Failure to report an incident, Close Call, unsafe behaviour, unsafe condition or unsafe asset is unacceptable

Consequences

- There will be consistent messages, processes and agreed consequences applied to any breach of a Lifesaving Rule
- All potential breaches of a Lifesaving Rule will be properly investigated in a fair and transparent manner with trade union involvement
- Where outcomes from an investigation determine further action is required then they shall be subject to a separate process
- No action against workers will be taken without recourse to a fair and transparent process
- Disciplinary action or sanctions against a worker shall as a minimum include an investigation, a hearing and, where necessary, an appeal with the right to trade union representation for its members at the hearing and appeal, and observation at the investigation

2.10 Specialist Health and Safety Support

2.10.1 Health and safety support is provided to assist managers and employees to meet their responsibilities. The Technical Authority function provides organisation-wide guidance and support in respect of:

- Strategies for managing safety, health and welfare (including occupational health and track safety)
- Safety culture and leadership
- Assurance and accident investigation

- Health, safety and welfare learning and liaison, safety, health and environment performance reporting safety risk assessment

2.10.2 Specialist health and safety support and advice is provided within each Region and Route by Directors and Heads of health, safety and environment and their teams. The Operational Security & Contingency Planning Manager and team provide support and advice on emergency planning and business continuity.

2.10.3 Within the Route Services Supply Chain Operations (RSSCO) and System Operator Functions, safety advice and support is provided by Directors or Heads of health, safety and environment.

2.11 Health and Safety Meeting Structure

2.11.1 NRIL sets policies and coordinates direction for the management of the organisation through a structure of formally appointed committees and groups, from the Board to local management level. NRIL's meeting structure is defined in the Business Performance Management Framework (BPMF).
This framework describes required meetings from Board level through to route, region and function meetings.

2.11.2 These meetings have a clearly identified membership (chair, secretary and members), and purpose and specific remits to:

- Promote good governance, risk management and control
- Prevent duplication
- Promote action-focused discussion

2.11.3 Each meeting has an agenda and the outputs and actions are captured in meeting minutes and reviewed, updated and finalised and subsequent meetings. They also have specified routes for escalation or delegation.

2.11.4 The Network Rail Board comprises non-executive and executive Board members, with overall responsibility for corporate governance. The NRIL Board's Safety Health and Environment (SHE) Committee monitors NRIL's management of its safety, health and environmental responsibilities. The committee is appointed by the Board and comprises at least three members - non-executive directors of the Board of NRIL. The Board appoints one of the members of the SHE (Safety, Health and Environment) Committee to be its chairman (who is not the Chairman of the Board). One nominated representative from NRIL's recognised trade unions normally attend meetings by invitation of the SHE Committee.

2.11.5 The Executive Leadership Team (ELT) is an executive body operating at a strategic level responsible for providing leadership and commitment within the business on safety, health and environment matters to sustain and continually improve the performance of NRIL in these areas. It is responsible for the day-to-day running of the organisation and is the decision-making body within delegated authority limits. It is also responsible for agreeing the strategy and objectives necessary to deliver NRIL's safety and sustainability goals. The ELT meets regularly throughout the year, is chaired by the chief executive and is attended by members of the ELT including the Managing Directors of the Regions (MDRs) and nominated Directors.

2.11.6 The ELT has ownership of governance for safety leadership:

	Responsible	Accountable	Consulted	Informed
Setting direction	Group Safety & Engineering Director	Chief Executive	Trade Unions (TU)	Line managers
Setting process	HR NR Training	HR NR Training MDRs	TU	Line managers
Carry out actions (training, induction etc.)	NR Training HR	Senior managers Line managers	TU Designated Competent Person (DCP) Investigation managers	Line managers All staff
Communications	CHSO	Communications	TU	All staff

2.11.7 The Health, Safety and Sustainability Coordination (HSSC) meeting operates at a strategic level and is responsible for developing strategic plans for consideration by the ELT, to tackle the risks and opportunities in the area of health and safety, environment and research and development. This review meeting also monitors the implementation of these plans by the organisation on behalf of the ELT. The Health, Safety and Sustainability Coordination (HSSC) takes place regularly throughout the year. It is chaired by the Group Safety and Engineering Director, and is attended by cross-functional representatives, as defined in the meeting terms of reference.

2.11.8 Members of the ELT and the Health, Safety and Sustainability Coordination (HSSC) hold functional team meetings, which include terms of reference for communicating and taking action on matters of safety, health and environment to their direct reports. The cascade of direction and communication continues through the hierarchy of line management meetings with attendees at each level chairing their own team meetings. Feedback and issues of concern are escalated via the structure of the chairman from one meeting being an attendee at the next level meeting, and so on.

2.12 Leading Safety Conversations

2.12.1 The principles of leading Safety Conversations are as follows:

A safe business is:

- One that has visibility of all its safety risks and is risk aware at all levels in the business
- Prepared to discuss risks openly and ensure sufficient oversight at senior levels of the business to address system level risk

As leaders of safety, NRIL is:

- Committed to, and competent enough to, see and recognise risk
- Sufficiently engaged to talk about safety, and open to listen, learn, and ensure actions reference, the risks identified

2.12.2 Leading Safety Conversations provides the context and skills required to hold effective and empowering safety conversations in its business. It looks to realise the different opportunities NRIL has every day to positively impact on safety performance and engagement. This moves conversations beyond inspection and assurance towards a systemic and comprehensive view, that drives an inclusive business dialogue between operational and non-operational staff from across the business.

2.12.3 Safety Conversations may form part of a safety hour or be held as a result of a safety hour. The CHSO's team will provide a clear definition of the differences/similarities between these two initiatives.

2.12.4 Role modelling safe behaviours - SAFE commitments – 360º feedback will be given to the following groups and one-to-one coaching provided to develop safety behavioural commitments. These will be reviewed and updated annually and are to be recorded as part of the individual's Personal Development Plan (PDP). This process will be led by HR, however, the CHSO will remain accountable for its delivery.

2.12.5 The minimum expectations for key roles, both in terms of frequency and recording requirements are:

Executive Director	3-monthly
Other Executive Committee (ExCom) Members	3-monthly
Managing Director Region and Route Director	3-monthly
Director Freight	3-monthly
Director of Engineering and Asset Management (DEAM)	Bi-monthly
Route Programme Director (Works Delivery)	Monthly
Infrastructure Director	Monthly
Operations Director	Monthly
Head of Infrastructure Support Services (Scotland only)	Monthly
Infrastructure Maintenance Delivery Managers (IMDM)	Monthly
Operations Manager	Monthly
Capital Delivery Director	3-monthly
Functional/Business Directors, including RSSCO	6-monthly
Heads of Discipline	3-monthly

2.12.6 The routes, regions and functions will develop local plans and set local expectations so that influential members of the team will also conduct Safety Conversations.

2.12.7 These commitments will also be shared with line-reports to support visibility of safety leadership and role-modelling.

2.12.8 The remainder of the leaders across NRIL will also make their own personal SAFE commitments within a facilitated session, using the SAFE commitment card pack. These sessions will be made available by the Technical Authority function four times yearly.

Executive safety strategy session

2.12.9 Each route, region and function within NRIL will complete a cultural safety strategy evaluation session which will create an agreed benchmark of safety maturity for both safety leadership and culture. This will be led by the principle safety culture specialist and will be used to form a heat map for the organisation, which will enable risk-based allocation of resources.

Managers

2.12.10 Safety conversations will create the environment for trust, and open and honest, reporting around safety, as well as ownership of safety solutions. Managers will need to develop expertise in safety leadership that will be demonstrated through activities such as delivery of safety hour, management of Close Calls (e.g. responsible manager), and the ability to work as a collaborative safety leader with

other technical experts outside their area, e.g. a Signaller with a Controller of Site Safety (COSS), or a project manager with a contractor manager.

2.12.11 The Chief Health & Safety Officer (CHSO) and team will identify the skills requirements, and ensure that appropriate upskilling is provided/monitored, through courses, other programmes (e.g. role-based competences), and bespoke training where appropriate.

Front-line Leaders

2.12.12 At the front line, Safety Conversations need to contain higher levels of positive challenge, encouragement of greater risk/hazard awareness and better active listening. This will generate quicker development of capability, and greater capacity, through development of people resources. The Principal Safety Culture Specialist is responsible for ensuring that internal training courses such as Signaller, Controller of Site Safety (COSS), etc., include and embed these skills in conjunction with the routes, regions and functions and NRIL Training.

Safety Leaders in Corporate Offices

2.12.13 Within the corporate office, safety leaders will understand that while safety conversations take place at the front line, they can also be undertaken, and be of significant value, within the corporate office, covering areas such as commercial management, safety by design, HR policy, etc. Decisions made in corporate offices can and will have significant impact on safety at the front line. The CHSO's team will ensure this upskilling through development of corporate safety hour sessions, stand down learning, and bespoke team safety interventions.

Trade Union (TU) Reps

2.12.14 TU reps play a vital role in both supporting the development of safety leadership in NRIL and also to be demonstrable safety leaders themselves. Governance lies with the Principal Safety Culture Specialist in conjunction with the national health & safety representatives from the RMT, TSSA and Unite, to ensure the lead reps, and safety reps, receive the required development and training.

Supporting Safety Leadership in Contractors

2.12.15 NRIL will work with its partner organisations to agree expectations and monitoring and share best practise around safety leadership. This will include safety leadership internally in the partner organisation, and how NRIL staff can work with its partners in a safety leadership capacity. Key areas that will be covered include:

- Procuring/designing for safety
- Safety conversations
- Monitoring/joint safety culture planning
- Sharing safety information – two way

2.12.16 Work will be undertaken with contractors to tie NRIL's safety leadership strategy and requirements, into their own behavioural safety strategy. The requirements for safety leadership will form part of the procuring for contractor safety process so that how NRIL will work with its contractor partners is defined up front.

2.12.17 The Prevention Through Engineering Design (PtED) policy will outline how NRIL staff will monitor safety leadership skills as part of the design process. This will be tracked through the requirements of Construction (Design & Management)

Regulations (2015) (CDM), e.g. the attendance of CDM awareness training courses by NRIL staff.

2.12.18 The delivery of the P3M3 programme (Portfolio, Programme and Project Management) will ensure that expectations of safety leadership for Capital Delivery and Projects staff, and how this is demonstrated with route and contractor partners, is defined and supported (e.g. via the competency and capability framework development, and the management of safety as a functional expertise, managed by safety experts through adherence to a new operating model).

2.12.19 NRIL's principal contractors will be encouraged to work jointly with the capital delivery teams to evaluate their safety cultures, including safety leadership, and to develop a joint plan for implementation of change. This process will allow two-way sharing and learning. It is expected that any plan will be described in terms of the cultural themes, and the Dimensions of Safety (DoS), so that there is consistency across NRIL and its contractors.

Sentinel

2.12.20 The Sentinel process will develop safety leadership skills as part of the process for verification. The requirement of safety leadership will be defined by the Sentinel team, and upskilling provided as appropriate.

2.12.21 The Sentinel investigations process will illustrate any issues with safety leadership within its investigation process and ensure these are highlighted back to the appropriate contractor managers, and NRIL project managers.

Communication Process

2.12.22 The Technical Authority will be accountable for producing communications both internally and for requirements externally, around safety leadership.

2.12.23 These communications may be topic specific, such as with safety leadership communications of any Lifesaving Rules refresh, shared learning, e.g. safety bulletins, and around development and training requirements and implementation, e.g. Safety Conversation training. The CHSO's team is accountable for ensuring this happens.

2.12.24 The safety leadership strategy will be communicated to all contractors through the Centre of Excellence (CoE) and Capital Delivery.

2.13 Objectives, Targets and Programmes

2.13.1 Every year, as part of its business planning cycle, NRIL reviews its health and safety risks and performance and sets objectives and targets for further risk reduction, therefore meeting NRIL's related legal obligations and other business requirements.

2.13.2 At corporate level the review is carried out by the relevant functional directors. The review considers performance against health and safety key performance indicators, the outputs of the Precursor Indicator Model (PIM), and other information on risk.

2.13.3 Route/region/functional review groups identify options for further risk reduction and evaluate these against the business safety decision criteria. Specific objectives, targets and actions are then agreed by the functional directors to

reduce risks so far as is reasonably practicable (SFAIRP). Following Board-level review and endorsement, these are included in the organisation's business plan and progress against these is monitored via the business review process.

2.13.4 Each year, as part of the business planning process, the range and definition of health and safety performance indicators are agreed and communicated throughout the organisation. Where appropriate, indicators are normalised (e.g. by train miles/hours worked) to facilitate a meaningful trend comparison. Targets for particular indicators are set, where appropriate, through the business planning process. A master list of corporate health and safety performance indicators is maintained by the Safety Analysis and Reporting team within the Technical Authority function.

2.13.5 Performance across the range of measures is captured through the NRIL National Scorecard.

2.13.6 The Scorecard provides clear line of sight of performance throughout the organisation. It tracks 12 measures covering the key themes of: safety, train performance, financial performance, investment delivery, employee engagement, customer satisfaction, complaints handling, and environmental sustainability.

2.13.7 The National Scorecard is continually evolving to allow NRIL to be much more focused directly on passenger needs. This includes aligning targets and priorities much more closely with those of the local train operating companies, by route and region.

2.13.8 The Scorecard is divided into four distinct groups of performance measurements relevant to the four pillars of the business: NRIL's passengers, stakeholders, people and the rail industry. The overall scorecard will be an aggregation of all the region and function scorecards. It is reviewed and revised every year to reflect changes in performance and stakeholder priorities. Examples of scorecard components directly related to safety are described below.

Our Passengers

- **Passenger Safety - Train Accident Risk Reduction (TARR)**

  Definition: Measures delivery of the key milestones and metrics to reduce train accident risk.

  Calculation: TARR is made up of milestone targets and volume targets, both of which have different achievement ratings.

Our People

- **Fatalities and Weighted Injuries (FWI)**

  Definition: An index representing workforce safety. This includes both NRIL staff and contractors employed by NRIL

  Calculation: Moving annual average of number of fatalities and non-fatal injuries per 100,000 hours worked

- **Personal Accountability for Safety**

  Definition: Measures the impact of the safety culture and behaviours of the business.

  Calculation: A combination of the number of life-saving rule breaches and high potential events.

2.13.9 Each director is responsible for cascading health and safety objectives throughout their own organisations by the setting of personal objectives for individual managers. Organisational and individual objectives are specific, measurable, attainable, realistic and time bound. Each route or region director liaises with train operators on the development of NRIL safety objectives, and objectives being developed by train operators, via the OPSRAM (Operational Risk Reduction and Mitigation) or equivalent groups. This informs the development of the NRIL business plan, with relevant actions for NRIL being included and monitored via the business review process.

2.13.10 Actions that require either capital expenditure (Capex) or non-recurring operational expenditure (project Opex) and which satisfy the safety decision criteria for health and safety enhancements are progressed in accordance with NRIL's Investment Regulations.

2.13.11 Rail Safety & Standards Board (RSSB) publishes a five-year Railway Strategic Safety Plan, stating the overall industry safety objectives and reporting on safety performance. The Railway Strategic Safety Plan brings together commitments made by NRIL and train operators in their own plans, showing collectively how they address the key safety risk areas on the railway and the projected impact on levels of risk. The Group Safety & Engineering Director coordinates NRIL's input to the plan, based on the actions identified by functional directors.

2.13.12 NRIL also takes account of the RSSB publication Leading Health & Safety on Britain's Railway.

2.13.13 As required by Railways Interoperability Regulations 2011 (Directive 2004/49/EC Railway Safety Directive), NRIL is committed to applying CSM RA (Common Safety Method for Risk Assessment), as these are defined to describe:

- How safety levels are measured
- The achievement of safety targets
- Compliance with other safety requirements identified in Regulation 19 (2) of ROGS 2006

2.13.14 NRIL provides information to the Office of Rail & Road (ORR) to demonstrate its contribution to the achievement of Common Safety Targets (CST) as defined.

3 Risk Management

3.1 Risk Assessment Process

3.1.1 NRIL carries out risk assessments to identify and assess all of its significant health and safety risks to employees, members of the public, contractors and other operators who may be affected from its operations. The risk assessment process describes how to identify, prioritise and manage measures to control or mitigate significant risk. These arrangements ensure that decisions on the control and management of risk are made in an informed, rational and structured manner, and demonstrate that all that is reasonably practicable is being done.

3.1.2 A thorough understanding of the health and safety risk profile of NRIL and its assets is necessary to enable the organisation to manage health and safety effectively. NRIL has adopted the principle that for any change (technical, operational and organisational) proposed, it applies the risk management framework defined in the CSM RA, including as its methods of safety verification.

NRIL will appoint an independent assessment body, such as Network Certification Body (NCB), for changes assessed as significant. This enables compliance with the MHSW Regulations 1999, and ROGS 2006, and CSM RA, for safety verification, under a single risk management framework.

3.1.3 Risk is the combination of the consequence of an event and the likelihood of that consequence occurring. The MHSW Regulations 1999 (Regulation 3) requires each employer to carry out a suitable and sufficient assessment of the risk to everyone affected by the activities of the organisation. For NRIL, this means passengers, its workforce, other railway employees and the public.

3.1.4 Identification of the risk control measures to be adopted follows the established hierarchy of controls, as follows:

- Complete elimination of the hazard, or hazardous event
- Substitution of the hazard for one of lesser risk
- Use engineering controls, for example isolation of the hazard, containment of the hazard etc.
- Use administrative controls, for example documented SSOW, method statements, operational procedures, enhanced training and competence, increased supervision etc.
- Use of personal protective equipment (PPE), for example safety footwear, ear defenders, protective clothing etc.

3.1.5 Risks associated with safety critical operational tasks are addressed by application of:

- The recruitment, selection and medical fitness screening for suitability
- Task requirements, taking account of hierarchy task analysis (HTA)
- Providing employees with work equipment required to undertake tasks safely compliant to Provision and Use of Work Equipment Regulations (PUWER) 2002
- Training and competence requirements identified directly in the risk assessments addressed by application of NRIL Standard NR/L2/CTM/201 Competence Management and Specific Competence Requirements
- Rules (GE/RT 8000, National Operating Instructions) and procedures (SP series) and NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line where there is a risk to health and safety if the control measures were not to be applied in a consistent manner, or where the control measures may be considered of a more complex nature
- Regular information, communication and feedback on issues related to operational health, safety, environment and quality
- Formal meetings and escalation
- Effective arrangements for dealing with emergency situations in accordance with the applicable standards
- The investigation into accidents, incidents and other near misses to determine their root cause, the subsequent development of additional measures where necessary
- Monitoring the effectiveness of control measures through the setting and measuring against safety key performance indicators (KPIs), and through the audit and inspection programme

3.1.6 The HSMS defines the standardised risk assessment processes which are supported by the risk profile and the use of specific tools and techniques to assess the risk and the effectiveness of mitigations. This provides NRIL with a consistent process to understand and reduce risk SFAIRP.

3.1.7 Specialist advice and support on the risk assessment process, roles and techniques, is available to help line managers assess risk and understand the output of risk assessments.

3.2 Safety Risk Profile

3.2.1 System safety risk encompasses all aspects of safety risk associated with the design, construction, maintenance and operation of the mainline railway network. This includes the stations and running lines, and covers risk to passengers, workforce and the public who may be affected by the operation of the railway.

3.2.2 The system safety risk profile across NRIL's infrastructure is described in the Safety Risk Model (SRM) with the train accident Precursor Indicator Model PIM.

3.2.3 The SRM gives a prediction of the risk arising from all of the hazardous events that could cause death or injury on the mainline railway. It is updated approximately every 18 months.

3.2.4 The PIM looks specifically at train accidents, providing a snapshot of the risk profile based on an analysis of performance against the precursors for train accident events. It also provides information on trends. It is produced periodically and reported in the Safety, Health and Environment Performance (SHEP) Report.

3.2.5 These views provide the start point for analysis of specific risk areas. This analysis can also include data direct from the Safety Management Intelligence System (SMIS), Fault Management System (FMS) and other databases, along with investigation reports.

3.2.6 The system risk profile is supported by route or region-specific risk registers, owned and managed by the directors and heads of health, safety and environment.

3.3 Safety Risk Model (SRM)

3.3.1 NRIL recognises its activities carry risks with multi-fatality potential.
The SRM-Risk Profile Tool (SRM-RPT) is a risk management tool for industry stakeholders, and is used to quantify the significant causes and consequences associated with each of the 131 identified hazardous events. This enables NRIL to identify key areas of risk associated with its operations and to prioritise its investment in safety, using a risk-based approach.

3.3.2 The model covers all NRIL Managed Infrastructure (NRMI) and is maintained by the RSSB on behalf of the industry.

3.3.3 The hazardous events are divided up into three types:

- **Train accidents**: In general, this covers accidents involving trains that are reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). See SMIS Structural collapses at stations are also included
- **Movement accidents**: Accidents involving moving trains that are not included in the train accident category
- **Non-movement accidents**: Other accidents not related to the movement of trains that occur on NRMI

3.3.4 The model uses historical data from a wide range of sources including SMIS and FMS. This is combined with detailed analysis of particular areas to cover the chance of very rare events happening and the range of potential consequences of any incident. For each hazardous event (such as derailment of passenger train, or workforce manual handling injury), cause and consequence trees have been developed to identify the failure sequences needed for a hazardous event to arise, and to review the potential for different outcomes of a hazardous event depending on the circumstances around the event. The SRM has all identified precursor events contributing to the causes of the hazardous events.

3.3.5 As the SRM provides a comprehensive view of the risk on NRMI, it can be used to compare the risk from different types of hazard, allowing for effective prioritisation of safety management effort.

3.3.6 The SRM is a vital tool in assessing the cost-effectiveness of potential mitigations, as it allows a quantified estimate of the risk reduction to be made by looking at the effect of the mitigations on the relevant individual precursors. This can then be used as input to cost-benefit analysis.

3.4 Precursor Indicator Model (PIM)

3.4.1 The PIM provides a guide to the risk profile and trends in the risk profile for train accidents. It is produced periodically by the RSSB, with further analysis and commentary by the Technical Authority's Chief Health & Safety Officer (CHSO).

3.4.2 Each update of the PIM is reported in the SHEP report, providing an analysis of the train accident risk profile.

3.4.3 The figures are obtained by taking precursor data from a range of systems, notably SMIS and FMS. For each precursor, a typical expected outcome has been estimated based on history and the detailed cause and consequence analysis used for the SRM. Combining the number of precursor events and their expected outcomes gives the total prediction of the risk across all precursors.

3.4.4 The PIM is recalibrated after each update of the SRM to allow for changes in outcome for precursors, for instance due to extra controls being introduced that reduce the chance of a precursor event resulting in an accident.

3.5 Enterprise Risk Management Framework

3.5.1 The Enterprise Risk Management Process aims to increase the certainty of meeting corporate objectives through a comprehensive, structured and robust framework which is designed to confirm that key risks are managed appropriately and to provide transparency on how they are managed.

3.5.2 The corporate risk profile (i.e. Level 0) is reported to the ELT and the Audit and Risk Committee.

3.5.3 To support this, risk profiles are produced at business/functional areas (Level 1) and business/functional units (Level 2). Risks are escalated or consolidated as appropriate to inform the corporate level risk profile.

3.5.4 The NR Standard NR/L1/RSK/001 Network Rail Risk Policy outlines the mandated requirements for the management of risk (threat and opportunity) within NRIL. The Group risk business unit provides procedural guidance for risk management on the Group Risk Connect page.

3.6 Risk Tools and Techniques

3.6.1 NRIL has developed a range of specialist tools and techniques to support decision making in managing specific risk areas.

All Level Crossing Risk Model (ALCRM)

3.6.2 The ALCRM, which is available via the Network Rail portal, is a networked, software-based safety decision support tool that is used to assess risk at all level crossings, in a systematic and consistent manner. It provides a predicted level of risk in Fatality Weighted Injuries (FWIs) for a given level crossing and identifies the predominant factors that influence the predicted level of risk at that crossing. It is used by NRIL as part of its level crossing risk management process to identify and prioritise safety investment.

Signal Overrun Risk Assessment (SORA)

3.6.3 The SORA process consists of a suite of tools and techniques, which are available on the Network Rail portal, that are used to assess the risk of a train passing a signal at danger without authority, both in terms of the probability of a collision occurring and the likely consequence of that collision. It is used to assess risk at signals in a systematic and consistent manner. The tools are used in signalling layout design and steady state operations of the layout. The SORA process provides a predicted level of risk in a unit-less score that can be converted into Fatality Weighted Injuries (FWIs). This is used to identify signals that require a detailed assessment, at a workshop, where expert judgement identifies the factors that influence the predicted level of risk and determines how these modify the predicted score. This final predicted score is then used to assist in determining what action to take (see also HSMS 4.19.1 Signals Passed at Danger (SPADs)).

Railway Crime Risk Management

3.6.4 NR Standard NR/L2/OPS/050 Railway Crime Risk Management uses a decision support tool that provides a consistent and systematic methodology for assessing route/region crime risk at specific locations. The methodology employs a semi-qualitative scoring matrix with guidance provided on appropriate actions for each scoring level. It is used by NRIL as part of its crime risk management process to identify and prioritise further control measures.

General Risk Assessment Tools and Techniques

3.6.5 The following general risk assessment tools and techniques can be applied by competent persons with specialist support and guidance from the Technical Authority function as appropriate:

- **Data analysis**: Refers to the use of historical incident data to indicate what may happen in future.
- **Visual mapping**: Involves using a picture to portray risk. The picture could be a map showing risk levels in different areas, a train showing how risk levels change between carriages, or a geographical section of infrastructure showing variability along line of route
- **Hazard identification prompt lists**: A pre-defined list of topics that are expected to feature during a workshop or a set of interviews intended to identify hazards.

- **Risk control prompt lists**: A complement to hazard identification prompt lists. They help a team or individual to think broadly about the range of possible alternatives available for the control of risk.
- **HAZID (Hazard Identification) workshops**: A meeting of a group of experts in which a formal structure is imposed to promote the capture of knowledge and facilitate decision-making and problem solving.
- **SWIFT**: the' Structured What If Technique' for hazard identification. It is a systematic, multi-disciplinary, team orientated technique carried out in workshops managed by a competent facilitator. The effectiveness of the technique comes from asking questions, according to a structured plan, to identify the various types of failures and errors which are likely to result in a hazard within the system, design or process under examination.
- **Risk log (or Hazard log)**: A means of collecting and storing information throughout the risk management process. On computer or on paper, the log captures the hazards as they are identified and becomes a traceable record of information and decisions relevant to that risk.
- **Task-based Risk Assessments (TBRAs)**: A method generally based on a semi-quantitative assessment used for assessing individual tasks, usually associated with workforce safety. TBRAs provide a relatively simple technique which can be used by suitably trained lay persons to determine risk associated with a range of day-to-day work activities.
- **Interviews**: Information gathering question and answer exercises between two individuals, one conducting the interview and the second responding to the interviewer. In some circumstances, they are used as an alternative to workshops.
- **Hierarchy Task Analysis (HTA)**: Is carried out to have a clear understanding of the scope and what work is involved. This method is favoured as it breaks down complex tasks into a number of more simplistic ones, to allow detailed examination and to allow them to be easily understood and followed. The HTA outputs formed the basis for conducting a hazard and operability analysis (HAZOP).
- **Hazard and Operability Analysis (HAZOP)**: is carried out to identify, analyse and evaluate the risks that are related to the work. Key risks are evaluated to decide the significance of each risk identified with the operation and selecting and implementing appropriate measures to control risk.
- **Fault Tree Analysis (FTA)**: a structured method of examining the root causes of an undesirable event – usually the failure of a complex system. It answers the question 'What combination of events could lead to this undesirable event?'. FTA is a graphical tool that has a built-in ability to examine how events combine to cause or prevent further events.
- **Event Tree Analysis (ETA)**: is, like fault tree analysis, a structured graphical tool. However, ETA considers the possible outcomes that may result from an initiating event (or hazardous event), and from subsequent actions and decisions.
- **Cause-consequence analysis**: combines the functions of both fault tree (FT) and event tree (ET) tools to provide an analysis of both the root causes and the final outcomes of a hazardous event. It can be used qualitatively or quantitatively.
- **Common Consequence Tool (CCT)**: The Common Consequence Tool (CCT) provides a method for estimating the potential safety consequences (fatalities and injuries to train occupants) arising from a train derailment, independent of the cause of derailment. For any given location specified by engineer's line reference (ELR) and mileage, the CCT returns a consequence rating ranging from 1 (lowest consequence) to 20 (highest consequence). The CCT models train derailments only; it does not model non-train incidents,

such as injury to a trespasser on the railway, nor any direct consequences of any initial event subsequently leading to the train derailment e.g. collision with object on the line. For convenience, individual mapped route/region versions of the common consequence scores have been developed and published.

- **Failure Modes and Effects Analysis (FMEA)**: A technique for identifying ways in which the constituent elements of systems can fail to perform their design intentions. It is used to evaluate and document the potential impact of each identified failure on equipment reliability and personnel safety. Due to the time-consuming nature of the technique, its use is normally limited to system elements that are novel and/or have been identified through other techniques or experience as safety critical.
- **Bowtie analysis**: a visual risk assessment tool based on the Barrier based and Swiss cheese risk models. The centre of a bowtie consists of a hazard (the item/environment/act with the potential to cause harm) and a top event (the point at which control over the hazard is lost). The bowtie is structured in a cause/risk/effect framework. Where threats (which may cause the top event to occur) are on the left of the top event and consequences (which describe the effect of the top event) are on the right of the top event. Controls to prevent threats and controls to mitigate the consequences are represented in the form of barriers.

3.7 Work Activity Risk Assessment (WARA)

3.7.1 The operation of the railway network relies heavily on standardised processes, with many work activities carried out in the same way at different times and locations across the network. NRIL has, therefore, established a central database of work activity risk assessments (WARAs).

3.7.2 NR Standard NR/L2/OHS/00102 Work Activity Risk Assessment details the principal process by which NRIL assesses risks associated with the work activities carried out by our employees. It documents, and makes available, the findings of those assessments.

3.7.3 This standard is supported by a suite of NRIL specialist risk assessment standards for:

- NR/L2/OHS/00107 Management Procedure - Display Screen Equipment Risk Assessment
- NR/SP/OHS/00114 Specialist Risk Assessment - Hand Arm Vibration
- NR/L2/OHS/00103 Specialist Risk Assessment – COSHH (Control of Substances Hazardous to Health)
- NR/L2/OHS/00106 Management of Manual Handling Risk
- NR/SP/OHS/00122 Specialist Risk Assessment - Workplace Noise
- NR/L2/OHS/003 Management of fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work
- NR/L2/OHS/00117 Specialist Risk Assessment – New and Expectant Mothers

Function-specific procedures for undertaking WARAs underpin these arrangements further.

3.7.4 Work activity risk assessments are conducted by nominated risk assessors, supported by persons who have appropriate knowledge and experience of the activity being assessed. These assessments identify any requirement for further specialist risk assessment(s) where legislation dictates, or the need for specialist knowledge, skills or equipment are required.

3.7.5 A template WARA form is used to record the findings of the assessment and a standard risk calculation matrix is applied to quantify the level of risk. Measures to control the risks SFAIRP are identified using the knowledge and experience of the nominated risk assessor(s), and other team members. The final findings of the assessment are documented, including existing and additional control measures.

3.7.6 Completed WARAs are reviewed by nominated reviewers within each function, who check that the assessment is suitable and sufficient.

3.7.7 WARAs are further reviewed and amended at a frequency dependent upon the level of residual risk identified by the original assessment. Reviews are also conducted when the existing risk assessment has been identified as no longer reflecting working practices or adequately controlling the risk.

3.7.8 NRIL's arrangements for the planning, risk assessment and delivery of multi-activity work sites are defined in NR Standards NR/L3/MTC/RCS0216 Risk Control Manual, NR/L2/OHS/0044 Planning and Managing Construction Work, and NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail) which requires each business unit to document their CDM management procedures, including those for risk management.

3.7.9 Control measures identified by risk assessments, are included in documented safe systems of work (SSOW) within each function. Functional documented SSOW are reviewed before they are applied at local level to identify any further control measures that may be required due to local conditions. These reviews either confirm that identified control measures are suitable and sufficient taking into account the working environment and local conditions or identify additional control measures which are then recorded for briefing to persons who may be affected. Employee briefings are undertaken by line managers through the normal briefing process.

3.7.10 The national database of assessments is provided and maintained by the Principal Workforce Safety Specialist within the Technical Authority function. Work activity risk assessments held on the database are available to all employees through SharePoint.

3.7.11 A plan for measuring activities designed to prevent the occurrence of injuries and work-related ill health (active monitoring) is considered. Active monitoring is established during the transitional period and post transitional period of change to ensure the planned safeguards are effective and perform as intended.

3.8 Safety Decision Criteria

3.8.1 NRIL has arrangements that support a risk-based safety decision making framework to help manage and prioritise safety activity. The procedure outlines the legal and best practice requirements for making safety decisions and establishes a structured safety decision making process. It provides a standard which specify the requirements to ensure that safety decisions are proportionate, made in a consistent and transparent manner and demonstrate that safety risks have been reduced to a level which is as low as reasonably practicable (ALARP). This is consistent with the industry 'Taking Safe Decisions' model.

3.8.2 NRIL has adopted the RSSB Safety Decision Criteria which sets out a framework for taking decisions and helps meet the reasonably practicable legal standard.

Risk assessment appraisal methods and professional judgement are applied to safety investments in determining reasonable practicability.

3.8.3 Safety on the railway depends largely on the proper design, construction, maintenance and operation of the network. Most safety improvements are therefore likely to come from better process, managerial control and behaviour, rather than from expensive infrastructure enhancements. In these cases, simple inexpensive controls can be adopted on the basis of qualitative analysis, using judgement and common sense.

3.8.4 Where significant change is proposed (for example, infrastructure, organisation, or operation), Network Rail applies CSM RA to determine what safety enhancements are reasonably practicable.

3.8.5 Where infrastructure improvements are appropriate, the most efficient time to make these is likely to be at the time the infrastructure is due for renewal. Infrastructure assets generally are renewed in modern equivalent form and to the latest standards, which in most cases include reasonably practicable improvements. Where assets are being renewed in line with asset policy and relevant standards, scheme specific investment appraisal is not generally required.

3.8.6 However, there are occasions where it may be reasonably practicable to make safety enhancements to the infrastructure before its due renewal date, or over and above what is required by standards. Also, some standards specify certain requirements where reasonably practicable. In these circumstances, NRIL applies quantitative analysis combined with specific safety decision criteria for determining what is reasonably practicable and therefore mandated by the Health and Safety at Work (HASAW) Act 1974.

3.8.7 The appraisal methodology applied depends on the type of scheme under consideration and the source of funding. Safety schemes required under HASAW are generally funded from the expenditure allowance – i.e. they are a legally required cost of doing business and as such are built into the expenditure allowance agreed as part of the regulatory funding settlement for each control period. Some of these are built into the business plans of each function and summarised in NRIL's Strategic Business Plan. Guidance on this is defined in NRIL's Investment Regulations.

3.8.8 When the cost/safety benefits of a proposed risk control are assessed quantitatively, it is necessary, by way of comparison, to place a monetary value on both costs and safety benefits. NRIL applies this by using the Value of Preventing a Fatality (VPF) as a guide to what is reasonably practicable.

3.8.9 When safety improvements are being considered and the cost is less than the monetary value of the safety benefit determined by applying the VPF, NRIL will, generally, implement the improvement. Where the cost is above the monetary value of the safety benefit, NRIL will apply professional judgement in determining whether the cost is grossly disproportionate to the safety benefit and it is reasonably practicable to implement the improvement. In making this judgement, NRIL will pay particular attention to:

- The degree of uncertainty in the assessment of costs and safety benefits
- The maximum potential safety consequences
- Absolute legislative requirements

3.8.10 Safety investments are authorised by the relevant investment panel, the arrangements for which are defined in NRIL's Investment Regulations.

3.8.11 The VPF can be found on the RSSB website. It is updated annually in line with the VPF adopted by the Department for Transport (DfT) and other Railway Group members. The VPF applies to fatalities and weighted injuries. One fatality is considered equivalent to 10 major injuries or 200 minor reportable injuries or 1000 minor non-reportable injuries.

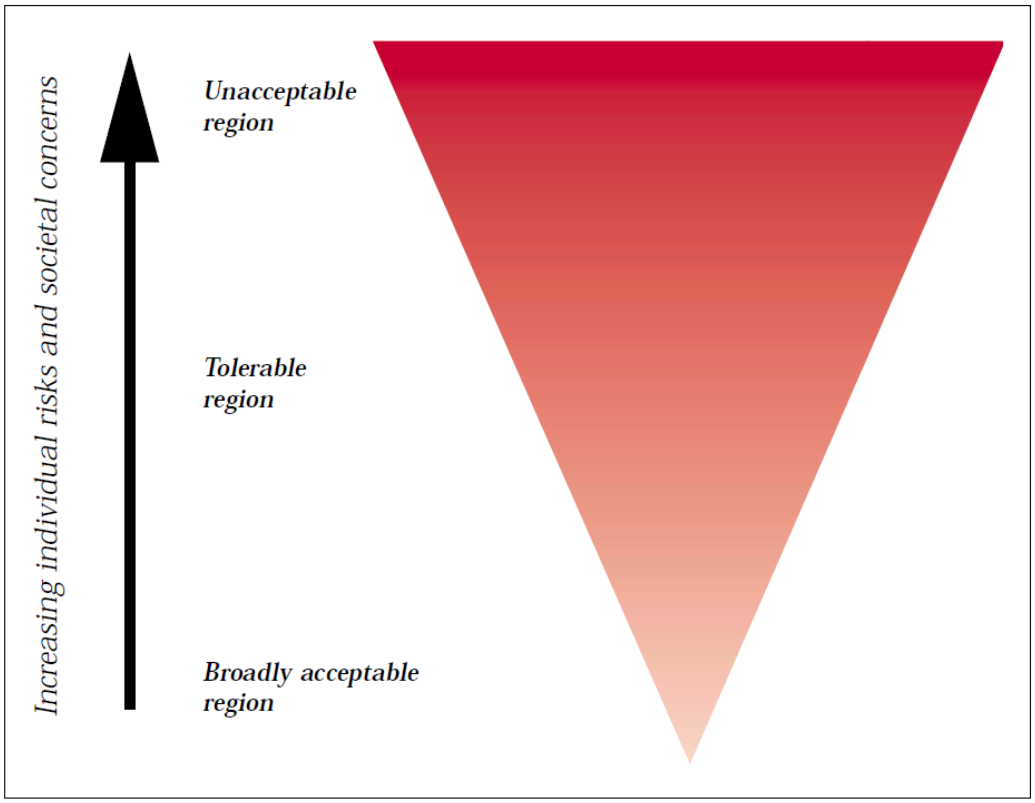
3.8.12 When the costs and/or benefits are incurred or delivered over a number of years, NRIL applies discounted cash flow analysis to determine the net present value of safety benefits compared to costs. Guidance on this and the discount rates applicable are defined in the NRIL's Investment Regulations.

3.8.13 A similar quantitative approach, using formal cost benefit analysis, is also used to demonstrate the reasonable practicability of changes to process that are likely to incur significant implementation costs.

3.8.14 When setting priorities for the development of further risk control measures, consideration is given to the levels of risk to which individuals within particular segments of the population are exposed.

3.8.15 The Health & Safety Executive (HSE) publication, Reducing Risks Protecting People (2001) describes a tolerability of risk framework based on risk to which individuals within particular segments of the population are exposed. Risks to individuals are categorised as 'Unacceptable', 'Tolerable' and 'Broadly Acceptable', with different priorities identified for each category.

3.8.16 The Tolerability of Risk Framework is a conceptual model and its application is not mandated through legislation. The assessment of the level of individual risk depends largely on the selection of the segment of the population. There are no legislated quantified boundaries between the different ranges. However, the HSE has suggested guidelines of 1:1,000,000 fatality risk for the boundary between broadly acceptable and tolerable, and 1:10,000 (public) and 1:1,000 (workforce) fatality risk for the boundary between tolerable and unacceptable.



3.8.17 The legislative requirement to reduce risks, SFAIRP, and the application of the standard VPF, applies within each band. However, the priority and effort applied to analysing risks and developing potential measures for further risk mitigation increases in line with the level of individual risk.

3.8.18 For NRIL's undertaking, most population groups fall within the tolerable range and NRIL is committed to developing and evaluating options for further risk reduction and implementing those that are reasonably practicable.

3.8.19 In some cases, the risks are considered so low as to be broadly acceptable, i.e. they are generally considered to be insignificant and adequately controlled. In these cases, there is no requirement for systematic evaluation and risk reduction, although there is still a requirement to implement any further measures which are reasonably practicable.

3.8.20 However, there may be some population groups where the risks to individuals is assessed as within or approaching the unacceptable range. In these cases, NRIL will allocate a high priority to actively develop and evaluate options for further risk reduction and implement those that are reasonably practicable.

3.8.21 Further guidance on the framework for taking decisions affecting safety in the GB (Great Britain's) rail industry, and within which NRIL operates and applies as appropriate, is provided in the RSSB's Taking Safe Decisions publication.

3.8.22 NRIL manages risk created by external parties. Each route or region is developing asset protection processes, their purpose of which is to evaluate the level of risk posed to the operational railway from external parties, and how control of risk is implemented and managed.

3.9 Monitoring the Effectiveness of Risk Control Arrangements

3.9.1 NRIL regularly monitors the effectiveness of health and safety management arrangements, by specific health and safety performance groups at appropriate levels of the organisation. Health and safety assurance is provided under the monitoring and review part of the HSMS to test and observe that policies and arrangements are implemented as intended. NRIL Standard NR/SP/ASR/036 Network Rail Assurance Framework provides details of these arrangements.

3.9.2 Specific performance of the risk management arrangements in terms of their effective control of risk is understood as a result of the following monitoring processes. These processes can also identify additional workplace or other operational hazards, in which case, these hazards are included in the risk assessment review process:

- Accident, incident and Close Call reporting and investigation
- Re-active monitoring – health and safety performance against targets, personal accident rates, operational accident and incident rates etc.
- Pro-active monitoring – measured performance against safety, health, environment and quality plan targets, workplace/worksite management visits, safety conversations, completed, effective briefs delivered, competence assessments completed etc.
- Findings from audits conducted
- Findings from health and safety inspections and senior management visits
- Feedback from employee health and safety representatives, both informally, and formally via the National Health, Safety and Welfare Council, and feedback from industry partners and interface organisations

3.9.3 Corrective actions necessary to maintain, or improve upon, performance of the HSMS that may be identified by any of the above methods will be reviewed at the Cross Functional Quarterly Safety Assurance Meetings and allocated to responsible managers for action.

3.9.4 Progress against corrective actions is monitored by the Cross Functional Quarterly Safety Assurance Meeting.

3.10 Review of Risk Control Arrangements

3.10.1 HSMS 8 Learning describes the range of reviews that are adopted for ensuring the effectiveness of NRIL's health and safety management arrangements.

3.10.2 Specific overall performance of the operational risk management arrangements will be reviewed via measurement against operational safety and health performance indicators. This performance is outlined in HSMS 7 Measuring and Monitoring and is reviewed formally within defined timescales by the following groups:

- Network Rail Board Exec Group 1
- Executive Leadership Team Meetings
- Safety, Health & Environment Committee (SHE Committee)
- Health, Safety and Sustainability Coordination (HSSC) Meeting
- Directorate Business Reviews
- Network Corporate Functional and Service Directorate Meetings
- Region Business Reviews and Region Periodic Business Reviews
- National Health, Safety and Welfare Council
- Local Health and Safety Committee

3.10.3 Risk assessments are reviewed for continued suitability in the following circumstances:

- Routine review - the risk assessment process will specify the nature and frequency of workplace inspection, monitoring systems and procedures according to outcomes of the risk assessment, minimum statutory requirements and industry best practice
- When circumstances change affecting operational risk
- When new operations are considered
- With the introduction of new or changed regulatory requirements, standards or best practice guidance
- Following receipt of intelligence that may impact on the validity of the risk assessments, for example from accidents, incidents, or near misses, audit reports etc.
- When new technology is introduced
- When updates are made to existing machinery, plant etc.

3.10.4 Methods analogous to those used for the original hazard identification and risk assessment process will be employed for review i.e. local responsible managers own the assessments in their area of responsibility, hence are responsible for ensuring that the risk assessments remain suitable and sufficient, using trained and competent, risk assessors to assist in the review.

4 Implementing Controls

4.1 People

Organisation

4.1.1 NRIL's organisational structure defines how NRIL allocates responsibilities and tasks amongst its workforce and coordinates these to deliver its business objectives. Responsibilities are allocated in a structured way so that all employees have a clear understanding of their individual safety responsibilities.

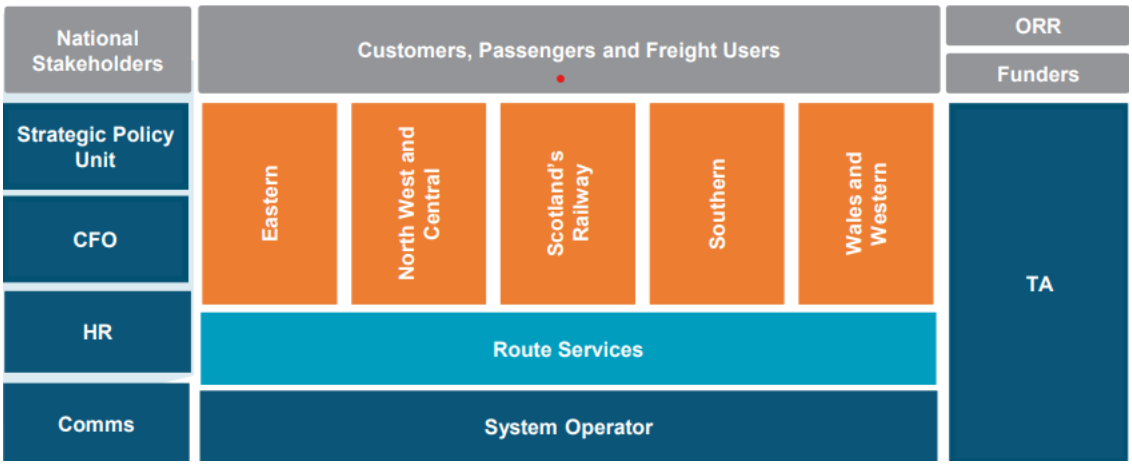
4.1.2 Organisation charts show the job titles of specific posts and the direct reporting lines between posts are available on ORG Plus organisation charts.

4.1.3 Employees are issued with job descriptions (JDs) giving them a clear understanding of their accountabilities. Each line manager is responsible for issuing each of their team with a copy of their JD and briefing them on their roles and accountabilities.

4.1.4 Where employees are allocated to roles outside of the formal organisation charts (e.g. temporary project work) any safety responsibilities specific to their role are communicated to them in writing. Where contract staff are allocated to posts shown on the formal organisation charts, or to temporary project work, their safety responsibilities are also communicated to them in writing.

4.1.5 Following the implementation of a devolved model, NRIL is an organisation comprising regions, routes, Network corporate functions and a service directorate. These elements of its business need to operate effectively together in a matrix to deliver NRIL's objectives. There are five Regions containing 13 Route organisations that are responsible for operating, maintaining, renewing and enhancing NRMI and managing the relationship with train operators. The Regions and Routes are supported by a service directorates: Route Services (RSD), and

by five Network corporate functions: Technical Authority (TA), System Operator (SO), Human Resources (HR), Corporate Communications (Comms), and the Chief Financial Officer's (CFO) organisation which contains the Centre of Excellence (CoE) for Capital Delivery within NRIL.



4.1.6 As part of its management system NRIL is required to document and provide guidance on how the business operates, specifically in the following key areas:

- Leadership
- Risk management
- Controls
- Monitoring
- Learning and improvements

4.1.7 The Network Target Operating Model (NTOM) has replaced Principles of the Matrix Framework (formerly known as The Devolution Handbook) as the primary documentation describing how the business operates. Its purpose is for use by the routes, regions and the National functions and directorates to explain how the organisation is designed to operate and reflect the organisation's structure, design principles, accountabilities, internal interfaces and management arrangements for delivering its core processes.

4.1.8 As part of the creation of the Network Rail Integrated Management System (IMS), led by the Technical Authority, it is proposed that this document acts as the initial framework to be incorporated into the initial IMS design by:

- Providing clarity on the top-level accountabilities of the business (routes, regions and functions)
- Supporting the business in understanding how NRIL discharges these key requirements
- Supporting discharging the requirements of HSMS and the safety validation commitments
- Providing the framework for the business to understand, support and continuously improve the key business process and accountabilities

Network Rail Alliances

4.1.9 In all routes and regions, NRIL and the TOCs are working closely together, collaborating even more to deliver greater benefit to customers. Formally integrated and co-located teams are not always a prerequisite for collaboration, as

active partnership can still be achieved through effective leadership that fosters a culture of cooperation. A number of teams in several routes/regions now work in the spirit of an 'alliance' without any structural changes.

4.1.10 The partnership developed between NRIL Wessex route and the TOC has the shared objective of working together to deliver the best possible service to customers and has delivered a number of benefits including, reduced delays per incident, better train performance and a joint approach to managing the impact of the weather on the railway. Formal Alliance teams are in place in Control, Performance, Planning and Waterloo Station.

4.1.11 The ScotRail Alliance is a close working relationship between the NRIL Scotland route and the TOC, to improve the railway in Scotland for customers by working together better. While remaining separate companies, both organisations will work to achieve common aims and objectives led by a single managing director.

4.1.12 The alliances have discrete individual agreements with each operator, but all the agreements have common features including:

- NRIL and the operator will remain separate entities
- Employees will continue to have the same employer with their current terms and conditions
- Each organisation continues to be ultimately accountable for their own areas of responsibility
- The interests of other passenger rail companies and freight operators are protected

4.1.13 The agreements in place commit the companies to working together and to work up specified projects where there is an opportunity for more integrated working and an opportunity to improve the service to passengers or reduce cost. The alliances may look at how stations can be better managed to provide a better service to passengers, how engineering work can be better planned or how improvements to train punctuality can be delivered.

Key Safety Posts

4.1.14 Certain posts have specific responsibilities identified within the HSMS. These posts are designated as key safety posts and the JDs endorsed accordingly. Nominated deputies are appointed for each key safety post to cover for prolonged periods of absence. Nominated deputies are issued with copies of the JD for the key safety post and briefed on the specific safety responsibilities of the post for which they are deputising in part or in whole.

4.1.15 These key safety posts exercise decisive authority over actions, products, decisions and policies that have a direct and material effect on the ability of NRIL to discharge its duty holder responsibilities under ROGS 2006.

4.1.16 These posts cannot be left uncovered for prolonged periods without detriment to NRIL's ability to discharge its duty holder responsibilities under ROGS 2006, hence the need for nominated deputy(s) to be briefed on the accountabilities and key responsibilities of the role.

4.1.17 In order to identify if a particular post is a key safety post, it is necessary to identify the following:

- Does the post have specific responsibilities identified against it in the HSMS or are there plans to do so?

- Does the post have a nominated deputy, i.e. the post is key, and cannot be left uncovered for prolonged periods?

4.1.18 There are no general corporate criteria to assist in making the determination whether a post has specific responsibilities that need to be included in the HSMS in the first place. It is therefore a matter reserved for individual business units to judge, albeit subject to challenge and rejection by the Chief Health & Safety Officer (CHSO), where they believe that the judgement is perverse, or would create a situation where the term has effectively become meaningless. This could be applied to any managerial post within the organisation.

4.1.19 To help to differentiate between key safety and non-key safety posts, it is necessary to view a post in the context of the concepts of accountability and decisive authority.

Accountability is the acknowledgment and assumption of ultimate responsibility for actions, products, decisions, and policies including their administration, governance, and implementation within the scope of the role or employment position, and encompassing the obligation to report, explain, and be answerable for, resulting consequences.

Decisive authority concerns decisions that the post or body can legitimately take autonomously without reference to a higher authority in the normal course of events.

4.1.20 A key safety post is something that meets all the following criteria:

- It exercises decisive authority over actions, products, decisions and policies including their administration, governance and implementation within the scope and accountabilities of the post. The actions, products, decisions and policies have a direct and material effect on the ability of NRIL to discharge its duty holder responsibilities under ROGS 2006
- The post cannot be left uncovered for prolonged periods without detriment to NRIL's ability to discharge its duty holder responsibilities under ROGS 2006, hence the need for nominated deputy(ies) to be briefed on the accountabilities and key responsibilities of the role

4.1.21 The accountabilities of a functional head are categorised in three areas:

Technical Direction

- Setting the technical direction in their field of expertise, directing the translation of business objectives into technical policy
- Providing technical input to Network Rail Standards, including ongoing ownership and arbitration of technical components
- Influencing the development of statute, external regulations and Railway Group Standards so that Network Rail's interests are protected
- Providing guidance and interpretation of technical requirements for compliance with statute, external regulations and Railway Group Standards
- Providing single point leadership for technical communities and directing the professional development within these communities
- Catalyst for technological change, providing professional direction in support of research and development into more effective technical solutions to business requirements
- Providing technical advice and strategy to the Board, SHE Committee, ELT, Health, Safety and Sustainability Coordination (HSSC) meeting, etc.

- Representing NRIL at technical bodies at various levels from UK industry – Institution of Civil Engineers (ICE), Institution of Electrical Engineers (IEE), Institution of Mechanical Engineers (IMechE), Institution of Railway Signal Engineers (IRSE) etc. to European and global level (UIC, CEN, etc).

Technical Compliance

- Specification of technical audit and monitoring requirements in the form of audit, verification and monitoring protocols
- Providing technical input to acceptance process
- Support to procurement process

Technical Authority

- Setting the framework that enables railway system operation at lowest whole life cost within tolerable risk, and implementation of change that maintains continued safe and efficient operation of the railway
- Supporting development of, and setting technical competence requirements for, key activities and posts
- Review and acceptance of technical recommendations arising from formal inquiries

The key safety posts within NRIL are shown in Appendix 1.

4.2 Safety Critical Work Posts

4.2.1 Certain posts within NRIL require the occupants of the posts to undertake safety critical work and these posts are designated as safety critical work posts. The posts within NRIL undertaking safety critical work as the core part of their normal duties are shown in Appendix 4.

4.2.2 NRIL is identified as a controller of safety critical work in accordance with ROGS 2006. These posts are designated as safety critical work posts and the job description (JD) is endorsed accordingly. The occupant of the post is required to sign the JD.

4.2.3 Safety critical work means any safety critical task carried out by any person in the course of their work. A safety critical task means:

- In relation to a vehicle used on NRIL managed infrastructure (NRMI):
  - Driving, dispatching or any other activity which is capable of controlling or affecting the movement of that vehicle
  - Signalling, and signalling operations, the operation of level crossing equipment, receiving and relaying of communications or any other activity which is capable of controlling or affecting the movement of that vehicle
  - Coupling or uncoupling
  - Installation of components, other than where the installation of those components is subject to supervision and checking by a safety critical worker or a controller of safety critical work
  - Maintenance, other than where the carrying out of that maintenance is subject to supervision and checking by a safety critical worker or a controller of safety critical work
  - Checking that that vehicle is working properly and, where carrying goods, is correctly loaded before being used
- In relation to NRMI:

- Installation or maintenance of any part of it, or of the telecommunications system relating to it, or used in connection with it, or of the means of supplying electricity directly to that transport system or to any vehicles using it or to the telecommunications system, other than where the carrying out of that task is subject to supervision and checking by a safety critical worker or a controller of safety critical work

The definition of maintenance includes:

- Any repair, alteration, reconditioning, examination or testing of infrastructure
- Controlling the supply of electricity directly to it or to any vehicles used on it
- Receiving and relaying of communications
- Any person ensuring the safety of any persons working on or near to the track, whether or not the persons working on or near to the track are carrying out safety critical work
- In relation to training, any practical training or the supervision of any such training in any of the tasks set out in the subparagraphs in this section above

4.2.4 The above criteria should be used to determine if a post is a safety critical work post and, where it is not included in the following list, the HSMS Specialist should be advised accordingly.

4.2.5 Every controller of safety critical work is required to ensure, so far as is reasonably practicable (SFAIRP), that a person under their management, supervision or control, with the exception of where that person is receiving practical training in a safety critical task, only carries out safety critical work where:

- That person has been assessed as being competent and fit to carry out that work following an assessment by an assessor
- There is an accurate and up to date record, in writing, of that person's competence and fitness which references any criteria for determining competence and fitness against which the assessment was made
- The record, or an accurate summary of the record referred to above is available for inspection, on reasonable request, by any other controller of safety critical work or any operator who may be affected by any safety critical work carried out or to be carried out by that person, for the purposes of establishing that persons competence and fitness to carry out safety critical work
- There are arrangements in place for monitoring the competence and fitness of that person

4.2.6 Every controller of safety critical work is required to review, without unreasonable delay, any person's competence or fitness assessment where:

- They have reason to doubt the competence or fitness of a person to carry out that safety critical work
- There has been a significant change in the matters to which the assessment relates
- To undertake a reassessment of competence or fitness where the result of a review of competence or fitness indicates that it is required

4.2.7 Every controller of safety critical work is required to have arrangements in place to ensure, SFAIRP, that a safety critical worker under their management, supervision or control does not carry out safety critical work in circumstances where they are fatigued, or where they would be liable to become so fatigued that their health or safety or the health or safety of other persons could be significantly affected.

4.2.8 For all safety critical work under its control, NRIL has systems in place for adequately managing the competence and fitness of those carrying out safety critical work and the associated fatigue risks. The arrangements are applied to all tasks that are defined in ROGS 2006 and in accordance with the relevant ORR guidance. Where safety critical workers are NRIL's own employees this is done through its competence management and line management arrangements.

4.2.9 Where employees are required to undertake any of these roles their JD is endorsed as safety critical work post. Where NRIL employs contractors to carry out safety critical work, they are required to have suitable arrangements in place directed towards ensuring that competence, fitness and fatigue are properly managed. NRIL does this through its supplier qualification and arrangement and co-operates as necessary with other controllers of safety critical work to enable them to discharge their responsibilities under ROGS 2006.

4.3 Heads of Disciplines

4.3.1 A Head of Discipline is the NRIL senior professional within a recognised technical discipline and may also be referred to as the Network Technical Head or Professional Head.

4.3.2 Each Head of Discipline is accountable for:

Each Head of Discipline is accountable for:

- Guidance on, and interpretation of, technical requirements for compliance with statute, external regulations and Railway Group Standards (RGSs) and Railway Industry Standards (RISs)
- Providing technical input to NR Standards, including ongoing ownership of technical components
- Influencing the development of statute, external regulations, RGSs and RISs so that NRIL's interests are protected
- Provision of professional leadership, including supporting research and development (R&D) into more effective technical solutions to business requirements
- Supporting development of, and setting technical competence requirements for, key activities and posts
- Ownership of standards and competence frameworks
- Reviewing/approving variations to standards
- Delegation of authority to review/approve variations to standards
- Agreeing the proposed assurance arrangements
- Understanding non-compliance to standards identified by monitoring, assurance and investigation activities and monitoring actions plans being taken to address
- Taking action to address any issues identified relating to the effectiveness of controls
- Provision of expert technical advice to the business, including reviewing business proposals from a technical perspective. This includes:
  - Support to the acceptance process
  - Providing technical support to the procurement process
  - Review and acceptance of technical recommendations arising from Formal Inquiries
  - Representing NRIL at technical bodies at various levels from UK industry – Institution of Civil Engineers (ICE), Institution of Electrical Engineers (IEE), Institution of Mechanical Engineers (IMechE), Institution of Railway Signal

Engineers (IRSE) etc. to European and global level (UIC – International Union of Railways - CEN, etc).

- Specification of technical audit and monitoring requirements in the form of audit and monitoring protocols for each owned standard

4.3.3 The head of discipline is accountable across NRIL for the quality of the technical advice and support provided to the business. They are not accountable for assuring compliance with NR Standards and advice. This accountability lies with the heads of the regions, routes, functions and directorates concerned.

4.3.4 A head of discipline is required to hold a recognised technical qualification in a discipline appropriate to their post, and to be a member of an appropriate professional body. Where no appropriate professional body exists, a head of discipline is required to demonstrate qualification through previous experience within the discipline. Examples of specific minimum competence requirements are shown in the following table extract**:**

Discipline	Post	Competence Requirements
Control, Command & Signalling	Network Technical Head Signalling	Chartered Engineer and Member of The Institution of Engineering and Technology (IET)/IRSE
Level Crossings	Network Technical Head Level Crossing Engineering	Chartered Engineer and Member of The Institution of Engineering and Technology/IRSE
Power Distribution HV/LV (High Voltage/Low Voltage)	Network Technical Head Power Distribution	Chartered Engineer and Member of The Institution of Engineering and Technology, or Mechanical Engineer
Contact Systems AC/DC (Alternating Current/Direct Current)	Network Technical Head Contact Systems	Chartered Engineer and Member of The Institution of Engineering and Technology, or Mechanical Engineer
Structures	Network Technical Head Structures	Chartered Civil or Structural Engineer
Buildings & Architecture Engineering	Network Technical Head Buildings & Architecture	Chartered Civil or Structural Engineer RICS, CIOB, CIBSE, RIBA or similar relevant membership (see glossary for acronyms)
Geotechnical	Network Technical Head Geotechnical	Chartered Civil Engineer or Geologist
Mining & Tunnels	Network Technical Head Mining & Tunnels	Chartered Civil or Structural Engineer or Chartered member of the institute of materials, minerals and mining.
Track	Network Technical Head Track	Chartered Civil Engineer with extensive experience of railway permanent way management

Discipline	Post	Competence Requirements
Lineside	Network Technical Head Drainage & Off-Track	Chartered Civil Engineer or Geologist or Incorporated Engineer with extensive experience of railway off-track management
Asset Data and Information	Network Technical Head Compliance & Capability	Extensive experience in the management of asset related data and information, with Chartered level membership of a relevant institution/body
Plant	Network Technical Head Plant	Chartered Engineer and Member of The Institution of Engineering and Technology, or Mechanical Engineer IMechE (Institution of Mechanical Engineers)
Traction & Rolling Stock	Network Technical Head Rolling Stock	Chartered Engineer and Member of The Institution of Engineering and Technology, or Mechanical Engineer IMechE (Institution of Mechanical Engineers)
Ergonomics	Network Technical Head Ergonomics	Chartered Ergonomist and Human Factors Specialist (Chartered Institute of Ergonomics & Human Factors)
Fire Safety	Network Technical Head Fire Safety	Member of the Institution of Fire Engineers
Operations Principles & Standards	Network Technical Head Operations Principles & Standards	Extensive experience of train operation and signalling including detailed knowledge of all books of Rules and Regulations published as RGSs
Environment & Sustainability	Chief Environment & Sustainability Officer	Science degree in appropriate subject

4.3.5 A number of posts in NRIL also provide technical direction in their field of expertise, for example Principal Programme Sponsor (Business Planning). Whilst these posts are not deemed to be a head of discipline, they provide support to each head of discipline's asset category.

4.3.6 Route/region asset protection teams can seek support from these posts when managing risk, for example when created by external parties.

4.4 Implementation and Operations – Competence, Training, Development and Awareness

General Arrangements

4.4.1 The Director, HR (Human Resources) sets an overall framework for competence management. Heads of disciplines support this by setting specific technical, operational and safety competence standards within their own professional disciplines. These are incorporated, where appropriate, into JDs.

4.4.2 Posts are filled by a process of competency-based selection led by line managers with support from the HR function. This involves conducting competence-based interviews to select the candidate who most closely meets the requirements of the post.

Suitability

4.4.3 Suitability means an individual meets the medical or physical requirements and has a high degree of emotional intelligence to match other JD requirements as well as the skill and knowledge requirements for the task. Job Task Analysis (JTA) and Training Needs Analysis (TNA) sets out these requirements.

Medical Fitness

4.4.4 Prior to any identification of training and/or competence requirements, medical fitness of the individual shall be taken into account and shall be in line with NR Standard NR/L2/OHS/00124 Competence Specific Medical Fitness Requirements and Supplier Requirements for Medical Assessments. Any individual required to go on or near the line shall be able to demonstrate medical fitness and competence in accordance with:

- NR/L1/OHS/051 Drugs and Alcohol
- NR/L2/CTM/021 Competence and Training in Track Safety

4.4.5 Line managers issue and brief employees on JDs that describe the role of the post, the principal accountabilities, and the competence requirements. Where a post is filled by a person who does not yet have all the required competencies, the line manager puts in place transitional arrangements until the postholder can demonstrate these competencies.

Assessment and Training

4.4.6 NR Standard NR/L2/CTM/202 Quality Assurance in Training and Assessment sets out training and assessor competence. The standard requires assessors and trainers to be able to demonstrate suitable occupational competence in the subject area in which they are required to deliver assessments or training as well as competence as an assessor or trainer.

4.4.7 All new entrants undertake a four stage on-boarding and induction process. An e-Learning module (Welcome to Network Rail) is sent to them once they have accepted their job offer, along with the Network Rail On-boarding Checklist which is completed with their line manager once they commence their employment. This highlights all the mandatory and legal information they need to be aware of. A face-to-face event is then held which has a content mix of national and local information.

4.4.8 For those new to NRIL or new to a management role, a People Manager workshop is available which trains them in the key responsibilities expected of a people manager.

4.4.9 Line managers arrange for new entrants and transferees between jobs to receive local job orientation as soon as practicable on arrival and before commencing work. The safety aspects of local job orientation are detailed in the Network Rail On-boarding Checklist.

4.4.10 Line managers arrange for appropriate assessment, monitoring and review of the performance of those employees for whom they are responsible.
Line managers/employees in role clarity bands 1-8 are subject to an annual performance review process. The review assesses the capabilities of the person against determined areas where competencies can be improved and action plans are set for such improvement. The Managing for Performance procedure allows for the removal of an employee to a more appropriate position when the individuals performance does not meet the required standard. This procedure may be invoked at any time.

4.4.11 Training and relevant medical examinations are arranged through the HR function. HR maintains personnel records including details of medical examinations, training and competence assessments. Arrangements are in place to give advance notice to line managers of the expiry date of competence and details of any medical restrictions applied to staff.

4.4.12 Those newly appointed to a director level post are given an individually tailored induction programme so that they are aware of their responsibilities and the nature of the system safety risks affecting NRIL. The programme for each director is drawn up by the Principal Safety Culture Specialist, on behalf of the Chief Health &Safety Officer (CHSO).

4.4.13 NRIL ensures all employees receive mandatory training, which includes the following:

- Doing the Right Thing (I-ethics)
- General Fire Safety Awareness (See NR Standard NR/L2/CTM/229 Competence and Training for Emergency Evacuation Wardens and Persons Responsible for Fire Safety)
- Asbestos Awareness
- Security on the Railway
- Everyone – Diversity and Inclusion
- A Spotlight on Business Ethics (part one)
- A Spotlight on Business Ethics (part two)
- Counter Terrorism on the Railway
- Data Protection Essentials

Checks are carried out to ensure that these are in date and employees have undertaken this development.

4.4.14 For maintenance, signalling, track safety, traction supplies, and certain other safety related activities, specialist training is provided and employees are formally assessed against the appropriate competence standards. Line managers prevent employees from undertaking such work until the necessary standard of competence has been achieved.

Safety Critical Competence - Competence Management System

4.4.15 NR Standard NR/L1/CTM/001 Competence Management sets out the requirements for a competence management system for managing the competence of people who undertake safety critical or safety related work on NRMI to satisfy the requirements of ROGS 2006.

4.4.16 NR Standard NR/L2/CTM/201 Competence Management defines the mandatory requirements for managing the competence of people who undertake safety critical or safety related work on NRMI. The main purpose is to ensure that NRIL,

its contractors and suppliers take a consistent approach to competence management. The standard enables NRIL to control risks associated with the competent performance. It defines the processes that NRIL implements and maintains as part of its competence management system:

- The identification of activities and assessment of risks
- Selection of competence standards and training courses
- Development of procedures and methods for managing competence
- Determining how to meet these standards
- Establishing training, development and assessment needs
- Maintaining managers competences
- Selection and recruitment
- Undertaking training development and assessment
- Arrangements for controlling the activities that are undertaken
- Monitoring and maintaining the performance of individuals
- Managing sub-standard performance
- Keeping records
- Verification, audit, and review

4.4.17 NR Standard NR/L3/CTM/306 Skills Assessment Scheme is a competence assurance process based on risk. It applies a methodology to attain, maintain and renew competence based on the activity being performed by an individual. This standard and its modules set out the requirements of the skills assessment scheme. It defines the processes and sets the standards to be followed in order to attain competences within its scope.

4.4.18 The Skills Assessment Scheme is the NRIL means of competence assurance and is about making the assessment of capability proportionate to the level of risk involved. The assurance regime is derived from assessing a number of factors, including:

- The complexity of the task
- The likelihood of skills fade
- The impact of not doing it right

This allows NRIL to apply a regime that varies from re-train every two years to a 50-year award of competence. The control is a mandated Annual Capability Conversation without which competence is automatically removed.

4.4.19 Competence standards are developed by the relevant heads of disciplines based on applicable Railway Group and national occupational standards and against which the performance of employees is evaluated. These standards describe what a person must be able to do, how well and how this would be assessed.

4.4.20 NRIL's Competence Management System mandates a competent person must hold a certificate which confirms that specific competence has been demonstrated by an individual against the requirements of a competence standard.

4.4.21 A competence profile defines competence standards with a description of the range of competence requirements that apply to a specific job role or post. The competence profile is used to determine the training and assessment requirements for the person occupying the post. The profile supplements the relevant job description (JD), forming the basis for recruitment and selection and is also used to identify individual training and assessment needs.

4.4.22 Competence assessment is undertaken in accordance with the requirements set out in NR Standard NR/L2/CTM/202 Quality Assurance in Training and Assessment.

4.4.23 A detailed plan of training and assessment requirements for employees is maintained, on Oracle E-Business Suite, based on the competence profiles and training frameworks.

4.4.24 The HR Shared Services management system (HRSS) and supporting competence record is updated for each individual based on the results of the latest assessment/review. This record is updated and re-issued each time an employee's competence changes.

4.4.25 In some cases, a person is required to complete a period of work experience, under the supervision of a mentor, to enable the individual to demonstrate competence in specific work activities. The arrangements for this mentoring are agreed between the line manager, the person concerned and the mentor following the completion of training. In some other cases, a person is required to complete a period of learning with appropriate support.

4.4.26 Any employee required to undertake safety critical work on NRMI (Network Rail Managed Infrastructure) is issued with a relevant identification card. Only authorised people are permitted to undertake safety critical work and authorisation is granted on the basis of a person being medically fit and competent for the activity concerned.

Signal Engineering Competence

4.4.27 The Institution of Railway Signal Engineers (IRSE) operates a competence certification scheme to provide assurance about the competence of individuals to carry out technical safety-critical or safety-related work on signalling equipment and systems. It provides a cross-industry accepted benchmark of competence for personnel carrying out a range of activities from maintenance to design, installation, and testing. In addition to the skills assessment scheme, NRIL uses this certification scheme to assess the competence of its staff used on safety-critical and safety-related signalling work.

4.4.28 NR Standard NR/L2/SIG/10160 Signal Engineering: Implementation of IRSE Licensing Scheme - The Route to Competence sets out the requirement for the mandatory application of the IRSE licensing scheme to NRIL's own engineers and technicians as well as those of its contractors and/or consultants. For telecoms staff, NRIL uses the skills assessment scheme to confirm the competence of telecoms staff undertaking safety-critical and safety-related work.

Signaller Competence

4.4.29 Signallers are trained, assessed and certified competent in accordance with national occupational standards. These arrangements are set out in NR Standard NR/L3/OPS/045 National Operating Procedures Index and NR/L3/OPS/045/2.06 Competence Standard Assessment for Operating Signalling Equipment.

4.4.30 Signallers are managed by local operations managers who have arrangements in place so that:

- Signallers are assessed as competent to carry out work in their particular location

- Signallers are assessed as medically fit
- Arrangements are in place to control the working hours of signallers
- Competency standards for assessors are met

4.4.31 New entrants to the signalling grades attend a standard basic signalling skills training programme.

4.4.32 Basic signalling training is delivered at NRIL approved centres using registered professional and vocationally competent trainers. Various simulation media are used to support basic, signalling system conversion and refresher training delivery.

4.4.33 Signallers then receive local on-the-job training, followed by final competence assessment by the line manager qualified in competence assessment.
The line manager issues a signed certificate of competence detailing the specific locations the signaller is competent to operate. This is retained on the signaller's personal safety file. Newly qualified signallers are subject to increased levels of monitoring in accordance with NR Standard NR/L3/OPS/045 National Operating Procedures Index and the operations manual procedure NR/L3/OPS/045/2.14 Additional Monitoring of Employees and Support Procedure.

4.4.34 Entrants to the signalling grades who are only required to work level crossings which do not require signalling block knowledge, do not attend the nationally set signalling course. Instead, they receive appropriate on-the-job training and are assessed as competent by the local line manager. Signallers moving to another box using the same signalling system receive appropriate on-the-job conversion training and are assessed as competent by the local line manager. If a change of signalling system is involved when a signaller changes post, conversion training programmes that are delivered either at a training location or on-the-job, are provided. An appropriately qualified local manager will assess competence.

4.4.35 NRIL has competency assessment processes that test each signaller's knowledge and understanding of relevant signalling rules, regulations and instructions, as well as the level of confidence each signaller has in their responses. As part of this process, signallers are subject to continuous assessment on a three-year cycle and each signaller is issued with a workbook identifying specific competence requirements relevant to the locations they are authorised to work. The operations manual procedure NR/L3/OPS/045/2.06 Competence Standard Assessment for Operating Signalling Equipment sets out the arrangements for this activity.

4.4.36 In order to support the maintenance of competence, all signallers, local operations managers, mobile operations managers, operations managers, and other operations staff receive operations' safety briefs which take place every six months. Signallers are further released from duty four days per year for development and competence development with their line manager.
Assessment evidence is taken into account, paying particular attention to any identified areas of weakness, recent changes in rules and regulations and any emerging development needs. During a three-year cycle these nationally coordinated refresher training/assessment elements cover the emergency and degraded mode working situations that they may only deal with infrequently.
The assessment evidence generated during these sessions contributes to the evidence gathered through regular supervised visits, during the three-year continuous assessment cycle. These sessions also cover the regular formal face-to-face safety briefings for signallers. Reassessments are considered for issues such as substandard performance, long term sickness, legislation/standard

changes and changes due to the introduction of new and modified vehicles, plant and equipment, etc.

4.4.37 Each signalling location is subject to supervisory visits by the line manager, which include fitness for duty checks, at a predetermined frequency. The frequencies vary depending on a number of risk factors including signalling complexity and traffic density. Each signaller is also subject to supervisory visits at a predetermined frequency. Records are maintained of these visits.

4.4.38 Local Operations Managers and Operations Managers are subject to formal competence assessment at initial appointment and reassessment every two years to assure the Route Director that postholders are competent in railway operating Rules and Regulations.

4.5 Fitness for Work and Management of Fatigue

4.5.1 NRIL sets standards, where appropriate, for medical fitness and hours of work. The medical fitness requirements include criteria for visual acuity, colour vision, hearing and general health. They specify the scope of medical examinations and when they are required. These are defined in NR Standard NR/L2/OHS/00124 Competence Specific Medical Fitness Requirements.

4.5.2 The extent of medical examination for a recruit to NRIL depends upon the post for which the individual is being recruited. For jobs which do not require track access, the individual completes a medical questionnaire and the occupational health professional determines whether any further information or a meeting is required.

4.5.3 Applicants for safety critical posts are given hearing and sight examinations and are medically examined in relation to the physical and psychological requirements of the job. A medical assessment shall be carried out before an individual is permitted to hold one or more of the competences listed on Sentinel, except the Industry Common Induction (ICI). This initial medical assessment is undertaken before the applicant is permitted to undertake safety critical work and, thereafter, at periodic intervals dependent on the age of the applicant at the time of the initial and each subsequent assessment. Medical certificates are issued on appropriate completion of each medical assessment. The maximum expiry date of medical certificates issued shall be:

Age at date of medical assessment	Maximum validity of certificate (unless revoked earlier)
Until aged 40 years	Every 10 years
Until aged 65 years	Every 5 years
Aged over 65 years	Annually

Shorter expiry dates may be issued for medical reasons.

4.5.4 Confidential medical records are maintained using the HR Shared Services (HRSS) medical's team and management systems.

4.5.5 NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work details the arrangements for reducing, SFAIRP, the risks to health and safety that are associated with working patterns, shift work and excessive working hours.

4.5.6 The standard is supported by the following functional level 3 standards, and a guidance note for Capital Delivery employees and suppliers:

- NR/L3/OPS/045/2.13 Control of Excessive Working Hours for Persons Undertaking Safety Critical Work details the arrangements for managing fatigue and working hours in terms of:
  - Designing and risk assessing working patterns
  - Working time limits and managing exceedances of working time limits
  - Monitoring and reviewing working patterns
- Applies to all operations staff (within the route and region including managed stations' staff) who undertake safety critical work and those who have responsibility for the rostering and/or management of staff who undertake safety critical work
- NR/L3/MTC/MG0224 Infrastructure Maintenance Process for the Management of Fatigue and Control of Working Hours for Employees Undertaking Safety Critical Work defines the requirements for managing fatigue and working hours for maintenance staff within the route and region, and those employed under contract by the route and region, who undertake safety critical work. Its purpose is to reduce the risks to health and safety that are associated with working patterns, shift work and excessive working hours.
- NR/L2/INI/CP0070 Principal Contractor Licensing Scheme is NRIL's process to verify that organisations discharging contractor duties on construction work, where NRIL is the client, have the relevant management systems in place to incorporate the additional requirements over and above legislation, and that they are implementing these requirements on site.
- NR/GN/INI/001 Guidance on the Management of Door-to-door Work and Travel Time provides information to support the assessment of risk associated with fatigue and the management of work and travel time. It is for all NRIL staff and suppliers working for Capital Delivery that require access to NRMI.

4.5.7 NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work covers NRIL's fatigue management arrangements for safety critical workers. This standard outlines the requirements for managing fatigue and working hours. It applies to all NRIL employees who undertake safety critical work, and to those suppliers/contractors whose employees undertake safety critical work on behalf of NRIL.

4.5.8 Specific requirements are set out for line managers or other identified roles who:

- Have responsibility for the rostering and/or management of staff who undertake safety critical work, and/or
- Are responsible for arranging, placing, controlling and monitoring of contracts which involve undertaking safety critical work on behalf of NRIL.

4.5.9 The scope of this standard includes controls for:

- Working hours
- Exceedances of working time limits
- Design and risk assessment of working patterns
- Management of fatigue
- Monitoring and review of arrangements for managing fatigue and working hours

4.5.10 NRIL applies the following limits for safety critical workers:

- No more than twelve hours to be worked per period of duty/shift
- No more than seventy-two hours to be worked in any seven-day period

- A minimum of twelve hours rest between booking off from a period of duty/shift to booking on for the next period of duty/shift
- No more than thirteen periods of duty to be worked in any fourteen-day period

4.5.11 These limits are not sufficient, on their own, to control all of the risks from fatigue, but form part of a set of fatigue management arrangements in conjunction with other measures such as the risk assessment of base rosters and of actual hours worked.

4.5.12 Line managers plan and develop rosters and working patterns in accordance with the working time limits defined within NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work. These are agreed with relevant employee representatives so that working time limits are not exceeded. Any local arrangements for rostering or managing working hours are required to remain within these identified working time limits.

4.5.13 Rosters are developed in accordance with good practice roster design to minimise the build-up of fatigue. Good practice roster design includes, but is not limited to, the following:

- Restricting the number of consecutive night or early morning shifts to reduce fatigue build-up
- Providing adequate rest between shifts and between blocks of shifts to allow fatigue to dissipate, particularly for night shifts. It is recommended that 48 hours rest be provided following a block of nights
- Utilising forward rotating shift patterns (earlies to lates to nights) where practicable
- Planning spare duties so workers have advance notice of start times
- Providing breaks where there are no natural breaks in work activity
- Considering the impact of travelling time and workload when scheduling shifts longer than 8 hours.

Further information is included in NRIL's Fatigue Management e-Learning Programme.

4.5.14 All rosters are risk assessed using the Fatigue and Risk Index (FRI) prior to implementation to evaluate whether the pattern of shifts places staff at risk of fatigue. Compliance with the identified working time limits does not constitute a risk assessment. The FRI is available for download from the HSE website or via NRIL's Fatigue Management e-Learning Programme. The guidelines set principles and parameters for use of the FRI.

4.5.15 Where rosters are amended in response to short-notice changes to work requirements or staffing availability, such as to cover unplanned staff shortages or sickness, these amendments are made in accordance with good practice roster design to minimise the build-up of fatigue.

4.5.16 Where resource shortages occur beyond a four-week period, the actual hours worked are reviewed and control measures put into place to manage identified fatigue risks. This may include amendment of the roster in accordance with available resources, the addition of contingent labour or a more even allocation of overtime to avoid individuals becoming at greater risk of fatigue as a result of prolonged working in excess of the base roster.

4.5.17 Where resource shortages have been or are likely to be prolonged beyond a 3-month period, the roster is amended in accordance with the revised staffing profile, and this is risk assessed.

4.5.18 Where employees are persistently working in excess of a base roster to cover resource deficits, the initial risk assessment of that roster is no longer applicable as the cumulative risk posed by the additional hours worked is not being assessed. A new roster should be devised to better reflect the available resources and action taken to address the resourcing deficit as soon as possible to reduce the impact on the remaining employees, particularly where the resource deficit is prolonged.

4.5.19 A copy of the FRI risk assessment and risk controls implemented for each roster is maintained for audit purposes, in accordance with the requirements of NR Standard NR/L3/INF/02226 Corporate Records Retention Schedule.

4.5.20 Working time limits are exceeded only with prior approval, on an infrequent basis and only in exceptional circumstances, as defined in NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work. The prior approval and risk assessment process is defined in the relevant functional procedures. Where work can be completed at another time without disruption or without a need to exceed the working time limits, an exceedance is not granted.

4.5.21 Functional heads are required to define, for their areas of responsibility, posts permitted to authorise exceedances within their area of responsibility. This should normally be the line manager but may be another nominated person, particularly if the exceedance is incurred out of hours (e.g. On-call Manager, Route Control).

4.5.22 An exceedance is risk assessed and authorised by a line manager or other nominated person prior to its being incurred. Before authorising an exceedance, the line manager or other nominated person should:

- Consider the risks involved so that the exceedance does not place the individual or the safety of the railway at an unacceptable level of risk.
- Consider the alternative options available
- Identify mitigation measures to address the fatigue risks associated with the exceedance

4.5.23 NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work provides a table of the factors known to contribute to fatigue and increase risk and is used for guidance when risk assessing an exceedance request.

4.5.24 Where a line manager or other nominated person determines that an exceedance can be authorised, they are required to complete a record of the authorisation, including the mitigation measures to be implemented where appropriate. Where the working time limit is defined in terms of number of shifts, each shift over the limit is counted as a separate exceedance for the purposes of recording. Functions are required to develop a record to be used for the purposes of recording the authorisation. NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work includes a template form demonstrating the minimum requirements for this record.

4.5.25 Where they have not been directly involved in the authorisation of an exceedance, the line manager is required to co-sign the exceedance report form on the next working day.

4.5.26 Line managers take steps to relieve staff who have worked in excess of the identified working time limits as soon as practicable and provide them with sufficient time to receive adequate rest before their next period of duty. Line managers are also required to take steps to mitigate against further exceedances occurring. These mitigating measures may include:

- Alteration of the roster to provide adequate rest for employees who have exceeded
- Provision of additional resources
- Reallocation of staff to priority work tasks, where appropriate
- Provision of additional supervision
- Provision of additional breaks during a shift

4.5.27 Functional heads have arrangements in place for collating information on working hours and exceedances in order to assess how effectively they are controlling the risks arising from fatigue. The actual hours worked are monitored against the identified working time limits on a period basis. This includes any period of overtime (whether planned or unplanned) and any period where non-safety critical work is undertaken. This may include retrospective analysis with the FRI of individuals who have worked a high number of hours, as a means of informing future decisions about allocation of overtime or coverage due to the level of risk imposed. This may also include analysis of time sheets for evidence of actual hours worked, as measured against the identified working time limits.

4.5.28 The number of exceedances is monitored and reported on a period basis with the aim of minimising the occurrence of exceedances. This process includes:

- Compilation of period reports on the number of exceedances that occur, including reference to causes
- Monitoring of exceedances per individual to identify where particular individuals may persistently exceed working time limits
- Agreement of action plans with the line manager to limit the number of exceedances where practicable
- Auditing of the exceedance authorisation documentation and of the process taken to authorise exceedances as a means of preventing retrospective authorisation
- Reviewing the adequacy of mitigation measures implemented when exceedances have been incurred

4.5.29 In addition to the monitoring of exceedances, monitoring and review should consider those working an average of more than 48 hours a week, which should provide an early indication of patterns or trends which may give rise to exceedances occurring.

4.5.30 Suitable measures are required to be taken to prevent recurrences where exceedances could have been prevented.

4.5.31 Line managers are required to retain records of all exceedances incurred and the signed authority to support them, in accordance with the requirements of NR Standard NR/L3/INF/02226 Corporate Records Retention Schedule.

4.5.32 On-call time is monitored on a period basis. This includes time spent responding to callouts both via telephone and in person. Where there is a high level of callout activity identified over a prolonged period which regularly affects the ability of employees to obtain sufficient rest between duties, consideration is required to be given to reviewing the on-call arrangements for that location.

4.5.33 Line managers have arrangements in place that prevent employees from carrying out or continuing to carry out safety critical work activities where there is reason to believe they are unfit due to fatigue. The reason for the employee's fatigue is required to be established SFAIRP to prevent future occurrence. In the event of an employee being unfit due to fatigue, appropriate control measures shall be applied before the individual commences or recommences safety critical work activities. Guidance for managers on identifying and managing employees who are fatigue is contained within NRIL's Fatigue Management e-Learning Programme.

4.5.34 Functional heads have arrangements in place for providing information on the management of fatigue and working hours to employees who fall within the scope of NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work. This may include, but is not limited to, completion of NRIL's Fatigue Management e-Learning Programme, or the provision of specific training on the use of the fatigue and risk index or on coping with shift work, on-going briefing material.

4.5.35 Suppliers to NRIL of staff undertaking safety critical work are required to have arrangements in place for managing fatigue, working hours and exceedances for their employees, in accordance with the requirements of the Contract and Procurement Policy.

4.5.36 All suppliers to NRIL are subject to formal audit arrangements. The effectiveness of contractor management arrangements for fatigue and working hours for staff undertaking safety critical work may be subject to monitoring by the line manager responsible for the management of the contract. An audit of fatigue management arrangements may also be undertaken (see HSMS 7.3 Safety Assurance).

4.5.37 Functional heads are responsible for self-assuring compliance with NR Standard NR/L2/OHS/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work in accordance with NRIL's safety assurance arrangements (see HSMS 7.3 Safety Assurance). Compliance with this standard is also addressed through NRIL's safety assurance arrangements.

4.5.38 A review of arrangements for managing the risks of fatigue is required to be undertaken by a line manager or functional head where:

- There are plans to change the existing working patterns
- There has been a significant change in circumstances, such as resulting from job redesign, changes to workload or organisational change
- Fatigue has been identified as a causal factor in an incident investigation which gives reason to doubt the effectiveness of the arrangements
- Monitoring has shown that standards and limits are being exceeded on a regular basis
- Long term sickness, a significant number of unfilled job vacancies or industrial action results in frequent exceedances
- There is a significant incidence of workers being stopped from carrying out safety critical tasks due to being unfit because of fatigue
- There is any other reason to doubt the effectiveness of the arrangements

4.5.39 Information is available on the Fatigue Management e-Learning Programme and relevant health and wellbeing factsheets (see also HSMS 4.20 Workforce Health and Safety).

4.6 Drugs and Alcohol Policy

4.6.1 NR Standard NR/L1/OHS/051 Drugs and Alcohol Policy defines the policy and related implementation arrangements to control the risks of employees and contractors working for or on behalf of NRIL being unfit through drugs or alcohol while at work. The policy demonstrates NRIL's commitment to:

- The health and safety of its employees and contractors
- Prevent as far as reasonably practicable problems resulting from drug and alcohol misuse arising at work
- Raise awareness, of all employees and contractors, to the effects of drugs and alcohol and recognise the common symptoms of misuse, including the impact on themselves and on their work (See NR Standard NR/L2/OHS/00120 Testing for Drugs and Alcohol)
- Encourage those employees who misuse drugs and alcohol to seek help voluntarily at an early stage, before their performance at work is adversely affected and to deal fairly, consistently and in a supportive manner with those employees, provided they co-operate fully with the treatment programme
- Assist managers/supervisors in dealing with drugs and alcohol misuse incidents at work
- Establish clear guidelines for dealing with misconduct arising from drugs and alcohol misuse

It requires contractors to provide their own drugs and alcohol policy to support NR's Standard as part of their health and safety management arrangements.

4.6.2 All NRIL employees recruited into safety critical work or posts, which require competences that are managed through the Sentinel card system, are tested for the presence of drugs or alcohol. All employees recruited to other posts are required to confirm that they understand, and will comply with, NRIL's drugs and alcohol policy. Employees in safety critical work or key safety posts, and those that are Sentinel cardholders, are subject to random testing for drugs or alcohol. Employees are also subject to for cause testing for drugs or alcohol, where appropriate, or example following involvement in a safety critical accident or where breach of the policy is suspected.

4.7 Employee Assistance

4.7.1 For the route/region employees (i.e. signallers, level crossing operators, controllers, mobile operations managers and electrical control operators) NR Standards NR/L3/OPS/045 National Operating Procedures Index and NR/L3/OPS/045/2.14 Additional Monitoring of Employees and Support Procedure assist line managers in the identification and support of those who may be experiencing personal, health or domestic issues. The procedure is designed to provide both the employee and the line manager with a process for exploring such matters in a supportive environment. It provides guidance about the types of support available and outlines some actions that may be used to help support the operator whilst maintaining the safety of the railway.

4.7.2 Specifically, employees are identified as requiring additional support and monitoring when they return from an extended absence (i.e. when they have been absent for more than eight weeks). The additional support may take the form of

additional refresher training if the manager and operator agree that this is an appropriate course of action. See the NRIL Employee Assistance Programme (EAP).

4.8 Consultation and Communication

4.8.1 NRIL values the input that its employees make to the development of health, safety and welfare policies and local working procedures. In support of this, a Health, Safety and Welfare at Work Procedure agreement has been agreed with recognised trade unions, namely the RMT, TSSA and Unite.

4.8.2 The purpose of this procedural agreement is to provide a framework for dealing with matters related to health, safety and welfare at work in accordance with the Health and Safety at Work Act 1974, and the Safety Representatives and Safety Committee Regulations 1977, as amended by the MHSW Regulations 1999.

4.8.3 The parties to this agreement recognise the paramount importance of health and safety at work and the positive contribution that health and safety representatives make. Improvements in health and safety performance depend on full cooperation and commitment from all employees and managers. Health and safety representatives and safety committee/council structure have vital roles to play in developing this commitment at all levels. The recognised trade unions nominate NRIL employees to act as local health & safety representatives with specific health and safety functions. They have direct access to local management and the intention is to resolve as many health and safety issues as possible at the lowest level consistent with authority and accountability, and the procedure requires that effort is to be taken to provide that matters raised are resolved at the appropriate level.

4.8.4 To support the introduction of this agreement and to assist in improving its safety culture, NRIL has agreed with the trade unions that they appoint a number of lead union health & safety representatives. Their role is to support the introduction of this agreement across the whole organisation and work with NRIL in improving the organisations health and safety culture.

4.8.5 An NRIL National Health, Safety and Welfare Council (the Council) has been established to consider organisation wide policies and principles related to health, safety and welfare at work covering the totality of NRIL's business and employees. This is separate to the role of the council associated with general collective bargaining as defined in the general collective bargaining procedure agreement and the management grades collective bargaining procedure agreement.

4.8.6 The purpose of the National Health, Safety and Welfare Council is to:

- Discuss, develop and implement the health, safety and welfare programmes and safety policies related to the totality of NRIL's business and its employees
- Monitor health, safety and welfare strategies and standards with the objective of promoting health, safety and welfare through management and employees' cooperation
- Review and discuss the general safety performance of the business
- Review and discuss emerging trends in the context of the health of employees
- Consider important matters of principle
- Consider the issues which remain unresolved and have been referred to the secretary

4.8.7 The chair and secretary of the Council are appointed by NRIL. At Council meetings, the organisation's side comprises not more than ten representatives appointed by NRIL. The employee's side comprises not more than nine representatives appointed by the trade unions on the basis of a maximum of 4 x RMT, 3 x TSSA and 2 x Unite. In addition, each trade union may appoint one official employed by the union and one employee of the trade union who is a health and safety specialist.

4.8.8 Meetings of the Council are held periodically and not less than four times a year. Further meetings take place as necessary and within twenty-eight days of a request being made either by the organisation's side or by a trade union on the employee's side.

4.8.9 Each NRIL route/region or equivalent has established a health, safety and welfare committee, to deal with matters within the route/region or functional equivalent, implications of which have been referred to it because of differences at local level. In addition, there are two headquarter's functions' committees.

4.8.10 Each route, region or functional equivalent committee comprises of:

- The appropriate senior managers from the route, region or function. The chairperson will normally be the Operations Director and Infrastructure Director
- Health and safety representatives as set out in the appendices to the procedure

4.8.11 The purpose of the committees is to keep under review the effectiveness of measures taken to protect the health and safety at work of employees within its scope, including issues escalated from local level and to promote cooperation between NRIL and employees in instigating, developing and carrying out such measures.

4.8.12 The committee meets on a frequent basis and in no case less than four times a year. Further meetings take place as necessary and within twenty-eight days of a request being made either by route, region or functional management or by a trade union party to the agreement.

4.8.13 Matters are not normally referred to a higher level. If discussions fail to settle a difference, the agreement is exhausted. However, if after exhausting the local, route, region or functional equivalent procedures the representatives legitimately believe that it is not within the remit of the Operations Director and Infrastructure Director, or functional equivalent manager to resolve the issue, they can refer it to their national official who, if in agreement with their view, may contact the relevant employee relations specialist to facilitate a meeting with the Route Director or functional equivalent director.

4.8.14 Separate to the route or region committees within each function detailed above, a Route based Committee meeting, which will normally be chaired by a Route Director, shall be held at least once a year specifically for the purpose of addressing cross functional safety matters that affect employees in both the Operations and Maintenance Committees within the same Route. Further meetings shall take place as necessary and within twenty-eight days of a request being made either by Area/functional management or by a trade union party to this Agreement.

4.8.15 A trade union appointing a local health & safety representative advises the local manager in writing of the appointment and also when the appointment ceases. The functions of local health & safety representatives are as set out in the Safety Representatives and Safety Committee Regulations 1977 as amended by the MHSW Regulations 1999.

4.8.16 The boundaries of the workplace to be covered by health & safety representatives will normally be the route, region or function controlled by the local manager within which there will be a health & safety representative(s) for each constituency. Each trade union party to the agreement will normally appoint not more than one health & safety representative from amongst the grades of employees they represent per constituency.

4.8.17 Local managers should meet with local health & safety representatives on a frequent basis but not less than four times a year. Meetings are required to be held within seven days of a specific request for a meeting. Where the matter concerns employees controlled by other functional managers or other areas, the relevant health & safety representative is invited to the discussion. Emergency meetings may be held upon request to discuss matters considered by the health & safety representative(s) concerned to constitute a serious and imminent risk to health and safety at work.

4.8.18 Any matters raised by local health & safety representatives or trade unions between normal meetings are reported to the next meeting. If a matter is not resolved at local level it may be referred to the route, region or functional committee level and may be so referred by either of the parties concerned. In the event of an urgent health and safety problem not being resolved locally or at route, region or functional committee level, the head office of the trade union may bring it to the attention of the Secretary of the NRIL Council in order that the necessary discussions can be arranged as appropriate. However, to progress an issue in this way would be the exception rather than the norm.

4.8.19 The procedure agreement also includes a number of general arrangements for:

- Workplace inspections (both routine and special inspections by local health & safety representatives)
- The provision of information (statutory provision, information in relation to accidents/ill health/dangerous incidents, health and safety information, timely and efficient communications and access to information)
- Reasonable access to office facilities or time away from normal duties with pay as is necessary to undertake planned inspections, attend meetings, have appropriate involvement with regard to hazard identification, risk assessments, the determination of controls and to discharge their other functions, i.e. undertake consultation, review of health and safety documentation/information, undertake correspondence
- Attend courses on health and safety at work matters as are agreed to be reasonable by the parties to the agreement (TUC Stages 1 and 2, course equivalent to these as run by the individual trade unions, other courses as may be agreed by the National Council as being relevant), and reimbursement of reasonable expenditure associated with attending such courses

4.9 Safe Delivery of Core Activities

Asset Management Process

Asset Management System

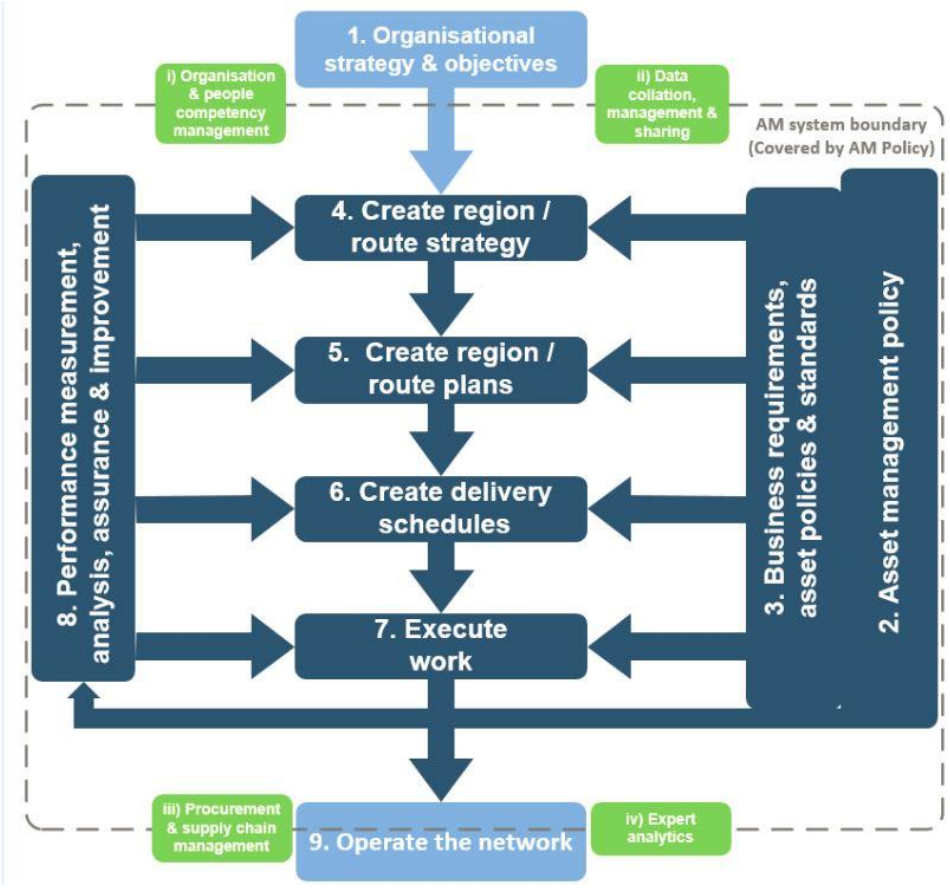
4.9.1 NRIL's Asset Management Process (AMP) is defined through the Asset Management System (AMS). It provides an overview of how all its activities, learning and control frameworks work together, so that they are able to be understood, communicated and operated across NRIL.

4.9.2 The AMS outlines the key documents that describe NRIL's approach to asset management as below.

Asset Management Policy (AMP)

4.9.3 The Asset Management Policy includes details of the organisation's asset management policy statements and guiding principles, a framework for asset management, and a commitment to communicate the policy as appropriate.

4.9.4 NRIL's Asset Management Framework, as shown overleaf, encompasses nine stages with underpinning processes that provide the mechanism to create an effective line of sight between its high level objectives, on the ground work delivery and through monitoring and review, to return feedback and learning to help frame future strategy.



Asset Management Strategy (AMS)

4.9.5 The Asset Management Strategy (AMS) includes a narrative on the asset management objectives, and how improvement initiatives are guiding the development of asset management excellence to deliver:

- Improved safety
- High performing assets, required to provide a quality service
- Value for money at all times

4.9.6 All projects which may cause significant change to the infrastructure are subject to infrastructure change approval, whereby all aspects of the proposed change are reviewed, to provide assurance that relevant risks have been identified and that adequate controls are in place for the change (see HSMS 6.1.15 Transport Operators – Duty of Cooperation and 6.6.9 Change Management - Infrastructure, Rail Vehicle and Safety Critical Plant and Equipment).

4.9.7 The impact of proposed new or altered infrastructure on train and station operators is considered and any plans for new or altered infrastructure (including station facilities) are developed in close cooperation with them and any other affected parties, as applicable, including adjacent infrastructure managers (see HSMS 6.1 Transport Operators and 6.6.9 Change Management - Infrastructure, Rail Vehicle and Safety Critical Plant and Equipment).

4.9.8 Risk assessment and change control is undertaken in accordance with NRIL's relevant procedures. This includes meeting the requirements of CSM RA (see HSMS 6.6.15 Change Management – Common Safety Method on Risk Evaluation and Assessment and Authorisation Under Interoperability), the MHSW Regulations 1999 and, where appropriate, legislative requirements in relation to specific risks.

4.9.9 All construction works that result in physical change to the railway system are designed, planned, constructed and implemented in accordance with statutory requirements, particularly:

- The CDM regulations 2015
- CSM RA
- National Technical Specification Notices (NTSN) where applicable
- RGSs and RISs
- NR Standards (or authorised departures there from)
- Relevant national standards, wherever possible adopting best industry practice

The engineering function leads the appropriate acceptance into service of infrastructure changes.

4.9.10 The Sponsor's Handbook sets out the process for collecting, analysing and grouping refurbishments, renewals and enhancement requirements together in CAPEX infrastructure projects. These grouped refurbishments, renewals and enhancements are documented by strategic route and support the NRIL business plan. The Sponsor's Handbook specifies how refurbishments, renewals and enhancements are captured and grouped before the project lifecycle commences and how to document these relationships in multi-disciplinary projects.

4.9.11 NR Standard NR/L2/INI/02009 Engineering Management for Projects describes the processes and roles and responsibilities for the management of the technical

and engineering requirements of projects for and on behalf of NRIL. It applies to all projects and the organisation's working on those projects that change, renew, enhance or remove NRIL infrastructure assets.

4.9.12 However, where the project is only to be undertaken by the region or route, and the type, complexity and scale of the whole of the project is covered by NR Standard NR/L3/MTC/RCS0216 Risk Control Manual, then where the complete works are to be managed and undertaken by the region or route, it may undertake these projects, in compliance with these controls, rather than apply NR Standard NR/L2/INI/02009 Engineering Management for Projects.

4.9.13 NR Standard NR/L2/INI/02009 Engineering Management for Projects applies to all phases of a project as applicable, including, but not limited to:

- Feasibility studies
- Design
- Construction
- Testing and commissioning
- De-commissioning and demolition

4.9.14 NR Standard NR/L2/INI/02009 Engineering Management for Projects applies to projects which protect NRIL's asset when a party other than NRIL carries out work on, over, or under, NRIL property. The requirements defined within this standard detail the responsibilities that are aligned to elements of the CDM Regulations 2015.

4.9.15 In addition to general health and safety legislation, the CDM Regulations 2015 contain specific legislative requirements that aim to reduce construction and operational safety risk by requiring effective coordination, management and cooperation throughout the life cycle of a physical asset. NR Standard NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail) describes the requirements and arrangements for the application of the CDM Regulations 2015, across NRIL.

4.9.16 NRIL, as a corporate body is a duty holder under the CDM Regulations 2015, generally client where it procures the proposed work, and for a number of projects, a combination of duty holder roles. NR Standard NR/L2/OHS/0047 Application of the Construction Design and Management Regulations to Network Rail Construction Projects requires for each construction project, a person to be nominated who will be accountable for the discharge of NRIL's duty holder accountabilities for that project CDM. They may delegate responsibilities, on agreement, to capable persons that have the time and resources to carry out the necessary duties.

4.9.17 Where third party and outside party works are undertaken, NRIL confirms in writing who is the client and what duties NRIL holds, through a Memorandum of Understanding, or an equivalent contract document. NR Standard NR/L2/CIV/095 Asset Protection and Optimisation Management of Third Party Works on Network Rail Infrastructure defines how NRIL will manage Third Party works.

4.9.18 NRIL's business as usual activity is to manage and implement construction works, including design. To enable consistency and avoid recreating arrangements, the standard sets a hierarchal management framework for NRIL's compliance to the CDM Regulations 2015. Through the devolution model, each business unit (route, region, function and major programme) documents their CDM management

procedures for how they discharge elements of NRIL's duties as client, designer, contractor, principal designer and principal contractor.

4.9.19 The NR Standard NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail) requires written arrangements to be produced which demonstrate how each project will comply with the CDM Regulations 2015 throughout the lifecycle of project. This may be in the format of a CDM plan which is a templated form NR/L2/OHS/0047/F0052 or can be included in other suitable project documentation that is more appropriate for the size nature and complexity of the project.

4.9.20 NRIL's client arrangements for the production, management, storage and provision of health and safety files are defined in NR Standard NR/L2/INF/02202 Records Management of Health and Safety Files.

4.9.21 NRIL's arrangements as client for ensuring that adequate welfare facilities are provided for construction works are defined in NR Standard NR/L3/INI/CP0036 The Provision of Welfare Facilities. NRIL's arrangements as client for ensuring that an appointed contractor or principal contractor has the necessary skills, knowledge, experience and capability is through the Principal Contractor Licencing Scheme, as defined in NR Standard NR/L2/INI/CP0070 Principal Contractor Licensing Scheme.

4.9.22 Other duty holder appointments are subject to prequalification and meeting the industry minimum requirements, as reviewed and audited by RISQS (Rail Industry Supplier Qualification Scheme) as an independent industry body. RSSCO, route and region contract and procurement teams have supplemented this requirement with business unit supply-chain assurance process.

4.9.23 NRIL's clients arrangements for the production of the construction phase plan, by NRIL and external appointments are defined in NR Standard NR/L2/OHS/0044 Planning and Managing Construction Work, for works in the rail environment. For the high-street environment the arrangements are defined in NR Standard NR/L2/OHS/005 High Street Environment and Conditions for Work Outside NR Controlled Infrastructure.

4.9.24 The process for implementing the physical change, will determine which functions and business units have accountabilities and the interfaces between them, for discharging NRIL's CDM duties. In accordance with the client principles, the region, route or system operator will hold the client accountabilities in the majority of cases for enhancement projects. The route or region will hold the client accountability for renewals works. For a project, the Contract Strategy Mapping Tool (available on Safety Central) can be used to describe the interfaces and how the accountably within NRIL transition throughout a project.

4.9.25 A RACI (Responsible, Accountable, Consulted, Informed) may be used as part of the documented CDM arrangement to identify which party is best placed to discharge the respective duty holder requirements of CDM.

4.9.26 A business unit may delegate responsibility for a task, as defined in their CDM management procedures to another part of NRIL or to a supplier. Where this is option is chosen, the CDM management procedures will document how the business unit will assure that the task has been completed and undertaken in compliance with the CDM Regulations 2015. Accountability cannot be transferred and will be retained by the original business unit.

4.9.27 When roles on a project are transferred between individuals, functions, delivery groups, and suppliers, during the project then the transfer of roles is required to be clearly documented in the written arrangements/CDM plan, including formal arrangements to demonstrate coordination and management continuity including transfer of health and safety information. Where the role of Principal Contractor is transferred between organisations then the plan allows time for NRIL to provide the necessary pre-construction information (including as built information) to the new Principal Contractor and for that contractor to plan the delivery of the work.

4.9.28 In situations where there are either:

- Closely related projects
- Different projects work areas that are directly adjacent or overlap

The client duties, as discharged by business units or persons nominated as accountable or delegated with responsibilities, are required to reach a clear understanding of the CDM arrangements that apply, verify that these are documented in the CDM Plans/written arrangements, and relevant information is communicated to all involved parties.

4.10 Prevention Through Engineering and Design (PtED)

4.10.1 Prevention Through Engineering and Design (PtED) represents the best-value approach to the identification and elimination of hazards from the railway system and its interfaces, over its lifecycle. NR Standard NR/L1/HSS/00126 Prevention Through Engineering and Design (PtED) policy sets NRIL's commitments and aspirations for removing hazards and reducing risk in the railway system by being effective, consistent, measured, and adopting a systems thinking approach. The policy acts as a key enabler (capability) for leading health and safety in Britain's railway; the rail industry's strategy for health and safety improvement.

4.10.2 The policy provides a coherent overall policy of prevention, through the setting of requirements for PtED. These require NRIL to continually improve in the following areas:

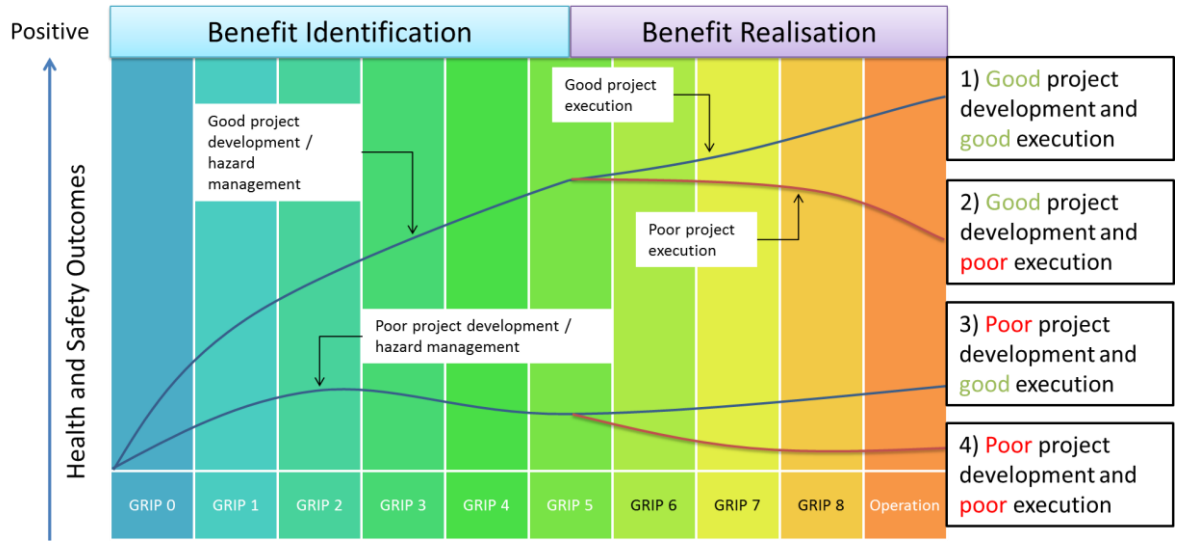
- Organisational culture and structure
- Management system
- Technology
- Investment
- Workforce education
- Procurement
- Hazard management
- Investigations
- Research
- Learning
- Improving the elimination of hazards at source

4.10.3 Research from the HSE, the USA (United States of America) and Australia, has shown that decisions made about how the built environment or systems are designed and how this activity is performed (design/engineering management), affects the type and amount of:

- Injuries
- Health impacts and fatalities that occur during the construction
- Operation
- Maintenance and decommissioning of the built environment

4.10.4 PtED has the ability to reduce potential injuries and fatalities between 40% and 70%.

4.10.5 The culture and organisational systems of NRIL can either limit or enable individual and group behaviour to eliminate hazards or reduce risk, at the most effective point in the change process and over the whole life of its assets, as shown overleaf.



4.10.6 NR Standard NR/L1/HSS/00126 Prevention Through Engineering and Design (PtED) policy sets the requirements to establish and continually improve the means of engineering or designing the elimination reduction of hazards and risk in the areas of:

- Safety
- Health and wellbeing
- Environment protection
- Security
- Inclusion

4.10.7 The NRIL Executive Leadership Team (ELT) has accountability for the implementation of the PtED policy across the organisation to deliver the following commitments:

- Set PtED outcomes as organisation and personal priorities, supported with sufficient resources
- Create an organisational culture, structure and management system to achieve PtED outcomes
- Educate its workforce, the rail industry and stakeholders in PtED to develop increasing capability
- Learn and retain knowledge from past incidents and events both in the rail industry and from outside the rail industry
- Research the effectiveness of PtED practice, new solutions to existing problems, and the identification of future research needs
- Increase the practice of PtED, throughout the organisation, the rail and construction industries
- Increase the ratio of hazards eliminated through PtED to operational controls and the reduction of dependence of on-going human intervention
- Improve the awareness and the demonstration of how the actions of individuals and NRIL as a whole affect PtED outcomes and practice

4.10.8 Infrastructure design requirements are specified in relevant NTSNs Railway Group, NRIL and relevant technical engineering standards. Heads of Disciplines are responsible for technical standards and also specify the inspection, assessment and maintenance requirements for those parts of the infrastructure whose design predates current standards.

4.10.9 Designers duties under CDM are prescribed in the CDM Regulations 2015 and require designers to identify risk, control identified risks by design, and document any identified residual risks which require controls or mitigations by other means. Specifically, ROGS 2006 require the incorporation of the European Union Regulation 402/2013, CSM RA as amended by the 2019 EU Exit Regulations (see HSMS 6.6.48 Change Management - Application of CSM RA). NR Standard designs and asset policies apply the CSM RA method in their creation, and a hazard record provided with the design.

4.10.10 Design work is only undertaken by competent persons against approved standards, procedures, codes of practice and relevant regulatory requirements. It is normally undertaken as part of a project and is therefore subject to relevant project controls in accordance with NR Standard NR/L2/INI/02009 Engineering Management for Projects.

4.10.11 Design work is subject to technical approval, the general requirements for which are set out in NR Standard NR/L2/INI/02009 Engineering Management for Projects. Specific technical approval requirements for asset groups are then further defined in NR Standards:

- NR/L2/SIG/30035 Signalling and Level Crossing Scheme Technical Approval Process
- NR/L2/CIV/003 Engineering Assurance of Building and Civil Engineering Works
- NR/L2/TRK/2500 Engineering Assurance Arrangements for Track Engineering Projects
- NR/L2/ELP/27311 Engineering Assurance Requirements for Design and Implementation of Electrical Power Engineering Infrastructure Projects
- NR/L1/TEL/30100 Telecoms Design
- NR/L2/TEL/30022 Engineering Assurance Arrangements for Communications Engineering Schemes and Services
- NR/L2/ERG/24020 Engineering Assurance Requirements for Ergonomics Within Design and Development Projects

4.11 Construction

4.11.1 The Project Manager creates plans for the project, including engineering designs, based on the sponsor's instructions. This includes the identification of hazards and assessment of risks at all further stages of the project and the identification of control measures to reduce the risks as far as reasonably practicable. These risk assessments use professionally recognised techniques for hazard identification, quantified risk assessment, and safety cost benefit analysis, where appropriate, to identify acceptable levels of risk in accordance with these principles.

4.11.2 The Project Manager will arrange consultation with adjacent or affected parties, including owners of neighbouring land, Local Authorities, and Highways Agency, in compliance with legislation including, yet not limited to, the Health and Safety at Work Act 1974, and the New Roads and Street Works Act 1991, to protect persons associated with the delivery of the proposed project from dangers to their health and safety, and others who might be affected by the work activity including

members of the public. For example, passengers, pedestrians, cyclists, equestrians and motorists. These include proper arrangements for design (including planning and risk assessment) and management (including supervision) of the works. Under the Equality Act 2010, there is a duty to have regard for the needs of disabled people and older people in the planning and execution of works.

Third and Outside Party Schemes

4.11.3 The responsibility during the implementation stage for a Third Party scheme rests with Capital Delivery or Route Asset Managers (RAMS), depending on the size of the scheme. NR Standard NR/L2/CIV/095 Asset Protection and Optimisation Management of Third Party Works on Network Rail Infrastructure sets out requirements for the application of equivalent controls to be established when Third Parties wish to specify, manage and/or deliver infrastructure projects upon NRMI.

4.11.4 For Third Party schemes, the Asset Protection and Optimisation (ASPRO) Asset team will usually be the initial point of contact and undertake the role of Sponsor (producing sponsors instructions, stage gate authorisations, etc.). Heads of Disciplines specify engineering policy and requirements and provide engineering advice. Local site knowledge is provided by the route civils asset management team.

4.11.5 Where a Third Party or an Outside Party promotes a scheme on or adjacent to NRIL property then asset information will be shared before the works are to start. This will allow anyone involved in any design, survey or construction/installation of an asset, to have relevant information.

4.11.6 For Third Party proposed works the NRIM (Network Rail Interface Manager) shall request and accept a CDM Plan or equivalent from the Third Party where required by NR Standard NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail). The CDM Plan is to document evidence of how each of the duty holders is to discharge their duties. The CDM roles identified for the project and people and organisations identified as accountable and responsible for undertaking the various duty holder activities will be identified in the CDM plan or equivalent.

4.11.7 For Third Party schemes a Network Rail Interface Manager (NRIM) is appointed by a Head of Asset Protection and Optimisation (ASPRO). The Third Party shall act as the only Client under the Construction (Design and Management) Regulations (CDM) including appointment of a Principal Designer and a Principal Contractor.

4.11.8 The NRIM shall confirm that the Third Party has appointed a Principal Designer acceptable to Network Rail as per the ASPRO Agreement(s).

4.11.9 The NRIM shall review and accept the appointment of the designers for all or part of the works.

4.11.10 The NRIM shall confirm that the Third Party has appointed a Principal Contractor acceptable to Network Rail as per the ASPRO Agreement(s).

4.11.11 The NRIM shall confirm that the Principal Contractor hold competencies and capabilities relevant to the works being undertaken by requesting all appropriate licences and permits.

Project Safety Management – Preconstruction Information

4.11.12 The NR Standard NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail) details the development of preconstruction information.

Construction Phase Plan (CPP)

4.11.13 Before commencement of physical works under the implementation phase, the Project Manager ensures the Principal Contractor has a satisfactory Construction Phase Plan (CPP) and where necessary that effective handover arrangements have been specified for the handover of responsibilities for the asset from the route, region or function (within which sits the maintenance organisation) to the Project Contractor. The required content and specification of the health and safety file is agreed in advance of the commencement of work with either the Infrastructure Maintenance Delivery Manager (IMDM) or the equivalent responsible person for Property.

4.11.14 NR Standard NR/L2/OHS/0044 Planning and Managing Construction Work defines the process for providing on-site personnel with sufficient information to enable them to manage the risk associated with work activities. It requires the production of work package plans and task briefings for specific items of work in accordance with the requirements of relevant NR Standards and as specified within the construction phase plan. Work activities deemed significant are not undertaken until the relevant work package plan has been accepted by a competent person within the Project Managers team.

Health and Safety File (H&S File)

4.11.15 NR Standard NR/L2/INF/02202 Records Management of Health and Safety Files specifies the records management requirements for these files. The standard specifies the records management processes for the:

- Delivery and acceptance of H&S files into steady state
- Content of H&S files
- Onwards management and update of H&S files

4.11.16 It is mandatory for NRIL staff and NRIL contractors who carry out work on NRIL infrastructure where a health and safety file is a requirement under the CDM Regulations 2015.

Entry into Operational Service (EIS)

4.11.17 NR Standard NR/L2/INI/CP0075 Procedure for the Entry into Operational Service of Railway Infrastructure describes NRIL's arrangements for undertaking Entry Into Operational Service (EIS) of new or altered railway infrastructure. This is achieved by the demonstration that the assets provided, whether new, temporary or legacy assets, are suitable, sufficient and correctly configured to provide for the safe functional operational requirements of the railway infrastructure.

4.11.18 NR Standard NR/L2/INI/CP0075 Procedure for the Entry into Operational Service of Railway Infrastructure provides the requirements for a project to plan in advance of EIS activities starting, how new or altered railway infrastructure shall be entered into operational service. The requirements for EIS are also described, including the relationship with discipline specific EIS standards and the roles and responsibilities of people involved with the process. This procedure covers the EIS

of all new or altered railway infrastructure where a Designated Project Engineer (DPE) is appointed in accordance with NR Standard NR/L2/INI/02009 Engineering Management for Projects.

4.11.19 The decision to bring a new or altered asset into service is that of the relevant Project Manager and this decision considers requirements such as engineering, commercial, safety assurance, operational readiness, maintainer preparedness, CSM RA and/or interoperability.

4.11.20 NR Standard NR/L2/MTC/089 Arrangements for the Exchange of Asset Data and the Continuing Maintenance of Assets Undergoing Change sets out the requirements for the safe and effective maintenance of all new and existing assets undergoing change, or that are affected by project works, at all times that they are in operational use, whether the works to them are complete or not, and that the responsibilities for maintenance of such assets are clearly identified. NR Standard NR/L2/MTC/089 Arrangements for the Exchange of Asset Data and the Continuing Maintenance of Assets Undergoing Change does not deal specifically with the actual commissioning and inspection of the project works as to their fitness for operational use or for their final acceptance by the asset steward. However, the arrangements for these are documented in the asset management plan required.

4.12 Maintenance

4.12.1 CDM Regulations 2015 and NR Standard NR/L2/OHS/0047 Managing Health and Safety in Construction (Application of the Construction (Design and Management) Regulations to Network Rail) can apply to maintenance work that meets the definition of construction work and can be considered a project (This also includes a routine programme of maintenance work which could be classed as a project). Where ‘like for like’ replacement of assets is proposed, it will be risk assessed by the Route Director, or their teams, to justify that it is the design solution that eliminates all foreseeable risks, or where they cannot be eliminated reduces the risk SFAIRP. NRIL aims to maintain the railway infrastructure in a safe and reliable condition, by working to specifications, defined in NR Standards, which set out what must be maintained and how it should be maintained.

4.12.2 The list of work identified as being necessary is known as the unconstrained workbank and comprises both major items of work specified by location and some items of work which are specified only as volumes of activity to be carried out on each route or region. The route or region Asset Management team specifies the appropriate mitigating actions necessary if work is either cancelled or deferred. This is defined in accordance with relevant standards, examples of which are NR Standard NR/L2/TRK/6001 Renewals Workbank Management (this defines the process for the management of the renewals workbank, including strategic management, peer review processes, programme compilation and scheduling for delivery) and NR Standard NR/L2/HAM/02201 Management of the Risk Arising from Deferred Renewals (this supports NRIL asset management policy(ies) and associated risk control on how to prepare, implement and manage measures directed towards controlling the risks arising from deferred renewals).

4.12.3 Once produced, the total volume of the workbank is reviewed against the availability of the necessary resources in an integrated process the revised workbank volume is established within a framework of relevant NR Standards which takes account of the availability of design and implementation resources and funding availability. This constrained workbank is reviewed and accepted by

the route or region Asset Management team, who also specify any mitigating actions to be incorporated into the plan in respect of deferred work.

4.12.4 The Work Plan Coordinator develops a detailed plan taking into account specific resource availability and engineering requirements. This plan is then passed to the Access Coordinator (for detailed access planning), the Infrastructure Maintenance Engineer (to implement maintenance plans) and to Programme Managers (to implement the renewals plan).

4.12.5 Maintenance plans are developed for each Delivery Unit (DU) that define the arrangements for delivering the required levels of inspection, maintenance and testing to comply with relevant standards. These mandate the minimum levels of maintenance for each asset type. Where required, they are supported by detailed maintenance procedures.

4.12.6 Each Infrastructure Maintenance Delivery Manager is responsible for managing systems and processes so that maintenance work allocated to the DU is programmed and carried out safely and efficiently, that the end product complies with the engineering specification, and that NRIL's information systems have been updated to reflect the work that has been carried out.

4.12.7 Asset condition data is collected and records of maintenance, inspection and testing are maintained. The information gathered is used to optimise maintenance specifications and standards and, where possible, enable condition-based maintenance regimes to be implemented.

4.12.8 Planned preventive inspection, testing and maintenance is carried out on key items of equipment whose failure has unacceptable safety risks, or where required by legislation and to protect the value of the asset.

4.12.9 Planned inspection is undertaken on equipment to monitor asset condition. The frequency depends on the degree of risk associated with the equipment concerned. NRIL's engineers, using their professional judgement, take the decision on whether or not to alter the frequency of checks. Their professional judgement is supported by a variety of decision support tools that help quantify the risks.

4.12.10 Infrastructure assets are maintained for as long as they give safe and reliable service. Decisions on whether to renew an asset or to continue to maintain it are made by engineers from the appropriate discipline, taking into account available asset information and, when available, using appropriate analytical models.

4.12.11 If it is decided to renew an asset at a date later than the due date, an assessment is performed to determine whether any precautionary measures should be applied, such as the imposition of a temporary speed restriction. The NRIL asset management policy(ies) and associated risk controls for managing the risk arising from deferred renewals is supported by NR Standard NR/L2/HAM/02201 Management of the Risk Arising from Deferred Renewals

4.12.12 Delivery Unit organisations and the RSSCO team manage the delivery of all maintenance work. Where contracts are in place that covers more than one DU, such as fencing and vegetation management, a nominated lead DU will manage the delivery.

4.12.13 Where NRIL does not undertake the maintenance directly, the condition of such assets is inspected and maintained by contractors in accordance with relevant

standards and contract terms prepared on behalf of the Infrastructure Director or Director Engineering & Asset Management (DEAM) as appropriate.

4.13 Operating the Network

4.13.1 NRIL's core processes for operating the network consist of:

- Access planning
- Directing the operations of the network through national and route controls
- Controlling the movement of trains by operation of the signalling systems
- Controlling the electrical traction supplies by operation of the electrical control systems
- Responding to incidents through operational or infrastructure teams
- Managing those stations for which NRIL is the infrastructure manager

Access Planning

4.13.2 Access planning is the process by which NRIL produces working timetables of train paths on its network and allocates possession of the track for engineering works and whereby access is only granted to those operators of trains who have a current safety certificate relevant to the route/region and nature of traffic proposed.

4.13.3 The basic framework governing each working timetable is provided by the Rules of the Route and the Rules of the Plan. The Rules of the Route deal with the timing and location of possessions for planned maintenance and other works, together with permitted restrictions, such as temporary speed restrictions for maintenance repair works. The Rules of the Plan deal with, amongst other matters, certain timing capabilities of the network such as the running times for different categories of trains, minimum headways between trains over each segment of route and stopping times at stations. This timing within Rules of the Plan creates suitable safety margins between trains including avoidance of conflict at junctions.

4.13.4 The Capacity Planning Director leads a team of persons conversant with train planning tools and techniques who validate and authorise changes to the timetable based upon documented headways, margins and pathing times. NR Standard NR/L2/OCS/031 Risk Assessment and Briefing of Timetable Change sets out the common process for identifying and assessing the risks associated with timetable change and the controls for reducing such risks SFAIRP.

4.13.5 All planned significant timetable changes are reviewed nationally by the Train Plan Risk Assurance Panel (TP-RAP) that is chaired by the Capacity Planning Director. Where a detailed assessment is considered necessary, (TP-RAP) directs the relevant Route-based Timetable Plan Risk Assessment Meeting (TP-RAM) to carry this out and identify any reasonably practicable risk mitigation controls.

4.13.6 A Timetable Change Brief is produced for the beginning of each new published timetable and to which local items may be added. Once approved by the Route Director, it is provided to line managers and operators of trains and stations in sufficient time to enable the briefing of all signallers and train drivers prior to implementation of the timetable.

Possessions Planning

4.13.7 The access planning process NR Standard NR/L3/INI/CP0064 Delivering Work Within Possessions is required to provide sufficient access to the track environment to maintain, renew and enhance the infrastructure to deliver a safe

and reliable network. The process provides three points of entry for disruptive possessions to be included in the timetable year planning cycle:

- TT - 176 weeks before the relevant timetable commences
- TT - 55 weeks before the relevant timetable commences
- TT - 30 weeks before the work commences

4.13.8 The planning process also allows for possession activities to be lodged in draft long-range form, three to five years before the relevant timetable commences.

4.13.9 NR Standard NR/L2/NDS/202 Principles, Timescales and Functional Responsibilities for Engineering Work, Access and Heavy Resource Planning describes the process to bring together the planning of work and access on the railway infrastructure.

4.13.10 Non-disruptive (Rules of the Route) possessions are planned to meet the above disruptive timescales, but worksites within possessions can be included up to T - 2 weeks before the commencement of work. In addition, where reactive maintenance is required to address track defects, etc., then possessions may also be planned in these timescales provided there is no effect on train services. Additional work activities can be included in the possession plan, between T - 10 to T - 4 days prior to the commencement of work, providing the work is of an urgent nature and does not interfere with the existing work plan and that a risk assessment is undertaken.

4.13.11 A description of the method of working is required for each possession application which must include how railway operational interfaces are managed. A risk assessment is carried out in respect of what the work is, where the work is to take place (taking into account such factors as distance from running lines, live overhead lines, access points, etc.), how the work is being undertaken (trains, on/off tracking of On-Track Plant (OTP)) and duration of the task (daylight and or night time working).

4.13.12 The description of the method of working will pass through various iterations at each stage of the planning process, as it is developed. For tasks not covered by a generic task description, a competent person signs off the operational interface component of the description of the method of working.

4.13.13 The appropriate possession plan is then published in the relevant weekly operating notice in accordance with NR Standard NR/L2/OPS/110 Requirements for the Weekly Operating Notice, Periodical Operating Notice and Local Operating Instructions (incl. Sectional Appendix).

Operations Control

4.13.14 The National Operations Centre (NOC) liaises with Route Control Centres to collate real time information on network safety and performance. The NOC also has a national coordinating role for:

- Dissemination of urgent advice of operating issues in accordance with NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice**,** and critical engineering issues in accordance with GE/RT8250 Reporting High Risk Defects
- Dissemination of weather warnings
- Coordination of major incident response at national level

- Coordination of nationally managed rail vehicle breakdown and recovery resources (e.g. rail cranes)

4.13.15 Each route/region has one or more Control Centres that liaise with signalling locations, electrical control rooms and with operators of trains and stations to provide overall coordination of train movements over a particular geographic area. Additionally, the centres provide a route/region-wide communication and coordinating role for NRIL's employees, contractors, train operators, and with the emergency services, following accidents or incidents on or adjacent to the infrastructure. The centres form a significant communication component in the processes to deliver the requirements of NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice, as well as Railway Industry standards RIS-8250-RST Reporting High Risk Defects and RIS-0707-CCS Management of Safety Related Control, Command and Signalling System Failures.

4.13.16 NR Standard NR/L3/OPS/045 National Operating Procedures Index mandates the use of National Control Instructions, their Approved Codes of Practice and organisation instructions which apply at each Control Office location. National Control Instructions are produced as a functional procedure for all NRIL Control Offices and contain a template for organisation instructions which apply at each Control Office location. Organisation instructions which apply at each Control Office location are produced by Operations Managers or Alliance Control Manager (Wessex only), or Head of Integrated Control (Scotland only), from the template, taking account of local factors. The standard also sets out the process for the design of these instructions, their implementation, and the arrangements for governance and compliance.

Signalling Control

4.13.17 The movement of trains on the network is controlled by signallers who operate the signalling system from signalling control locations. They control train movements over sections of the network and are grouped within geographically defined routes/regions and managed by Operations Managers.

4.13.18 Train movements are controlled by signallers on the basis of train paths shown in the working timetable, taking account of actual train movements and any short-term changes, for example as a consequence of engineering work or signalling system failure. Any short-term amendments are detailed in Special Notices or under very short-term planning arrangements by route/region Control Centres. Longer term changes are published in timetable supplements. This information is distributed under document control procedures, as hard copy or by electronic means.

4.13.19 The risks associated with the movement of trains, including personal safety of persons on or about running lines, are controlled through the correct application of detailed rules and instructions, many of which are published as RGSs and RISs.

4.13.20 These rules and instructions enable the consistent management of safety procedures across the interfaces between different groups of employees and different organisations. RGSs for operations include:

- GE/RT8000 series The Rule Book (including Train Signalling TS1 – TS10)
- GO/RM3056 The Working Manual for Rail Staff

4.13.21 These documents define the requirements and detailed procedures for safe interworking, and are supplemented locally by other mandatory operating

instructions in accordance with NR Standard NR/L2/OPS/110 Requirements for the Weekly Operating Notice, Periodical Operating Notice and Local Operating Instructions (incl. Sectional Appendix), including:

- Signalbox Special Instructions
- Sectional Appendices
- National Operating Instructions (NOI) NR/NOI-006
- Electrical Control Room Instructions
- Radio Electronic Token Block Regulations

4.13.22 The National Operating Instructions (NR/NOI-006) are to be read in conjunction with the GE/RT8000 series of Rule Book modules. This document is designed to provide additional instruction and guidance to NRIL staff that are in receipt of the Rule Book. These additional instructions carry the same requirement and responsibilities as those within the Rule Book modules, and it is the responsibility of those charged with these duties to make sure that they are familiar with and understand these instructions.

4.13.23 This document has been created primarily using the information removed from the Rule Book as part of the Tranche Change Process. Other instructions have been added following recommendations within the route/region. The information removed from the Rule Book and placed in this document is classed as single duty holder meaning that the responsibility lies with NRIL for these instructions to be carried out. They do not include actions required of others outside of NRIL.

4.13.24 Together, these rules, regulations, instructions and appendices define the controls and authority for movement, whether in normal mode, degraded mode or emergency conditions. Details of any urgent amendments to these rules are published in Weekly and Periodical Operating Notices, in accordance with NR Standard NR/L2/OPS/110 Requirements for the Weekly Operating Notice, Periodical Operating Notice and Local Operating Instructions (incl. Sectional Appendix), which are prepared and sent out by each route or region's organisation to signallers, contractors and the operators of trains and stations.

Managed Stations

4.13.25 Each Managed Station has a NRIL Station Manager, who has the lead responsibility for health and safety management including security, crowd control, planned general inspections, train despatch monitoring and liaison with train operators. They manage the delivery of a core set of activities, delivered either by NRIL employees or third parties, to the train operators and their customers.

4.13.26 Transport Undertakings (i.e. the operators of trains) are normally responsible for the following activities within each Managed Station:

- Cleaning and maintaining dedicated areas
- Ticket sales and revenue protection
- Management and control of automatic ticket gates (ATGs)
- Train attendance and despatch
- Travel centre

4.13.27 Responsibility for these activities may vary at each Managed Station and the precise activities and the responsibilities for their provision are defined in the access agreement between NRIL and all the relevant train operators for each Managed Station. Where activities are undertaken by train operators, the relevant procedures are no less than those of NRIL. NRIL also has arrangements by which

the activities for which the organisation is responsible are delivered by competent persons.

4.13.28 Station Managers are supported by Shift Station Managers, who monitor the delivery of these activities using the relevant procedures within the NR Standard NR/L3/OPS/045/5.04 Management of Station Works, which provides a structured framework and set of procedures for managing the operational activities and risks associated with Managed Stations.

4.13.29 Station Managers, or their shift managers, have arrangements with train operators that define the responsibilities and arrangements for the despatch of trains, operation of the station and evacuation procedures. Station Managers review the delivery of activities and undertake regular liaison meetings with the representatives of train operators to discuss relevant health and safety issues, address any deficiencies, and develop appropriate remedial measures for implementation.

4.13.30 Where essential maintenance or renewal work is to be undertaken to the fabric of the station, whether by NRIL employees or contractors, Shift Station Managers provide a safety briefing, information on identification cards and access control systems (NR Standard NR/L3/OPS/045/2.12 Operational Development Day and Safety Briefing) and operate a permit-to-work process (NR Standard NR/L3/OPS/045 Management of Station Works) in accordance with the relevant procedures in the NR Standard NR/L3/OCS/044/FS-05C Station Toolkit. This is used to establish controls over the worksite/station operations interface.

4.13.31 Alterations and property development on stations have the potential to introduce risk and are appropriately risk assessed to identify necessary control measures, taking into account factors such as crowd control and fire safety, using procedure NR Standard NR/L3/OPS/045/5.04 Management of Station Works.

Managed Stations - Crowd Control

4.13.32 Organisational arrangements are established to cater for the number and purpose of people expected to be in the station at any given time. Real-time monitoring of crowd flow and accumulation is carried out by Managed Stations employees who are in radio contact with the Shift Station Managers. Each crowd control plan, developed in accordance with procedure NR/L3/OPS/045/4.06 Station Overcrowding and Special Events, which documents the risk-based approach to manage the accumulation of crowds to acceptable levels. Such measures include controls ranging from restricting/closing pedestrian access to the station, to coordinated closure of adjacent transport operator facilities (e.g. London Underground Limited (LUL) trains will run through the adjacent underground station non-stop). The ultimate crowd control mechanism is to evacuate the station where the crowding could become dangerous. Where the overcrowding event becomes unsafe the emergency plan, developed in accordance with procedure NR/L3/OPS/045/4.02 Preparation and Distribution of Emergency Plans, may be implemented.

4.13.33 For large pre-planned events, a contingency plan is drawn up in conjunction with the relevant interfacing organisations and special arrangements, including additional staff where necessary, are provided to control crowds associated with scheduled events (e.g. football matches, music concerts).

4.13.34 Station Managers coordinate, maintain, exercise and review the crowd control arrangements (including the station emergency plan) with interfacing

organisations (e.g. train operators, LUL (London Underground Ltd), LOL (London Overground Ltd) and MTRC (MTR Corporation (Crossrail) Ltd, Local Authorities, British Transport (BTP) and civil police) via regular programmed meetings and live and table-top exercises involving these key organisations.

Managed Stations - Train Despatch

4.13.35 The arrangements in place to manage the despatch of trains at Managed Stations is reviewed through an assurance check in accordance with NR Standard NR/L3/OCS/044/FS-05C Station Toolkit and procedure NR/L3/OPS/045/5.06 Management of the Operational Railway.

4.13.36 The assurance check is undertaken by the Station Manager, to a frequency determined by documented risk assessment, which takes into account several different factors such as the station layout, train despatch arrangements, the results of previous assurance activity and the performance of the train operator.

4.13.37 Where NRIL employees despatch trains, (Birmingham New Street only), this is undertaken in accordance with the defined safe system of train despatch, developed following risk assessment, by competent persons, appropriately trained and certificated in accordance with NR Standard NR/L3/OPS/045 National Operating Procedures Index and procedure NR/L3/OPS/045/2.04 Operational Competence Management.

Managed Stations – Assaults on Employees

4.13.38 NRIL has a zero tolerance towards assault on any of its employees and NR Standard NR/CS/OHS/005 Personal Security defines the organisations policy and related implementation arrangements to control risks to the personal security of its employees whilst at work.

4.13.39 All Managed Stations employees who come into regular contact with the public are formally trained and briefed on the Rules on Aggression Avoidance.

4.13.40 Each Managed Station has installed digital or tape-recorded CCTV that is licensed for security and safety management and used by NRIL and the Police to act as a deterrent, as evidence and to provide intelligence. NRIL will press for severe punishment of persons guilty of harassment or violence to its employees. NRIL will also seek to use Anti-Social Behaviour Orders (ASBOs), as provided for in the Crime & Disorder Act 1998 to prohibit such persons from entering stations.

4.13.41 Where NRIL employees are assaulted, procedure NR Standard NR/L2/INV/002 Accident and Incident Reporting and Investigation is implemented to cater for the welfare of employees. An investigation is undertaken to identify any measures which can be taken to prevent reoccurrence. Data from such reports is monitored at periodic safety meetings to identify trends and where necessary action plans are devised to reduce the incidence of assaults.

Managed Stations 'Lite'

4.13.42 At many NRIL Managed Stations, specific station services are contracted to train operating industry partners via sub contracted services agreements. NRIL remains accountable in accordance with its safety obligations and station license.
A number of stations are operated under an alternative model, examples include Reading, Bristol Temple Meads, Cannon Street, Clapham Junction and Guildford. The hour-by-hour management and a majority of station services are delivered by

a train operator on NRIL's behalf, with NRIL retaining overall accountability. Under these arrangements, NRIL allows the use of train operators' equivalent station safety and operating procedures to avoid overlapping or duplicating safety processes. The interface arrangements between NRIL and train operators in this relationship are safety validated. NRIL maintains a station management post responsible for each of these stations to oversee the contract deliverables, industry collaboration and compliance-based checks.

OTM Driving/Mainline Operations

4.13.43 NRIL has principles, roles, responsibilities, systems and processes, which are in place, to manage the health, welfare, safety and security of its employees, and others affected by its mainline operations. The scope of train operations is limited to the driving of On-Track Machines (OTM) on the NRMI and is primarily managed by the RSSCO function. The arrangements for safe mainline operations are documented within the Health & Safety Management System (Transport Undertaking) (HSMS TU), which supports NRIL's Safety Certificate and is published on Connect.

4.14 Key Health and Safety Risks and Controls

Emergency Planning and Crisis

4.14.1 NRIL is defined as a Category 2 Responder under the Civil Contingencies Act 2004, and recognises its duties to assess and plan for accidents, incidents and other emergencies on or affecting NRIL infrastructure and to provide an effective response.

4.14.2 NR Standard NR/L2/OPS/250 Network Rail National Emergency Plan describes the national generic arrangements in place to provide an effective response to accidents, incidents and other emergencies on or affecting NRIL infrastructure. NRIL has arrangements to regularly review the National Emergency Plan and update it whenever necessary.

4.14.3 NRIL's emergency plans have been developed in cooperation with the emergency services and with other relevant transport undertakings, including LUL, LOL and MTRC. This cooperation extends to the planning, testing through exercises, and implementation of the emergency procedures. Plans are co-ordinated for emergency preparedness throughout the organisation such that all plans complement each other and those of other interfacing organisations (e.g. Local Authorities, LUL, LOL and MTRC). Information is supplied to the emergency services to assist them in forward planning and also during emergencies. Emergency plans are provided to all relevant stakeholders, including LUL, LOL and MTRC. Plans are reviewed with the emergency services and with other relevant transport undertakings and interfacing organisations by the Route Emergency Planning and Coordinating Committee (REPACC).

4.14.4 NRIL has developed plans that cover the following:

- Identification of the significant hazards and the associated risk, including those arising from occasional or one-off events
- Strategies for dealing with potential emergencies, both internal and external
- The conditions under which they will be applied and the organisational arrangements needed to implement them

- The responsibilities of NRIL staff and appropriate guidance to protect the safety of themselves, the general public, contractors and train operating and station staff
- Liaison with external organisations prior to, during and following an emergency
- Attendance on site of appropriate employees to deal with public and media enquiries
- Responsibility for informing the ORR (Office of Rail and Road) and the RAIB, (Rail Accident Investigation Branch), in appropriate circumstances.
- An abnormal, unstable and complex situation that presents threat to commercial and strategic objectives, reputation and license to operate (this is termed as a Crisis in NRIL, see HSMS 4.14 Key Health and Safety Risk and Controls)

Arrangements and Communication of Emergency Response

4.14.5 The contents of emergency plans are communicated to all relevant personnel through briefing, training, and during exercises. NR Standard NR/L2/OPS/250 Network Rail National Emergency Plan contains a brief description of the roles and responsibilities of posts that NRIL may appoint as part of the rail industry response to an incident. Additionally, it provides a brief outline of the roles and responsibilities of personnel from external agencies that may be found at an incident site, for example Train Operating Companies (TOCs) and the Emergency Services. NRIL has arrangements to suitably train and brief relevant employees for the roles they may need to take in emergency situations. Where plans require the designation of responsibilities to individuals, such individuals are trained and assessed competent in their tasks. NRIL has arrangements to regularly review the National Emergency Plan and update it whenever necessary. NR Standard NR/CS/OPS/200 Network Rail Security Manual mandates core operational security requirements and provides associated guidance.

4.14.6 The Operational Security & Contingency Planning Manager acts as the overall coordinator of emergency planning for NRIL, overseeing the compilation of emergency plans such that they are produced in accordance with RGS GO/RT3118 Incident Response Planning & Management, and are consistent across NRIL's areas of operation. Line managers are responsible for preparing, maintaining and managing emergency plans relevant to their operational area. Advice on drawing up these plans is given by the Operational Security & Contingency Planning Manager and team when required.

4.14.7 A three-tier structure is applied to the management of rail response to an incident. This basic structure will apply whatever the severity of the incident. However, not all of the structure will be implemented for each incident. The detailed response depends on the circumstances, in liaison if appropriate, with the emergency services. These tiers are defined as Strategic (Gold), Tactical (Silver) and Operational (Bronze).

Gold (Strategic)

The role of the personnel in the Gold location is to be responsible for the strategic management of the incident. Gold is led by the Rail Incident Commander (RIC), and would normally be situated at NRIL Route Control. Gold personnel provide executive support to the Rail Incident Officer (RIO) and focus on operational strategy.

Silver (Tactical)

The role of the personnel in the Silver location is to determine the priorities in allocating resources, obtaining other resources as required, planning and coordinating the overall response on site from a rail industry perspective. Within NRIL, this role is performed by the Rail Incident Officer (RIO), who is the lead rail industry responder on site for route/region incidents, or the Station Incident Officer (SIO) for incidents that occur at Managed Stations (a SIO may be appointed from within the Train Operating Company (TOC) at stations not directly managed by NRIL).

Bronze (Operational)

Bronze staff are key personnel required to support the RIO or SIO in the case of incidents occurring at Managed Stations) in providing effective management of the recovery from an incident. Those operating at this level concentrate on undertaking specific tasks within their area of responsibilities. These activities will be coordinated by the RIO as far as rail related organisations are concerned. The need for the appointment of Bronze Command personnel will be dictated by the circumstances of the incident. The Emergency Services will establish a command structure based on the same three tiers - Bronze, Silver and Gold.

4.14.8 The National Operations Centre provides a national notification and communications role, whilst emergencies on the network are coordinated on the ground by the relevant Route/region Control, which is responsible for coordination of response, rescue and recovery arrangements. Supporting equipment and facilities, such as emergency rail vehicles (snowploughs, rail cranes etc.), road vehicles, radios etc., are identified and contracts made with organisations as necessary to operate them. Contracts specify the required levels of availability and response times for all such emergency equipment and facilities.

4.14.9 Emergency plans are regularly tested and reviewed. NRIL holds joint practical exercises with the emergency services and other responding agencies, train and station operators and Local Authorities to confirm that the emergency plans are effective, and that they can be applied in practice. Testing and review may be through live emergency exercises, table-top exercises or workshops as appropriate. NRIL also participates in planning meetings and exercises with external organisations and provides access to its premises and infrastructure for familiarisation purposes.

4.14.10 Recommendations arising from testing and review are documented and incorporated into emergency plans and relevant standards, as appropriate.

4.14.11 In the case of a corporate crisis, which NRIL defines as an abnormal, unstable and complex situation that presents a threat to commercial and strategic objectives, reputation and license to operate, a Strategic Crisis Management Team (SCMT) may be mobilised to manage resulting issues. The chief executive, or their nominated alternative, can declare a crisis and once declared they will appoint a senior director to the role of SCMT Director who is assumed full delegated authority for the crisis response. An SCMT team is drawn from across the business, deploying individuals with a variety of skills and competences who have been trained in the SCMT processes and governance arrangement. A crisis management policy, plan and handbook, with appropriate templates, are readily available for each SCMT to mobilise quickly. In the event of an operational emergency, an SCMT (if mobilised) will act as a strategic capability that sits above

incident and functional response capabilities, and will focus on long-term reputational, financial, commercial and other impacts and ultimately NRIL's license to operate.

Liaison with External Bodies/Interfaces

4.14.12 The Operational Security & Contingency Planning Manager acts as the overall coordinator of emergency planning for NRIL, overseeing the compilation of emergency plans such that they are produced in accordance with RGS GO/RT3118 Incident Response Planning & Management and are consistent across NRIL's areas of operation. Line managers are responsible for preparing, maintaining and managing emergency plans relevant to their operational area. Advice on drawing up these plans is given by the Operational Security & Contingency Planning Manager and team when required.

Traumatic Incident Management

4.14.13 NRIL is dedicated to promoting a positive working environment for its employees and aims, therefore, to implement control measures that aim to reduce the likelihood of employees being exposed to, or involved in, a potentially traumatic incident.

4.14.14 Mental health conditions can develop immediately after trauma, but can also occur in the weeks, months, or years later. The majority of people recover within a few days of a traumatic incident and suffer no long-term negative psychological effects. Therefore, enforcing psychological intervention or formal professional healthcare services immediately following an incident should be avoided.

4.14.15 Control measures identified by NR Standard NR/L2/OHS/052 Traumatic Incident Management aim to reduce the risk of employees developing a mental health condition following a potentially traumatic incident.

4.14.16 Sufficient resources are available to all employees to raise awareness of the normal reaction to a potentially traumatic incident, and to embed principles of watchful waiting throughout the business.

4.14.17 Employees more likely to be exposed to potentially traumatic incidents can be offered training to understand the nature of their work and the impact such exposure might have on their mental health.

4.15 Fire Safety

4.15.1 NRIL has arrangements in place to manage risks from fire in accordance with the requirements of fire safety legislation to reduce the risks to its employees and other persons, protect its extensive property portfolio and minimise business disruption.

4.15.2 The Head of Fire Safety is responsible for developing fire risk policy and loss control strategy directed towards reducing fire risk and compliance with statutory fire safety legislation.

4.15.3 The NRIL fire safety policy mandates requirements applicable to the control of risks arising from fire to the safety of NRIL workforce, contractors, customers, assets and business activity. It defines the policy and procedures for the delivery of effective fire safety management. The policy is detailed in NR Standard

NR/L1/FIR/100 Organisation Fire Safety Handbook, which is supported by the following suite of level 3 standards for fire safety:

- NR/L3/FIR/101 Fire Safety – Managed Stations
- NR/L3/FIR/102 Fire Safety – Operational Estate
- NR/L3/FIR/103 Fire Safety – Offices and Competency and Training Delivery Centres
- NR/L3/FIR/105 Fire Safety - Property: Business Space, Freight & Miscellaneous Property Portfolios
- NR/L3/FIR/106 Fire Safety – Maintenance
- NR/L3/FIR/107 Fire Safety - Fire Risk Assessment
- NR/L3/FIR/108 Fire Safety - Fire Extinguishers
- NR/L3/FIR/109 Fire Safety - Fire Log Book

4.15.4 All NRIL managed premises have a manager appointed as the Person Responsible for Fire Safety (PRFS). The PRFS is responsible for arranging fire risk assessment for buildings under their control which take into account the probability of a fire occurring and the potential consequences for safety and business continuity.

4.15.5 Fire risk assessments are reviewed by the PRFS at a frequency determined by the assessment. Buildings are inspected by the PRFS to check the adequacy of the fire safety arrangements at a frequency based on the results of the fire risk assessment. The PRFS uses an aide memoir check sheet, from NRIL guidance note NR/L3/FIR/109 Fire Safety - Fire Log Book, when conducting fire safety inspections of the premises.

4.15.6 Line managers arrange for all persons under their control to receive appropriate instruction and training in the fire safety arrangements pertinent to their workplace. All NRIL employees receive instruction and training on the fire safety arrangements within their work location as part of their induction process. Refresher training is delivered to all employees at a frequency which maintains competence, but not greater than every three years. Employees with additional fire safety responsibilities receive additional training commensurate with their responsibilities, e.g. line managers responsible for fire safety, emergency evacuation wardens.

4.15.7 Managers with fire safety responsibilities are supported by the Head of Fire Safety and the out-based team who:

- Provide fire safety advice, including in respect of new/altered buildings design
- Review train operator, station operator and contractor safety management documentation
- Undertake fire safety audit and investigation

4.15.8 The route/region asset management team accountable for building assets specifies maintenance regimes, inspection activities, and renewal proposals for buildings to include the Planned Preventative Maintenance (PPM) programmes for all fixed fire systems including fire alarm systems, fire suppression systems and emergency lighting systems such that they are maintained in accordance with the appropriate British Standard(s) by competent persons. All new, altered and refurbished premises are vetted for fire safety and any proposed changes are assessed for compliance with the relevant fire safety legislation.

4.15.9 The portable fire extinguishers maintenance contract is managed by the National Contracts Manager.

4.15.10 The Director, Property is responsible for arrangements by which all property lease agreements correctly address tenants' responsibilities for fire safety as part of the conditions of the lease.

4.16 Infrastructure Integrity

Signalling

4.16.1 Appropriate standards, procedures and work instructions are in place and implemented by a competent workforce throughout the entire lifecycle of the signalling system.

4.16.2 The NRIL Signalling Asset Policy sets out the overall strategy for the signalling system. In line with the requirements of the asset policy new equipment/systems can only be introduced onto the network following acceptance of a safety justification that demonstrates that a safety risk is not introduced onto the network and the risks have been managed SFAIRP.

4.16.3 Renewal needs are identified by the use of the SICA (Signalling Infrastructure Condition Assessment) process as defined in NR Standard NR/L2/SIG/13251 Management of the Signalling Infrastructure Condition Assessment (SICA) Process. Various renewal options exist according to the components/systems requiring renewal. These renewal options range from targeted renewal of specific components or groups of components through to full replacement by modern equivalent systems.

4.16.4 Design, installation, testing and commissioning activities require compliance to comprehensive standards and procedures with the work implemented by a competent workforce.

4.16.5 All contractors supplying labour require RISQS approval. RISQS is the UK rail industry supplier qualification scheme, providing a single common registration, qualification and audit process for suppliers shared by the UK rail industry. Initial and periodic audits are performed by independent bodies, such as Network Certification Body (NCB) on behalf of NRIL to confirm supplier compliance to the Contracts and Procurement Policy.

4.16.6 IRSE assessing agencies that process IRSE licence applications are routinely audited by the IRSE to confirm compliance to licensing rules and regulations. The IRSE are in turn audited by UKAS, to confirm that licensing scheme rigour is maintained.

4.16.7 NRIL employs both site and construction management supervision arrangements to manage the various stages of the contracts. Handover/handback procedures are designed to robustly manage the decommissioning and commissioning of systems into operational service.

4.16.8 Maintenance activities require compliance to comprehensive standards, procedures, and works instructions, by a competent workforce. Critical signalling equipment/systems have mandatory maintenance instructions with stated ranges of task frequencies based upon local conditions. Maintenance tasks and frequencies use a risk-based approach which optimises maintenance activities according to equipment type, frequency of use and impact on safety and performance.

4.16.9 Ongoing performance of the signalling system is monitored using the Fault Management System (FMS) and SINCS (Signalling Incident System). Signalling failures are reviewed according to the requirements of NR Standard NR/L2/SIG/10047 Management of Safety Related Reports for Signalling Failures. Processes also demand that failures are fully investigated to understand their root cause and any corrective actions are applied as required, including nationally where appropriate. The investigations may require testing by specialists and involve independent organisations as deemed necessary by the circumstances associated with the incident.

Structures

4.16.10 The requirements for the safe management assuring the integrity of structures are defined in NR Standards NR/L1/CIV/032 The Management of Structures and NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations. For their respective route, the appointed Structures Manager typically the Route Asset Manager (RAM - Structures) shall:

- Arrange for information necessary for the effective management of structures to be collected and entered into appropriate database(s)
- Appoint a competent engineer to manage each structure or group of structures (for example, of a particular type or category within a defined geographic area)
- Designate those structures that are to be managed as a major structure for which a bespoke asset management plan will be required
- Instruct the production and maintenance of local extreme weather plan(s) by coordination with other affected asset owners

4.16.11 For structures allocated to them the engineer will ensure that:

- A register of all assets under their management is maintained
- Appropriate management control procedures are being carried out on each asset
- Evaluations are carried out and documented on an appropriate frequency to the risk being managed.
- Change of use is evaluated
- Decide and implement interventions required to maintain the required outputs of the asset

4.16.12 Note that evaluation is an important aspect of structures management which is carried out by the engineer. It is defined as an appraisal of all relevant information regarding the stability, load-bearing capacity, condition and use of a structure to determine the actions required to maintain acceptable levels of safety and performance.

4.16.13 Evaluation is essential in structures management due to the unique and archaic nature of the asset portfolio. The application of judgement is regulated by competency reviews.

Competence

4.16.14 Engineers appointed to deliver one or more of the requirements of the safe management of structures shall:

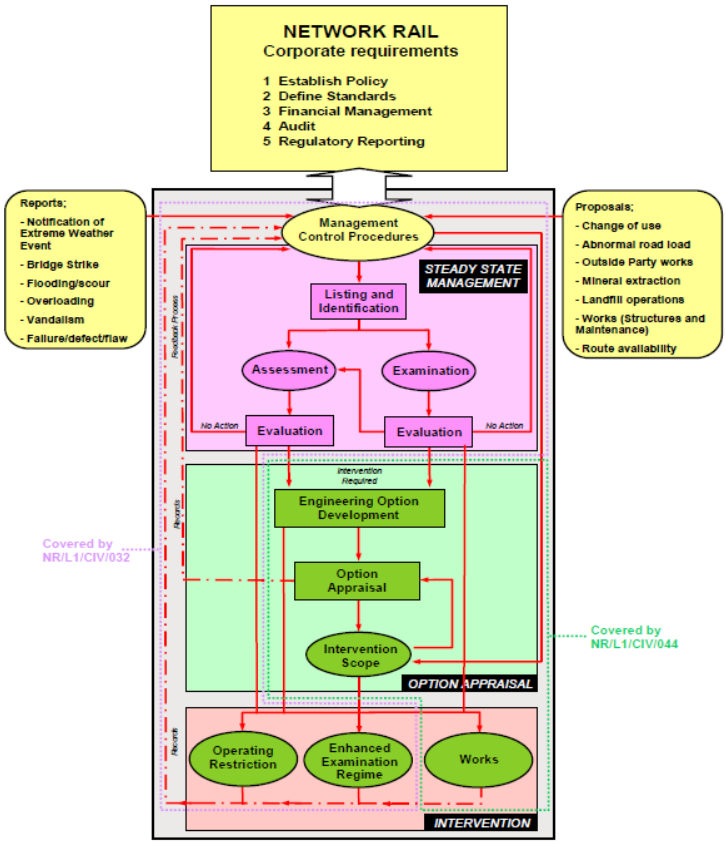
- Have the competency, skill, knowledge and experience necessary to undertake their role commensurate with the form, type and complexity of the structure(s) being managed

- Be aware of their responsibilities
- Understand why and be able to judge when urgent action is required to maintain safety

Competence requirements for specific roles for managing structures are defined in NR Standard NR/SP/CTM/017 Competence & Training in Civil Engineering.

Safety Management Process for Structures

4.16.15 NRIL's safety management process for structures:



Note that specific requirements for managing each category are defined in relevant NR Level 2 standards.

4.16.16 The fitness for purpose of existing structures is assured through a formalised regime of structural assessments and examinations. Structural assessments are undertaken to determine, or confirm, the safe loading capacity of the structure and are usually only undertaken on bridges. An examination will report on the condition of the structure, identify the location and severity of any defects, provide where possible information to assess the rate of deterioration of the structure and, where necessary, identify works required to maintain the fitness for purpose of the structure.

4.16.17 The requirements for undertaking a structural assessment (other than for an earthwork) are specified in NR Standard NR/L2/CIV/035 Management of Structures. The stability of Earthworks is determined in accordance with NR Standard NR/GN/CIV/203 Evaluation and Assessment of Earthworks.

4.16.18 Examination regimes for particular structures are developed in accordance with NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations to enable:

- The condition of the structure to be determined and recorded
- The presence, nature, severity and extent of defects that may indicate or cause deterioration of the structure to be identified and recorded

- Information to be provided that, with reference to previous examinations, allows the rate of deterioration and any significant change in the condition, loading or environment of the structure to be determined
- Informed decisions to be taken as to the actions and remedial works that need to be implemented so that there is no unacceptable risk to the safety or performance of the structure

4.16.19 The following can be carried out for a particular regime:

- Visual examinations
- Detailed examinations (including underwater examinations)
- Additional examinations

4.16.20 In general, structures are examined annually. The frequency of the detailed examination of a structure is determined using the risk-based approach set out in NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations.

4.16.21 Underwater examinations are generally carried out at a maximum of three-year intervals for structures which have elements within a watercourse or sea, or where the depth of water prevents a visual examination.

4.16.22 Additional examinations are carried out as required, for example if a structure has suffered significant accidental damage from a bridge strike.

4.16.23 NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations defines the requirements and provides recommendations for:

- The examination of structures
- Recording and reporting the findings of an examination
- Identifying actions and remedial works that need to be undertaken so that there is no unacceptable risk to the safety or performance of a structure as a result of its condition

4.16.24 The competency of those undertaking examinations and evaluating the results of examinations are specified in NR Standard NR/SP/CTM/017 Competence and Training in Civil Engineering.

Bridges and Culverts

4.16.25 The requirements for examination of bridges and culverts are defined in NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations.

4.16.26 NRIL undertakes a programme of structural assessment of bridges and puts in place mitigation measures for bridges that have yet to be assessed as part of this programme or for those bridges that are not amenable to a quantified assessment. Structural assessments are also undertaken as and when required, for example, prior to a change in the use of a bridge. The arrangements for undertaking a structural assessment of underbridges are detailed in NR Standard NR/GN/CIV/025 The Structural Assessment of Underbridges.

Bridge Strikes

4.16.27 The requirements for the management of bridge strikes are described in NR Standard NR/L3/CIV/176 Management of Reports on Bridge Strikes. Guidance on

the interpretation and application of these requirements is provided in NR guidance note NR/GN/CIV/202 Management of the Risk of Bridge Strikes. Further and more specific guidance on the process and activities to be undertaken by bridge strike nominees is provided in NR guidance note NR/GN/CIV/201 Management of Bridge Strikes - Good Practice Guide for Bridge Strike Nominees. This document provides guidance on the processes to be followed during examination of bridges following a reported bridge strike and gives examples showing the damage limits to a bridge up to which bridge strike nominees are authorised to permit train movements.

4.16.28 Instructions on the response to a notification of a bridge strike are contained in the Rule Book Module TS1 and also in Signal Box Special Instructions.

4.16.29 Persons authorised to examine bridges that have been struck by a vehicle and who have to make decisions on the re-opening of railway lines to rail traffic are trained and certified as competent in accordance with NR Standard NR/SP/CTM/017 Competence and Training in Civil Engineering.

Tunnels

4.16.30 Detailed examination frequencies of tunnels are determined in accordance with NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations. Each tunnel is divided into separate components such as tunnel bores, shafts and adits so that, as appropriate, different components can be examined at different intervals. Examination intervals are then determined using a risk-based approach, with intervals ranging from one year for higher risk category components to six years for components in the lowest risk category.

Earthworks

4.16.31 The NRIL earthworks asset policy sets out the approach of the organisation in delivering earthworks management which meets the safety and commercial requirements which the organisation and its stakeholders require. The asset policy is supported by NR Standard NR/L2/CIV/086 Management of Earthworks which in turn is supported by:

- NR/L3/CIV/065 Examination of Earthworks
- NR/L3/CIV/071 Geotechnical Design
- NR/L3/CIV/028 The Reporting of Structures and Operational Property Safety Related Events

Drainage

4.16.32 The NRIL drainage asset policy sets out the approach of the organisation delivering drainage management which meets the safety and commercial requirements which the organisation and its stakeholders require. The Asset policy is supported by the NR Standard NR/L2/CIV/005 Drainage Systems Manual which defines the requirements and provides recommendations for:

- The management of drainage systems
- The design, remediation and installation of drainage systems
- The inspection and maintenance of drainage systems
- Recording information on drainage systems
- Drainage management plans

4.16.33 NRIL has identified key priorities and developed short term drainage objectives which set out targets for completion within three-to-five year spans. The drainage objectives are monitored through the engineering assurance process.

4.16.34 NRIL is developing a 30-year drainage asset strategy which will provide the direction for the drainage asset across the whole lifecycle management of the asset.

Buildings and Station Structures

4.16.35 NR Standard NR/L3/CIV/006 Structures, Tunnels and Operational Property Examinations sets out two examination regimes for building and station structures. The major structural elements, such as train shed roofs and platform canopies, generally receive a visual examination every 12 months and a detailed examination every five years. Other elements of a building's fabric receive a visual examination every five years.

4.16.36 These examinations are supported by processes to receive and respond to reports of defects and to review and implement an annual planned maintenance programme.

Repair and Maintenance of Structures

4.16.37 On those rare occasions when defects are found during an examination which, in the opinion of the examiner, give rise to immediate concern for the continuing safety of a structure, the operational railway, people, equipment or property they are immediately reported to Control.

4.16.38 In the more usual case of structures having defects that are not of immediate concern the information provided in examination reports is used to determine what mitigation measures may be required and also the timing and extent of any necessary repair works. If necessary, the continued safety of the structure is assured by carrying out additional examinations or increasing the frequency of the detailed examinations.

Track

4.16.39 The NRIL Track Asset Management Policy sets out the approach of the organisation in delivering track which meets the safety and commercial standards which the organisation and its customers require. The asset policy is supported by principal NR Standards, including:

- Track design (NR/L2/TRK/2049 Track Design Handbook)
- Construction (NR/L2/TRK/2102 Design and Construction of Track)
- Inspection and maintenance (NR/L2/TRK/001 Inspection and Maintenance of Permanent Way)
- The control of risks associated with continuous welded rail track (NR/L2/TRK/3011 Continuous Welded Rail (CWR) Track)

4.16.40 NRIL uses industry approved modelling tools to identify the sustainability of various policy options and undertakes assurance of compliance to policy.

4.16.41 Competence requirements are set out in individual NR Standards such as NR/L2/TRK/001 Inspection and Maintenance of Permanent Way and NR/SP/CTM/011 Competence and Training in Track Engineering.

Switches and Crossings (S&C)

4.16.42 The following NR Standards provide additional guidance in support of the management of S&C:

- Design and specification (NR/L2/TRK/070 S&C System Specification for the Design of Switches and Crossings)
- Inspection and maintenance (NR/L2/TRK/001/mod05 Switches and Crossings (S&C))
- Inspection and repair (NR/L2/TRK/0053 Inspection and Repair Procedures to Reduce the Risk of Derailment at Switches)

Lineside

4.16.43 NRIL has processes in place which support boundary management measures commensurate with assessed risks posed by the adjacent environment and the railway and incorporate methods of assessing these risks.

4.16.44 Inspections and remedial activities are carried out along the line of the boundary at prescribed periodicities, dependent on the risk of breach, or adverse impact on the managed infrastructure, in compliance with the following NR Standards:

- The control of risks associated with animal incursion, trespass and vandalism (NR/L2/OTK/5100 Boundary Measures Manual)
- The control of risks associated with lineside vegetation (NR/L2/OTK/5201 Lineside Vegetation Management Manual)

Infrastructure Projects (IP)

4.16.45 Track delivery arrangements for infrastructure projects conducted by Capital Delivery are documented in Infrastructure Projects (Track) Portfolio Management Plan – IP6027. This document defines the operation and principles behind the Track Delivery organisational structure including High Output and Switches & Crossings. Further aspects of track management arrangements are detailed in other relevant NR standards.

Electrical Supplies

Electromagnetic Fields

4.16.46 The health and safety of the workforce can be affected by the exposure to the electromagnetic fields (EMFs).

4.16.47 The Control of Electromagnetic Fields at Work Regulations (CEFW) 2016 implement European Directive 2013/35/EU on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields). The CEFW Regulations place general duties on employers and employees to prevent harm arising from the conduct of their business activities.

Traction Current

4.16.48 The electrical supply system is designed, constructed, maintained and operated to deliver traction current to the trains in a safe and efficient manner, in accordance with the requirements of the Electricity at Work Regulations 1989 and other relevant safety legislation. Electrical loading is determined for normal/permissible degraded operation and short circuit currents are determined for credible fault

conditions. Circuit breakers are used to supply the catenary or conductor rail system. They are fitted with over current protection relays that will automatically disconnect the supply if an overload or fault occurs.

4.16.49 The electrical supply can be switched on and off remotely from an electrical control room for the purpose of isolating the system for emergencies or planned work. Procedures covering all control room activities are contained in Local Control Room Instructions, and Control Room personnel are required to be competent in these and all other rules and instructions associated with the operation of the traction supply system.

4.16.50 The system and the components that make up the system are designed and constructed to be compliant with relevant National Standards, RGSs , RISs and NR Standards.

4.16.51 The system is installed by accredited suppliers and maintained by competent persons in accordance with a suite of organisation maintenance standards.

4.16.52 The key standards that control the risk of inadvertent contact with live parts of the system are the Electrified Line Work Instructions, and all staff and contractors that work in the vicinity of electrified lines are required to be competent in the rules and instructions contained therein. Where relevant, NRIL employees and contractors also have to be competent in the rules and instructions relating to the operation and isolation of the associated electrical distribution systems.

4.16.53 NRIL is trialling manual securing of isolation on newly electrified infrastructure and is further developing remote securing solutions for roll out across legacy power distribution systems.

4.16.54 NRIL recognises there is scope to review power supply, local switching and isolation arrangements, in order to identify options to improve safety in both routine and emergency situations, including in conjunction with other duty holders where facilities are leased or shared.

4.16.55 The NR Standard NR/L3/ELP/29987 Working On or About 25kV AC Electrified Lines is formed of a suite of thirteen individual modules, the first of which is an introductory preface. The suite is appropriate for employers and those persons under their supervision required to work on or about 25kV AC electrified lines.

4.16.56 The DC electrified railways have three separate NR Standards for safe working:

- NR/L3/ELP/3091 DC Conductor Electrified Lines Working Instructions
- NR/L3/ELP/27051 Work Instructions for DC Electrified Lines in the Liverpool Area - Manual
- NR/WL3/ELP/27052 Working Instructions for DC Electrified Lines on the Northern City Line

4.17 Public Safety

Level Crossing Overview

4.17.1 There are two categories of level crossing in use across the rail network, namely those that are for public use and those that are for private use. Public crossings are used by the general public and may be pedestrian, vehicular or both. Whereas private crossings are used only by authorised parties (e.g. a farmer).

4.17.2 All crossings are further categorised as being protected or unprotected. Protected (Active) crossings provide warning of the approach of a train through the closure of gates or barriers, or by warning lights and/or sound and this protection may be controlled or automatic. Controlled protection is provided by a Signaller, either at the crossing or at a remote location using closed circuit television (CCTV) surveillance cameras. Automatic protection is afforded by the passage of the train and activated on the approach to the crossing. Unprotected (Passive) crossings do not provide a warning that a train is approaching, rather it is for the user to determine whether it is safe to cross. For either category of crossing, specific design criteria must be met and instructions for safe use, with appropriate signage, must be provided at all level crossing locations. The design criteria are summarised in the Office of Rail & Road (ORR) Level Crossings: A guide for Managers, Designers and Operators (Railway Safety Publication 7 - December 2011.

Level Crossing Types

4.17.3 There are a number of different types of level crossings in use across the rail network.

Private Crossings

4.17.4 Private crossings, also known as User-worked Crossings (UWCs) are provided with signs to advise users of the correct method of working at each UWC. Depending on the level of safety risk associated with each UWC, some will have additional protection:

- GPS-based (Global Positioning Satellite) system that provides the signaller with information relating to a trains proximity to the crossing
- Detection of the train's proximity by RADAR (Radio Detection and Ranging) which triggers local warning by way of wayside train horns
- Train detection within the block section accomplished using full axle counter techniques

Public Crossings

- **Manually controlled gated crossing** - These have gates on both sides of the road. The gates are normally closed to road traffic when a train is approaching, although not all manually controlled gated crossings on public roads are maintained in a normally open to road position. Furthermore, not all manually controlled gate crossings are operated by NRIL employees.
- **Manually controlled barrier crossing (including CCTV)** - These have full barriers on both sides of the road. It is operated by a NRIL employee, either at the crossing or using a CCTV surveillance system to control it remotely. When a train is coming, there is a warning amber light, followed by alternately flashing red lights. There is additionally an audible warning for pedestrians, cyclists and horse riders.
- **Manually controlled barrier crossing with obstacle detection (MCB-OD)** - uses obstacle detection technology in place of CCTV.
- **Train crew operated crossing** - There are a relatively small number of these crossings. They have gates on both sides of the road and are operated by the train crew, who will close the gates before the train goes through the crossing.
- **Automatic half barrier and barrier crossing (locally monitored)** - These have road traffic signals and half barriers across the left-hand side of the road, which are either automatically operated by approaching trains, or by the train driver. When a train is coming, there is a warning amber light, followed by

alternately flashing red lights. There is also a warning tone for pedestrians, cyclists and horse riders.

- **Automatic open crossing (locally monitored) (AOCL)** - These have no barriers but have road traffic signals, which are either automatically operated by approaching trains, or by the train driver. When a train is coming, there is a warning amber light, followed by alternately flashing red lights. There is also a warning tone for pedestrians, cyclists and horse riders.
- **Automatic open crossing (locally monitored) + barrier** – Similar operation to AOCL, with the addition of half barriers. The barriers deploy automatically alongside the flashing light sequence and warning tone.
- **Automatic open crossing (remotely monitored)** - There is no form of barrier protection at this crossing but they have road traffic signals, which are automatically operated by approaching trains. Once the train has passed the crossing, the siren stops sounding, followed by the extinction of the traffic lights. The equipment is monitored at a remote point, which is manned when the line is open. In addition, telephones connected to the manned monitoring point are available for the crossing user.
- **Open level crossing** - These are open to the road, with no road traffic signals, barriers or gates. There are signs warning road users to give way to oncoming trains.
- **Bridleway crossing** - These are crossings, usually gated, that are primarily designed for horses and their riders. Some have telephones for contacting the signaller, due to the reduced visibility of approaching trains.
- **Footpath crossing** - These are crossings, usually gated, that are primarily designed for pedestrians. There are three different types: those with no protection, those with whistle boards, and those with miniature warning lights. There may be stiles or wicket gates restricting access to the crossing.
- **Station crossing with miniature warning lights** - These level crossings are found at stations. They provide access between platforms at stations with no footbridge, or disabled access between platforms. They have miniature warning lights that indicate when it is safe to cross.
- **Station crossing with white lights** - These provide access between platforms at stations with no footbridge or disabled access and require users to be accompanied by station staff.
- **Station crossing with no gates** - These provide access between platforms at stations with no footbridge, or disabled access between platforms. There are no gates.

New Technology

4.17.5 NRIL is adopting new technologies such as:

- **Overlay Miniature Stop Lights (MSL)** - The overlay MSL family gives a flexible level crossing solution for footpath and user worked crossings. The system provides red/green warning lights indicating to crossing users whether or not it is safe for them to cross.
- **EBI gate 2000 level crossing** - Provide highly reliable barriers and signals across a main line or mass transit network. Various types of occupancy detectors and warning devices can be applied as required.
- **Supplementary audible warning device (Covtec)** - The system provides an audible warning to pedestrian users at footpath crossings, supplementing existing whistle board protection arrangements.

NRIL is additionally investing and developing alternative technologies to supplement existing solutions, and these will be phased into use following rigorous testing and assessment.

Risk Controls

4.17.6 NRIL's level crossing policy NR/L1/XNG/100 Level Crossing Asset Policy describes the organisation's approach to managing level crossing safety. Risks associated with level crossings are managed principally through:

- The mandated requirements and standards for the production of signalling design for, among others, level crossings that are set out in NR Standard NR/L2/SIG/11201 Signalling Design Handbook
- A programme of risk assessment to identify reasonably practicable measures for further risk reduction
- The continued reduction in the numbers of level crossings where justified
- Effective operation and maintenance
- Educating users and the public on the risks from level crossings misuse through ongoing local and national communication campaigns that promote the safe use of level crossings
- Cooperating with the police and local authorities in the enforcement of the law relating to level crossings

Signalling Design and Installation

4.17.7 The method of integrating level crossings with the remainder of the signalling system depends on the nature of the level crossing. There are a number of NR Standards covering the design and installation of level crossings. NR Standard NR/L2/SIG/11201 Signalling Design Handbook sets out NRIL's approach to the design of signalling assets and contains a number of modules covering both the design requirements common to all types of level crossing and also the requirements for specific types of crossing. These modules have been updated to take account of the European Rail Traffic Management System (ERTMS).

4.17.8 NR Standard NR/L3/SIG/11303 Signalling Installation mandates that any installation of new or altered systems and equipment on NRMI provides an operationally safe installation with safe interfaces between systems.

4.17.9 NR Standard NR/L2/SIG/30015 Specification for Station, Footpath, Bridleway and User Worked Level Crossings provides the preferred layouts for renewal of crossings, and is applicable to new crossings or those assets that are to be renewed during maintenance works. The standard guides the installer/maintainer on how to position equipment when the method of protection has been established.

Risk Assessment and Reduction

4.17.10 Operations Risk Advisors, and Level Crossing Managers, have arrangements in place for conducting risk assessments of all level crossings and reviewing these at appropriate frequencies. NR Standard NR/L2/OPS/100 Provision, Risk Assessment and Review of Level Crossings sets out the consistent process for determining the safety requirements for new level crossings, and the risk assessment and management processes that apply to both new and existing level crossings.

4.17.11 NRIL's strategy Transforming Level Crossings 2015-2040 and uses the All Level Crossing Risk Model (ALCRM) within its wider level crossing risk management process to:

- Evaluate safety risks associated with individual level crossings, based on characteristics such as usage, road speed and layout, train speed and frequency, and the level of protection provided by the crossing, as well as factors such as the duration of warnings and closures
- Support cost-benefit analyses of the options for reducing risk at level crossings

4.17.12 NRIL has developed a model called the Level Crossing Risk Indicator Model (LCRIM) to track risk at level crossings and regularly monitor risk reduction.

4.17.13 The benefits associated with the delivery of level crossing initiatives are calculated using the optioneering capability within ALCRM. For example, when initiatives such as closure or diversion and improvements such as installation of barriers are implemented, the risk reduction is reflected in ALCRM and also the LCRIM.

4.17.14 In the event of an accident or reported frequent misuse being apparent at a public level crossing, additional risk assessment is undertaken over and above the regular, routine risk assessment programme.

4.17.15 Following the risk assessment, the output is reviewed and, where justified, schemes are developed to reduce the risk as far as is reasonably practicable. NRIL undertakes appropriate approval prior to making any change to the type of protection at a public level crossing.

Operation and Maintenance

4.17.16 Level crossings are operated in accordance with the Rule Book, associated instructions and NR Standards such as the Operations Manual. The Head of Operations Principles & Standards undertakes regular review of the adequacy of relevant standards in light of level crossing accidents and incidents.

4.17.17 Route/region-based teams of Level Crossing Managers follow a set of instructions developed by the Network Technical Head Level Crossing Engineering and Head of Discipline Signals, for the inspection and maintenance of all types of level crossings.

4.17.18 The frequency and specification of inspection of level crossings is mandated by NR Standard NR/L2/SIG/19608 Level Crossing Infrastructure Inspection and Maintenance Handbook.

Education

4.17.19 Over a number of years, the UK rail industry has developed an increased level of maturity with regard to managing level crossing risk. NRIL's organisational capability, processes and systems have improved and evolved. At the same time physical improvement and enhancement projects have seen risk reduced through crossing closure, engineering and enforcement schemes. Finally, public education and awareness campaigns have raised the profile of level crossing safety with user groups.

4.17.20 The majority of accidents can be attributed to deliberate misuse and user errors when using level crossings. Regular communication campaigns, at local and national level, are developed by the Director, External Communications to highlight the risks associated with level crossings and to promote the safe use of crossings by the public. These are supported by the appropriate educational material, such as user safety guides. Those with rights to use private user-worked

level crossings are written to on a regular basis with instructions for the correct use of the respective crossing.

Platform Train Interface Risk (PTI)

4.17.21 NRIL has developed an approach to Platform Train Interface Risk (PTI) which is based on a detailed understanding of the risks that exist, using quantitative and qualitative methodologies to really understand the data, and to share the data identifying trends and good practises. Working with industry stakeholders, practical mitigations are being identified and deployed across the network. NRIL has set out plans and recommendations to benefit safety risk, performance impact, and capacity, which will support managing risk, and introduce consistency of approach.

4.17.22 PTI affects many areas of design and operation that are not always compatible:

- Platform clearances for passenger, freight, and plant vehicles
- Platform and passenger vehicle floor heights
- Optimal step and gap configurations for passengers with and without mobility issues, and those using wheelchairs
- Passenger train designs, including door configurations, train capacity, provision for luggage, and how these might affect overall performance

4.17.23 NRIL has adopted the RSSB Platform Train Interface (PTI) Risk Assessment Tool.

4.17.24 Following completion of station platform assessment, the data output is analysed, and recommendations are identified to keep each route/region and associated station operator informed of the risk profile at the specific station, so appropriate actions may be implemented.

4.18 Route Crime (Railway Crime)

Overview

4.18.1 The term Railway Crime covers criminal offences that occur on trains (on-train crime), on stations (station crime) and on its infrastructure (route crime). NRIL has primary responsibility for the management of route crime, which is defined as criminal offences committed on or affecting NRIL infrastructure, such as acts of trespass, vandalism and graffiti. NRIL's aim is to manage route crime such that there is no year-on-year increase in the level of associated risk.

Risk Controls

4.18.2 The process for the management and monitoring of route crime is defined in NR Standard NR/L2/OPS/291 Railway Crime Risk Management and the supporting procedure NR/L3/OPS/045/4.11 Reporting and Assessing Railway Crime in the NR/L3/OPS/045/The National Operating Procedures Index and is based on delivering prioritised actions under the '4 Es' strategy (Enabling, Education, Enforcement, Enhancement). Route crime risks are reduced by:

- The identification and risk assessment of locations susceptible to route crime
- The designation of route crime hotspots and development of action plans for mitigating route crime risks
- The inspection, maintenance and repair of the lineside boundary in accordance with the relevant organisation standard

- Minimising the opportunity for route crime by removing graffiti and controlling the level of scrap material and other potential obstructions on the lineside
- Establishing cross-industry partnerships with train operators, the police and others that enable a clear focus on the required actions to reduce route crime activity
- Educating the public on the risks from route crime through ongoing local and national communication campaigns
- Cooperating with the police and local authorities in the enforcement of the law relating to route crime
- Enhancement and control of fencing and access points to deter unauthorised access to the railway

4.18.3 NR Standard NR/L2/OTK/5100 Boundary Measures Manual specifies the boundary management measures commensurate with assessed risks posed by the adjacent environment and the railway. It defines the arrangements for inspection, assessment, repair and renewal of the boundary fencing.
The prioritisation of repairs, the need for renewal and the type of fencing/barrier to be used for renewal is determined using a likelihood and consequence risk matrix within the standard. Where the existing fencing/barrier is inadequate, consideration is made to renewing to the type of barrier/fence appropriate to the risk.

4.18.4 The Senior Engineers from the Chief Engineer's team in the Technical Authority, with specialist lineside knowledge, provide technical specifications, maintenance regimes and expertise to the Delivery Units (DUs) for boundary fencing and access points. The Track Maintenance Engineers [Off-Track] manage the inspection and assessment (keeping records of such), and the maintenance and renewal of boundary fencing and access points. Where there is evidence of route crime activity that has occurred since the last inspection, this is dealt with in accordance with NR Standard NR/L2/OPS/291 Railway Crime Risk Management.

4.18.5 Sites or boundaries that are secured by Third Parties (commonly neighbours) are monitored and, where required, the Third Party is alerted to the need for repair or renewal.

4.18.6 The route/region Asset Protection teams manage security issues relating to Outside Parties whose worksites border NRIL infrastructure.

4.18.7 Contractors and NRIL employees are required to adequately secure surplus or redundant material or remove it from the lineside and Infrastructure Maintenance Delivery Managers monitor compliance to this requirement. They also monitor the performance of contractors in relation to site safety and security and draw to their attention any breaches of contractual conditions.

4.18.8 Each Route Director is responsible for monitoring and managing the risks associated with route crime within their designated routes. Infrastructure Maintenance Delivery Managers are responsible for the security and maintenance of the railway boundary (note – for some specified locations this responsibility is allocated to others, e.g. civil engineer for large structures).

4.18.9 Operation's Risk Advisors, or other appointed person for crime management as required by NR/L2/OPS/291 Railway Crime Risk Management, assess locations with very high levels of repeat trespass and vandalism as evidenced by information in SMIS, or following an inspection undertaken in accordance with NR Standard NR/L2/OTK/5100 Boundary Measures Manual which identifies

route/region crime activity. Following assessment, for those that are designated as route crime hotspots, line managers develop a coordinated programme of control measures.

4.18.10 Operation's Risk Advisors or appointed persons for crime management coordinate the management of route/region crime, cooperating with other industry partners and the BT and civil police, identifying and coordinating the development of action plans for route/region crime hotspots.

4.18.11 Community Safety Managers take the lead regarding liaison with the public and other external stakeholders to raise awareness of risks from route crime. Community Safety Managers target appropriate groups of people (e.g. teenagers) based on guidance from the Operation's Risk Advisors or appointed persons for crime management. They will consider whether further education and local community work can be implemented or refocused to address the issue. Where the Community Safety Manager confirms that further education, sponsorship or policing will not address the problem, enhancements for additional levels of fencing security may be considered.

4.18.12 Each Route Director arranges for the risk at route crime hotspots to be reviewed following the completion of relevant action plans and at least annually. This may result in the site being declassified as no longer being a crime hotspot, in which case further monitoring is not required. However, if the site continues to be classified as a crime hotspot, the action plan is reviewed and updated as appropriate.

4.18.13 Community Safety Partnership Groups or equivalent, covering specific geographical areas and in accordance with agreed national priorities, facilitate the development and delivery of local level action plans aimed at reducing the risks and costs posed by railway crime. They comprise senior representatives of NRIL, train operators, freight operators, British Transport Police (BTP) and, where appropriate, other relevant agencies. A cross-industry Trespass Risk Group agrees national priorities and strategies aimed at reducing the risks and costs posed by crime, disorder and other forms of inappropriate public behaviour. The Group endorses the cross-industry delivery framework and monitors its effectiveness.

4.18.14 Media campaigns aimed at youths and children, use a number of different media (e.g. website, roadshows, sponsorship, advertising campaigns) to highlight the dangers associated with trespass.

Suicide Prevention

4.18.15 NRIL is at the vanguard of suicide prevention in Great Britain. Since 2010 it has led an industry programme to reduce the:

- Risk of suicide on the railway
- Traumatic impact of suicide events on staff and customers
- Delay caused by suicide

4.18.16 The programme is underpinned through partnerships with two organisations:

- Samaritans, a relationship that began in 2010 which is now the longest running charitable/corporate enterprise of its type in this country
- A specialist British Transport Police Mental Health and Suicide Prevention Unit that came into being in 2013

4.18.17 NRIL's relationship with the industry is key to the success of the programme and is managed through the following groups which comprise part of its existing architecture:

- The presence of a suicide prevention representative in each route/region
- The National Suicide Prevention Working Group – NSPSG (a cross industry governance body of suicide prevention practitioners)
- The Suicide Prevention Duty Holders Group (SPDHG) (essentially the industry's steering group for suicide prevention)
- System Safety Review Group (Rail Industry Suicide Stakeholder Group - RISSG) led by RSSB
- National Task Force (NTF)

4.18.18 NRIL recognises the responsibility it has for protecting the rail network from suicide events. It does this through its route/region teams identifying vulnerable locations introducing appropriate mitigation measures, and its central suicide prevention team progressing longer term prevention initiatives.

4.18.19 It also endorses and subscribes to the SPDHG guidance issued in November 2016 (Guidance for creating a Suicide Prevention Plan) outlining the cross-industry collaboration required to further address the suicide challenge on the network.

4.18.20 Suicide, however, is a societal problem the causes of which are outside NRIL's ability to control. Subsequently it works closely with Government, Local Authorities, Public Health England and other external agencies to address the issue upstream from the railway promoting help seeking behaviour amongst the most vulnerable and those at risk of suicide in society.

4.18.21 With its range of activities in this arena and the relationships it has forged outside the rail industry NRIL is seen as a world leader in preventing suicide in public spaces.

4.19 Operational Risk and SPAD Management (Management of SPADs)

Overview

4.19.1 Category A Signals Passed at Danger (SPADs) – where any part of a train passes a signal maintained at danger without the authority of the Signaller – have been identified as a significant risk associated with the NRIL operation. SPADs have the potential to cause accidents giving rise to multi-fatalities. They are associated with:

- Train collisions
- Train derailments
- Collisions with objects
- Collisions with road vehicles at level crossings
- Striking people on the line
- Where an in-cab signalled movement authority has been exceeded without authority

4.19.2 SPADs are categorised as follows:

- **Category A1** - When a SPAD has occurred and, according to available evidence, a stop aspect, indication or end of in-cab signalled movement

authority was displayed or given correctly and in sufficient time for the train to be stopped safely at it.

- **Category A2** - When a SPAD has occurred and, according to available evidence, the stop aspect, indication or end of in-cab signalled movement authority concerned was not displayed or given correctly but was preceded by the correct aspects or indications.
- **Category A3** - When a SPAD has occurred and, according to available evidence, verbal and/or visual permission to pass a signal at danger was given by a hand-signaller or other authorised person without the authority of the signaller.
- **Category A4** - When a SPAD has occurred and, according to available evidence, a stop aspect, indication or end of in-cab signalled movement authority was displayed or given correctly and in sufficient time for the train to be stopped safely at it, but the train driver was unable to stop their train owing to circumstances beyond their control (for example, poor rail head adhesion, train braking equipment failure or malfunction etc.).

Risk Controls

4.19.3 NRIL has a policy which is intended to reduce SPADs by the adoption of appropriate measures that reduce the occurrence of, and mitigate the consequences of, a signal passed at danger.

Key areas include:

- Engineering controls
- Risk assessment
- Maintenance of signalling equipment
- Safety critical communication
- Training, competence and development
- Managing risk and dealing with change
- Recognising industry good practice
- Learning from lessons learnt

4.19.4 For trains operated by NRIL, the Head of Driver Standards takes lead responsibility in implementing the policy in accordance with arrangements described in the HSMS that supports NRIL's safety certificate. An annual risk reduction plan is provided to identify and implement safety improvements in order to prevent or reduce the likelihood of recurrence or mitigate the consequences of an accident or incident.

4.19.5 Risks associated with SPADs are further reduced by:

- The positioning and maintenance of signals to relevant standards
- The maintenance of line-side vegetation to relevant NR Standards
- A programme of risk assessment to identify reasonably practicable measures for further risk reduction
- Undertaking joint monitoring and review with train operators, including the effectiveness of communications
- The implementation of reasonably practicable measures identified to meet recommendations from investigations and signal sighting committees
- Providing information on the location of multi-SPAD signals
- The implementation of engineering controls that reduce the consequence of SPADs

Communicating SPAD Information

4.19.6 Nationally, it is recognised that a significant proportion of SPAD incidents involve either a signal and/or a driver with a previous SPAD history. Driver safety briefing arrangements and NRIL Weekly Operating Notices are used to promote recognition and awareness of multiple SPAD signals. NRIL receives information from routes/regions on multi-SPAD signals which is published on an external website accessible to train operators. HSMS 4.19.5 and 4.19.6 describe the arrangements that are in place to ensure that multi-SPAD signals relevant to NRIL are communicated to drivers (by SPAD notice cases at on-track machine (OTM) driver operator depots, SPAD focus groups etc.).
Multi-SPAD signals are also briefed as part of a SPAD awareness module within the driver training programme. Arrangements are detailed in SP-306 Management of Signing on Points.

Monitoring

4.19.7 The monitoring of safety performance is undertaken through regular management review meetings. NRIL has implemented a performance management regime that enables the setting and monitoring of performance targets across NRIL's business activities. Safety is a key element of this regime. HSMS 2.13 Objectives, Targets and Programmes describes how NRIL sets safety targets for the business as a whole and how these are monitored.

Signal Sighting

4.19.8 NR Standard NR/L2/SIG/10157 Signal Sighting details how signal sighting shall be undertaken for new and altered signals, and those where SPADs have occurred. It is directed towards confirming that signals are placed in the best possible position for train drivers.

Signal Maintenance

4.19.9 NR Standard NR/L2/SIG/10660 Implementation of Signalling Maintenance Specifications mandates the use of signalling maintenance specifications by technicians and technical support personnel to check signal alignment and visibility.

Lineside Vegetation Management

4.19.10 NR Standard NR/L2/OTK/5201 Lineside Vegetation Management Manual mandates that lineside vegetation will undergo inspection, maintenance and management regimes derived from risk assessments based upon railway and vegetation characteristics. It also requires minimum distances for vegetation clearance on signal approaches.

Risk assessment of signals

4.19.11 NR Standard NR/L2/SIG/14201 Signalling Risk Assessment Handbook defines the process and tools for the risk assessment and review of all junction-protecting signals. This is supported by procedure NR/L3//OPS/045/3.07 Signalling Systems Failures, Lineside Safety Equipment Failures, Track Defects and Receiving and Responding to RT3185 Forms which provides guidance in the estimation of train protection warning system (TPWS) effectiveness while undertaking the signal overrun risk assessment (SORA) process.

Joint Monitoring of Communications

4.19.12 The process for reactive and proactive monitoring of communications is defined in NR Standard NR/L2/OPS/037 Management of Spoken Safety Communications. NRIL undertakes joint review with train and station operators and infrastructure contractors of the quality of signal box voice recording files.

Investigation Recommendations

4.19.13 Each SPAD incident is investigated to ascertain the root cause and identify any lessons learnt. The process for investigating SPADs is detailed in NR Standards NR/L2/INV/002 Specification – Accident and Incident Reporting and Investigation and NR/L1/OPS/010 Signals Passed at Danger and Signal Reversions Affecting Trains.

4.19.14 The Signal Sighting Engineer arranges for Signal Sighting Committees to be held as required in accordance with NR Standard NR/L1/OPS/010 Signals Passed at Danger and Signal Reversions Affecting Trains or when reasonably requested by train operators or NRIL employees. The recommendations from Signal Sighting committees are considered by the Route OPSRAM (or equivalent) Groups who track the progress of accepted recommendations.

Multi-SPAD Information

4.19.15 Certain signals on the network have become multiple SPAD signals, in that each one has been passed at danger (defined as Category A) twice or more in the last five years. Train operators are informed of the existence of multiple SPAD signals by:

- The National Operations Centre (NOC) who issue an immediate urgent safety related advice to all train operators after a signal becomes a Multiple SPAD Signal (MSS), or when an existing MSS has another SPAD
- An MSS list which is provided in the Weekly Operating Notice (WON)
- The Multiple SPAD Signals website which is maintained by NRIL

Engineering Controls

4.19.16 Network Rail uses a variety of different engineering controls designed to prevent or mitigate SPADs. These include: the Automatic Warning System (AWS), trainstops on the lines of route used by LUL rolling stock, ETCS (European Train Control System) (Indusi) for the interface with the Tyne & Wear Metro, two different Automatic Train Protection systems (ATPS) (Western Route and for Chiltern Railways), the European Train Control System and the Train Protection and Warning System (TPWS).

4.19.17 The fitment of TPWS at signals, as required by the Railway Safety Regulations 1999, is designed to mitigate the consequence of trains that approach stop signals too fast, by automatic application of the emergency brake. TPWS is designed for speeds of up to 70 mph. For speeds up to 100 mph TPWS+ can be employed. TPWS+ has been fitted at selected higher-risk signals, thereby increasing the effectiveness of TPWS up to 100 mph. TPWS/TPWS+ fitment may be progressed at other signals following signal risk assessments where it is deemed to be a reasonably practicable mitigation action.

4.19.18 SPAD control can only be achieved by NRIL in collaboration with TOC partners. All routes/regions have meetings at which NRIL and train operators jointly review

SPAD incidents and other operational safety interface issues and develop initiatives to further reduce incidents. The recommendations from Signal Sighting Committees are considered by this joint meeting who also track the progress of accepted recommendations.

Weather

4.19.19 The NR Standard NR/L2/OCS/021 Weather – Managing the Operational Risks defines extreme weather and the arrangements for managing the associated operational risks, including the use of weather forecast information, to give adequate preparation for such events.

4.19.20 Each route/region has a Weather Strategy Coordinator, who liaises closely with the Operational Weather Resilience Manager, in order to formulate, agree and practice emergency plans. Data on predicted weather is provided to the National Operations Centre, who on receipt of an adverse weather forecast will circulate a warning to all Route Controls and train operators, following which Route Controls will coordinate the implementation of the emergency plan.

4.19.21 RGSs are used throughout NRIL to control the risks arising from weather and seasonal change. GE/RT8000 series The Rule Book gives instructions to traincrews, signallers and maintainers, for dealing with the effects of snow, flooding, and loss of adhesion.

4.19.22 A fleet of Multi-Purpose Vehicles (MPVs) and a variety of other trains, trackside and mobile equipment are used to control the risks arising from weather and are able to undertake the following functions:

- Application of traction sanding gel to aid train adhesion
- De-icing equipment
- Firefighting equipment
- High pressure water jetting to clear adhesion inhibiting substances
- Snow clearance fleet, including:
  - Drift ploughs
  - Beilhack snowploughs
  - Snowblower

Extreme Temperatures

4.19.23 As temperatures drop, each route/region invoke winterisation processes to mitigate risk of ice build-up on Overhead Line Equipment (OLE), affecting trains and causing delays.

4.19.24 NRIL has developed a tool that can accurately forecast the likelihood of ice build-up on OLE (overhead line equipment), giving teams on the ground the chance to tackle it before it causes delays.

4.19.25 Track is installed to Railway Group and NR Standards, such that the infrastructure has the ability to cope with the changes in temperature that can be reasonably expected. As a representative example of such standards, NR Standard NR/L2/TRK/3011 Continuous Welded Rail (CWR) Track defines the requirements for the configuration, installation and maintenance of continuous welded rail track. This standard also specifies the methods to be used when stressing continuous welded rail in plain line and through switches and crossings.

4.19.26 NR Standard NR/L2/TRK/001 Inspection and Maintenance of Permanent Way defines the minimum requirements for the inspection and maintenance of NRIL's permanent way, including the reporting mechanism where a track buckle does occur, irrespective as to whether it occurs on continuous welded rail or jointed track.

4.19.27 Monitoring of track temperature at certain key locations is mandated through local instructions, with appropriate arrangements in place where specific levels are exceeded.

4.19.28 In the way that heat can have an adverse effect on track through unwanted expansion, extremes of cold can also have an unwanted effect causing contraction that can result in rail breaks. NR Standard NR/L2/TRK/3011 Continuous Welded Rail (CWR) Track mandates the optimum level of stress in rail to reduce the impact of cold temperatures.

4.19.29 Following extended periods of shut down (associated with Christmas and New Year holidays on some routes/regions) the operation sometimes experiences additional risks associated with cold, whereby there is the potential for the build-up of ice (usually in the form of icicles) in tunnels and from over-bridges. Specific arrangements are in place to address this (please refer to NR Standard NR/L3/TRK/1010 Management of Responses to Extreme Weather Conditions at Structures, Earthworks and Other Key Locations) and, in the majority of cases this involves the use of an examining locomotive or train. This examination also monitors for other effects of prolonged shut down, such as contamination of railhead. For routes/regions that regularly experience the effects of winter weather, specific instructions are published in the Sectional Appendix covering items such as use of independent snow ploughs, snow blowers, and other winter working arrangements.

Low Rail Adhesion

4.19.30 The potential for SPADs and station overruns caused by low rail adhesion is addressed by NR Standard NR/L2/OPS/095 High Risk Sites for Wrong Side Track Circuit Failures in Leaf Fall Areas and for Low Rail Adhesion.

4.19.31 NR Standard NR/L2/OPS/095 High Risk Sites for Wrong Side Track Circuit Failures in Leaf Fall Areas and for Low Rail Adhesion describes the assessment process for identifying high risk sites for low rail adhesion and is directed toward ensuring that all long-term or known sites which may be high risk are identified in a consistent way and that a structured process exists to alter the status of such sites.

4.19.32 These standards support RGS GE/RT8040 Low Adhesion Between the Wheel and the Rail – Managing the Risk. This requires arrangements to be in place to identify low rail adhesion sites and the remedial action and advice to drivers and others of such sites.

4.19.33 Leaf fall is associated with low rail adhesion and NR Standard NR/L2/OPS/095 High Risk Sites for Wrong Side Track Circuit Failures in Leaf Fall Areas and for Low Rail Adhesion describes the process for identifying sites that may be high risk in respect of being likely to cause wrong side track circuit failures under leaf fall contamination conditions.

4.19.34 This standard supports Railway Industry Standard RIS-3708-TOM Arrangements Concerning the Non-Operation of Track Circuits During the Leaf Fall

Contamination Period which requires arrangements to be in place that identify the need for, and subsequent removal of, restrictions to normal operations in the event of significant problems being encountered during the Autumn leaf fall period.

4.19.35 The sites of known low rail adhesion are listed in each Sectional Appendix and indicated via lineside signage to train drivers. At many of these sites, much work has been undertaken to improve adhesion, such as mulch matting to prevent embankment growth, and tree felling. At certain locations, automatic traction gel applicators have been fitted.

Scour and Flooding

4.19.36 NRIL has arrangements in place for those sites with a history of flooding, and the respective Heads of Discipline for Track, Drainage, Structures and Geotechnical have NR Standards in place to reduce the incidence of, and the effects from, scour and flooding.

4.19.37 The suite of NR Level 2 standards such as RT/CE/080 Management of Existing Bridges and Culverts define specific requirements for structures that are at risk of damage through water action and/or scour.

4.19.38 Similarly, specific requirements for undertaking examination on these at-risk structures are defined in the suite of NR Level 2 standards such as NR/L3/CIV/006 Handbook for the Examination of Structures, Tunnels and Operational Property.

Communicating Safety of the Line Information

4.19.39 Safety is incorporated within NRIL's internal communication processes. The HSMS and other safety communications are available on MyConnect. Specific safety briefs are given to staff and safety is incorporated into organisation publications. Safety issues are discussed at a variety of internal meetings. Further details on these arrangements can be found in HSMS 2.11 Health & Safety Meeting Structure.

4.19.40 NRIL has a specific process in place for communicating safety of the line information to drivers. The Head of Driving Standards or equivalent role within each TOC is responsible for ensuring the content, target group and method of communication is timely, relevant and appropriate. Typical methods include publications, face-to-face briefings, route/region risk assessments, training and competence assessment. Typical information may include:

- Routine information relating to changes in the infrastructure including NRIL publications such as the Sectional Appendices, Periodic Operating, Notices and Weekly Operating Notices
- Rule Book and National Operating Instruction changes communicated through a combination of personal issue of rulebook updates and briefing on changes
- Urgent or late notices
- Safety of the Line incidents and investigations
- SPAD information
- Adhesion related incidents and Autumn preparation
- NRIL (OPSRAM), Rail Delivery Group (RDG) Operations Council, RDG Operations Standards Forum, National conferences and industry workshops

4.20 Workforce Health and Safety

Lifesaving Rules (LSRs) and Fair Culture Principles

4.20.1 NRIL's Lifesaving Rules (LSRs) are at the heart of its Safety Vision – everyone home safe every day – and the result of its ongoing commitment to eliminate all injuries and fatalities in NRIL and on its infrastructure. They underpin its safety values and vision, and they are for everyone, whether office based or working on the front line.

4.20.2 It is important that NRIL staff are treated fairly whilst at work. The Fair Culture Principles are aimed at creating the environment in which Close Call reporting is supported and define how NRIL will investigate potential breaches of the Life Saving Rules (LSRs) in a way which identifies the root cause, and moves away from a perceived culture of blame. There has been an increased focus on the consistent application of the Fair Culture Principles across its contractors and supply chain.

4.20.3 All employees, having been briefed on the rules and associated fair consequences, have a responsibility to comply with the Lifesaving Rules and to personally intervene if they feel others may be working unsafely.

Health, Safety and Environment Delivery Plan

4.20.4 NRIL has identified key areas where it needs to speed up its approach to ensuring the safety of its workforce and contractors. There are a number of projects and programmes within the Health, Safety and Environment Delivery Plan (formerly Home Safe Plan) designed to make a step change in the safety, health and wellbeing of people:

- Safety Task Force
- Fatigue Improvement Programme
- Safety Culture
- Community Safety
- Trespass Improvement Programme
- Level Crossing Technology Programme
- Health and Wellbeing Procured Health Services
- Health and Wellbeing Mental Health Resilience
- Health and Wellbeing Medical Standards
- Manual Handling Improvement Programme
- Suicide Reduction

Health and Safety Hazards

4.20.5 Risks to the health and safety of persons carrying out work on the infrastructure are assessed through work activity risk assessment and controlled to a level SFAIRP, taking into account the requirements of relevant legislation.

4.20.6 The National Hazard Directory contains a list of specific health and safety hazards by line of route across the network, as well as generic hazards that may be encountered. NR Standard NR/L2/MTC/006 Maintenance and Contents of the National Hazard Directory defines the minimum content of the National Hazard Directory and stipulates the management arrangements, data maintenance, and

hazard notification process, so that employees, contractors, and others can be supplied with details of hazards at site-specific locations.

4.20.7 It includes amongst other data:

- Locations where 'With Warning Work Site Working' is prohibited
- Authorised walking routes
- Access points
- Signals barred to hand signallers
- Buried services

4.20.8 NRIL employees have access to this data through MyConnect. Where employees do not have direct access to MyConnect, line managers have arrangements in place to provide this information to those employees for whom they are responsible. Contractors are provided with access to the data through NRIL's National Hazard Directory which is provided to them through the RailHub online digital platform. This directory brings all hazard data together in one place and provides contractors with a user-friendly interface to access the data that they require.

4.20.9 Additionally, NRIL contracts prohibit the import onto the infrastructure of harmful substances that have not been previously agreed. NRIL employees and contractors are required to inform their line manager if, in the process of their work, they come across any unforeseen harmful substances or hazards brought onto the infrastructure by the actions of others outside the control of NRIL, e.g. fly-tipping.

Trackside Safety

4.20.10 It is critical to NRIL that our workforce can access the trackside environment safely. We have been working to improve our arrangements with regard to this matter and continue to do so through the Safety Task Force.

The Safety Task Force is focussed on eliminating near-misses and operational close calls where our track workers are put at risk from passing rail traffic.

The Safety Task Force has a clear remit to enable NRIL to complete the following tasks:

- Achieve compliance with ORR Safety Improvement Notices on Track Worker Safety;
- Review 28 million maintenance standard tasks and align them with the safest methods of access and protection;
- A significant deployment of technology for protection and warning of track workers,
- The implementation of robust processes for oversight, verification and assurance against NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line;
- Introduction of a new signalling workload assessment process and assessment of 700+ signaller workstations;
- Conclusion of the 'Planning 4 Delivery' programme in CP6.

Control measures and requirements for managing trackside safety risk are primarily set out in NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line.

The standard specifies the requirements for establishing and publishing details of working with protection availability and prohibitions on 'Working With Warning' systems (also referred to in some systems as 'Red Zone Working').

Working under protection is where work activity is separated from train operations, whereas 'working with warning' is where work is undertaken and trains continue to run.

The standard supports the requirements of the Rule Book, requiring effective SSOW to be established that mitigate the risk of people being struck by trains. It also establishes the requirement to prevent harm from the work activity and location where the work is being undertaken.

NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line emphasises that:

- A specific person will be in charge of work, so a workgroup knows who is accountable for their safety and delivery of their work
- That person will have been involved in planning the work. It is critical to track worker safety and that a safe system of work must be established
- The planning will ensure that task risk is identified and mitigated as part of the planning process. This is implemented via a Safe Work Pack (SWP) before work can be undertaken. The SWP is required to take account of:
    - The way that the work tasks will be undertaken
    - Any specific requirements for doing the work
    - The operational (train vs person) risk and what arrangements will be employed to control that risk as identified in the Rule Book
    - The occupational risks presented by the task(s) and location and what arrangements will be employed to control those risks.
    - The characteristics of the location of the planned work, including working under protection availability or prohibitions on 'working with warning' (also known as 'Red Zone Working Prohibitions')

4.20.11 Working under protection provides staff an overall higher level of risk mitigation from trains compared to working with a warning system. It remains the first choice method of working, even where working with a warning is permitted, due to the increased level of protection this provides. Working under protection may be a safeguarded, fenced or separated area to protect the staff working in that area.

4.20.12 Where it is necessary to 'work with warning', appropriate warning is afforded to those working within it. Safety systems of work include (in hierarchical order, first being the most effective):

Train warning systems	Signal Controlled Warning System	1st
	ATWS permanent	2nd
	SATWS permanent	3rd
	TOWS	4th
	LOWS	5th
	ATWS portable	6th
	SATWS portable	7th
	Lookout fixed refuge	8th
	Lookout distant	9th
	Lookout intermediate	10th
	Lookout (site)	11th

4.20.13 An assessment of the operational and task risks associated with any work on NRIL infrastructure is required to be undertaken through NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line.

4.20.14 This assessment is used as the basis for the development of a safe work pack (SWP). The SWP is an integral part of a safe system of work SSOW and is informed by the risk assessment process, which determines how work can be carried out safely. It enables effective management of a wide range of activities undertaken in differing operational environments, often in close proximity to each other. The term SWP refers to a pack of information that directs the Person in Charge (PIC), on how work is to be carried out safely and gives details on how to manage and control task (activity), site, and operational risks. Whether it is manually or electronically generated, it is a detailed document which authorises specific people to carry out specific work at a specific site at a specific time and sets out the controls necessary to complete the job safely.

Person in Charge (PIC)

4.20.15 NR Standard NR/L2/OHS/019 Safety of People at Work on or Near the Line introduces the term ‘Person in Charge’ (PIC).

The PIC is accountable for their own safety and the safety of all persons in their workgroup. This includes risks of being struck by trains and the risks associated with the task(s) and location.

As a prerequisite, the PIC shall hold one of the following competencies:

- Controller of Site Safety (COSS) or Safe Work Leader (SWL)
- Individual Working Alone (IWA) as a minimum when working alone

It is expected that the PIC will deliver the supervision of the workgroup and manage the protection from train operations. There may be occasions during planning when the PIC may need to delegate the role of COSS. Where the PIC is not acting as the COSS, the person appointed as the COSS shall carry out the requirements of COSS duties in accordance with the Rule Book (GE/RT8000).

4.20.16 Accountability for the protection of a group of staff from both operational and occupational risks rests with the PIC.

Where the planned controls prove to be inappropriate, the PIC is required to implement a higher level of protection or to adjust the work or planned protection arrangements. They are not permitted to implement a lower level of protection without specific authority from a responsible manager. If the PIC is unable to implement a higher level of protection or to adjust the work or planned protection arrangements, work is not allowed to commence and they are required to refer the matter to the responsible manager. When this occurs, the responsible manager reviews the arrangements and determines whether it is reasonably practicable to authorise a lesser means of risk control, but that which still keeps the staff exposed safe and unharmed.

4.20.17 Where a PIC is appointed, they are required to check that all staff employed on that site are briefed as to the safety arrangements in place before work commences.

4.20.18 Where one person is to undertake work alone, this person is required to be certificated competent as an Individual Working Alone (IWA), SWL or COSS, and the location has to be authorised as one where individuals may work alone.

4.20.19 The potential risks that can be imported by the employment of contractors and control of suppliers are controlled by the implementation of robust process. Sentinel manages a secure database of persons qualified in Personal Track Safety (PTS) and associated competencies including IWA, SWL, COSS, and PIC Of Possession (PICOP). Sentinel issues track safety competency cards to personnel who are competent in the track safety disciplines to which the scheme applies. Before issuing a card, they require evidence to be submitted relating to the individual's competence and medical fitness to undertake such works. This can only be supplied by licensed training centres that employ accredited trainers, both of whom are subjected to annual and random audit.

4.20.20 Selection and verification of suppliers and contractors are in accordance with NRIL Contract and Procurement Policy. Contractor and supplier management processes include:

- Prequalification of contractors and suppliers to ensure robust arrangements are in place, this could include audit process
- Assessment and control of risk
- Selection and competence of contractors and suppliers
- Site access procedures
- Monitoring of contractor and supplier performance, including previous safety record

4.20.21 The Sentinel accreditation process applies to NRIL employees, contractors and sub-contractors. Train and station operators are required to comply with relevant RGSs relating to track safety.

Sentinel Track Safety Competence Scheme

4.20.22 The Sentinel scheme is designed to ensure only workers who are competent to carry out safety critical work on the NRMI, do so. These arrangements are described in NR Standard NR/L2/OHS/050 Sentinel Scheme Rules. Under the Track Worker Identification and Safety Competence Scheme (Sentinel), contract personnel (including those engaged in safety critical work) are required to hold valid Sentinel safety identification and competence cards, to access areas defined as on or near the line. Employers of such cardholders are required to hold

appropriate supplier qualification. Control is achieved through links between the Sentinel and RISQS qualification scheme databases.

Access to the Infrastructure

4.20.23 NRIL recognises that risks can be imported by the presence of, or actions taken by, persons other than its own employees' activities, including contractors under NRIL control. Typically, this may include contractor activity not employed by NRIL, public behaviour such as level crossing misuse, trespasser activity or route/region crime. Train and station operators are required to comply with relevant RGSs relating to track safety.

4.20.24 Access to NRIL infrastructure is restricted to employees, operators, contractors and others who have a legitimate reason to be there in order to undertake their duties. The process for managing such access is described in RGSs and NR Standards. At their core, the standards seek to reflect the general principles identified by the Railway Industry Health and Safety Advisory Committee (RIHSAC), for the planning and management of work on or near the line.

4.20.25 NR Standard NR/SP/OHS/069 Lineside Facilities for Personnel Safety sets out the design, construction and maintenance criteria for providing secure access points onto and along the track for authorised persons.

4.20.26 The Asset Protection team is the primary contact for arranging safe access to the infrastructure on a pre-planned basis, for example by Third parties, Outside parties, or Utility Providers.

4.20.27 For emergency access, liaison to effect safe access is via the Route Control and Local Operations Managers.

Changes Affecting Interface Risk

4.20.28 NRIL recognises that clear roles and responsibilities for managing safety at interfaces and across the system is critical in safety assurance. All network interfaces relating to operations and maintenance have been identified as follows:

- Arrangements to identify and manage interfaces (Appendix 4 List of Interconnecting Passenger Railway Infrastructure)
- Maintenance depots used by NRIL managed by other operators
- Risks arising due to the activities of others (HSMS 3.8 Safety Decision Criteria)
- Risks affecting NRIL and others following change processes

4.20.29 In the event of any significant changes to interface risk, information will be shared and consulted prior to implementation to enable affected parties to assess, challenge and assure each other of imported, exported and shared risks. This is done through consultation and then agreed communication methods e.g. joint meetings, joint and shared risk registers. Once the controls have been agreed, a monitoring strategy will be set to decide the information needed to check on controls and how to obtain and exchange it. NRIL and the affected parties will individually or jointly obtain, review and filter shared and individual data for review and, where necessary, follow up actions. NRIL has a meeting structure in place and provides for an escalating arrangement for non-compliance, risk or disputed issues.

Personal Track Safety (PTS) Certificate

4.20.30 PTS training, which is provided by NRIL, should be undertaken by anyone who is required to routinely work on or near the line. The recommendation is that anyone who is required to go on track (on or near the line) on more than 12 occasions in a 12-month period, is to achieve PTS competence. PTS is the foundation competence for all other track safety competencies. The aim of PTS training is to provide the following:

- An understanding of NRIL NR/L1/OHS/051 Drugs and Alcohol Policy and the practical implications
- An ability to identify terms associated with the railway environment
- An understanding of the dangers of walking or working on or near the line
- Identification of hazards and the precautions and processes to control the risks
- Understanding of safety critical communication, the protocols to be utilised and its effective use
- Understanding of the hazards and risk minimisation processes including when working in AC or DC electrified areas
- An ability to implement emergency action
- Best practices in relation to site security

4.20.31 Further guidance for PTS is available in the RT3170 Personal Track Safety (PTS) Handbook..

Rail for London (Infrastructure) Ltd (RFLI) Track Safety Competence

4.20.32 Staff required to work on or near ‘Rail for London (Infrastructure) Ltd’ (RFLI) infrastructure, including yet not limited to the Crossrail Elizabeth Line, will require an RFLI track safety competence.

Industry Common Induction (ICI)

4.20.33 The ICI provides staff with a health and safety induction for working in construction sites, rail depots and station maintenance. It has been developed by NRIL, in partnership with ISLG (Infrastructure Safety Liaison Group) and RIAG (Rail Infrastructure Assurance Group). It covers the safety procedures and risks that are common across the rail industry, whatever the role and type of site.

Track Visitor Permits (TVP)

4.20.34 A visitor who requires access on or near the line for a specific purpose and who does not hold PTS certification may apply for a Track Visitor Permit (TVP) using a centralised process. NR Standard NR/L2/OHS/020 Track Visitor Permits sets out the arrangements for the issue and control of these permits. The permits:

- Are valid for a maximum of 24 hours
- Allow access to multiple sites (maximum of four per TVP)
- Require medical and drugs and alcohol self-declaration
- Issued within a safety aide memoir

Personal Protective Equipment (PPE)

4.20.35 Suitable PPE is provided for all employees exposed to a risk to their health or safety while at work in accordance with Regulation 4 of the PPE at Work Regulations 1992. Minimum standards and requirements for PPE and workwear are specified in NR Standard NR/L2/OHS/021 Personal Protective Equipment and Workwear. Task-specific PPE requirements are identified by work activity risk assessments.

4.20.36 Wherever reasonably practicable, risks are eliminated or reduced at source before PPE is considered. Controls include the consideration of possibilities such as:

- Eliminating the hazard
- Reducing the level of the hazard by substitution with a less hazardous process
- Isolating persons from the hazard

4.20.37 If a hazard is identified that cannot be mitigated by any other means, a risk assessment is undertaken. A specific assessment may not be necessary where the requirement to wear PPE is absolute, e.g. the wearing of high-visibility clothing when working on or near the line. In these circumstances, the requirement for PPE is defined in the relevant Railway Group/NR Standard.

Display Screen Equipment

4.20.38 Risk assessment procedures are in place for display screen equipment (NR Standard NR/L2/OHS/00107 Management Procedure – Display Screen Equipment Risk Assessment). Employees are provided with computer and office equipment suitable for their role and information about its safe use. They are also provided with such additional or alternative equipment as is necessary to control risk identified during the risk assessment process.

First Aid at Work/Medical Treatment

4.20.39 NR Standard NR/L2/OHS/00110 First Aid at Work sets out the arrangements for the provision of first aid in the workplace, in accordance with the Health and Safety (First Aid) Regulations 1981, and Approved Code of Practice. The level of first aid provision is defined by the number of NRIL employees in the workplace or worksite and the level of health and safety risk posed by the work activities undertaken.

4.20.40 First aid arrangements are specified for each location or as a result of risk assessment undertaken in accordance with NR Standard NR/L2/OHS/00110 First Aid at Work for each worksite. Employees are advised of the local first aid arrangements which exist at their location. The requisite level of first aid arrangements being based on the assessed level of risk. Line managers are required to make provision for training adequate numbers of employees such that the specified first aid arrangements are maintained.

Maintenance of Emergency Response Equipment

4.20.41 Where first aid boxes are provided in facilities, a local manager is always nominated to carry out regular inspections of the first aid box, checking its contents are correct. A dated label is used to seal the box after checking. A broken seal is used as an indicator that the box has been opened and the contents may have been used or removed.

4.20.42 Fire extinguishers installed in facilities are all covered in a contracted annual inspection and maintenance regime. Discharged fire extinguishers are replaced as soon as practicable under a call-off maintenance contract. Fire inspections and maintenance records are recorded in the Fire Log Book.

4.20.43 Where fire alarms, smoke detectors, emergency ventilations systems and other emergency equipment are installed in a building or other facility, these are always recorded in a plant inventory and are embraced in a maintenance programme. Plant and equipment maintenance is carried out against a planned maintenance schedule. Auditable maintenance records are retained by the maintenance contractor.

Testing of Emergency and Escape Procedures

4.20.44 Emergency plans are regularly tested and reviewed. NRIL holds joint practical exercises with the emergency services and other responding agencies, train and station operators and Local Authorities to confirm that the emergency plans are effective, and that they can be applied in practice. Testing and review may be through live emergency exercises, table-top exercises or workshops as appropriate. NRIL also participates in planning meetings and exercises with external organisations and provides access to its premises and infrastructure for familiarisation purposes.

4.20.45 Recommendations arising from testing and review are documented and incorporated into emergency plans and relevant standards, as appropriate.

Occupational Health

4.20.46 NRIL embraces continuous improvement in occupational health management and implementation of relevant outcomes/milestones in its strategies and those of RSSB. These have brought about greater understanding of the benefits of health programme initiatives and enhanced measuring of their impact and progress. NRIL has continued development and reporting of occupational health metrics against NRIL's licence condition and published annual returns. NRIL encourages better use of absence data to drive health management benefits through targeting reduced rates of absence and more cost-efficient health surveillance.

4.20.47 NRIL has an ambitious employee health and wellbeing strategy in place for Control Period 6. This has clear measures of success, which are reported in a dashboard in the annual return, with the strategy delivering by 2024.

4.20.48 The Chief Medical & Wellbeing Officer (CMWO) will provide greater strategic leadership in the area of occupational health and wellbeing, identifying, communicating and promoting industry best practice for NRIL to adopt in order to significantly improve the health and wellbeing of its workforce.

Health Controls

4.20.49 NRIL contracts with suitably qualified occupational healthcare suppliers to provide the medical examinations referred to in Railway Group and NR Standards and to offer professional occupational health advice.

4.20.50 Controls are in place to reduce the risks arising from health hazards and include:

- The application of Railway Group and NR Standards (for example, medical examination of employees prior to appointment of certain grades such as signallers, supervisors and those required to hold PTS certification)
- Rostering of employees
- Undertaking of noise surveys
- Identification of appropriate PPE, etc.
- Health surveillance
- Display screen equipment assessment
- Rehabilitation and back to work advice
- Stress management
- Health promotion/education

Health Surveillance

4.20.51 NRIL has a range of health surveillance programmes, including:

- Hand Arm Vibration Syndrome (HAVS) NR/L2/OHS/00113 Health Surveillance and Management of Diagnoses for Hand-arm Vibration Syndrome
- Noise Induced Hearing Loss (NIHL) NR/L2/OHS/00123, Health Screening and Surveillance for Noise Induced Hearing Loss
- Respiratory health surveillance NR/L2/OHS/157 - Health Surveillance for Silica and Asbestos and the Management of Diagnosed Occupational Respiratory Conditions

4.20.52 Records are maintained on personnel files of an individual's involvement with health surveillance programmes, and records of the clinical results are maintained on confidential medical records. Where risk assessments identify that exposure to other occupational health risks for which health surveillance is appropriate may occur a local, targeted health surveillance programme is introduced.

Rehabilitation and Back to Work Advice

4.20.53 Impartial and objective advice on attendance management, rehabilitation programmes and back to work advice is available to line managers from its externally provided occupational health service provider (See MyConnect).

Stress Management

4.20.54 Arrangements are in place to assist all line managers to identify and support employees who may be experiencing difficulties with stress at work. This is available via Safety Central Stress at Work Information, and through NR Standard NR/L2/OHS/053 Assessing the Risk of Stress in the Workplace.

4.20.55 The provision of confidential counselling, advice and support to all employees and their immediate families is available through its externally provided Employee Assistance Programme.

Health and Wellbeing Promotion and Education

4.20.56 Health and wellbeing promotions are designed to help employees to identify health and fitness requirements, providing advice at individual or group basis on several lifestyle issues such as diet, exercise, smoking, sensible drinking in order to promote employee wellness.

4.20.57 Health and wellbeing promotion initiatives are arranged at a corporate level and health fairs arranged locally at route/region level.

4.20.58 Employees are identified for health surveillance dependant on the hazard they are exposed to. In some instances, there is a requirement for employees who hold particular competencies to participate in health surveillance.

4.20.59 Incorporated in employee health and wellbeing campaigns are healthy options within catering facilities and a host of health and wellbeing information through health and wellbeing factsheets, newsletters, Network magazine and health literature provided by the organisation's occupational health service.

4.20.60 Safety Central reinforces the importance of the safety message and is supported by a series of videos and publications that are available through MyConnect and its predecessor, Connect.

4.20.61 Questionnaires as part of Hand-arm Vibration Syndrome (HAVS) health surveillance which, where necessary, triggers clinical surveillance. In other instances, work activity risk assessments are utilised with the line manager identifying the need for health surveillance following the processes defined in NR standards. NRIL also offers a medical assessment to all staff working on NRMI in line with the competency requirement is listed in Sentinel.

4.20.62 NRIL has contracted with a supplier to provide a highly specialised physiotherapy service for any employee experiencing muscle, soft tissue or joint pain, commonly known as musculoskeletal disorders (MSDs).

4.20.63 A medically validated screening process is carried out to make sure there is no serious underlying medical condition and that the individual's situation is appropriate for physiotherapy.

4.21 Rail Mounted Vehicle Plant (RMVP)

4.21.1 NRIL utilises RMVP to inspect, maintain and renew the infrastructure. NR Standard NR/L1/RMVP/0001 Plant, Traction and Rolling Stock Policy describes the policy for the safe acquisition, operation, maintenance, monitoring and disposal of such RMVP, whether owned by NRIL or hired (directly or indirectly).

4.21.2 NRIL is the entity in charge of maintenance (ECM) as defined in ROGS 2006 for the RMVP owned by NRIL, and registered as such on the National Vehicle Register (NVR). For RMVP under NRIL control but not owned by NRIL, an ECM shall be agreed with the vehicle owner and the Professional Head Plant and registered as such on the NVR.

5 Network Rail Standards and Controls

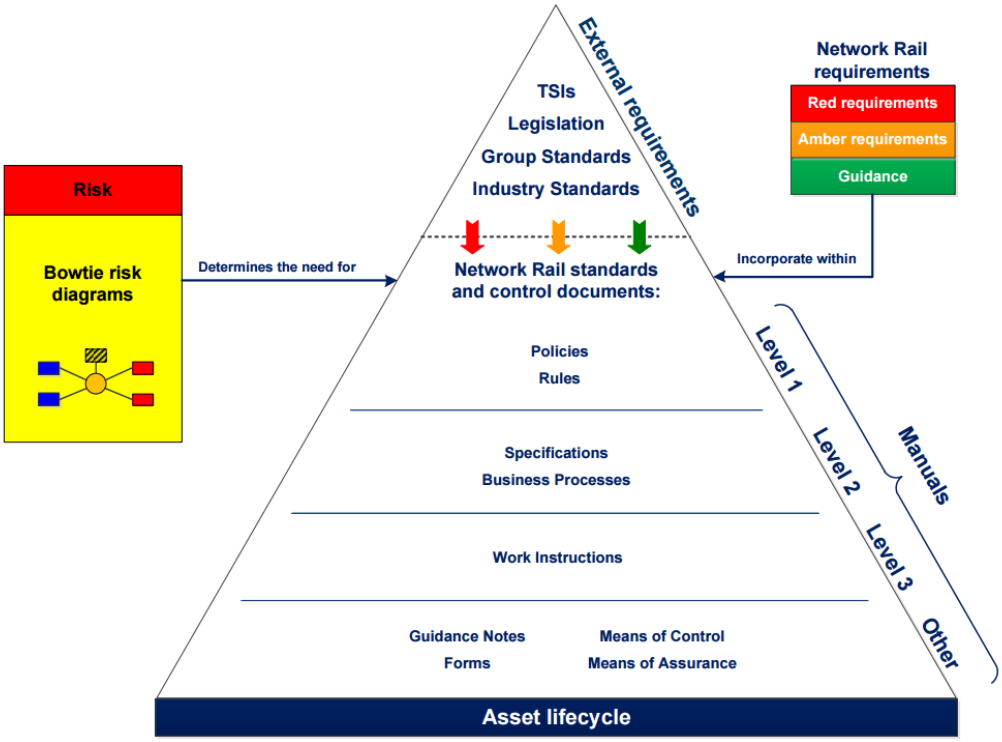
5.1 Network Rail Standards and Controls Document Framework

5.1.1 NR standards and controls are the generic terms for the documents that specify requirements and provide guidance directed towards securing the safe and efficient operation of the rail infrastructure. They support the overall organisation assurance system by specifying how NRIL controls its principal health and safety risks, and how the organisation complies with NTSNs, domestic legislation, RGSs and RISs.

5.1.2 NR standards and controls fit within a wider framework of regulatory and domestic legislation and standards that are applicable to the railway industry.

5.1.3 The standards and controls framework is designed to enable NR standards and controls owners to:

- Develop requirements that are designed to control and/or help appropriately mitigate identified safety and business risks, and
- Describe those requirements within a hierarchy of NR Standards and controls



5.1.4 Where appropriate, Bow Tie analysis is used to visualise the controls in place to manage risk and help determine the standards and control documents required to support each control.

5.1.5 Where relevant in terms of the whole life cycle management of assets, the standards and controls framework aligns the risk controls to the asset management lifecycle stages that are based on BS ISO 55001 – Asset Management: Management System Requirements, published by the British Standards Institution. This standard provides a requirements checklist of good practices in physical asset management.

Legal and Other Requirements

5.1.6 NRIL is subject to general legislation, one example being statutes such as HASAW 1974, an umbrella act creating a flexible approach to regulatory standards that, is supported by Regulations such as the MHSW Regulations 1999. Other requirements include Approved Codes of Practice (ACOPs). ACOPs are semi-legal, therefore non-compliance does not constitute a legislation breach. However, if not followed it would be accepted in court that reasonably practicable measures had not been applied. This list is not exhaustive and other considerations include guidance notes, industry/trade best practice, agreements with interested parties, contractual conditions, corporate requirements and employee agreements. The requirements of these and other statutes are identified by NRIL's Heads of Disciplines and incorporated into NR's standards and controls as necessary.

5.1.7 NRIL is also subject to a number of rail specific requirements. The European Union has issued a number of directives and regulations aimed at promoting the efficient provision of rail services by providing open access to rail infrastructure and giving infrastructure managers a status independent of the state. Most of the content of these directives has been adopted by the UK through the 2019 EU Exit Regulations and is implemented through a number of domestic regulations,

including ROGS 2006 and the Railways (Interoperability) Regulations 2011. The requirements, to the extent that they continue to apply in the UK following withdrawal from the European Union, and other statutes are identified by NRIL's Heads of Disciplines and incorporated into NR's standards and controls as necessary.

5.1.8 NRIL has an established Health and Safety Legal Register which sets out its legal requirements. The Health and Safety Legal Register is available on Connect and is usually updated every six months.

National Technical Specification Notices (NTSNs)

5.1.9 Following the UK's exit from the EU, and the end of the transition period on 31 December 2020, Technical Specifications for Interoperability (TSIs) have ceased to apply in Great Britain but the technical content has been replicated in National Technical Specification Notices (NTSNs).They define technical and operational standards which must be met to satisfy a number of essential requirements for:

- Health
- Safety
- Environmental protection
- Reliability and availability
- Technical compatibility along with others specific to certain sub-systems

5.1.10 They also enable the interoperability of the railway system so that the various parts of the system "allow the safe and uninterrupted movement of trains which accomplish the required levels of performance for those lines" as defined in the Railways (Interoperability) Regulations 2011 (as amended). Furthermore, they require the adoption of common assessment and authorisation processes when new rolling stock is introduced or new lines are built, or when major work is done on the railway. The DfT decide ultimately if a project is interoperable and the NR Assurance Panel (NRAP) assesses whether a project application is interoperable before an appropriate recommendation to the DfT is made (see NR Standard NR/L2/RSE/100/03 - The Application of the Interoperability Regulations for Infrastructure Projects).

5.1.11 The Secretary of State for Transport is responsible for the development and publication of NTSNs pursuant to the RI Regulations and they take precedence over all other national standards (subject to reasonable cost constraints), including RGSs and NR standards and controls. However, there is a continuing role for national standards to manage that to which NTSNs do not yet, or will never, apply.

National Technical Rules (NTRs)

5.1.12 National Technical Rules (NTRs) are those national standards that either fill a gap where a NTSN does not exist, or fill an open point within a published NTSN. The purpose of the NTRs is to provide additional controls so that the essential requirements as specified in the interoperability directives are met.

5.1.13 The DfT publish a list of the latest set of NTRs. It is updated as the number and scope of published NTSNs is progressively increased. Prior to submission to the DfT, the list is firstly approved by the relevant Standards Committee and then by the Rail Industry Standards Coordination Committee (RISCC) of which NRIL has a minimum of two members representing the disciplines of engineering and safety.

Standards and the Rail Industry

5.1.14 Published by RSSB, the aim of standards is to support a compatible, cost-effective, safe and efficient railway system. To meet this aim, standards define and record what has to be done, or how something needs to be done.

5.1.15 RSSB provides a clear framework to help apply standards, rules and best practice, and to take full advantage of the knowledge and guidance they contain.

5.1.16 There are seven modules to the RSSB strategy framework, reflecting the different types of standards or rules which exist today.

5.1.17 Under the guidance of Standards Committees, they are produced and implemented as specified in the RGS code. The code has been developed based on input by RSSB members (including NRIL), endorsed by RISCC and authorised by the ORR.

5.1.18 In accordance with the code, NRIL inputs to the development of standards, rules and best practice by providing suitably competent personnel to sit on Standards Committees and on other working and drafting groups managed by RSSB.

5.1.19 The Chief Engineer in the Technical Authority has responsibility for specifying engineering input and this is delivered by the Head of Discipline for each technical asset discipline.

5.1.20 The Director Network Strategy & Operations in the System Operator Function has responsibility for specifying operational input and this is delivered by the Head of Operations Principles & Standards as Head of Discipline for operations.

5.1.21 The Heads of Disciplines also identify potential changes to NR Standards necessitated by changes to RGSs.

National Technical Rules

5.1.22 National Technical Rules (NTRs) are those rules (standards) that the RI Regulations require to be published in the absence of a National Technical Specification Notice (NTSN).

5.1.23 ‘In the absence of’ includes situations where a NTSN has not been written yet, where it contains an identified open point or where a deviation from a NTSN has been notified. NTRs provide additional controls to ensure that the essential requirements specified in the RI Regulations are met.

5.1.24 NTRs are not permitted to supplement the NTSNs on performance related issues or repeat requirements mandated by the NTSNs.

5.1.25 NTRs also support specific cases in NTSNs and set out requirements to maintain technical compatibility between existing assets that do not conform to the requirements of NTSNs and new, upgraded or renewed assets conforming to NTSNs.

5.1.26 The industry process to be used for identifying and managing NTRs or the GB mainline railway is set out in the Railway Group Standards Code.

National Safety Rules

5.1.27 National Safety Rules (NSRs) are required by the Railway Safety Directive (Directive 2004/49/EC). They are defined as rules containing railway safety requirements imposed at Member State level and applicable to more than one railway undertaking, irrespective of the body issuing them.

5.1.28 NSRs supplement the Common Safety Methods that have been produced in accordance with Directive 2004/49/EC.

National Operations Publications

5.1.29 The National Operations Publications comprise:

- The Rule Book (GE/RT8000) - It comprises a set of modules and handbooks which contain direct instructions for railway staff. It sets out the operational rules for application on the GB mainline railway, which are necessary to enable the safe and timely delivery of people and goods to their destination and to provide the framework to enable safe engineering operations.
- The Working Manual for Rail Staff: Freight Train Operations (GO/RT3056) (*known as the white pages*) - Used by all staff concerned with the acceptance, planning, handling, conveyance, marshalling, and movement of freight traffic
- The Working Manual for Rail Staff: Handling and Carriage of Dangerous Goods (GO/RT3053) (*known as the pink pages*) - Used by all staff concerned with the classification, acceptance, identification, marshalling, movement and loading of dangerous goods

Rail Industry Standards

5.1.30 Rail Industry Standards (RISs) define functional or technical requirements to be met in circumstances where the management of the railway system does not need the use of RGSs. RISs are railway-specific standards: they contain requirements applicable to subsystems, or they set out rules about how subsystems should be operated or managed.

Governance of Network Rail Standards and Controls

5.1.31 As well as specifying how NRIL controls its principal health and safety risks and how it complies with NTSNs, domestic legislation and RGSs, NR Standards and controls also help facilitate the practical implementation of corporate policy by specifying mandatory activities and competences and giving guidance on activities to be undertaken on NRIL assets.

5.1.32 NR Standard NR/L2/CSG/STP001 Standards and Controls Management Manual and the following modules comprise the governance framework for managing standards and controls:

- NR/L2/CSG/STP001/01 Principles of Standard and Control Management
- NR/L2/CSG/STP001/02 Managing Standard and Control Document Change Projects
- NR/L2/CSG/STP001/03 Drafting Criteria for Standards and Control Documents
- NR/L2/CSG/STP001/04 Managing Variations to Network Rail Standards and Control Documents and Railway Group Standards

- NR/L2/CSG/STP001/05 Producing Bowties and Using Them to Support the Management of Standards and Control Documents

5.1.33 Each NR standard and control document has an owner, usually the relevant Head of Discipline, who is responsible for the development of the implementation plan for that standard and/or control document throughout NRIL, including the setting of compliance criteria. The implementation plan also identifies the relevant functions and roles responsible for implementing the requirements of the standard and/or control document within their own areas of responsibility.

Types of NR Standards and Controls

5.1.34 Types of NR standards and control documents are:

- Level 1
- Level 2
- Level 3
- Other

5.1.35 **Level 1 NR standards and control documents** specify objectives, goals, strategies and policy requirements. These describe how NRIL will consistently meet its business and regulatory requirements. They provide the framework for assurance systems and controls specified at Level 2.

NOTE: Level 1 standards and control documents include policies e.g. Asset Policies and the NRIL Drugs and Alcohol Policy.

5.1.36 **Level 2 NR standards and control documents** specify what is to be done or what criteria designs and products have to meet. They specify mandatory business processes, assurance systems and controls. They provide the minimum requirements against which Level 3 processes can deliver.

NOTE: Level 2 standards and control documents include specifications and business processes.

5.1.37 **Level 3 NR standards and control documents** specify how tasks are to be carried out. They detail mandatory tasks to be followed in order to deliver requirements specified in Level 2.

5.1.38 **The NR standards and control document** framework includes a range of other documents that support Level 1, 2 and 3 standards and control documents. These include for example, guidance documents which may be used to provide guidance on the interpretation of NR standards and controls and where appropriate may give recommendations and identify potential implications of accepting them.

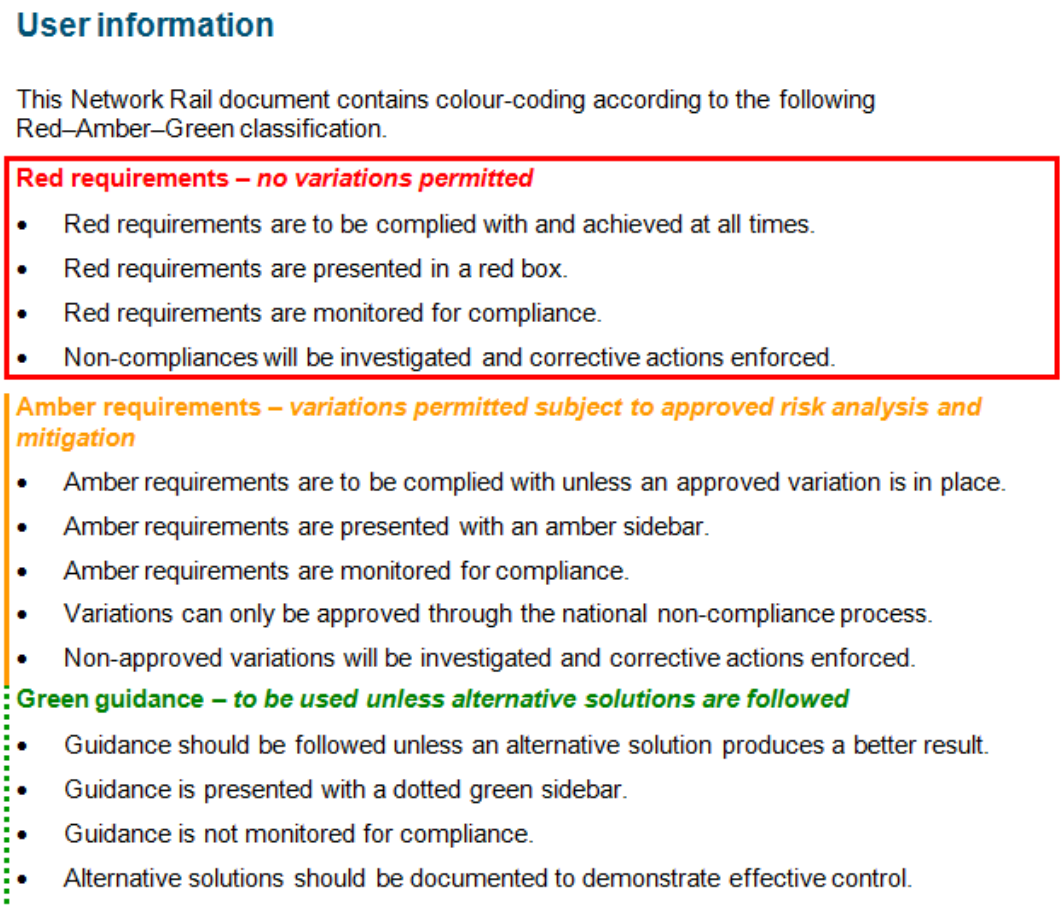
NOTE: Other documents in the standards and control document framework include guidance notes and forms.

5.1.39 Manuals are standards and control documents that are organised into a series of modules with an index. Each module contains content on a subject matter that contributes to the overall scope of the manual. Manuals may contain content from different types of document in the standards and controls framework and are given the classification that best reflects their content.

5.1.40 The benefits of producing manuals include:

- Directing readers to the modules relevant to their roles,
- Updating modules independently of other modules in the manual, and
- Building manuals over time by publishing new modules

5.1.41 To help readers of standards and controls to quickly identify which sections are mandatory and which are guidance, the text within standards and controls documents is colour coded. With the exception of guidance information (green), all NR standards and controls requirements are mandatory and are monitored for compliance on NRIL's non-compliance database.



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.

NR Standards Development

5.1.42 The Head of Compliance & Capability in the Technical Authority manages the overall NRIL organisation standards programme including the process of standards and controls development, publication, change control and the administration of non-compliance with standards and controls. Functional Heads manage and support the standards and controls programme in their area of responsibility to enable those standards and controls that are applicable to their function to be implemented and briefed, and any non-compliances to be recorded and managed appropriately. The issuing of new and amended NR standards and controls is supported by a briefing process designed to alert those affected by any changes. NR standards and controls are created, amended or withdrawn by a programmed process.

Programmed Change Process

5.1.43 The Company Standards and Controls Group (CSCG) is the Network Rail approved forum that oversees the Network Rail standardisation process as described in NR/L2/CSG/STP001 Standards and Controls Management Manual. The CSCG has been delegated the authority to perform its work on behalf of the Network Rail Executive Leadership Team.

5.1.44 Standards are normally categorised by the asset-type from which is derived the Standards and Controls Steering Group and standard owner (for the majority of standards and controls, this will be the Head of Discipline). The Standards and Controls Steering Groups comprise the standard owner, representatives from other functions, and staff representing the Head of Compliance & Capability in the Technical Authority.

5.1.45 These groups determine the need for standards creation, amendment or withdrawal in response to changes in legislation, RGSs, RISs, NRIL policy, or changes driven by technical innovations. All changes are undertaken to a defined remit that includes the associated risks, costs, resources and broader implications associated with implementing change.

5.1.46 Once the remit has been accepted, the appointed Working Group Leader/Technical Lead facilitates the production of a working draft that is circulated to affected parties for their review and comment. The Working Group Leader/Technical Lead is supported by a specific working group who, in addition to reviewing the comments from affected parties, confirms the compliance requirements for the standard or control, produces the implementation programme and supporting briefing information and finalises the standard or control.

5.1.47 Following authorisation and prior to publication, each standard or control is endorsed as appropriate, authorised by the relevant Standards and Controls Steering Group/standard owner and accepted for issue by the Head of Compliance & Capability in the Technical Authority. It is then published on the Standards and Controls Management intranet site and in the standards and controls catalogue for external subscribers to NR standards and controls.

Emergency Changes to Standards and Control Documents

5.1.48 Emergency changes can be made to add to or modify, existing content in standards and control documents outside the quarterly publications cycle. Emergency changes are attached to the standard or control document they affect. The front page of the affected standard or control document is marked to highlight that an emergency change has been attached to the document.

5.1.49 Emergency changes are used where new control measures need to be implemented through a standard or control document to control an urgent:

- Safety risk, and/or
- An NRIL asset or equipment risk which has the potential to cause disruption to the infrastructure or its operations

5.1.50 Letters of instruction (LOI) are signed off by the relevant Head of Discipline.

5.1.51 This process excludes:

- The communication of urgent operating advice (see NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice)

- Urgent advice on defects in equipment on RMVP (see Railway Industry Standard RIS-8250-RST Reporting High Risk Defects)
- The management of safety related failure of signalling and operational telecommunications systems (see Railway Industry Standard RIS-0707-CCS Rail Industry Standard for the Management of Safety Related Control, Command and Signalling System Failures)
- Shortcutting the standards and controls programmed change process

Approved Variations

5.1.52 In the context of NR standards and control documents and RGSs, a variation is defined as a departure or alternative approach from the originally specified requirement.

5.1.53 On occasions, parts of NRIL might need to use an alternative approach to the requirements in NR standards and control documents or RGSs. The respective Heads of Disciplines will also determine and identify which RISs are mandated for their disciplines. Variations to RISs are managed in the same way as variations to NR Standards and control documents and RGSs.

5.1.54 There are three categories of variance that can be applied for:

Temporary variation – A temporary variation authorises a defined part of NRIL not to comply with all or part of a standard or control for a pre-determined period of time. The line manager for that part of NRIL is required to develop an action plan for the achievement of full compliance and to monitor progress against this. The action plan includes any interim measures to identify and control any risks that may arise pending compliance. If the action plan is expected to deliver compliance within 14 days of the date when variance was first required, a formal application for variation authority is not required. However, a record of this action plan is required to be kept on the National Variations Database, Tracker.

Variation pending change to standards and controls – An agreement made by the NR standard and controls owner that entitles a defined part of NRIL not to comply with all or part of a standard or control. This may apply if the standard or control is considered inappropriate or out of date and is being challenged. The line manager for that part of NRIL develops alternative arrangements for the risks normally controlled by the relevant standard or control and these are recorded on Tracker.

Derogation – Authorises a defined part of NRIL to be temporarily non-compliant with all or part of a standard or control in a particular respect. The line manager for that part of NRIL applies for a variation authority using Tracker, giving full details of the alternative approach being adopted.

5.1.55 Each application for approved variation is reviewed by the relevant NR standard and control owner or delegated authority. All applications for variations to RGSs are reviewed by the relevant owner and are submitted to RSSB for approval. The agreement/rejection of the relevant NR standard and control owner or delegated authority (RSSB for RGSs) is recorded on Tracker and the applicant is duly advised.

5.2 Implementation and Briefing

5.2.1 The process for the management of NR standards and controls is set out in NR Standard NR/L2/CSG/STP001/02 Managing Standard and Control Document

Change Projects which describes how the implementation of standards and controls is managed.

5.2.2 Implementation is undertaken in accordance with the agreed implementation programme and includes all briefing, training and contract requirements necessary for achieving compliance. Briefing consists of awareness briefing and technical briefing.

5.2.3 Awareness briefing provides an appreciation and basic understanding of new or amended standards and letters of instruction. Standards and Controls Management collate and publish all awareness briefing notes in the standards and controls briefing report, prior to the publication of the associated standards and controls. The briefing report is then issued to all functions for cascade briefing by line managers.

5.2.4 Technical briefing provides all relevant individuals with a detailed understanding of particular responsibilities. The NR standard and controls owner manages the briefing process and keeps appropriate technical briefing records and the Working Group arrange for checks to be made that those requiring technical briefing have been briefed by the stated compliance date.

5.3 Lessons Learnt

5.3.1 Following implementation and briefing and as part of the formal close out of each standard project, each Working Group Leader/Technical Lead is required to complete a project close out report (as part of the project remit) and submit it to the Standards and Controls Steering Group for approval.

5.3.2 In terms of lessons learnt, this may include:

- Any information that may be helpful to the Standards Steering Group or Working Group Leader/Technical Lead in the future.
- Aspects of the project that went well, and/or issues encountered during the project.
- Relevant feedback from briefings or from applications for approved non-compliance.

5.4 Document Control and Records Management

5.4.1 NR Standard NR/CS/INF/02203 Controlled Publications - Issue and Receipt mandates the minimum requirements for the processes for managing the issue and control of documents that require receipt in a controlled form. NR Standard NR/L2/INF/02204 Controlled Publications – Process and Accountabilities defines the requirements for maintaining a receipting mechanism in order to demonstrate that recipients have been issued with required information and that recipients are advised of updates to that information. Where deemed necessary by the standard owner, certain technical standards also define the requirements for control of the issue and receipt of relevant technical documentation. Employees are advised when printing a document which is maintained in electronic format that once printed the document is deemed to be uncontrolled.

5.4.2 NR Standard NR/L3/INF/02225 Records Management specifies the minimum required process for managing NRIL corporate records. It applies to all records created received and managed by NRIL and the processes, tools and resources employed to manage them. NR Standard NR/L3/INF/02226 Corporate Records

Retention Schedule specifies authorised retention periods for NRIL's corporate records.

5.4.3 It covers all records created, received and managed by NRIL and the processes, tools and resources used to manage those records, and enables NRIL:

- To retain records for no longer than necessary
- Implement a consistent approach across NRIL
- Promote the prompt and auditable disposal of records when they are no longer required; to be compliant with relevant legislation and regulation including the Data Protection Act 2018
- Protect NRIL's rights and interests and those of its employees, customers, suppliers and the general public affected by its operations

5.4.4 NR Standard NR/L3/INF/02231 Disposal of Records specifies how NRIL shall dispose of records that are time expired according to the Corporate Records Retention Schedule. It relates to both the disposal of records in hard copy and electronic formats and specifies processes relating to disposal timescales, disposal methods, ownership of records, and the disposal of designated items.

6 Managing Interfaces

6.1 Transport Operators

6.1.1 The Railways and Other Guided Transport Systems (Safety) Regulations (ROGS) 2006 refer to three types of Transport Operators:

- Infrastructure Manager
- Infrastructure Manager (Station Operator)
- Transport Undertaking (Train Operator)

6.1.2 ROGS also places duties on Entities in Charge of Maintenance (ECMs).

Infrastructure Manager

6.1.3 NRIL is the Infrastructure Manager for the national rail network. The Infrastructure Manager is responsible for developing, maintaining and using the infrastructure, including permitting its use for the operation of trains.

NR Managed Infrastructure (NRMI)

6.1.4 NRMI is the infrastructure that falls within the geographic boundaries of NRIL's operational railway, including the permanent way and land within the lineside fence, and plant used for signalling or exclusively for supplying electricity for traction purposes to NRIL's operational railway. It includes permanent way at stations and plant within these locations used for signalling NRIL's operational railway, or exclusively for supplying electricity for operational purposes to the operational railway. At stations managed by NRIL it also includes the means of access for passengers between the platforms and the exterior of the station premises.

6.1.5 NRMI does not include the following: depots, yards or sidings owned by, or leased to, other parties; infrastructure managed by Network Rail High Speed Ltd; and infrastructure determined by the safety regulator (ORR) to be excluded from the mainline railway.

6.1.6 Structures such as tunnels, bridges, culverts, viaducts, covered cuttings, retaining walls, underpasses, etc., are deemed to form part of NRMI only in relation to their potential to transfer risk onto, or from, the operational railway.

6.1.7 Where NRIL staff or contractors are undertaking work for NRIL on railway infrastructure or other construction that does not form part of NRMI they are still required to comply with the requirements described in the NR HSMS, to the extent that the system requirements are applicable to such activities, unless the work cannot transfer risk to the safe operation of NRMI and is being performed under one of the following arrangements: in a “high street” environment, or under arrangements stipulated by either the infrastructure manager of the infrastructure concerned or the person in control of the premises where the work takes place. This is in addition to any other rules, regulations and arrangements specifically required by NR or its agents for activities undertaken on railway infrastructure or other construction that does not form part of NRMI.

6.1.8 A ‘High Street Environment’ is an environment that exists, or can be created, where construction work, structures design, mineral exploration and extraction (or work preparatory to mineral exploration and extraction) can be undertaken by or on behalf of NRIL without creating or transferring safety risk to or from Network Rail Managed Infrastructure (NRMI) and adversely affecting its safe operation. The requirements for creating a ‘high street’ environment are set out in NR/L2/OHS/005 High Street Environment and Conditions for Work Outside Network Rail Controlled Infrastructure.

Infrastructure Manager (Station Operator)

6.1.9 Under ROGS 2006, stations are classified as railway infrastructure and those who operate stations are classified as Infrastructure Managers. For clarity, these are referred to in the HSMS as Station Operators.

6.1.10 Station Operators are responsible for managing and operating stations. NRIL is Station Operator (Infrastructure Manager) for its Managed Stations. There are also approximately a further 2,500 stations, most of which are managed by train operating companies.

Transport Undertaking

6.1.11 Transport Undertaking is the legal term under ROGS 2006 for those organisations that operate trains or rail mounted vehicles and plant (RMVP) (excluding those who operate RMVP wholly within engineering possessions). For clarity, these are referred to in the HSMS as Train Operators.

Duty of Cooperation

6.1.12 A significant proportion of risk occurs at the interface between the infrastructure manager and the operators of trains and/or stations (i.e. other Transport Operators). The control of this aspect of risk depends upon cooperation between these duty holders.

6.1.13 ROGS Regulation 22 imposes a duty of cooperation on all transport operators. The Rail Safety & Standards Board (RSSB) has developed A guide to ROGS Requirements for Duty of Cooperation Between Transport Operators.
The arrangements for the practical implementation of this, including those to meet the requirements of RGS GE/RT8270 Assessment of Compatibility of Vehicles

and Infrastructure, are set out in NRIL's HSMS and in the safety management systems of other transport operators.

6.1.14 Cooperation takes the form of the application of agreed:

- Rules governing access (i.e. the Network Code and the Railway Operational Code)
- Access and lease conditions
- Liaison and communications arrangements
- Arrangements for escalating and agreeing resolution of safety issues

6.1.15 NRIL has arrangements in place for:

- Managing access to the network, whereby access is only granted to those Transport Operators who have a current safety certificate/authorisation as appropriate
- Making appropriate representation to the ORR in respect of applications for safety certification/authorisation
- Cooperating fully with Transport Operators to enable them to discharge their own health and safety duties
- Conducting regular formal liaison meetings with Transport Operators to discuss the safety performance of both the Transport Operator and NRIL, and to share good practice and ideas for improvement

Note: Some Routes, such as Wessex, have a Route Safety Group, the primary purpose of which is to help duty holders understand, maintain and improve health and safety on the Route by assisting them to efficiently and effectively discharge their legal duty to cooperate. The group seeks to understand and review the totality of the system risk profile on the Route and facilitate effective assurance from duty holders across the Route such that all aspects of system risk on the Route are addressed.

6.1.16 NRIL also has reciprocal arrangements with Train Operators to advise of any:

- Proposed changes which might affect the safe operation or the safety management system of other parties, including consulting with the train operating companies for stations that they manage, and where NRIL is not the duty holder, in respect of NRIL-led design, construction and bringing into use of alterations of alterations to such stations
- Matters which other parties are required to know to discharge their statutory obligations including meeting the requirements of their own safety management system
- Any aspects of its health and safety arrangements or performance which could affect the safety of other parties' overall operations

Network Code and Railway Operational Code

6.1.17 The Network Code provides a common set of rules that apply to all parties who have access rights to the network. Its purpose is to:

- Regulate change (including among others, change to the working timetable, to rail vehicles and to the network)
- Establish a performance monitoring system
- Establish procedures relating to environmental damage
- Establish procedures in the event of operational disruption

6.1.18 The purpose of the NR Standard NR/L2/OCS/042 Railway Operational Code Implementation, Variation and Review Process is to sustain the operation of train services on the network and restore operation of the network following disruption. It describes how the ROC is to be implemented, how reviews will be conducted, and the arrangements and processes for dealing with variations.

6.1.19 NRIL has established track access agreements with each operator authorised to operate trains on the network. Depot and station lease agreements are also in place with each operator for relevant operational premises.

Managing Access

6.1.20 Train Planning Managers have arrangements for confirming that every train which operates on the network has an identified operator who holds current safety certification.

6.1.21 NRIL will refuse access to its infrastructure where the operator does not hold current safety certification. NRIL will also refuse access for any individual train or type of individual vehicle that is identified as unsafe, whether this is due to a defect on the train or vehicle, or because of how it is loaded or operated.

Safety Certification/Authorisation Applications – NRIL Representations

6.1.22 Transport Operators are required to make available to affected parties their application for safety certification/authorisation as part of the consultation process. The Chief Health & Safety Officer (CHSO) manages a process for providing all affected parties with NRIL's application.

6.1.23 NRIL also undertakes appropriate scrutiny of applications for safety certification/authorisation from other Transport Operators. Such scrutiny involves appropriate representation from the Heads of Disciplines and from within the routes/regions, Technical Authority and System Operator. At the conclusion of this, the CHSO makes representation to the ORR detailing any comments that NRIL has with each application.

Liaison

6.1.24 Joint NRIL and TOC Route Supervisory Boards are in place.
Chaired independently, these do not have decision making authority. However, they may make recommendations which the relevant RMD (Regional Managing Director) or TOC MD (Train Operating Company Managing Director) can then action within their existing accountabilities and delegated authority levels.

6.1.25 Liaison between organisations for operational matters is on a daily basis and is conducted through Route Control Centres. Further liaison occurs between signallers and train crew in accordance with the provisions of the Rule Book.

6.1.26 All routine communications with all operators on the network (e.g. weekly and periodical operating notices, special notices etc.) are communicated through an agreed channel.

6.1.27 NRIL meets with train operators at various levels in order to communicate the safety needs of both organisations and provide visibility of how each is managing those risks under their control that affect the other.

6.1.28 Liaison meetings are held with each operator at Director level as well as locally to address local issues. At these meetings safety performance reports and significant audit findings relating to interface safety risk are shared and reviewed. Joint meetings are held with all operators on a Route where necessary. The frequency of meetings varies according to the level of interface. Meetings at Director-level are typically held every quarter, but this can be varied if necessary.

6.1.29 All routes/regions have an OPSRAM or equivalent Group that is chaired by the relevant Route Director or their delegated representative. It is the forum where NRIL and train operators jointly review SPAD incidents and other operational safety interface issues, develop initiatives to further reduce incidents and share good operational practice and advice. Its primary purpose is to:

- Understand and address the common risks on the Route
- Recommend strategy and co-ordinate activities to address safety risk
- Monitor trends and establish the Joint Safety Improvement Plan (JSIP) for the Route and its stakeholders
- Put in place the right instruments/mechanisms to address safety risk i.e. groups, projects and day job activities

6.1.30 The Station Manager for each of NRIL's Managed Stations meets with each relevant train operator's representative every month, although operational matters are handled on a daily basis. Meetings are used to discuss issues such as evacuation procedures, train dispatch arrangements and accident trends.

6.1.31 Community Safety Partnership Groups (CSPGs) are held at least every six months in accordance with NR Standard NR/L2/OPS/291 Railway Crime Risk Management. Based on geographical areas that cover the entire network and chaired by a Route Director, or Operations Director (or nominated deputy), they include senior representation from Operators, the British Transport Police (BTP) and other agencies by invitation. CSPGs facilitate the development and delivery of and coordinate local level action plans aimed at reducing the risks and costs posed by crime, disorder and other forms of inappropriate public behaviour – including trespass, vandalism, graffiti, assaults, fatalities and level crossing misuse.

6.1.32 Where infrastructure protection equipment such as that for hot axle box detection, wheel impact load detection or pantograph monitoring are in place, relevant NR Standards define the requirements for providing the associated on-train equipment condition information to relevant train operators.

6.1.33 NRIL cooperates with train operators in the development of RGSs (in accordance with RSSBs standards management arrangements) where such standards are required to manage safety interface risks.

6.1.34 NRIL has reciprocal arrangements with train operators to allow access to monitor safety performance where both organisations have a legitimate interest. This includes safety critical activities, such as monitoring cab to shore communications or undertaking speed checks.

6.1.35 NRIL's change control arrangements provide the mechanism by which each transport operator cooperates in establishing the compatibility of infrastructure and rolling stock where changes to either the infrastructure or rolling stock is proposed, and in compliance with RGS GE/RT8270 Assessment of Compatibility of Vehicles and Infrastructure (see HSMS 6.6.23 Change Management - NRAP and Assessment of Compatibility).

6.1.36 NR Standard NR/L2/OCS/070 Major Infrastructure Changes - The Provision of Staff Briefing Material to Train Operators defines the process for the supply of suitable and sufficient briefing materials to train operators to enable a safe transition following significant infrastructure changes.

6.1.37 NRIL complies with any reasonable request made by train operators that assures health and safety on the rail network. NRIL allows the employees of train operators to undertake inspections and investigations as required in order to meet their legal obligations under Safety Certification.

6.1.38 In the event of dispute or disagreement between NRIL and train operator(s), managers at an appropriate level attempt to resolve the matter in a way which maintains safe operation for all parties involved. If necessary, independent advice obtained in order to satisfactorily resolve such issues, or issues can be escalated, in accordance with NRIL's escalation process.

Escalation Process

6.1.39 NRIL has a policy whereby it brings to the attention of any transport operator repeated non-compliance with the operators own safety management system, or health and safety-performance which is such that it may adversely affect the performance of NRIL's own health and safety duties.

6.1.40 Such systematic and repeated non-compliance may be identified by NRIL's monitoring arrangements and may be supplemented by other information such as incident reports, accident investigations, or assurance information provided by the operator.

6.1.41 The policy provides for steadily escalating the issues as shown below and in accordance with A guide to ROGS requirements, for duty of cooperation between transport operators, published by RSSB:

- NRIL routinely shares safety performance information with other transport operators and mutual safety risk performance is reviewed at regular interface meetings that are held locally, at route and national levels. These meetings are used to resolve safety concerns and all agreed actions and timescales are minuted
- Where specific safety concerns are not resolved at such meetings, the Route Director will meet the Managing Director of the transport operator concerned and raise the specific issues concerned
- If satisfactory progress is not made, then the matter will be formally raised by representatives of the NRIL Board with the Board of the operator concerned at a meeting. Failure to reach adequate agreement shall trigger the formal escalation letter
- Safety concerns that are not resolved at such meetings are escalated between NRIL and the relevant transport operator through the preparation and issue of a formal request letter from the General Counsel, Legal Services, prepared in consultation with the Managing Director of the Region and the Group Safety & Engineering Director. The letter is submitted to the organisation secretary of the responsible organisation. The recipient of an escalation request letter is required to respond to NRIL within the timescale specified in the formal letter
- If progress is still unsatisfactory, then the General Counsel, Legal Services will, in consultation with the Managing Director System Operator, and the Group Safety & Engineering Director, formally escalate the safety concerns to

the ORR for investigation and formal action and inform both ORR and the operator of NRIL's proposed action

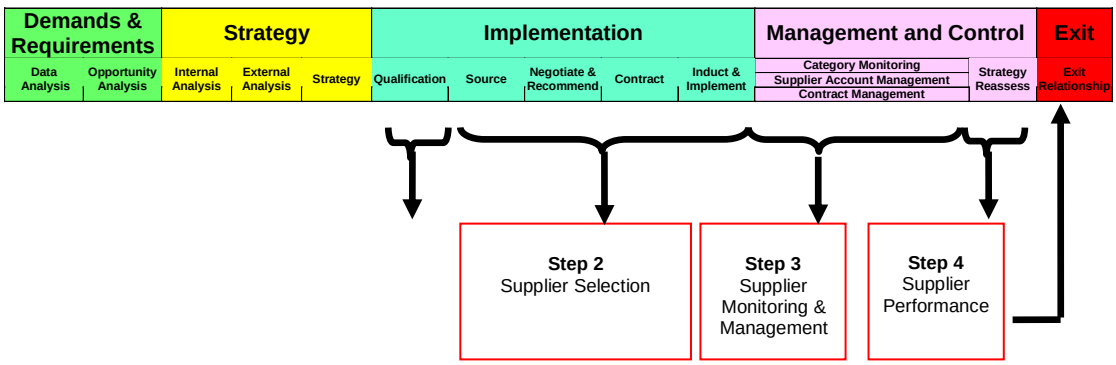
- Where NRIL believes that urgent action is required because a transport operator is performing or failing to conform to its safety management system, in a manner that is likely to increase the risk of serious personal injury to any person, NRIL will consider formally suspending some or all of the transport operators access to NRIL's infrastructure from a given date. The operator would be advised in writing accordingly
- Reinstatement of the terminated activities will only be permitted when NRIL is satisfied that the operator has put in place robust arrangements for assuring full compliance with that operator's safety management system. NRIL will inform the ORR of the circumstances and advise subsequently of progress by the operator in the delivery of the agreed actions

6.2 Suppliers

6.2.1 NRIL's expenditure with suppliers is managed through the Contract and Procurement Policy. The purpose of this policy is to specify the high-level sourcing and supplier governance structure and processes within NRIL.

6.2.2 The NRIL Group General Council has overall responsibility for setting policy and implementing governance arrangements for all expenditure with suppliers and these are available on Connect. The Managing Director of Region has accountability for project renewals and enhancements expenditure and the Managing Director Route Services has accountability for all other expenditure. NRIL's expenditure with suppliers is managed through a standard sourcing process that provides a consistent methodology for procurement in five consecutive stages:

- **Demands and Requirements** – The detailed understanding of its current and future requirements and the identification of potential sourcing opportunities
- **Strategy** – Defining the best way to commercially and contractually engage with suppliers to meet its business needs
- **Implementation** – The stages and activities to be considered when engaging with the supply market, including selecting suppliers, awarding contracts, and transitioning to the implementation of an agreement
- **Management and Control** - The management of the supplier's performance, the supplier relationship, and ensuring that the benefits of the contract are actually delivered and provide measurable value
- **Exit** – The confirmation that contractual obligations have been met by both NRIL and the supplier, and the management of the closure of a contractual relationship



6.2.3 This is underpinned by its arrangements for providing assurance that those suppliers that NRIL appoints are suitably competent and adequately resourced. The Contract and Procurement Policy states NRIL's supplier assurance policy, and describes the framework by which NRIL obtains assurance that all reasonably practical steps have been taken to appoint suitably competent and adequately resourced suppliers:

- Supplier qualification and licensing
- Supplier selection
- Supplier monitoring and management
- Supplier performance

Supplier Qualification and Licensing

6.2.4 The arrangements for the qualification and licensing of suppliers are described in the Contract and Procurement Policy and NR/L2/INI/CP0070 Principal Contractor Licensing Scheme. The purpose of this is to specify the arrangements for the qualification activity within the NRIL Strategic Sourcing and Supplier Assurance Framework. It describes the qualification activities that show assurance suppliers have met the minimum pre-determined qualification criteria to supply a specific product category, and that the requirements of the Utilities Contracts Regulations are met. These standards include the arrangements for the:

- RISQS Supplier Qualification Scheme
- Licensing of Principal Contractors
- Development of contract specific bespoke qualification assessments (used in circumstances where general arrangements are not sufficient or appropriate)

Supplier Qualification

6.2.5 As part of NRIL's sourcing strategy and before engaging suppliers to provide NRIL with required goods and services, it is necessary to confirm that potential suppliers have the requisite qualification. This is determined by the assessment of supplier organisations against predetermined qualification criteria. All potential suppliers require to be qualified, normally via its Supplier Qualification scheme, known as RISQS or, on occasion, as part of a separate call for competition and qualification exercise.

Railway Industry Supplier Qualification Scheme (RISQS)

6.2.6 Railway Industry Supplier Qualification Scheme (RISQS) embraces rails qualification arrangements previously known as Link-up. RISQS is industry-owned and sponsored by a board of representatives from across the rail industry. This reports into RSSB, which provides a range of services to support operational delivery of the scheme.

6.2.7 The process of qualification initially requires the completion, by all potential suppliers, of an on-line questionnaire. This collects commercial, operational and technical information regarding each supplier including financial, quality, health and safety, capability, environmental and insurance details. Subsequent qualification stages will depend on the products or services that are to be supplied and involve an appropriate assessment of suppliers against pre-determined and risk-prioritised criteria in the following hierarchical stages:

Registration

6.2.8 These product groups are designed for suppliers of non-critical goods and services, typically corporate goods and services, which are deemed not to be business-critical or import risk to a RISQS subscriber.

Scored Evaluation

6.2.9 These are designed for suppliers of business-critical goods and services that have the potential to import a risk to a RISQS subscriber. Additional information on these suppliers will be collated from their questionnaire which will be then be evaluated and scored.

Auditable

6.2.10 These product groups are designed for suppliers of safety-critical products and services. In addition to completion of the questionnaire, the capabilities of each supplier will be assessed annually by RISQS via an audit against the requirements of the Contract and Procurement Policy and further, bespoke technical audit protocols derived by the specific product groups selected by the supplier. Where a supplier is awarded a full NRIL Licence under NR Standard NR/L2/INI/CP0070 Principal Contractor Licensing Scheme, the annual assessment is undertaken by the Assurance (Licensing) team.

Call for Competition

6.2.11 There may be circumstances where the RISQS route for supplier selection is inappropriate – such as insufficient numbers of suitably qualified suppliers in RISQS (e.g. suppliers with new or novel products). In such cases qualification may be realised through a call for competition through the UK-only tendering service that has replaced the Official Journal of the European Union (OJEU).

6.2.12 The NRIL Contract and Procurement Policy details the steps involved in confirming qualification, whether it is via RISQS or the call for competition option.

Supplier Licensing

6.2.13 The Corporate Assurance Manager has overall responsibility for the application of the supplier licensing process. NR Standard NR/L2/INI/CP0070 Principal Contractor Licensing Scheme details the licensing process from application to award and maintaining the validity of a Licence. The application of sanctions for fundamental or persistent failure to comply with Licence Requirements and Conditions is also included in this standard.

6.2.14 The Principal Contractor assurance framework is gained from rail industry audit schemes, internationally recognised schemes audited by accredited organisations and NRIL Principal Contract Licensing (PCL) team audits.

6.2.15 Prior to applying for a PC licence the following pre-requisite requirements must be in place:

- **Industry Minimum Requirements** (IMR) which is the validation via audit of suppliers declared organisation and arrangements to meet predetermined qualification requirements including the capability to discharge duties identified in the CDM Regulations 2015. It also includes

other legislative and rail industry requirements. This is a rail industry audit and not specific to NRIL
- Sentinel Scheme Rules and Railway Interface Planning (for trackside works) as well as the relevant product codes. These management systems are independently audited by a Third Party
- This includes evidence of the organisation's managements system holding ISO9001, ISO14001 and BS ISO 45001 audited by an accredited organisation

6.2.16 NRIL's PCL Assurance team review the submission to confirm that the suppliers arrangements comply with NR Standard NR/L2/INI/CP0070 Principal Contractor Licensing Scheme. These are additional requirements in order to discharge PC duties on NRIL's infrastructure.

6.2.17 On successful contract award, the PCL Assurance team verify by way of a site audit the compliance with, and adequacy of, the Health & Safety, Quality, and Environmental Management systems, to enable an assessment of the supplier's ability to meet the requirements for certification to Full Principal Contractor Licence status.

6.2.18 The standard provides an ongoing assurance regime that mandates suppliers maintain all requirements of the Standard including the pre-requisites. This is verified by the NRIL PCL Assurance Team through review of evidence contained in an annual assurance file.

6.2.19 The NRIL PCL Team also undertakes physical site audits to assess the practical application of the management systems. The frequency of these site audits is a minimum annually, or more frequent should the level of assurance gained on site audit be minimal or there are concerns raised to the PCL team from other channels within NRIL e.g. route/region.

6.2.20 Should a supplier fail to comply with the scheme rules or there are concerns regarding their performance, a consequence matrix has been developed, and contained within the standard, which documents the consequences following breaches, which is managed by the NRIL PCL Team in conjunction with the supplier and other areas of NRIL. This process follows the NRIL fair culture principals and seeks to address and rectify through engagement and collaboration any shortfalls with the PC but can ultimately result in revocation of licences.

Supplier Selection

6.2.21 Sourcing teams are responsible for all of the stages and activities associated with selecting suppliers, awarding contracts and the transition to contract implementation. These selection activities also have assurance considerations in place which build on those within the preceding supplier qualification and licensing step of the supplier assurance framework.

Supplier Monitoring and Management

6.2.22 Persons who are required to administer a contract are identified as an Employer's Representative. Such persons will have been notified to the supplier as having the authority, on behalf of NRIL, to issue instructions to the supplier under the terms of a relevant agreement. An Employer's Representative is required to implement an appropriate strategy for the monitoring and management of every contract that they administer. This strategy includes the arrangements for obtaining assurance

that specific requirements are met and, where deficiencies are found, improvement actions have been implemented.

6.2.23 An annual risk review of Licence-holders is also undertaken by the Assurance (Licensing) team. This identifies from a number of sources, the potential risk a licensed supplier presents to the business.

Supplier Performance

6.2.24 At the end of every contract an assessment of the supplier's performance against the requirements of the contract are required to be recorded by the Employers Representative. Where NRIL has multiple contractual relationships with a supplier, the Contracts and Procurement Director (Route Services) may apply a Strategic Supplier Account Management process. In these circumstances, performance information will be consolidated from across multiple contracts and fed into the Supplier Account Management process.

On-Track Plant Operations Scheme Rules (POS Rules)

6.2.25 The purpose of the POS Rules is to define the compulsory mechanisms and minimum means of compliance for any organisation undertaking the provision and operation of On-Track Plant (OTP) on NRMI. The rules describe the means of achieving and maintaining approval for OTP operations providers, including Principal Contractors where they undertake OTP operations.

6.2.26 The scope of the rules extends to all organisations carrying out OTP operations on NRMI, to NRIL and all parties involved in the process. The rules are not designed to detail the following requirements, however, these will be prerequisites to compliance with the rules:

- The safe use of plant for infrastructure work, as set out in NR/L2/0200 Infrastructure Plant Manual
- Product Introduction and Change as set out in NR/L2/RSE/100/05 Product Acceptance and Change to Network Rail Operational Infrastructure
- Engineering acceptance as set out in RIS-1530-PLT Engineering Acceptance of Possession-only Rail Vehicles and Associated Equipment
- Specific rules controlled through the Sentinel Scheme
- The provision and use of non-rail mounted general construction plant and equipment used on NRMI

6.2.27 Arrangements for the operation of On-Track Machines (OTM) and/or machines certified against the Group Standard: GM/RT2400 Engineering Design of On-Track Machines in Running Mode, whether operating inside or outside of a possession are out of scope of the POS Rules. The NRIL POS Review Panel will act as the owner and administrator of the rules to ensure fair and compliant application both when NRIL is undertaking OTP operations and for its contractors.

Safety Critical Products and Services

6.2.28 These processes augment strategic sourcing, providing additional assurance that safety critical suppliers products are fit for purpose and their services are delivered by competent people.

Product Introduction

6.2.29 The technology introduction process is designed to establish whether new or modified products are technically sound, fit for purpose and safe for use in the intended application. These arrangements are described in NR Standard NR/L2/RSE/100/05 Product Acceptance and Change to Network Rail Operational Infrastructure which defines the requirement for anyone specifying or purchasing safety critical engineering products, equipment, systems and services to confirm manufacturers or suppliers of such items are qualified as having the relevant competence to supply the rail industry. NRIL specialists evaluate product features against predetermined criteria to assess whether or not a product is safe and fit-for-purpose. The organisation and management system of product suppliers are also appropriately vetted as part of Supplier Qualification.

6.3 Transport for London (TfL)

6.3.1 TfL delivers its services through a number of subsidiaries, including London Underground Ltd (LUL), and Rail for London (RfL), Rail for London Infrastructure Ltd (RFLI), and concessions, including London Overground Ltd (LOL), MTR Corporation (Crossrail) Ltd (MTRC).

6.3.2 LUL operates over NRMI on the Bakerloo and District lines for a distance of approximately 17 kilometres. NRIL is responsible for maintaining 10.81km of the Bakerloo Line and 3.69 km of the District Line, in accordance with relevant Railways Group Standards (RGS) and NR Standards. NRIL also provides the signalling control for the Bakerloo line north of Queens Park and the District Line south of Putney Bridge in accordance with relevant RGS and NR Standards. On these sections of track, NRIL and LUL have shared responsibility for safety risk management. For operation over this section, LUL has arrangements to comply with the relevant parts of NRIL's safety arrangements. LUL is also committed to complying with any reasonable request NRIL may make regarding any aspect of activities within the scope of NRIL's Safety Authorisation.

6.3.3 Rail for London Ltd (RfL) manages infrastructure between the boundaries or interfaces with NRIL at Dalston Junction, Old Kent Road Junction, New Cross and New Cross Gate.

6.3.4 Rail for London (Infrastructure) Ltd (RFLI) operate and maintain the infrastructure through the Crossrail Elizabeth Line Central Operating Section (COS) with boundaries/ interfaces with Network Rail Infrastructure Ltd at Westbourne Park (Western Route), Pudding Mill Lane (Anglia Route) and Abbey Wood (Kent Route).

6.3.5 MTRC operates Crossrail Elizabeth Line services over NRMI between Reading and Portobello Junction in the west to Abbey Wood Sidings and Abbey Wood in the southeast, and Pudding Mill Lane Junction and Shenfield in the east.

6.3.6 A connection from the Crossrail Elizabeth Line to the North Kent Lines (NKL) exists as a single line from Abbey Wood platform 3 'Bolthole Berth', this connection is not for normal operations and is not provisioned with Overhead Line Equipment (OHLE).

6.3.7 NRIL provides electrical traction supplies:

- Between Waterloo and Bank on the Waterloo and City Line and between Putney Bridge and Wimbledon on the District line, where LUL is the Infrastructure Manager
- Between Acton Lane Junction and Richmond on the District Line and between Queens Park and Harrow and Wealdstone on the Bakerloo Line where NRIL is the Infrastructure Manager

6.3.8 NRIL supplies electrical power for traction from two feeder stations at the eastern and western ends of the Crossrail Elizabeth Line route. Either of the two supply routes are independently capable of delivering the traction power requirement of the entirety of the Crossrail Elizabeth Line route offering resilience to local power outages:

- At the western end, power for traction is fed into the system at the Westbourne Park Autotransformer Site which is in turn fed from the National Grid bulk supply point at Kensal Green via NRIL's Kensal Green Autotransformer Feeder Station. The Kensal Green Auto Transformer Feeder Site is a dual managed facility which feeds both NRMI (Great Western Main Line) and RFLI Crossrail Elizabeth Line
- At the eastern end, power for traction is fed into the system at the Pudding Mill Lane Autotransformer Site which is in turn fed from the National Grid bulk supply point at Pudding Mill Lane via NRIL's Pudding Mill Lane Autotransformer Feeder Station. The Pudding Mill Lane Auto Transformer Feeder Site is a dual managed facility which feeds both NRMI (Great Eastern Main Line) and RFLI Crossrail Elizabeth Line

6.3.9 These traction supplies are provided in accordance with relevant Railways Group Standards and NR Standards to specific contracts between NRIL, RfL, RFLI and LUL.

6.3.10 Signalling for the Crossrail Elizabeth Line Central Operating Section (COS) is operated from Romford Rail Control Centre within Romford Rail Operating Centre. Outside of the COS, the signalling is operated by NRIL at Didcot Thames Valley Signalling Centre (TVSC) for the Western Route, Liverpool Street Integrated Electronic Control Centre (IECC) for Anglia Route and Ashford Integrated Electronic Control Centre (IECC) for Kent Route.

6.3.11 RfL, its subsidiaries and concessions have arrangements to comply with relevant RGSs where they operate over NRIL infrastructure. The HSE in consultation with appropriate competent individuals within RfL, its subsidiaries and concessions, decides applicability of the RGSs to RfL, its subsidiaries and concessions operations and status in terms of direct compliance, or compliance via Rf, its subsidiaries and concessions equivalent standards.

6.3.12 The SRM (see HSMS 3.3 Safety Risk Model) includes risks imported to NRIL's operations through the activities of suppliers, and train and station operating companies, including LUL, LOL and MTRC. However, there are some differences in the responsibilities and controls for risk between NRIL, LUL, LOL and MTRC.

6.3.13 Quantitative assessments have been undertaken to identify specific issues where an additional hazard or a higher hazard likelihood or consequence may arise due to operation of the Bakerloo Line and District Line services on NRMI. These assessments were carried out by a knowledgeable group of operational and safety specialists from LUL (with support from NRIL, and train and station operating companies where appropriate). The findings of these assessments are,

where applicable, integrated into the SRM. Risk reduction measures arising from these assessments are developed in liaison with LUL, LOL and MTRC interfaces, via the respective Route Director or Station Manager, as appropriate. NRIL, LUL, LOL and MTRC also attend various specialist topic groups with railway industry bodies, e.g. RSSB, to discuss various risk reduction measures.

6.3.14 Track and station access agreements are in place providing access for RfL/RFLI/LUL to the NRMI. These include provisions for:

- Safe operation
- Compliance with RGSs and NR Standards where applicable
- Changes to legislation
- A performance regime with incentives (where applicable)

These are supported by:

- The BR/LT Works Access Agreement 1964 which provides for access to and maintenance of infrastructure at the interface with NRMI to applicable safety and engineering standards
- Site specific engineering arrangements that describe the boundaries between NRIL and RfL/RFLI/LUL in terms of ownership of property and fixed assets and state the maintenance and safety obligations arising for each asset

6.3.15 NRIL's Weekly Operating Notices are transmitted electronically by the routes/regions, for information to key RfL/RFLI personnel, and to LUL, LOL and MTRC operating staff.

6.3.16 The London Underground Control Centre (LUCC), and RFLI's Route Control Centre (RCC) also receive NRIL alerts on defective equipment.

6.3.17 Local operating arrangements define the arrangements for train signalling and operations on NRMI referred to in HSMS 4.13 Operating the Network. With the route/region and Station emergency plans they also define the interfaces and arrangements for liaison with LUL, LOL and MTRC for the management of incidents. When incidents occur on NRMI, NRIL's emergency plan comes into operations and arrangements are in place through mutual aid agreements, to obtain appropriate support from TfL/RFLI/ LUL, LOL and MTRC. Where an incident occurs on NRMI, TfL/RFLI/ LUL, LOL and MTRC have arrangements in place to comply with relevant RGSs and NR Standards where applicable.

6.4 Other Infrastructure Managers

6.4.1 The Managing Director System Operator is the primary safety contact with RfL, RFLI, LUL, LOL and MTRC, as well as Heathrow Airport Limited (HAL) for support services including for example contracted infrastructure works by NRIL to the Heathrow Spur, and the Anglia Route is the lead NRIL route for the Crossrail Elizabeth Line.

6.4.2 The relevant Route Director or Station Manager for those Managed Stations with an RfL/LUL, LOL and MTRC interchange, liaises with the LUL, LOL and MTRC line managers for the Bakerloo, District and Jubilee Lines etc., North London and East London Lines, and Crossrail Elizabeth Line.

6.4.3 For all other Infrastructure Managers (e.g. Network Rail (High Speed) Ltd, Nexus Tyne & Wear Metro, Stagecoach Sheffield Supertram, Docklands Light Railway,

Heathrow Airport Limited etc.) the relevant Route Director is responsible for leading the management of the interface.

6.5 Other Interfaces

Office of Rail & Road (ORR)

6.5.1 The Group Safety & Engineering Director is the primary health and safety contact with ORR and holds regular liaison meetings to discuss strategic issues of railway safety, including NRIL's safety performance, safety strategies and policy, and health and safety arrangements.

6.5.2 The Route Director is the primary safety contact within the routes/regions for liaison with ORR. Liaison on specific issues (e.g. level crossings, operations standards, etc.) is through nominated line managers. Liaison on local issues is conducted between local line managers within the relevant function and field inspectors.

6.5.3 Liaison arrangements are defined in NR Standards NR/L3/INV/3001/RIM115 Network Rail and National Safety Authority (ORR) Interface and Liaison Arrangements and NR/L3/INV/3001 Reporting and Investigation Manual.

Rail Safety and Standards Board (RSSB)

6.5.4 The Group Safety & Engineering Director is the primary safety contact and manages the interface with RSSB during preparation of the Railway Strategic Safety Plan. The drafting groups and Standards Committees managed by RSSB, which develop new RGSs or changes to existing RGSs also include NRIL representatives.

6.5.5 RSSB manages the System Interface Committees (SICs) and sub-groups of which NRIL is a member and that the rail industry agreed to form in recognition of the importance of managing the interfaces between railway systems. The aim of these committees is to assist the railway industry to manage all aspects of identified system interfaces in the most cost effective and efficient way. For a specific interface issue the SIC will determine solutions based on sound technical and economic evaluation and identify which is in the best interest of the industry as a whole.

6.5.6 RSSB manages a programme of research and development (R&D) on behalf of government and the rail industry. NRIL supports this programme through its membership of the RSSB Board and its R&D Advisory Group, and also through NRIL's involvement in other industry groupings that act as the client for RSSBs research at the project level.

Rail Accident Investigation Branch (RAIB)

6.5.7 The Chief Health & Safety Officer (CHSO) is the primary safety contact with RAIB. Regular liaison meetings are held to discuss the management arrangements for accident investigation and significant issues and outcomes arising from accident investigation.

Emergency Services and Local Authorities

6.5.8 The Operational Security & Contingency Planning Manager is the primary safety contact in respect of emergency planning, developing suitable access

arrangements in the event of an emergency. These arrangements include the preparation of emergency plans, table-top and real-life exercises and regular meetings with representatives of the emergency services to review those arrangements.

British Transport Police (BTP)

6.5.9 The Managing Director System Operator is the primary safety contact with BTP Headquarters. Each nominated Route Director, or nominated deputy, as chair of the Community Safety Partnership Groups that cover specific geographical areas, is the primary safety contact with the senior BTP officers for those areas. Liaison on local issues is conducted between local line managers and BTP officers. NRIL is represented on the cross-industry Trespass Risk Group which the BTP are an integral part of.

European and International Affairs

6.5.10 The CHSO is the primary health and safety contact with Europe (ERA – European Rail Agency, EIM – European Rail Infrastructure Managers and UIC – International Union of Railways) in understanding the development of the new tier of safety regulation and influencing its form so that the UK industry and NRIL in particular achieve their objectives.

Private Locomotive and Wagon Owners

6.5.11 NRIL is committed to the contractual arrangements described in Private Wagon Registration Agreements (PWRAs) and Private Locomotive Registration Agreements (PLRAs). The Network Technical Head Traction & Rolling Stock manages the NRIL requirements in these agreements. The owners who are signatories to the PWRA or PLRA will be the Entities in Charge of Maintenance (ECM) or will have appointed ECMs for their wagons and locomotives.

6.6 Change Management

Change Management

6.6.1 NRIL operates formal change management arrangements to control the introduction of change and to confirm that all safety risks are identified, systematically addressed and controlled. These apply to changes relating to organisational structure, management systems, operations, infrastructure engineering, traction and rolling stock route compatibility, product acceptance, and any other factors which may affect the safety of the operational railway.

Organisational

6.6.2 NRIL has developed the Managing Successful Programmes for Network Rail (MSP4NR) framework which supports delivery of business change (including people change) programmes across NRIL. In support of this, NRIL has developed toolkits, which are available on the Change Channel (SharePoint site) for both process improvement and for managing the people aspects of change that are designed to assist managers when they are undertaking organisation, process or system changes.

6.6.3 NR Standard NR/L2/HSS/020 Safety Validation of Organisational Change describes the process for validating organisation and associated HSMS changes,

including arrangements for consulting employees and Trade Union-appointed health and safety representatives about proposed changes.

6.6.4 Validation affirms that the potential risks associated with a change have been identified, assessed and appropriately controlled. Furthermore, it identifies required changes to the HSMS and provides compliance with CSM RA.

6.6.5 The sponsor of each proposed change arranges for the completion of a change proposal form, outlining the proposed change and the rationale and benefits to the business. The proposal is submitted for approval in accordance with the Authority to Change Organisation (A2CO) process.

6.6.6 As part of the A2CO process, the sponsor is advised of the relevant level of CSM RA application (with or without an Assessment Body (AsBo)) that has been agreed by the Health and Safety Management Systems Specialist. The level of validation is proportionate to the scope of change and the potential safety risks associated with the proposal –CSM application with or without an AsBo.

6.6.7 If approval is given for the change, validation is undertaken in accordance with NR Standard NR/L2/HSS/020 Safety Validation of Organisational Change. No change is implemented until safety validation has been completed and any required revision is made to the safety management system. Substantial changes are notified to the ORR in accordance with regulation 13 of ROGS 2006. Where a substantial change is to be made in accordance with regulation 11(1), it is not implemented until it has been assessed and the safety authorisation appropriately amended by the ORR.

6.6.8 For major changes, each sponsor arranges for a post implementation review to be undertaken after the changes have taken place to confirm that the intended business benefits have been delivered and the lessons learned for the future. Any new safety requirements arising from the organisational change are also fed back into the process for consideration in relevant, future organisational changes.

Infrastructure, Rail Vehicle and Safety Critical Plant and Equipment

6.6.9 These change control arrangements are applicable to projects that introduce changes to the infrastructure (defined as the track, the signalling, the power supply equipment and stations) or changes to vehicles operating on the network.

6.6.10 This includes changes to:

- Existing vehicles operating on the network
- The way in which existing vehicles are operated
- The infrastructure including new infrastructure
- The way that the infrastructure is operated, maintained and renewed as a potential consequence of a change to the infrastructure or to vehicles operating on the network
- The way in which data is managed
- Specific products that are used on its network

6.6.11 It also includes projects that:

- Introduce new plant, equipment or products onto the network, and which have the potential to have an impact on the safety of the network, or the operations carried out by Transport Operators on the network

- Impact on the infrastructure of any other Infrastructure Manager with which NRIL infrastructure interfaces

6.6.12 These arrangements examine the nature of the change from a system perspective to provide assurance that the proposed change is fully compatible with:

- The existing and planned future network
- The operation of all its commercial customers on the network and its neighbours
- Its ability to maintain the network in the future

6.6.13 The change is assessed for both its immediate impact and long-term consequences, which can be safety related, environmental or commercial. These change control arrangements for applicable projects are managed by the Network Rail Assurance Panel (NRAP), the processes for which are defined within the relevant NR Standards within the NRAP Processes Manual NR/L2/RSE/100 Network Rail Assurance Panel processes. The requirement for Sponsors to refer qualifying infrastructure change projects to NRAP is also defined in these standards and letter of instruction (LOI). The manual contains the following standards:

- NR/L2/RSE/100/01 Network Rail Assurance Panel
- NR/L2/RSE/100/02 Application of the Common Safety Method for Risk Evaluation and Assessment
- NR/L2/RSE/100/03 The Application of the Interoperability Regulations for Infrastructure Projects
- NR/L2/RSE/100/04 Introduction of New or Modified Vehicles
- NR/L2/RSE/100/05 Product Acceptance and Change to Network Rail Operational Infrastructure
- NR/L2/RSE/100/06 How to Decide What Needs Product Acceptance Via NR/L2/RSE/100/05
- NR/L2/RSE/100/07 System Review Panels

NRIL Assurance Panel (NRAP)

6.6.14 NR Standard NR/L2/RSE/100/01 Network Rail Assurance Panel specifies the role and remit of NRAP. It is chaired by the Head of Compliance & Compatibility and has representatives from all relevant NRIL functions and other experts as required. This balance reflects the nature of the changes and the risks that may potentially arise and the effective mitigation of these risks by the various functions within NRIL.

Common Safety Method on Risk Evaluation and Assessment and Authorisation Under Interoperability

6.6.15 NRIL has change control processes for qualifying infrastructure projects that are defined in NR Standards, in order to comply with the relevant requirements of the CSM RA and/or RI Regulations 2011 and subsequent amendments.

6.6.16 NRAP specifies the necessary consents to allow change to be enacted on the infrastructure. Such consents take the form of Safety Assessment Reports where CSM RA applies, and/or support of the verification declarations under RI Regulations 2011, in support of the issuance of the requisite authorisation, by the ORR. Prior to 1st April 1994 the network, its operation and associated rail vehicles have grandfather rights which allow them to continue to operate.

6.6.17 Under NR/L2/RSE/100/02 Application of the Common Safety Method for Risk Evaluation and Assessment, all projects related to railway infrastructure, as defined in ROGS and irrespective of scale, are notified to NRAP. The notification includes an assessment of the projects risk profile. NRAP considers the applicability of the RI Regulations 2011 and CSM RA to each project, advises the project of the applicable requirements, and records all decisions in a database.

6.6.18 Proposed alterations to level crossings which have the potential to affect the Level Crossing Order and/or the interface with road users are additionally progressed under the provisions of the Level Crossings Act and are subject to ORR approval. NR Standard NR/L2/OPS/100 Provision, Risk Assessment and Review of Level Crossings sets out the process for determining the safety requirements for new level crossings, and the risk assessment and management processes that apply to both new and existing level crossings.

Authorisation Under Interoperability

6.6.19 Certain projects may require to be notified to the DfT for authorisation into use under the RI Regulations 2011. NRAP monitors the process of the notification of projects under NR Standard NR/L2/RSE/100/02 Application of the Common Safety Method for Risk Evaluation and Assessment, so that projects are correctly allocated to the appropriate procedure. NR Standard NR/L2/RSE/100/03 The Application of the Interoperability Regulations for Infrastructure Projects defines the procedure by which NR projects progress under RI Regulations 2011.

6.6.20 Where RI Regulations 2011 have been deemed to apply, it is necessary to have new or altered assets designed and constructed to common standards termed NTSNs and assessed by an independent body, known as a Notified Body (NoBo). Where there are no applicable NTSN requirements, or where permitted by a NTSN, projects are designed to national technical rules and assessed by a designated and independent body, known as a Designated Body (DeBo). Following these assessments projects require authorisation by the ORR (as the Safety Authority).

6.6.21 Certain infrastructure projects that are either deemed to be major renewals or upgrades or involve the construction of new sub-systems fall within the scope of the RI Regulations 2011.

6.6.22 Where there is the potential for a project to require RI Regulations 2011 authorisation, NRAP will:

- Make the initial determination in conjunction with the project sponsor
- Endorse the required submissions (including requests for regulation 13 decisions and derogations) compiled by the project team prior to their submittal to the DfT via the CSAE (Chief Systems Assurance Engineer)
- Endorse the NoBo and DeBo remits prior to appointment by the project
- Support the verification declaration that the project meets all the requirements of the RI Regulations prior to its submission to the ORR, via the Head of Compliance & Compatibility, as required for the project to be authorised into use
- Support any declarations of conformity or suitability for use, drawn up by the project, for interoperability constituents
- Network Rail Assurance Panel (NRAP) and Assessment of Compatibility

6.6.23 Before any new or changed infrastructure or rolling stock is brought into use, it is necessary to assess the change so that compatibility between assets is

maintained. NRIL and each transport operator are responsible for the safety of their own part of the railway system. Neither party gives permission to or has authority over the other. If authorisation for placing into service is required, this is given by the ORR.

6.6.24 ROGS mandates a duty of cooperation between the parties responsible for the management of the railway system. RGS GE/RT8270 Assessment of Compatibility of Vehicles and Infrastructure provides a basis for NR and each transport operator to co-operate in establishing the compatibility of infrastructure and rolling stock to facilitate compliance with regulatory responsibilities. The assessment of compatibility forms part of NRIL's change control arrangements for changes to the infrastructure or to rail vehicles. NR Standard NR/L2/RSE/100/04 Introduction of New or Modified Vehicles defines the process for assessing new or changed vehicles, or changes to routes where existing vehicles operate, for:

- Compatibility between the infrastructure and the vehicle
- Technical requirements (NRIL projects only)

6.6.25 For any NRIL instigated changes that affect or may potentially affect the safe operation of other transport operators on the network, those relevant transport operators must be engaged and their agreement sought regarding the safe introduction of the change.

6.6.26 For changes instigated by transport operators other than NRIL and which affect or may potentially affect the safe operation of the network or NRIL assets, NRAP will act as the primary NRIL body which receives notification of these changes and, in terms of an assessment of compatibility, assesses their potential impact on NRIL and other users of the network. NRAP will then either endorse the change on behalf of NRIL, through the issue of a summary of compatibility, or endorse any appropriate mitigating actions as agreed by the parties.

System Review Panel and Technical Review Groups

6.6.27 NRAP is supported by System Review Panels (SRPs) which will review presented evidence and seek endorsement that safe integration and technical compatibility have been confirmed before commissioning vehicle, major infrastructure, and information management systems change respectively. The output from SRPs is subject to regular review by NRAP.

6.6.28 NR Standard NR/L2/RSE/100/07 System Review Panels specifies the roles and remits of SRPs and the associated interfaces.

Safety Critical Plant and Equipment

6.6.29 NR Standard NR/L2/RSE/100/05 Product Acceptance and Change to Network Rail Operational Infrastructure defines the NRIL process for providing assurance to the NRIL Acceptance Panel that products accepted for use on or about NRIL infrastructure are:

- Safe
- Fit for purpose
- Do not export unacceptable risks to NRMI

6.6.30 This standard is supported with guidance produced by the Network Technical Head System Capability.

6.6.31 NRIL specialists evaluate product features against predetermined criteria to assess whether or not a product is safe and fit-for-purpose. The organisation and management system of product suppliers are also appropriately vetted as part of Supplier Qualification and Licensing.

Common Safety Method on Risk Evaluation and Assessment

6.6.32 The following sets out NRIL's arrangements for complying with the requirements of CSM RA and maps onto NRIL's existing management arrangements.

Requirements of Common Safety Method Risk Evaluation and Assessment CSM RA

6.6.33 NRIL is required to have a process for identifying significant changes of a technical, operational or organisational nature. For technical change this is contained within NR Standards: NR/L2/RSE/100/02 Application of the Common Safety Method for Risk Evaluation and Assessment and NR/L2/RSE/100/05 Product Acceptance and Change to Network Rail Operational Infrastructure.

6.6.34 Organisational change is described in NR Standard NR/L2/HSS/020 Safety Validation of Organisational Change.

6.6.35 Operational change is described in NR Standards NR/L2/OPS/031 Assessing and Assuring the Impact of Operational Risks Relating to Changes to the Train Plan and NR/L2/RSE/100/01 Network Rail Assurance Panel.

6.6.36 These arrangements are subject to periodic review by NRAP to confirm their ongoing suitability.

6.6.37 CSM RA dictates that the decision regarding whether a change is significant should be set out in a notified national rule. If there is no such rule, as there is not for UK, then expert judgement is to be used based upon the following criteria:

- Failure consequence
- Novelty
- Complexity of change
- Monitoring
- Reversibility
- Additionality

6.6.38 These criteria are covered for engineering change by the significant difference and significant risk tests as applied under NR Standards NR/L2/RSE/100/01 Network Rail Assurance Panel, and NR/L2/RSE/100/02 Application of the Common Safety Method for Risk Evaluation and Assessment, whereby programmes of work are examined in totality and not just on an individual project basis. Reversibility is covered as engineering change projects are most usually irreversible and is applied as a default.

6.6.39 The decision on significance is recorded by the:

- Network Technical Head System Compatibility (for engineering and operational change) – NR/L2/RSE/100/01 Network Rail Assurance Panel
- Chief Health & Safety Officer (for organisational change) – NR/L2/HSS/020 Safety Validation of Organisational Change.

- Train Plan Risk Assessment Meeting (TP-RAM) (for timetable change) – NR/L2/OPS/031 Assessing and Assuring the Impact of Operational Risks Relating to Changes to the Train Plan

6.6.40 For vehicle change the Network Technical Head Traction & Rolling Stock records the decision on significance for T&RS (Traction & Rolling Stock) assets, and Network Technical Head Plant records the decision on significance for plant assets.

6.6.41 For changes to standards the Head of Compliance & Compatibility records the significant test.

Contractors and Sub-contractors

6.6.42 Where a manufacturer or supplier introduces new or changed products or infrastructure to the market, they are the proposer under CSM RA. The proposer provides details of the outcome and their application of CSM RA to NRIL for the generic application of their product.

6.6.43 Where the new or changed product or infrastructure is to be incorporate into the railway system, then the application specific use is subject to NRIL's application to CSM RA as the proposer. As such contractors, sub-contractors and suppliers shall be required to participate in the hazard identification and management processes as appropriate prior to any consent to introduce the product or infrastructure into service - the cost of this participation is included in any tender or quote.

System Definition

6.6.44 The CSM RA process starts with the system definition which includes not just the physical system but also the human and operational system. All hazards associated with the system should be identified including those at the interface of the system with other systems and/or affected parties.

Assessment Body

6.6.45 For changes, assessment bodies will be selected and appointed to projects in accordance with the criteria set out in the CSM RA Regulations. For timetable change TP-RAM will fulfil this role, and for organisational change the CHSO will fulfil this role. The independent assessment confirms whether CSM RA has been applied properly and that the system definition (including human and operational interfaces) has been correctly drawn. The Safety Assessment Report produced by the assessment body will clearly indicate whether or not implementation of the project is supported by the independent assessor.

Reviews and Audits

6.6.46 The Network Rail Assurance Panel (NRAP) is responsible for the overview of the suitability of the arrangements on an ongoing basis and for liaison in respect of external auditing of the process, as a single point of contact for NRIL.

Annual Safety Report

6.6.47 The Head of Compliance & Compatibility collates the synthesis of the decisions related to the level of significance of the changes for engineering, vehicle and

operational change. The CHSO collates the synthesis of decisions for organisational change and for timetable change (via TP-RAM).

Application of CSM RA

6.6.48 For engineering and operational changes, the application of CSM RA shall be via compliance with NRIL's relevant health and safety management arrangements and relevant NTSNs, Euronorms (ENs), RGSs, RISs and NR Standards. Hazard identification and classification will be in accordance with NR Standards and shall be recorded in the project safety file. In instances in which several bodies are participating in the management of a hazard at an interface, an appropriate record of the arrangements in place is required, which in relation to rail vehicles would typically be an NRAP Summary of Compatibility, or amendment to the sectional appendix.

6.6.49 For timetable changes the application of CSM RA shall be via compliance with NR Standard NR/L2/OPS/031 Assessing and Assuring the Impact of Operational Risks Relating to Changes to the Train Plan The role of independent assessor will be fulfilled by Train Plan Risk Assurance Panel (TP-RAP) in this instance.

6.6.50 For organisational changes, the application of shall be via compliance with NR Standard NR/L2/HSS/020 Safety Validation of Organisational Change.
The CHSO shall act as independent assessor in this instance.

Risk Acceptance Criteria

6.6.51 NRIL would most usually apply standards, including NTSNs, Group Standards, Organisation Standards and Euronorms (ENs) as risk acceptance criteria, as set out in the HSMS. The management of changes to these and the granting of deviations from them is set out in:

- The Railway Group Code and Standards Manual for Group Standards including the Rule Book (GE/RT8000)
- NR Standard NR/L2/CSG/STP001 Standards and Controls Management and the standards within the manual for managing NR Standards

7 Measuring and Monitoring

7.1 Health and Safety Performance Indicators

7.1.1 NRIL measures its health and safety performance against a suite of health and safety performance indicators. These consist of a balanced mix of leading and lagging indicators covering key personal and system safety risk areas and provide for consistent measurement of health and safety performance.

7.1.2 Health and safety performance indicators are identified by analysis of the risk profile, using information from a range of risk models including the industry SRM and, within specific asset groups, the applications of Failure Modes and Effects Analysis (FMEA). Safety indicators are mapped onto the safety risk profile and cover a range of leading and lagging indicators including:

- **Output indicators** – fatalities and/or injuries to each population group, or train accidents
- **Precursor indicators** – set at different levels of the risk hierarchy, covering the key precursors to train accidents and other accidents, and specific risks

within each risk sub-group, including different asset groups (e.g. broken rails, buckled rails, bridge strikes)

- **Activity indicators** – measure the adherence to certain critical control activities mapped to specific risk precursors

7.1.3 Each year, as part of the business planning process, the range and definition of health and safety performance indicators are agreed and communicated throughout the organisation. Where appropriate, indicators are normalised (e.g. by train miles/hours worked) to facilitate a meaningful trend comparison. Targets for particular indicators are set, where appropriate, through the business planning process. A master list of corporate health and safety performance indicators is maintained by the Technical Authority.

7.1.4 Arrangements are made for each group of health and safety performance indicators to be reviewed by specific safety performance groups at appropriate levels of the organisation on a regular basis. This includes analysis of performance against targets and trends and is used to identify areas for further improvement.

7.1.5 Specific safety performance groups are identified for each of the asset groups and each of the delivery functions.

7.1.6 Every four weeks, information on performance against corporate level health and safety performance indicators is collated into a periodic SHEP report. This includes information on specific issues highlighted from analysis by the safety performance groups throughout the organisation. An extract of key information, the corporate safety, health and environment performance report is provided to the Executive Leadership Team (ELT) and the Health, Safety and Sustainability Coordination (HSSC) meeting. An extract is also provided to the NRIL Board, Safety Health & Environment Committee) for review.

7.1.7 Information at functional levels, and below, is also incorporated into functional reports.

7.1.8 Specific arrangements for data quality assurance are in place throughout the organisation. A description of these data quality assurance arrangements is maintained by Asset Information Services.

7.1.9 The Group Safety & Engineering Director will compile an annual safety performance report for submission to the ORR which comply with the requirements of the Railways and Other Guided Transport Systems (Miscellaneous Amendments) Regulations and ORR Guidance 2013, such that NRIL's safety performance can be aggregated by ORR for reporting on a national basis in compliance with ROGS requirements, which contains:

- Information on how NRIL's safety targets are met
- The results achieved through putting NRIL's safety plans into effect
- Statistics for the common safety indicators as relevant to NRIL
- The findings of safety auditing
- Comments on any deficiencies or malfunctions relating to the safe management of NRIL's infrastructure

7.1.10 NRIL will submit the annual safety performance report by the deadline of 30th June, to cover the preceding calendar year.

7.2 Safety Management Information

Safety Management Information System (SMIS)

7.2.1 SMIS is the industry-wide system used to collate accident and incident information, and which is used for the production of statistics and analysis. SMIS is owned and operated by RSSB, who manage the system on behalf of the railway industry.

7.2.2 SMIS is to be used by all members of the Railway Group, and NRIL inputs information to the system to comply with the provisions of RGS GE/RT8047 Reporting of Safety Related Information which mandates the requirements for the reporting to SMIS.

7.2.3 Where deemed necessary, a number of NR Standards specify the requirement to report certain types of safety incident information to SMIS (e.g. bridge strikes, fire, level crossing incidents, route crime, SPADs).

7.3 Safety Assurance

Safety Assurance

7.3.1 NRIL has assurance arrangements that take the form of a three lines of defence model which provides the Board, executive leaders, managers, and external stakeholders, with confidence in the levels of compliance with, and the effectiveness of, NRIL's health and safety management arrangements.

7.3.2 The three lines of defence assurance regime is illustrated below:

7.3.3 These monitoring arrangements are prioritised to take account of the areas of greatest risk in respect of the design, construction, operation and maintenance of NRIL's managed infrastructure. They focus on the early identification of key findings and/or non-conformances that are likely to result in undesired events and take account of the outputs from previous monitoring activity. The monitoring of

compliance with NR Standards is achieved through the first-and-second line arrangements.

Safety Conversations

7.3.4 Senior leaders understand the impact of good safety conversations on safety and risk awareness. This also provides system oversight, and by holding open, learning conversations, a senior leader can understand the interaction of risks within the system under their control, as well as identify unintended consequences resulting in elevated risk.

7.3.5 This is covered in more detail in HSMS 2.12 Leading Safety Conversations including the minimum expectations for key roles, both in terms of frequency and recording requirements and the requirement that the routes and businesses will develop local plans and set local expectations that other influential members of the team should also conduct Safety Conversations.

Plant Operations Scheme (POS) Site Monitoring

7.3.6 NRIL route/region based staff undertake POS inspections on site to monitor the safe delivery of works. A mixture of announced and unannounced inspections are used, with the emphasis being on unannounced. Approximately 2% of shifts are monitored in this way.

7.3.7 NRIL provides a three-day On-track Plant (OTP) training course to route/region-based staff which will provide the necessary competence for effective inspection. The Principal Contractor and the POS provider will also be undertaking a programme of on-site audit activity.

7.3.8 Reactive monitoring is carried out to examine any unsafe OTP related events after they have occurred. This will be managed through with the resultant lessons learned.

Management Self-Assurance

7.3.9 NRIL managers are required to participate in the self-assurance process relevant to their Function/Business Unit. Self-assurance requires identified managers to assess their compliance, typically every 4 weeks, with responsibilities and requirements described within the HSMS, formal industry and company standards and procedures and safety legislation. Managers are required to develop action plans to address all deficiencies identified as a result of this self-assurance activity.

7.3.10 Maintenance and Works Delivery staff within the Routes are required to complete the self-assurance process in accordance with NR Standard NR/L3/MTC/MG0221 Network Operations Non-Operations Staff Management Self-Assurance Procedure.

7.3.11 Operations staff within the routes/regions are required to complete the self-assurance process in accordance with NR Standard NR/L3/OPS/045/1.02 Self Assurance.

7.3.12 Managed Stations staff are required to complete the self-assurance process in accordance with NR Standard NR/L3/OPS/045/1.02 Self Assurance.

Annual Line Managers Self-Assurance

7.3.13 NRIL's Functional Audit programme is underpinned by the self-assurance process which is also defined in NR Standard NR/L2/ASR/036 Network Rail Assurance Framework. The process requires identified managers to assess their compliance with responsibilities and requirements described within the HSMS, formal industry/organisation standards/procedures and safety legislation. Managers are required to develop action plans to address all deficiencies identified as a result of this self-assurance activity.

7.3.14 Each year line managers within specified parts of the organisation are requested to complete an annual Self-Assurance Questionnaire to confirm compliance (or otherwise) with certain requirements of NRIL's HSMS. Line managers have safety responsibilities in respect of the management of their team. The questions are designed around the day-to-day line management responsibilities and the evidence should be easily accessible.

7.3.15 Functional coordinators are appointed to coordinate the self-assurance process on behalf of the Functional (or Business Unit) Director. However, the responsibility for completing the Self-Assurance Questionnaire(s) lies with individual line managers.

7.3.16 Where non-compliances are identified the relevant line manager is required to put corrective and preventative actions in place to remedy the non-compliance and prevent future recurrence.

7.3.17 The functional coordinators use a functional summary matrix to consolidate the results from all of the questionnaires completed by individual line managers into a single summary for the whole function. This includes the results of the questionnaire completed by the functional director. The functional director reviews the results presented within the functional summary matrix with the functional coordinator and signs a certificate of assurance.

7.3.18 The Corporate Assurance Manager produces and submits a paper for consideration by the ELT meeting reporting on the levels of compliance across the organisation (normally April each year). This is informed by the results contained within the Functional Summary Matrices and the accompanying Certificates of Assurance.

7.3.19 Functional directors are required to request their line managers to provide feedback to their teams on the results of the line managers' self-assurance process. This includes the results for their team, within their function and across the organisation as a whole.

7.3.20 Functions (and Business Units) may issue a supplementary questionnaire when issuing the line managers self-assurance questionnaire or may choose to issue their own self-assurance questionnaires on a more frequent basis.

Level 2 Assurance Activities

7.3.21 Second line of defence, or Level 2 assurance activities, are those which provide corporate oversight of the business units/functions. These assurance activities are primarily focussed on testing whether the safety risk controls are designed so that they can be effective and the business units/functions have implemented the controls.

Functional Audit

7.3.22 Each financial year a Functional Audit Programme is prepared, in conjunction with the functions, by the Corporate Assurance Manager. It takes into account the results of previous audits, the risk of failure of control measures and includes compliance to technical standards and specifications. NRIL also sponsors specific topic audits, where organisation and rail industry wide concerns have been identified. The audit programme shall also effectively meet the NRIL Policy and Objectives requirements prior to submitting for agreement each year, by the Health, Safety and Sustainability Coordination meeting.

7.3.23 The programme identifies:

- The subject/nature of the audit
- Those entities to be audited
- The resources that will conduct the audit

The programme of audits primarily comprises of Functional Audits but also includes a small number of Cross-Functional Audits.

7.3.24 Audits are undertaken by trained auditors in accordance with the requirements of NR Standard NR/L2/ASR/036 Network Rail Assurance Framework.

7.3.25 Following each Functional Audit, a review meeting is held between the lead auditor and auditee, to review the audit findings and agree formal non-conformance reports (NCRs), observations and areas of good practice. Following this meeting the auditee prepares an action plan to address issues raised. The action plan shall include both corrective actions to correct the non-conformance and preventative actions to prevent future reoccurrence.

7.3.26 All Functional Audit findings are recorded in a national audit database, so that the programme and results of audits are visible to all business units. Details of corrective and preventative actions taken to address non-conformance reports (NCRs) are also entered into the national audit database. Closure of the actions is verified by a competent auditor.

Engineering Verification

7.3.27 Engineering verification is a part of NRIL's assurance process for confirming that infrastructure assets are fit for purpose. NR Standard NR/L2/RSE/070 Engineering Verification describes the process for undertaking engineering verification.

7.3.28 It aims to check how well its control processes work by physically inspecting infrastructure assets, at all stages of their life, to check that they:

- Comply with standards
- Are free from defects or problems which may affect the safety of the line, even if the assets comply with standards
- Are in a condition consistent with asset records
- Are in the condition that would be expected from the inspections carried out and the work recorded as being necessary in work databases

7.3.29 Engineering verification is additional to other assurance processes such as audit or regular process checks, complementing them by:

- Being focussed on the physical state of the asset, such as the reliability and integrity of the asset, as well as whether it complies with standards

- Being carried out independently of the team responsible for constructing or maintaining the asset
- Looking at the wider safety picture
- Assessing whether standards are appropriate

7.3.30 Engineering verification also provides opportunities for:

- Transferring lessons across NRIL, including good practice
- Examining the local root cause of any issues found with the asset
- Identifying developing trends
- Coaching and mentoring people on the management of assets, checking for their training needs and any skills gaps
- Identifying public interface issues, e.g. trespass and vandalism, vehicle incursion, level crossing misuse

The Engineering verification programme is determined by the relevant Head of Discipline, delivered by engineering capability teams and managed by the Engineering Verification & Recommendations Manager

The programme describes:

- The number of verifications to be carried out
- When they are to be carried out
- An appropriate level of detail of the type of asset
- Geographical areas and activities to be checked
- The lead verifier for each verification

7.3.31 The programme is tabled at the Health, Safety and Sustainability Coordination (HSSC) meeting for endorsement before the start of the year. Once approved, the programme is managed and tracked by the Engineering Verification & Recommendations Manager.

7.3.32 The lead verifier for each verification consults with the local manager or engineer to plan and undertake their assigned verifications. During each verification, the lead verifier categorises issues raised (major/minor/observation), identifies any actions needed, and agrees these with the appropriate person(s) responsible (usually the local manager/engineer). The lead verifier will also take immediate action to control a risk that they judge to be significant.

7.3.33 The lead verifier produces a report for each verification, and agrees and signs off the final report, including actions, with the appropriate manager or engineer. The findings and actions from each verification is recorded in an action tracking database (arrangements are being made to migrate this to NRIL's organisation-wide assurance database).

7.3.34 Each person assigned an action is required to manage the agreed action to completion within the agreed timescales. Once they have completed the action, they are required to notify the lead verifier who agreed the action with them. The lead verifier is required to monitor progress to close out the actions. The lead verifier is also required to update the action tracker records to show the action as closed.

7.3.35 On a quarterly basis, a report is produced that:

- Summarises the progress in delivering the agreed engineering verification programme

- Summarises the results of the engineering verification visits carried out and identifying common themes or key trends, whether by management unit, process or type of asset
- Describes any actions needed to address common themes or key trends, who is responsible for these actions and when they will be completed
- Reports the number of issues closed in the quarter and the number of new issues raised
- Includes examples of particularly important issues identified, whether because of the level of risk or their recurring nature
- Reports progress in completing the actions listed in the verification reports

7.3.36 In respect of NRIL's role as an Entity in Charge of Maintenance (ECM), the Engineering Change Process aims to confirm that Traction and Rolling Stock, On-Track Machine and On-Track Plant assets are fit for purpose. NR Standard NR/L1/RMVP/0001 Plant and Traction and Rolling Stock (T&RS) Policy describes the process for undertaking engineering verification. It aims to check how well it controls design, construction and maintenance, and to check that they:

- Comply with standards
- Are free from defects or problems which may affect the safety of the line, even if the assets comply with standards
- Are in a condition consistent with asset records
- Are in the condition that would be expected from the inspections carried out and the work recorded as being necessary in work databases

Deep Dive Reviews

7.3.37 Deep dive reviews are conducted in response to an emerging risk where there is a need to review the strategies, policies, initiatives, risk exposure, targets and performance of NRIL, and where appropriate of its partners, suppliers and contractors.

7.3.38 The outcome of each review is to reach:

- A common understanding of the risk and its causes
- A view on the level of risk reduction expected
- Agreement on the on-going monitoring of performance in this area
- Agreement on the future strategy for managing the risk

7.3.39 Recommendations and associated actions are processed via the National Recommendations Review Panel (NRRP), recorded in NRIL's national assurance database and are tracked through to completion.

Principal Contractor Licensing

7.3.40 The Contracts and Procurement Director (Route Services) has overall responsibility for the delivery of NRIL supplier qualification as described in NR Standard NR/L2/SCO/302 Supplier Qualification Requirements. The Assurance (Licensing) team undertake assessments of NR Licensed suppliers as described in NR Standard NR/L2/INI/CP0070 Principal Contractor Licensing.
Supplier assessments carried out as mandated by these standards cover compliance to relevant Railway Group/Industry standards and NRIL organisation standards and are underpinned by a programme of reviews of suppliers, carried out by business units, during the execution of contracts.

Plant Operations Scheme Audits

7.3.41 The POS scheme requires an annual management system audit that is conducted by RISQS at the POS provider's headquarters location.

7.3.42 NRIL undertakes a technical audit of each POS provider. This audit examines a sample of OTP and its associated maintenance records in detail at the provider's depot. Periodicity of audit is 12 months for NRIL route/region POS holders and 18 months for the external POS providers. This periodicity is regularly reviewed against risk and maturity of the organisations.

7.3.43 NRIL undertakes a sample of announced on-site audits. The audit route/region/supplier is selected using a risk-based approach and consists of a full review of pre-work planning documentation and an on-site visit during the work to view the application of the plan.

7.3.44 Unscheduled POS audits (technical and site) can be undertaken should reactive monitoring and intelligence deem it necessary.

Level 3 Assurance Activities

7.3.45 Third line of defence, or Level 3 assurance activities, are those which are independent of the Business Units/Functions and include regulatory and third-party assessment of the business. These assurance activities are primarily focussed on testing the effectiveness of Business Unit/Function policies in achieving NRIL's corporate objectives.

Group Finance Internal Audit

7.3.46 An annual programme of functionally independent internal audits is undertaken by the Group Risk and Internal Audit department to provide assurance to the Board, via the Safety, Health & Environment (SHE) Committee and Audit & Risk Committee, that controls are in place for the key health and safety risks facing the organisation and that those controls are being implemented and are effective in controlling the risk.

7.3.47 The objective of the internal audit programme is:

- To examine from a functionally independent perspective the degree to which at all levels within the organisation
  - Key health and safety risks have been identified
  - Controls to mitigate those risks have been put in place
  - Controls are being applied and proving effective at mitigating the risk
- To identify any weakness in the application of the required controls or in the effectiveness of the control being applied
- To establish that corrective and preventative action will be taken to address any such weaknesses
- To report the key findings to the SHE Committee, Audit & Risk Committee and senior management

7.3.48 The programme is prepared by the Director, Risk & Internal Audit. The risk areas to be audited are selected on a risk-based approach that is informed by a number of sources including:

- NRIL's corporate level safety risk map
  - The Industry Safety Risk Model (SRM)

  - The Pre-cursor Indicator Model (PIM)
- Emerging trends identified through analysis of accident/incident data within the SHEP report
- Intelligence from safety performance reviews and Safety Assurance activities such as Functional Audits, Engineering Verification, Self-Assurance, Standards deviation management, Safety Conversations and Planned General Inspections
- Senior management concerns raised at the Health, Safety and Sustainability Coordination (HSSC) Meeting or SHE Committee
- Concerns from stakeholders such as the ORR, train operators, station operators, trade unions, government or members of the public
- Internal and external influences (changes and trends) that may affect risk e.g. major construction projects, passenger numbers, road traffic density, climate change, social change, automation
- Concerns raised through confidential reporting channels such as CIRAS (Confidential Incident Reporting & Analysis System), or from whistleblower reports
- Causal, contributory or underlying factors from recent accident and incident investigation reports

7.3.49 The audit programme aims to examine the key passenger, workforce and public health and safety risks at least every four years. The programme is submitted to the SHE Committee annually, initially in draft form for review and then for endorsement following revision. It contains details of the subject/nature of the audit (i.e. risk area) and the entities to be audited. For each audit a lead auditor and a lead contact (representing the risk area to be audited) is identified.

7.3.50 These audits are led by senior auditors (Lead Internal Auditors) within the Group Finance, Risk and Internal Audit function and utilise a number of techniques which include:

- Interviews with senior managers to determine the extent to which the key risks have been identified and to highlight the controls that are required to be in place to mitigate those risks
- Interviews with key staff responsible for application of the controls
- Examining relevant documentation at both management and working level
- Discussions with frontline staff to examine their awareness of the required controls and their purpose, and to seek their opinion as to whether the controls are proving effective
- Surveillance and observations conducted at both management and working level to examine the degree to which the controls are being applied
- Confirming whether the documentation is compatible with what is being observed

7.3.51 At the end of each audit, a review meeting is held between the Lead Auditor and lead contact to review the audit findings. All audit findings are rated by the lead auditor according to their severity and an overall audit assessment rating is applied based on the number and severity of the findings. Each audit is rated unacceptable, unsatisfactory, fair or good. For all audit reports with an ‘unacceptable’ audit rating, a follow up audit will be scheduled in the subsequent year. Any areas of good practice that have been identified are highlighted within the report for wider dissemination.

7.3.52 Following the audit review meeting, the lead auditor prepares a report detailing the audit findings and the lead contact (in consultation with others) will prepare an

action plan, comprising both corrective and preventative measures, to address issues raised. Timescales for implementation of the actions are agreed between the lead auditor and lead contact based on the severity of the audit finding and practicability of undertaking the action.

7.3.53 All internal audit findings are recorded in NRIL's organisation-wide assurance database. Details of corrective and preventative actions taken to address the findings are also entered into the database. Closure of the actions is verified by the lead auditor.

7.3.54 Audit findings are used to inform the risk scoring within the corporate level safety risk map and the control ratings for their associated controls.

7.3.55 To support business to embed actions, the following is undertaken:

- A detailed audit action requirements document. This is produced once actions have been initially agreed by the action owner and before the report is finalised. The objective is to provide the action owner with a clear understanding of the type of evidence required before verifying implementation of an action. For example, evidence of a report being issued for three consecutive periods. It provides a sense check of the Auditee's understanding of the action, and supports the setting of realistic and achievable timeframes for completion
- Six to eight weeks after the final report has been issued to the business, a meeting is held with the action owners. The purpose of this meeting is to gain an update on progress to date and to address any concerns or uncertainties over the action

7.3.56 In order to confirm whether the actions taken in response to internal audit findings (from audits where the overall audit assessment rating is unsatisfactory/unacceptable) have been effective at reducing risk, further reviews/audits are planned following a period of elapsed time. These are either conducted as a standalone follow-up activity or integrated into the remit for the next planned audit.

7.3.57 A review of closed audit actions is undertaken to confirm if the actions have been sustained. The selection criteria are normally:

- 'Serious' and 'high' rated actions
- The actions have had at least one year to be sustained

7.3.58 With regard to audits rated unacceptable, progress being made on actions associated with 'Serious' findings from 'Unacceptable' audits is ascertained, and whether closed actions have been appropriately sustained. The follow up activity will additionally seek to ascertain any emerging risks in the subject matter area to inform future audits / reviews:

- Progress made to sustain closed actions, and evidence available to substantiate this
- Plans in place to close open actions, seeking evidence to demonstrate progress to closure
- Emerging risks in the subject matter area

7.3.59 The Independent Audit team within the Group Finance Function is subjected to an external quality assessment at least once every five years by a qualified, independent external reviewer and the results are reported to the Audit and Risk Committee (ARC).

ORR Inspection Plan

7.3.60 In accordance with the ORR's strategy for the regulation of health and safety on the railway, their annual Inspection Plan aims to assure the ORR, and through it the general public, that NRIL is maintaining and, as appropriate, improving its health and safety performance. The plan is designed to determine whether NRIL's management systems deliver effective health and safety risk control in respect of passengers, the workforce (including contractors) and the public.

7.3.61 The ORR Inspection Plan details the top-level national inspection projects with each broken down further by topic/issue/activity/location. An ORR lead inspector is identified for each inspection project.

7.3.62 A draft of the annual NRIL Internal Audit Programme is shared with the ORR at an early stage of their planning activity, to identify any audits/inspections that could be conducted jointly/collaboratively. For those audit/inspection topics where there may be some overlap, the NRIL Lead Auditor discusses this further with the ORRs lead inspector, when preparing the terms of reference for the audit, with a view to minimising duplication and maximising coverage.

7.3.63 A NRIL lead contact is assigned to each inspection project, to facilitate discussions with the ORR and to coordinate activities across the relevant functions/routes/projects involved.

7.3.64 The ORR will normally make contact with and/or meet the relevant Route Director, or representative, before embarking on route level inspection plan activities, in order to explain what work is to be done locally, by whom and when, and to seek co-operation and contact details for NRIL personnel likely to be involved.

7.3.65 NRIL holds Quarterly Safety Performance Review Meetings with the ORR to discuss progress with implementation of the ORR Inspection Plan and any key findings. Similarly, NRIL reports findings from its own internal assurance activities. These meetings are attended by the Chief Health & Safety Officer (CHSO). Key findings and trends from both the ORR Inspection Plan and from the NR internal safety assurance activities are also reported to the Health, Safety and Sustainability Coordination (HSSC) meeting.

7.3.66 At the end of the year the ORR Lead Inspector will normally produce a report for their inspection project summarising their findings and send it to the NRIL lead contact. If there are any recommendations in the report, they are reviewed to determine any action that should be taken by NRIL, and any such actions are tracked through to completion by the lead contact. NRIL's Reporting & Investigation Manual contains procedure NR/L3/INV/3001/RIM117 Management of Recommendations from ORR Inspection Plan Reports that provides a structured process for the management of the ORR's Inspection Plan reports and any recommendations contained therein.

7.3.67 Accepted recommendations from the ORR's Inspection Plan reports are entered into the national assurance database for tracking through to completion.

7.3.68 The Engineering Verification & Recommendations Manager tracks progress with the implementation of these actions and advises the ORR Lead Inspector of progress. The status of actions to address each recommendation are reported in the periodic SHEP report.

7.3.69 When the actions to address a recommendation have been completed, the lead manager notifies the Engineering Verification & Recommendations Manager who considers whether further assurance is required to verify closure. The Engineering Verification & Recommendations Manager then advises the ORR Lead Inspector that the recommendation is closed.

7.3.70 Progress with closure of actions in respect of recommendations arising from ORR inspection reports are reviewed by the Health, Safety and Sustainability Coordination Meeting each quarter.

7.4 Accident and Incident Reporting and Investigation

Overview

7.4.1 NRIL's arrangements for accident and incident investigation and reporting are defined in NR Standards NR/L2/INV/002 Accident and Incident Reporting and Investigation, and NR/L3/INV/3001 Reporting and Investigation Manual that incorporate modules for reporting and investigating accidents and incidents, tracking the progress of investigations, and managing associated recommendations.

Close Call Reporting

7.4.2 The Close Call reporting framework is a rail industry wide system (adopted by NRIL) for reporting anything that has the potential to cause harm or damage. A Close Call is defined as anything with the potential to cause harm or damage. This includes the potential to:

- Harm a person including minor, major injuries, and fatalities
- Harm the environment and/or protected species
- Damage railway infrastructure, plant, vehicles, tools and equipment

7.4.3 Close Calls are where corrective or preventive action will remove risk from the unsafe behaviour and/or condition before it becomes an incident. Reporting these occurrences will help to achieve learning and continual improvement. This will lead to a reduction in more serious events. Close Calls are also reported in the National SHEP report.

Accident Reporting

7.4.4 NRIL's arrangements for maintenance and operational accidents are defined in NR Standard NR/L2/INV/002 Accident and Incident Reporting and Investigation and are additional to the statutory reporting requirements of the Railways (Accident Investigation and Reporting) Regulations (RIDDOR) 2013. The standard is supported by the NR/L3/INV/3001 Reporting and Investigation Manual incorporates modules for reporting and investigating accidents and incidents and tracking the progress of investigations and managing associated recommendations.

7.4.5 Line managers advise employees for whom they are responsible of the requirements of the procedures for reporting. Employees are required to advise the relevant Control and their line manager as soon as possible whenever they have had an accident, assault or a case of occupational ill health.

7.4.6 All information in respect of accidents, incidents and cases of occupational ill health in managed through the SMIS. Reports are provided to RAIB, ORR and the rail industry as required.

7.4.7 Urgent information is reported and disseminated throughout members of the Railway Group in relation to accidents and failures affecting rail vehicles and equipment. This enables appropriate corrective action to be taken quickly. NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice defines how this arrangement is applied by NRIL.

7.4.8 NRIL has arrangements in place for complying with the requirements of RGSs GE/RT8250 Reporting High Risk Defects and RIS-0707-CCS Management of Safety Related Control, Command and Signalling System Failures.

7.4.9 Employees are required to complete, where possible, the relevant section of the reporting form and provide this to their line manager who will undertake an initial investigation. The severity of the accident/incident/occupational ill health will determine who will complete and/or provide the initial report to the ORR and RAIB (i.e. the Safety Analysis and Reporting Team) and will also determine the type of further investigation that will be undertaken and who will lead the investigation (i.e. RAIB/ORR/Police/rail industry led).

7.4.10 The Safety Analysis and Reporting Team cover each of NRIL's routes/regions and input all information in respect of accidents, incidents and cases of occupational ill health to the SMIS. They also provide reports to RAIB, ORR and the rail industry as required.

7.4.11 An additional arrangement enables the immediate reporting and dissemination of urgent information throughout members of the Railway Group in relation to accidents and failures affecting rail vehicles and equipment. This enables lessons relating to an accident involving one member of the Railway Group to be disseminated to all other members of the Railway to enable appropriate corrective action to be taken quickly. NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice defines how this arrangement is applied by NRIL.

Accident and Incident Investigation

7.4.12 All accidents/incidents occurring on the network are investigated to determine both the basic and underlying causes and identify appropriate corrective action in order to prevent, or reduce, the risk of their recurrence. Some types of accident/incident will not be the subject of a NRIL led investigation, as the type of accident may only require the completion of a standard accident report form that will capture the causes of the accident/incident, e.g. trespasser fatalities and suicides.

7.4.13 The actual and potential consequences of the accident/incident and potential for learning will determine the level and type of investigation that will be undertaken and who will lead an investigation. Investigations will be undertaken by:

- An industry member (Local and Formal Investigations in accordance with RGS GO/RT3119 Accident and Incident Investigation)
- RAIB
- The ORR or Health & Safety Executive (including Public Inquiries)
- The British Transport Police
- A coroner

7.4.14 RAIB is the body responsible for the independent investigation of rail accidents and is required to investigate certain types of accidents and incidents. Formal interface arrangements are established between NRIL and the RAIB through the Director Regulator Liaison. All parties in the Railway Group, or those undertaking work on their behalf, have a duty to cooperate in accident investigations.

Reporting of Accidents and Incidents

7.4.15 NR Standard NR/L2/INV/002 Accident and Incident Reporting and Investigation is additional to the statutory reporting requirements of Railways (Accident Investigation and Reporting) Regulations (RIDDOR) 2013, and mandates the use of the Reporting and Investigation Manual:

- To provide a consistent, comprehensive and structured process:
  - For the reporting of accidents and incidents
  - For the investigation of accidents and incidents in order to prevent, or reduce the risk of, their recurrence, without apportioning blame or liability
  - That enables information obtained from investigations to be shared with, and used by, organisations with a direct responsibility for maintaining, or improving railway safety
- So that:
  - The requirements of RGSs GO/RT3119 Accident and Incident Investigation and GE/RT8047 Reporting of Safety Related Information are met
  - Accurate information is provided to the SMIS
  - Action plans from investigation reports are accepted by the responsible Designated Competent Person (DCP) for managing their implementation, tracking and closure once complete
  - Recommendations from investigation reports, including those carried out by other parties, are systematically considered, implemented where appropriate, and tracked to completion
- To assist in:
  - Assessing safety risks
  - Monitoring safety performance, and compliance with NRIL's health and safety management arrangements

7.4.16 Typical maintenance and operational accidents and incidents could include:

- Collisions
- Derailments
- Collisions with objects
- Collisions with road vehicles at level crossings
- Striking people on the line

7.4.17 NRIL's Reporting and Investigation Manual incorporates a set of NRIL Level 3 standards to provide consistent, comprehensive and structured processes for the investigation of accidents and incidents without apportioning blame or liability. The manual covers:

- Reporting of accidents, incidents and occupational ill health
- Reporting of accidents, incidents and occupational ill health to SMIS
- Communicating with Outside Parties on accidents and incidents
- Irregular Working – Reporting and Risk Ranking
- Statutory reporting of accidents, incidents and occupational ill health
- Advising Safety Representatives of accidents and incidents
- NRIL and National Safety Authority (ORR) interface and liaison arrangements

- Reporting of and responding to enforcement action
- Management of ORR inspection plan findings report
- Deciding the lead organisation and level of investigation
- External agency investigations
- NRIL led investigations
- Investigations led by other Railway Group members
- Tracking of investigations, recommendations and local actions
- Management of recommendations and local actions

7.4.18 NR Standard NR/L3/INV/3001/RIM114 Advising Safety Representatives of Accidents and Incidents describes the process for the reporting of accidents, incidents and occupational ill health to health and safety representatives.

7.4.19 NR Standards NR/SP/CTM/032 Training, Competence and Assessment in Accident and Incident Investigation, and NR/L3/NSC/313/SP-2.06 Incident Investigation and Safety of the Line, for specific operations investigations, detail the competence arrangements for employees undertaking accident and incident investigation activities, i.e. Designated Competent Person (DCP) and lead investigators (LINs).

7.4.20 The competence requirements for DCPs and Lead Investigators is part of the Skills Assessment Scheme. The DCP is considered competent by virtue of the skills, knowledge and experience required for the post they hold. This is supplemented by a briefing available from the Senior Investigators to help DCPs understand the requirements of the role. This briefing will be supplemented further by an e-learning module for new DCPs.

7.4.21 In order to attain competence, an investigator must:

- Attend an approved training course
- Undergo an initial period of mentoring/workplace support

7.4.22 Lead Investigator (LIN) competence will be required to lead an investigation and this can be achieved by either:

- Completing the Accident Investigation Learning Programme
- Completing the Accident Investigation Refresher training, for staff who hold the INV1 or INV2 competence

7.4.23 A DCP is appointed for accidents/incidents with responsibility to determine how the accident/incident should be investigated. The level of investigation is based on an assessment of the actual and potential severity of the accident/incident. The Reporting and Investigation Manual includes the process that defines the levels of investigation and covers the most common accidents and incidents which occur during the operations on, or maintenance and renewal of the network. It is also used to help determine the lead function for each type of accident/incident.

7.4.24 Where appropriate, the DCP appoints a lead investigator to conduct the investigation. The DCP determines the remit for the investigation. The remit identifies the lead investigator for the investigation, its scope and the timescale for its completion.

7.4.25 Effective investigation requires the preservation of evidence both on and off site. NRIL liaises, as appropriate, with other members of the Railway Group, RAIB**,** and other regulatory bodies so that the relevant evidence is preserved, made available and subject to specialist testing as necessary. Appropriate specialists are

involved, as necessary, for the examination and interpretation of evidence as an input to the investigation process.

7.4.26 The lead investigator advises the DCP immediately if any urgent safety matters are discovered during the investigation, following which the DCP instigates the process of communicating such matters to Railway Group members in accordance with NR Standard NR/L2/OPS/035 Dissemination of Urgent Operating Advice.

7.4.27 The lead investigator produces a report that is reviewed, with the involvement of the DCP, to confirm that the immediate and underlying causes have been established. Local actions arising from investigation reports are accepted by the DCP who is responsible for managing their implementation, tracking and sign-off once complete. Information obtained from investigations is shared with organisations that have a responsibility for maintaining or improving railway safety.

7.4.28 The NR Standard NR/L3/INV/3001 Reporting and Investigation Manual incorporates processes for tracking the progress of investigations and the review and management of associated recommendations based on the type and level of investigation.

7.4.29 The Investigation's Handbook provides guidance on each stage of the investigation process to NRIL's DCPs and Lead Investigators.

Investigations Led by Other Organisations

7.4.30 In the majority of instances NRIL take the responsibility and will lead the investigation.

7.4.31 Significant railway accidents will be investigated by RAIB, and NR will ensure close cooperation with RAIB Inspectors. NRIL front line operational on-call managers are trained to act as a Train Operator Liaison Officer (TOLO).

7.4.32 Where a Rail Industry Duty Holder is the lead body for investigating an incident, the Corporate Assurance Manager will be responsible for agreeing the investigation remit on behalf of NRIL, and for ensuring NRIL employees are made available as necessary for conduct of the investigation.
SP-2.06 Safety of the Line Investigations prescribes the arrangements to meet the requirements of safety of the line investigations and interface with other railway industry parties for OTM Driving outside possessions. Operations Supervisors carry out investigation into all SPADs and other Safety of the Line Incidents in accordance with SP-2.06 Safety of the Line Investigations

7.4.33 NRIL will ensure that staff cooperate with any other party leading an investigation, including RAIB, ORR, and British Transport Police.

Systems for Analysis and Review

7.4.34 The purpose of investigation into accidents/incidents is to determine the sequence of events, to identify the causal and any underlying factors and to recommend measures to prevent future re-occurrence. NRIL's processes for the reporting and investigation of accidents and incidents, including the management of recommendations and local actions (see HSMS 7.1 Health and Safety Performance Indicators), are included within NR Standard NR/L3/INV/3001 Reporting and Investigation Manual. The overarching NR Standard is NR/L2/INV/002 Accident and Incident Reporting and Investigation.

7.4.35 Recommendations may be directed towards NRIL from the following sources:

- Judicial and HSE Inquiries
- RAIB Investigation Reports
- Industry Formal or Local Investigation Reports
- Coroner's Inquests

7.4.36 The process for managing and tracking recommendations from these sources within NRIL is well established and is detailed in NR Standards NR/L3/INV/3001/RIM301 Tracking of Investigations, Recommendations and Local Actions and NR/L3/INV/3001/RIM302 Management of Recommendations and Local Actions.

7.4.37 Reports and recommendations arising from RAIB Investigations and NRIL led Formal Investigations are reviewed by the National Recommendations Review Panel (NRRP), which meets every four weeks. The NRRP also review recommendations from Coroner's Inquests or Public Inquiries.

Process for Dealing with National Incident Reports

7.4.38 NRIL arrangements for dealing with National Incident reports is defined in NR Standard NR/L1/RMVP/0001 Plant and Traction and Rolling Stock (T&RS) Policy.

Learning from Experience

7.4.39 NRIL's processes for the reporting and investigation of accidents and incidents, including the management of recommendations and local actions are included within the Reporting and Investigation Manual The overarching NR Standard is NR/L2/INV/002 Accident and Incident Reporting and Investigation.

7.4.40 The findings are subject to scrutiny, interpretation and analysis such that key findings and trends can be reported and acted upon.

7.4.41 Safety intelligence gained through Safety Assurance activities is also supplemented by the receipt of findings from external or independent assurance activities and other forms of safety intelligence such as:

- **Regulatory Review/Monitoring** - These are assurance activities undertaken by external regulatory bodies such as the ORR or HSE. The outputs can range from Inspection Plan findings to Enforcement Action
- **Independent External/Internal, or Audit/Challenge** - This includes assurance activity undertaken by external non-regulatory sources (either internally or externally commissioned). It includes action taken in response to findings from RAIB and non-NRIL led Industry Investigation reports. It can also include investigation into concerns raised through correspondence (e.g. Trade Unions, Train/Station Operators, Public Enquiries, government departments or the general public) or through industry confidential reporting channels (e.g. CIRAS)
- **NRIL led Accident and Incident Investigations** (see HSMS 7.4 Accident and Incident Reporting and Investigation)
- **Functionally independent Internal audits** - Conducted by NRIL's Technical Authority or Internal Audit functions (see HSMS 7.3.60 Safety Assurance – ORR Inspection Plan). Using these intelligence sources in combination provides a wider perspective upon which to review the risks and controls and to adjust monitoring activities as appropriate.

7.4.42 Key findings and trends are regularly reported to the Board, ELT and senior management through channels such as the Health, Safety and Sustainability Coordination (HSSC) meeting or the Safety, Health & Environment (SHE) Committee. This takes the form of papers sponsored by the relevant Functional Director/Managing Director Region (MDR) or as part of a cross-functional paper prepared by the Technical Authority.

7.4.43 Functional Directors/ Managing Directors Regions (MDRs) are required to regularly review and confirm that the blend and depth of safety assurance activities is correct, taking into account the results of safety assurance activities and changing risk. This takes into account any revision to responsibilities/accountabilities as a result of organisational change.

7.4.44 NRIL's arrangements for auditing are further defined in NR Standards NR/SP/ASR/036 Network Rail Assurance Framework and NR/L3/RMVP/1006 Technical Audit Procedure for Plant and Traction and Rolling Stock.

7.4.45 The NRIL assurance framework aims to provide the Board and management groups with confidence in the levels of compliance with NRIL's HSMS, formal organisation standards, procedures, legislation, and contractual requirements. This specification sets out to clearly and concisely explain the different levels of audit and the self-assurance processes within NRIL, and how to plan, carry out and review these effectively.

7.4.46 All corrective actions are tracked via the NRIL Safety Assurance Tool CMO which includes actions and recommendations from audits, accident investigations, ORR inspection reports, inspections and safety conversations.

7.4.47 Managing and tracking recommendations from within NRIL is well established and is detailed in NR Standards:

- NR/L3/INV/3001/RIM301 Tracking of Investigations, Recommendations and Local Actions
- NR/L3/INV/3001/RIM302 Management of Recommendations and Local Actions
- NR/L3/INV/3001/RIM117 Management of Recommendations from ORR Inspection Plan Reports

7.5 Contractor Safety Performance

7.5.1 NRIL's contractors are required, through contract terms, to meet all relevant standards and to deliver specific levels of performance in identified areas. The delivery functions, with the support of the Heads of Disciplines, are responsible for implementing a programme of monitoring to confirm these standards are being met.

7.5.2 The results of contractor monitoring are formally reviewed on a regular basis during the life of each contract/project. At contract or project completion a review of the contractor's performance is formally undertaken, led by the relevant manager. Records of lessons learnt are retained to inform future decisions. For very strategic corporate suppliers these records are consolidated and fed back to the Director, RSSCO (Commercial Services). This information is reviewed on a regular basis through the supplier monitoring and management processes.

7.5.3 Where contractor performance falls below that which is acceptable the Contracts & Procurement Director, Route Services in conjunction with the appropriate functional director will agree specific and targeted interventions.

7.6 Employee Engagement

7.6.1 High engagement equates to high motivation and employees who are highly motivated consistently outperform those that are less motivated. Line managers play a crucial role in motivating their teams to work together to improve performance and to meet the organisations objectives and targets for designing, constructing, operating and maintaining a safe rail network.

7.6.2 Line managers are trained in techniques, and are provided with guidance, for improving motivation. The degree to which employees are motivated and therefore engaged is to be measured using a confidential survey, Your Voice that is run nationally every two years, supplemented with functionally-specific surveys every other year. The results of the survey will be discussed at Board level and cascaded to each line manager and their team. Line managers will use the results to undertake constructive team discussions that form the basis for action plans designed to improve team engagement and performance.

7.7 Reporting of Safety Concerns

7.7.1 Staff are encouraged to discuss any safety concerns they have with their line manager and to report these concerns using the company processes including Close Call and the Accident and Incident Reporting process. Where staff feel these channels are inappropriate, have been ineffective or feel unable to use them then there are confidential and anonymous ways to report.

Speak Out

7.7.2 Speak Out is a confidential reporting service run on NRIL's behalf by an independent company called InTouch. Reporters can leave a voicemail, speak to a professional call handler or report their concern via the Speak Out website. Reporters may also remain anonymous if they wish and are provided with a PIN number that they can call back and check on the status of the report.

7.7.3 Speak Out provides our employees and our delivery partners with a secure way to raise concerns happening in or affecting NRIL and to have these concerns investigated.

Confidential Incident Reporting & Analysis System - CIRAS

7.7.4 The Confidential Incident Reporting and Analysis System (CIRAS) is the confidential incident reporting system for the railway industry. CIRAS provides employees with a confidential and independent way for them to report safety-related concerns without fear of recrimination where they feel unable to report through normal organisation channels (e.g. through line management or other internal reporting procedures).

7.7.5 Safety concerns may be reported to CIRAS either by:

- Phone
- Text message
- Downloading and completing a form from the CIRAS website
- By writing to Freepost CIRAS

7.7.6 CIRAS directs those reports relevant to NRIL to the Corporate Assurance Manager who arranges for their assignment to a lead manager to action. The detailed arrangements are defined in NR Standard NR/SP/RSC/01702 Actions in response to Confidential Incident Reporting and Analysis System (CIRAS) reports.

7.7.7 The lead managers' responses to the reports are reviewed each period by an internal review panel that performs a series of quality checks and confirms that, where reasonably practicable, action has been taken to address the reporter's concerns. Following review and endorsement by the panel, the organisations response is provided to CIRAS who then inform the person who reported the original concern. The identity of the reporter is kept confidential by CIRAS at all times and not disclosed to NRIL or any other party.

7.7.8 The CIRAS organisation publishes a two-monthly newsletter known as The Reporter, summarising some of the key reports that have been received by CIRAS and the responses provided by the relevant rail industry member(s). These newsletters are made available to NRIL employees via the organisation intranet.

7.7.9 The Health, Safety and Sustainability Coordination (HSSC) meeting is provided with a report from the Technical Authority summarising the CIRAS reports received during the period and the number that have been responded to.

7.7.10 The Corporate Assurance Manager is also a member of the CIRAS Committee – an industry committee which meets quarterly and provides overall governance for the system.

8 Learning

8.1 Overview

8.1.1 NRIL uses the knowledge derived from its measurement activities, combined with planned and targeted research, to review the effectiveness of its health and safety management arrangements and drive continual improvement. This deepens its understanding of risk and informs the development of systems and controls based on a philosophy of predict and prevent.

8.1.2 NRIL recognises the importance of learning with other organisations which is made possible through industry groups such as OPSRAM. Learning is also achieved through making appropriate representation at formal liaison meetings including interface meetings on matters of proposed changes, statutory obligations etc. with others to discuss respective safety performance.

8.2 Review of Health and Safety Performance Indicators

8.2.1 Each group of health and safety performance indicators is reviewed by specific safety performance groups at appropriate levels of the organisation on a regular basis. This includes analysis of performance against targets and trends and is used to identify areas for further improvement (see HSMS 7.1 Health and Safety Performance Indicators).

8.3 Business Unit/Functional Review and Analysis of Findings from Assurance Activities

8.3.1 Functional (or Business Unit) Directors have established means for reviewing the findings of monitoring activities on an ongoing basis at all management levels to

identify where corrective and/or preventative action is required to be taken. This includes sharing of good practice where appropriate.

8.3.2 Each quarter the Director or Head of Health, Safety and Environment collates and undertakes an analysis of the assurance findings for their Business Unit. The analysis seeks to draw insights from the findings and specifically in identifying weaknesses in risk controls.

8.3.3 Intelligence is drawn from the following Level 1 assurance activities:

- Safety Conversations
- Planned health and safety inspections
- POS site monitoring
- Route/region-led accident and incident investigations
- Management self-assurance
- Line managers self-assurance
- The route/region safety, health and environment performance report

8.3.4 Additionally, findings from Level 2 and 3 assurance activity that are applicable to the route/region are reviewed, including those from:

- Internal audits
- Findings from ORRs inspection plan activities
- Enforcement action
- RAIB and other independent accident and incident investigations
- Functional audits
- RM3 evaluations
- Engineering verification
- Supplier assurance activity

8.3.5 The findings are subject to scrutiny, interpretation and analysis such that key findings and trends can be reported and acted upon.

8.4 Business Unit/Functional Review

8.4.1 Business Unit/Functional Directors are required to review and confirm that the blend and depth of safety assurance activities is correct; taking into account the results of safety assurance activities and changing risk. This takes into account any revision to responsibilities/accountabilities as a result of organisational change.

8.4.2 This review normally takes places at the Business Unit/Functional Business Assurance Committee.

8.4.3 Key findings and trends are regularly reported to the Board, ELT and senior management through channels such as the Health, Safety and Sustainability Coordination (HSSC) meeting or the Safety, Health & Environment (SHE) Committee. This takes the form of papers sponsored by the relevant Functional Director/ Managing Director Region or as part of a cross-functional paper prepared by the Technical Authority.

8.4.4 The quarterly analysis of the assurance findings for their Business Unit provides a key input for this review.

8.4.5 Using these intelligence sources in combination provides a wider perspective upon which to review the risks and controls and to adjust monitoring activities as appropriate.

8.4.6 The findings from functional audit and engineering verification activities are discussed at the Cross-Functional Quarterly Safety Assurance Review Meeting chaired by the Corporate Assurance Manager and attended by representatives from functional assurance teams. This quarterly meeting reviews the progress being made in delivering the functional audit plan. It additionally provides a forum to discuss the key findings from the following safety compliance activities and sources of safety intelligence:

- Internal audits
- Functional audits
- Engineering verification
- Self-assurance
- Findings from ORRs Inspection Plan activities
- Enforcement action
- RAIB and Industry Investigation Reports
- Inspections and Safety Conversations
- Supplier assurance activity
- SHEP report

8.4.7 The aim is to identify common themes worthy of further analysis and/or intervention. The Health, Safety and Sustainability Coordination (HSSC) meetings are advised of any such themes within the report.

8.4.8 In order to confirm whether the actions taken in response to NCRs have been effective at reducing risk further reviews/audits are agreed. These are either conducted as a standalone follow-up activity or integrated into the remit for the next planned audit.

8.4.9 A review of closed audit actions is undertaken not less than annually to confirm if the actions have been sustained.

8.5 Risk Management Maturity Model (RM3)

8.5.1 NRIL uses the RM3 model as one method of analysing the results from level 2 audits. RM3 describes what excellent management capability looks like by means of a five-point maturity scale for key elements of NRIL's HSMS.

8.5.2 The results from level 2 audits of each route/region are mapped onto their RM3 evaluation to give an annual view of the route/region's maturity against the 26 elements of the RM3 model.

8.5.3 The annual evaluations form an input into the Route/Region and Corporate Assurance Reviews.

8.6 Senior Management Review

8.6.1 NRIL has review mechanisms in place that afford the NRIL Board and management with an overview of safety performance.

8.6.2 The Board's Safety, Health and Environment (SHE) Committee and the ELT receive presentations and review papers that address accidents and incidents, progress with recommendations arising from investigations, and the learning

themes from these. This management review is a critical part of the evaluation of the safe performance of the organisation and focuses on results and opportunities for improvement. This deepens the understanding of risk and informs the development of systems and controls, based on a philosophy of predict and prevent.

8.6.3 The Health, Safety and Sustainability Coordination (HSSC) meeting similarly receive and review papers for the purpose of sharing concerns, lessons learned and best practices. As an executive body, operating at a tactical level, the HSSC meeting monitor, challenge and test the assumptions of the outcomes from accident and investigations (including the work of RAIB) and the National Recommendations Review Panel (NRRP). The HSSC also regularly review NRIL's major risk areas and discuss specific topics with a view to understanding both the current risk profile and its trajectory, so as to take the necessary decisions about actions and resources and give appropriate direction to the business.

8.6.4 Performance against the health and safety performance indicators is published four-weekly in the SHEP (Safety, Health and Environment Performance) report and regularly reviewed at NR Board's Safety, Health and Environment (SHE) Committee, ELT, HSSC meeting and functional Executive Review Meetings (ERMs). Where performance falls short of target or other issues are identified, the reasons are discussed and, where appropriate, actions for improvement are agreed.

8.6.5 NRIL's selected safety performance indicators include:

- Signals Passed at Danger (SPADs)
- Workforce reportable accidents and high potential events
- Defect reports
- Safety critical product and asset failures
- Level crossing risk
- Progress with audit actions and investigation recommendations
- Near misses/close calls
- Random drug and alcohol testing

8.6.6 The key findings from internal audits are reported to the SHE Committee by the Chief Health & Safety Officer (CHSO), including the overall assessment rating. Each quarter, a Safety Assurance Report is also provided to the HSSC meeting, ELT and SHE Committee, detailing:

- Progress being made in delivering the audits against the original audit programme
- Progress being made by management in implementing the actions to address audit findings
- Any actions that are overdue

8.6.7 Summaries of functional audit and engineering verification findings are reported to the HSSC meeting.

8.6.8 The number of open Non-Conformance Reports (NCRs) is reported to the HSSC meeting. Details of overdue NCRs are also highlighted at this meeting. Any areas of concern are escalated to the ELT or SHE Committee as appropriate.

8.6.9 Cascade reporting across the organisation – using the management cascade process – allows for the dissemination of information such as health and safety

performance, follow-up actions from audits and investigations, developments and good practice.

8.6.10 NRIL also encourages – through team meetings and briefings – the reporting of the results of investigations, organisation responses to confidential reports, local actions from self-assurance activity and employee engagement.

8.7 Responding to Enforcement Action

8.7.1 NRIL is subject to enforcement action by a number of authorities, including the ORR, who can issue Improvement Notices or Prohibition Notices under the Health & Safety at Work Act 1974 and associated legislation. The HSE, the Environment Agency (EA), and other enforcing authorities such as Fire Authorities and Local Authorities can also undertake enforcement action, e.g. for a perceived breach of fire safety, local authority or environmental legislation.

8.7.2 NRIL's process for responding to enforcement action is detailed in NR Standard NR/L3/INV/3001 Reporting and Investigation Manual.

8.7.3 On receipt of an enforcement notice, the relevant Managing or Group Director is required to nominate a Lead Manager. In the case of a notice that affects more than one function the Managing or Group Director are required to agree on the appointment of a single Lead Manager.

8.7.4 The Lead Manager is required to consult with other functions in order to nominate mangers to be responsible for developing and implementing the actions to address the requirements of the notice. Where the issues relating to the notice have wider implications (e.g. on other areas not specified in the notice), the Lead Manager also arranges for actions appropriate to address these wider implications.

8.7.5 The Technical Authority maintains a record of the issue of new notices and the progress of actions made to meet the requirements of the outstanding notices, including actions to address any wider implications of the notice.

8.7.6 The enforcement notices and progress with closure of actions are reviewed by the Health, Safety and Sustainability Coordination (HSSC) meeting. As part of this review, the Health, Safety and Sustainability Coordination (HSSC) meeting considers systemic issues and emerging trends, the actions required to address these and progress with the delivery of such actions.

8.7.7 On closure of an Improvement or Prohibition Notice, a paper is presented for endorsement by the Health, Safety and Sustainability Coordination (HSSC) meeting, setting out what actions were taken to close the notice, confirmation that ORR have confirmed closure of the notice, how any wider national implications/lessons have been identified and actions implemented and, if the wider actions are not yet completed, arrangements for tracking these to conclusion.

8.8 Investigation Recommendations

8.8.1 The purpose of investigation into accidents/incidents is to determine the sequence of events, to identify the causal and any underlying factors and to recommend measures to prevent future re-occurrence. NRIL's processes for the reporting and investigation of accidents and incidents, including the management of recommendations and local actions (see HSMS 7.1 Health and Safety

Performance Indicators), are included within NR Standard NR/L3/INV/3001 Reporting and Investigation Manual. The overarching NR Standard is NR/L2/INV/002 Accident and Incident Reporting and Investigation.

8.8.2 Recommendations may be directed towards NRIL from the following sources:

- Judicial and HSE Inquiries
- RAIB Investigation Reports
- Industry Formal or Local Investigation Reports
- Coroner's Inquests

8.8.3 The process for managing and tracking recommendations from these sources within NR is well established and is detailed in NR Standards NR/L3/INV/3001/RIM301 Tracking of Investigations, Recommendations and Local Actions and NR/L3/INV/3001/RIM302 Management of Recommendations and Local Actions.

8.8.4 Reports and recommendations arising from RAIB Investigations and NRIL-led Formal Investigations are reviewed by the National Recommendations Review Panel (NRRP) which meets every four weeks. The NRRP may also be specially convened to review recommendations from Coroner's Inquests or Public Inquiries.

8.8.5 NRIL-led Local Investigation reports and industry member Local and Formal Investigation reports containing recommendations are reviewed by route/region-based Recommendations Review Panels (RRPs). Reports containing recommendations of national significance are referred to the NRRP following endorsement by the RRP. Similarly, NRRP may direct recommendations of a local nature to the relevant Route RRP.

8.8.6 At the NRRP or RRP each recommendation directed towards NRIL is considered in turn to determine whether it should be accepted or rejected.

8.8.7 Where a recommendation is accepted a Lead Manager is allocated, and a target timescale for completion of the recommendation is determined. Following the NRRP/route or region RRP meeting the Lead Manager is advised of the recommendation and is required to confirm their acceptance. The Lead Manager is also required to identify the action(s) proposed in response to the recommendation including timescales - known as the Action Plan. In the case of RAIB Investigations the Action Plans are then ratified by the Health, Safety and Sustainability Coordination (HSSC) meeting before the ORR are advised. Action Plans in response to recommendations from NRIL led Industry Formal Investigations classified as Serious Accidents are also ratified through submissions to the Health, Safety and Sustainability Coordination (HSSC) meeting.

8.8.8 Where a recommendation is rejected the reasoning behind the rejection is captured.

8.8.9 Recommendations are sometimes accepted and closed if the action required to address the recommendation has already been undertaken and evidence of this can be provided within a detailed Closure Statement.

8.8.10 In the case of accepted recommendations, progress towards closure is tracked by Action Tracking Coordinators (for recommendations originating from NRRP), and by SHE Analysis & Reporting Specialists (for recommendations originating from

Route RRPs). Lead Managers are requested to provide regular updates to the relevant Action Tracking Coordinator/SHE Analysis & Reporting Specialist.

8.8.11 An Annexe to the safety performance report - published each period - details the status of all recommendations from the RAIB Investigations and the status of overdue recommendations from NRIL led Formal Investigations and any national recommendations originating from RRPs.

8.8.12 When the actions taken to address a recommendation are considered to be complete the lead manager provides a Closure Statement to the RPC or SRS as appropriate. In the case of recommendations arising from RAIB, Formal and Local investigations and being managed at HQ (Headquarter's) level the Closure Statement must be endorsed by the lead managers Functional (or Business Unit) Director. Once the recommendation is closed the SMIS is updated and, in the case of RAIB recommendations, the ORR is informed.

8.8.13 If for any reason the original timescales cannot be met then the Lead Manager must inform the RPC or SRS as appropriate. In the case of recommendations tracked by NRRP the Lead Manager must prepare a Timescale Extension request and this must be signed by the Lead Managers Functional (or Business Unit) Director and further ratified by the Health, Safety and Sustainability Coordination (HSSC) meeting. For recommendations tracked by route/region RRPs then the request for a timescale extension is tabled at the RRP for discussion and agreement.

8.8.14 Further guidance for recommendation owners is available on Connect.

8.8.15 In order to establish if the action(s) taken to address Level 3 formal and RAIB investigation recommendations have been effective, Level 2 assurance (FAP) will assess the implementation of critical and high risk controls that have been modified and sample reviews/audits on closed recommendations will be undertaken as part of the Internal Audit programme. These reviews/audits are undertaken in consultation with subject matter experts, to establish whether the modified control has been effectively designed and operated to address the intent of the recommendation.

8.9 Evaluation of Safety Leadership

8.9.1 As part of the health and safety management process, there will be regular evaluation of the maturity of safety leadership within NRIL, and its supply chain. This will be reported to the NRIL Board, and also form part of the RM3 return to ORR.

8.10 Review of the Health and Safety Management System

8.10.1 The Group Safety & Engineering Director is overall custodian of the HSMS. The CHSO maintains regular liaison with ORR to exchange views regarding the contents of the system, NRIL's compliance with it, and to discuss any proposed major/substantial changes. The CHSO gathers information gained from this and other sources such as audit reports and accident recommendations and is responsible for reviewing the contents of the system in light of that information. Where necessary, the Group Safety & Engineering Director recommends appropriate HSMS revisions to the Health, Safety and Sustainability Coordination (HSSC) meeting.

8.10.2 The CHSO undertakes an on-going review of the contents of the HSMS over the five-year period of validity of the Safety Authorisation. Where this review reveals the need for revisions, the CHSO will prepare the necessary changes and, where necessary, submit them to the ORR for acceptance. The Risk Maturity Model (RM3) is one of the tools used to assist with the ongoing review of the HSMS.

8.10.3 Every five years the overall HSMS is subject to independent audit by an external auditor.

8.10.4 The SHE Committee meet formally at least four times a year to discuss: the follow up actions from previous meetings, and to review the HSMS inputs and outputs:

- HSMS inputs:
  - Results of internal audits and evaluations of compliance with applicable legal requirements and with other requirements to which the organisation subscribes (this includes a review of the effectiveness of corrective and preventative actions in response to Internal audit findings and investigation recommendations)
  - The results of participation and consultation
  - Relevant communication(s) from external interested parties, including complaints
  - The safety, health and wellbeing performance of the organisation
  - The extent to which objectives have been met
  - Status of incident investigations, corrective actions and preventive actions
  - Follow-up actions from previous management reviews
  - Changing circumstances, including developments in legal and other requirements related to safety, health and wellbeing
  - Recommendations for improvement
- HSMS outputs:
  - Safety, health and wellbeing performance
  - Safety Vision and safety, health and wellbeing strategies, policies and objectives
  - Resourcing requirements
  - Any other elements activities related to the HSMS
  - Relevant outputs from Management Review Meetings shall be made available for communication and consultation

8.11 ORR Inspection Plan Reports

8.11.1 Each year, ORR advises NRIL of its inspection plan, including details of the inspections to be undertaken. On completion of each inspection, the ORR provides NRIL's Lead Contact with a report, including any recommendations, at either national or local level.

8.11.2 NRIL's process for learning from ORR Inspection Reports, and tracking subsequent improvements, is defined in NR Standard NR/L3/INV/3001/RIM117 Management of Recommendations from ORR Inspection Plan Reports.

8.11.3 On receipt of an inspection report, a nominated Assurance Coordinator (national or local) reviews the report to identify any recommendations. Where a recommendation is accepted, the Assurance Coordinator appoints a lead manager to progress the relevant actions.

8.11.4 The Assurance Coordinator tracks progress with the implementation of these actions and advises the ORR Lead Inspector of progress. Progress with the actions to address each recommendation is included in the periodic SHEP report.

8.11.5 When the actions to address a recommendation have been completed, the Lead Manager notifies the Assurance Coordinator who considers whether further assurance is required to verify closure. The Assurance Coordinator then advises the ORR Lead Inspector that the recommendation is closed.

8.11.6 Progress with closure of actions in respect of recommendations arising from ORR inspection reports are reviewed by the Health, Safety and Sustainability Coordination (HSSC) Meeting each quarter.

8.12 Review of Findings from the Internal Audit Programme

8.12.1 The key findings from Internal Audits are reported to the SHE Committee by the Chief Health & Safety Officer including the overall audit assessment rating. Each quarter a Safety Assurance Report is also provided to the Health, Safety and Sustainability Coordination (HSSC) Meeting, ELT and SHE Committee detailing:

- Progress being made in delivering the audits against the original audit programme
- Progress being made by management in implementing the actions to address audit findings
- Any actions that are overdue

8.13 Review of Findings from Safety Assurance Activities

8.13.1 Summaries of Functional Audit and Engineering Verification findings are reported to the Health, Safety and Sustainability Coordination (HSSC) meeting.

8.13.2 The number of open NCRs is reported to the Health, Safety and Sustainability Coordination (HSSC) meeting. Details of overdue NCRs are also highlighted at the same meeting. Any areas of concern are escalated to the ELT or SHE Committee as appropriate.

8.14 Deep Dive Reviews

8.14.1 Each review covers the strategies, policies, initiatives, risk exposure, targets and performance of NRIL in respect of each catastrophic risk theme.

8.14.2 These reviews are undertaken by the SHE Committee and are also considered at ELT and the Health, Safety and Sustainability Coordination (HSSC) meeting.

8.14.3 Each review provides a number of recommendations/actions to address the review findings and these are progressed in accordance with the organisations recommendations management process via the National Recommendations Review Panel (NRRP), recorded in NRIL's organisation-wide assurance database and are tracked through to completion.

8.14.4 Embedded within the industry Safety Risk Model (SRM), are a number of factors which benefit from being disaggregated to enable a more thorough discussion at NRIL's Board Safety Health & Environment (SHE) Committee.

8.14.5 The SHE Committee therefore considers in detail the six catastrophic risk themes aligned to train accidents within the industry SRM, at regular meetings during the course of the year:

- **Risk of a train collision**: The integrity of the signalling system in maintaining separation of trains

- **Risk of a train derailment**: The integrity of the track system in maintaining safe train movements
- **Risk of a train derailment or collision**: The integrity of the earthworks in maintaining safe train movements
- **Risk of a train derailment or collision**: The integrity of structures in maintaining safe train movements
- **Risk of a train derailment or collision with road vehicle**: The integrity of level crossings and the lineside in maintaining safe train movements
- **Risk of a train derailment or collision**: The integrity of operational practices in maintaining safe movement of trains

8.14.6 The purpose of each review is: to review the strategies, policies, initiatives, risk exposure, targets and performance of NRIL, and where appropriate of its partners, suppliers and contractors.

8.14.7 The outcome of each review is to reach:

- A common understanding of the risk and its causes
- A view on the level of risk reduction expected
- Agreement on the on-going monitoring of performance in this area
- Agreement on the future strategy for managing the risk

8.14.8 An in-depth review of each of the catastrophic risk themes is undertaken on an annual basis. The Committees consideration of each catastrophic risk theme is supported by a presentation (with supporting detail available if required).

8.14.9 The considerable and underpinning detail within each review (including an appropriate summary of the analysis) is presented to the ELT and the SHE Committee for discussion. Any residual issues resulting from the discussion are normally be dealt with by a post-meeting note as opposed to a follow-up paper.

8.14.10 Recommendations and associated actions are processed via the National Recommendations Review Panel (NRRP), recorded in NRIL's organisation-wide assurance database, and are tracked through to completion.

8.15 Standards Review

8.15.1 Standards Steering Groups assess the requirement to create new standards in response to changes in legislation, RGS, RIS or NRIL policy. They also review each relevant standard as part of a defined programme. The assessment/reviews determine the need for either standards creation, or amendment or withdrawal (including the associated costs, resources and broader implications), that are to be undertaken to a defined remit and following endorsement by the Standards & Controls Group (SCG).

8.15.2 NRIL will propose amendments to RGSs where, following review, it is identified as appropriate to deliver a safer or more cost-effective railway.

9 Appendices

9.1 Appendix 1 - The National Rail Network – Our Regions and Routes

We are divided into five regions and 14 routes to enable us to work closely with the train operating companies.

	Regions
	Eastern
	North West & Central
	Scotland's Railway
	Southern
	Wales & Western

	Regions, Routes and Network Rail-managed Stations	
	Region:	Eastern
	Routes:	East Coast North & East East Midlands Anglia
	Stations:	King's Cross Leeds Liverpool Street
	Region:	North West & Central
	Routes:	North West Central West Coast Mainline South
	Stations:	Birmingham New Street Euston Liverpool Lime Street Manchester Piccadilly
	Region:	Scotland's Railway
	Route:	Scotland
	Stations:	Edinburgh Waverley Glasgow Central
	Region:	Southern
	Routes:	Kent Network Rail High Speed (Separate safety authorisation) Sussex Wessex
	Stations:	Cannon Street Charing Cross Clapham Junction Guildford London Bridge St. Pancras (Separate safety authorisation) Victoria Waterloo
	Region:	Wales & Western
	Routes:	Wales Western
	Stations:	Bristol Temple Meads Paddington Reading

	Regions and Train Operating Companies (TOCs), Metro Operators and Tram Operators		
	Eastern	Trenitalia c2c Hull Trains Arriva Rail London Govia Thameslink Railway Abellio ScotRail Tyne & Wear Metro Northern Trains Ltd East Coast Trains Ltd East Midlands Railway (EM)	Grand Central Abellio East Anglia LNER MTR Crossrail Ltd TransPennine Express West Midlands Trains South Yorkshire Supertram North Yorkshire Moors Railway
	North West & Central	Avanti West Coast Chiltern Railways Arriva Rail London West Midlands Trains Northern Trains Ltd Transport for Wales Govia Thameslink Railway Manchester Metrolink	Serco Caledonian Sleepers East Midlands Railway (EM) London Underground MerseyRail ScotRail TransPennine Express Great Western Railway Abellio Scotrail
	Scotland	Avanti West Coast LNER TransPennine Express	Serco Caledonian Sleepers Abellio ScotRail
	Southern	Eurostar Arriva Rail London MTR Crossrail Govia Thameslink Railway	Great Western Railway London Underground SE Trains Ltd South Western Railway
	Wales & Western	Avanti West Coast Heathrow Express South Western Railway West Midlands Railway	Great Western Railway MTR Crossrail Ltd Transport for Wales Chiltern Railways
	System Operator	Colas Rail Cross Country Trains DB Cargo UK DC Rail Direct Rail Services (DRS) Freightliner (GW&C) GB Railfreight Hanson & Hall Rail Solutions	Locomotive Services Ltd Rail Operations Group SLC Operations Ltd Varamis Ltd Victa Railfreight Vintage Trains West Coast Railways West Coast Traincare Ltd
	Route Services	Babcock Rail Balfour Beatty Colas Rail Harsco Rail Ltd	Loram UK Ltd Swietelsky Construction Ltd Volker Rail

9.2 Appendix 2 - List of Regions Interfacing Passenger Railway Infrastructure and Independent Station Infrastructure Managers

	Regions and Interfacing Passenger Railway Infrastructure and Independent Station Infrastructure Managers		
	Eastern	Great Central Railway (Nottingham) Rail for London Ltd Rail for London (Infrastructure) Ltd Middleton Railway (Leeds) Nene Valley Railway (Peterborough) North Norfolk Railway (Sheringham) Peak Rail Midland Railway Trust	Keighley & Worth Valley Railway (Keighley) London Underground Ltd Mid Norfolk Rail (Wymondham) Network Rail High Speed Ltd North York Moors Railway (Grosmont) London Southend Airport Ltd Ecclesbourne Valley Railway Wensleydale Railway Weardale Railway Nottingham Express Transit
	North West & Central	Chinnor and Princes Risborough Railway Manchester Metrolink West Midlands Metro East Lancs Railway (Heywood)	London Underground Ltd Ribble Steam Railway (Preston) Severn Valley Railway (Kidderminster) TfGM (Horwich Parkway)
	Scotland	Bo'ness & Kinnell Railway (Bo'ness South)	Strathspey Railway (Aviemore) Glasgow Prestwick Airport
	Southern	Bluebell Railway Docklands Light Railway London Underground Ltd Network Rail (High Speed) Ltd Spa Valley Railway Mitie Technical Facilities Ltd Rother Valley Railway	London & Continental Railways (Cheriton) Mid Hants Railway (Alton) Rail for London Ltd Swanage Railway
	Wales & Western	Amey Keolis Infrastructure Ltd Barry Tourist Railway Dartmoor Railway East Somerset Railway (Cranmore) Ffestiniog & Welsh Highland Railway Rail for London (Infrastructure) Ltd Paignton & Dartmouth Steam Railway (Paignton) Welsh Highland Railway	Bodmin & Wenford Railway Dean Forest Railway (Lydney) Ffestiniog Railway (Blaeneau Railway) Great Western Society (Didcot) London Underground Ltd South Devon Railway Trust (Totnes) West Highland Railway West Somerset Railway (Taunton) Heathrow Airport Ltd

9.3 Appendix 3 – Key Safety Posts

Key Safety Post	Function / Region	Function / Route
Chief Executive Network Rail		
Group Director Communications	Corporate Communications	
Group Director Human Resources	Human Resources	
Managing Director Property	CFO Directorate	
Property Director (Region)	Region	
Managing Director, Route Services	Route Services	
Chief Design Engineer	Route Services	
Supply Chain Operations Director	Route Services	Supply Chain
Alliance Director (HO)	Route Services	
Director Fleet & Engineering	Route Services	Supply Chain Operations
Group Chief Information Officer	Route Services	
Head of Fleet Maintenance	Route Services	Supply Chain Operations
Health Safety & Environment Director	Route Services	
Principal Driving & Operational Standards Expert	Route Services	Supply Chain Operations
Principal Engineering Manager	Route Services	
Production Director (HO)	Route Services	
Director, Technical Services	Route Services	
Principal Engineer (RIDC)	Route Services	
Director, Telecoms Asset Management	Route Services	
Head of Operations (Telecoms) GSM-R/Telecoms	Route Services	
Head of Telecoms (Asset & Performance Management) GSM-R/Telecoms	Route Services	
Principal Engineer (TPCMS)	Route Services	
Director, Freight, National, Passenger & Customer	System Operator	
Network Operations Director	System Operator	
National Head of Stations Strategy & Delivery	System Operator	
Capacity Planning Director	System Operator	
Head of Timetable Production (Delivery)	System Operator	
Head of National Operations Centre	System Operator	
Head of Operational Access & Principles	System Operator	
Head of Operational Safety and Assurance	System Operator	
Train Operations Principles & Standards Expert	System Operator	

Key Safety Post	Function / Region	Function / Route
Head of Operational Resilience and BTP Relationship	System Operator	
Head of Crime, Security Contingency and BTP Liaison	System Operator	
Director Operational Capability	System Operator	
Security and Contingency Planning Specialist	System Operator	
Group Safety & Engineering Director	Technical Authority	HQ Based
Chief B&C Engineer	Technical Authority	HQ Based
Chief CCS Engineer	Technical Authority	HQ Based
Chief Engineer	Technical Authority	HQ Based
Chief M&E Engineer	Technical Authority	HQ Based
Chief Medical & Welfare Officer	Technical Authority	HQ Based
Chief Health &Safety Officer	Technical Authority	HQ Based
Chief Security Officer	Technical Authority	HQ Based
Chief Track & S&C Engineer	Technical Authority	HQ Based
Head of Corporate Safety	Technical Authority	HQ Based
Head of Ergonomics	Technical Authority	HQ Based
Head of Fire Safety	Technical Authority	HQ Based
Head of Level Crossing & Public Safety	Technical Authority	HQ Based
Head of Rail Technology	Technical Authority	HQ Based
Head of Security Governance	Technical Authority	HQ Based
Head of Systems Authority	Technical Authority	HQ Based
Principal Operations Safety Specialist	Technical Authority	HQ Based
Network Technical Head Buildings & Architecture	Technical Authority	HQ Based
Network Technical Head Contact Systems	Technical Authority	HQ Based
Network Technical Head Drainage & Off-Track	Technical Authority	HQ Based
Network Technical Head Geotechnical	Technical Authority	HQ Based
Network Technical Head Level Crossing Engineering	Technical Authority	HQ Based
Network Technical Head Maintenance Principles & Standards	Technical Authority	HQ Based
Network Technical Head Mining & Tunnels	Technical Authority	HQ Based
Network Technical Head Plant	Technical Authority	HQ Based
Network Technical Head Power Distribution	Technical Authority	HQ Based
Network Technical Head Signalling	Technical Authority	HQ Based
Network Technical Head Structures	Technical Authority	HQ Based
Network Technical Head Switches and Crossings	Technical Authority	HQ Based
Network Technical Head System Compatibility & Traction and Rolling Stock	Technical Authority	HQ Based
Key Safety Post	**Function / Region**	**Function / Route**

Network Technical Head Track	Technical Authority	HQ Based
Network Technical Head S&C	Technical Authority	HQ Based
Alliance Director (Track)	Region	
Asset Strategy Manager (Discipline)	Region	
Capital Delivery Director	Region	
Capital Programme Director (Track/Signalling)	Region	
Current Operations Manager (Pre-ICC)	Region	Route
Deputy Capital Delivery Director	Region	
Director, Engineering & Asset Management	Region	
Director Industry Partnership Digital (Eastern)	Region	
Electrical Control Room Operator Manager	Region	Route
Head of Asset (Discipline)	Region	
Head of Asset Management	Region	
Head of Asset Protection & Optimisation	Region	
Head of Control	Region	
Head of Engineering & Assurance	Region	
Head of Infrastructure Delivery	Region	
Head of Integrated Control	Region	
Infrastructure Director	Region	
Head of Network Delivery	Region	
Operations Director	Region	
Head of Operational Safety (Scotland)	Region	
Operations Director	Region	
Head of Regional Health & Safety	Region	
Head of Route Quality, Health, Safety & Sustainability	Region	
Head of Route Safety Health & Environment	Region	
Head of Security Crime and Resilience	Region	
Head of Signalling Operations	Region	
Health, Safety & Environment Director NW&C	Region	
Infrastructure Delivery Manager	Region	Route
Infrastructure Director	Region	
Infrastructure Maintenance Delivery Manager	Region	Route
Infrastructure Maintenance Engineer	Region	Route
Local Operations Manager	Region	Route
Major Programme Director (Northern Programmes)	Region	
Key Safety Post	**Function / Region**	**Function / Route**
Managing Director, North West & Central	Region	

Managing Director, Scotland's Railway	Region	
Managing Director, Southern	Region	
Managing Director, Wales & Western	Region	
National Telecoms Asset & Performance Manager	Region	
Network Delivery Manager	Region	
Operations Manager	Region	Route
Operations Risk Advisor	Region	Route
Regional Asset Manager	Region	Route
Regional Asset Protection & Optimisation Manager	Region	Route
Regional Director of HSE	Region	
Regional Director of Quality, Health, Safety & Sustainability	Region	
Regional Engineer	Region	
Route Capital Delivery Director (Geographic)	Region	
Route Director	Region	
Route Engineer (Discipline)	Region	
Route Infrastructure Engineer (Discipline)	Region	
Route Operations Manager	Region	Route
Route Programme Director (Works Delivery)	Region	
Security & Contingency Planning Specialist	Region	Route
Senior Operations Manager	Region	Route
Station Operations Manager (Birmingham)	Region	Route
Train Service Delivery Director (NW&C)	Region	Route

9.4 Appendix 4 - Safety Critical Work Posts

Safety Critical Role	Function / Region	Function / Route
Technical & Training Specialist (Operations)	Route Services	
Training Delivery Manager	Route Services	
Workforce Development Specialist	Route Services	
Technical & Training Specialist (ROC Maintenance)	Route Services	
Senior Installation, Test & Commissioning Engineer	Route Services	
Senior Network Support Engineer (GSM-R)	Route Services	
Senior Network Support Engineer (Power, Fibre & Environmental)	Route Services	
Senior Network Support Engineer (Transmission)	Route Services	
Safety Critical Role	**Function / Region**	**Function / Route**
Team Leader (Telecoms)	Route Services	
Installation, Test &	Route Services	

Commissioning Engineer		
Network Support Engineer (GSM-R)	Route Services	
Network Support Engineer (IP)	Route Services	
Network Support Engineer (Planned Works)	Route Services	
Network Support Engineer (Power, Fibre & Environmental)	Route Services	
Network Support Engineer (Systems)	Route Services	
Network Support Engineer (Transmission)	Route Services	
Network Support Engineer (Security)	Route Services	
Service Desk Analyst	Route Services	
System Analyst	Route Services	
Field Technical Support Engineer	Route Services	
Telecoms Support Engineer	Route Services	
Senior Technician Engineer	Route Services	
Network Management Technician	Route Services	
Network Support Engineer	Route Services	
Signal Works Tester	Route Services	
Field Engineer (Telecoms)	Route Services	
Field Technical Support Manager	Route Services	
Network Management Engineer (Telecoms)	Route Services	
Incident Manager	Route Services	
National Technical Support Ops	Route Services	
Network Support Engineer (Voice)	Route Services	
Operations Principles & Standards Expert	Route Services	
Senior Network Support Engineer (Systems)	Route Services	
Senior Network Support Engineer (Voice)	Route Services	
Technical Support Engineer	Route Services	
Works Planning Assistant	Route Services	
Senior Network Support Engineer (IP)	Route Services	
Apprentice	Route Services	
Alliance Director (HO)	Route Services	
Apprentice (SCO T&RS & Plant)	Route Services	
Apprentice (Track)	Route Services	
Area Depot Manager (ASMR)	Route Services	
Assistant Delivery Planner (HO)	Route Services	
Assistant Engineer (HO) (Construction)	Route Services	
Safety Critical Role	**Function / Region**	**Function / Route**
Assistant Mobile Plant Engineer	Route Services	

Assistant Signal Designer	Route Services	
Assistant Signal Locking Manager	Route Services	
Assistant Signal Works Tester	Route Services	
Assurance Engineer (HO) (Construction)	Route Services	
Construction Manager	Route Services	
Construction Safety Specialist	Route Services	
Delivery Manager	Route Services	Region
Delivery Manager (HO)	Route Services	Region
Delivery Manager (HO) (Construction)	Route Services	Region
Delivery Planner (HO)	Route Services	Region
Depot Engineering Manager	Route Services	Region
Depot Manager (Holgate)	Route Services	Region
Depot Operations Manager	Route Services	Region
Depot Operations Manager (F&E)	Route Services	Region
Depot Operations Supervisor	Route Services	Region
Depot Operative (Eastleigh LWRD)	Route Services	Region
Design Engineer (HO)	Route Services	Region
Design Engineer (HO) (Track)	Route Services	Region
Design Manager (HO) (Track)	Route Services	Region
Driver	Route Services	Region
Driving & Operations Rules Specialist	Route Services	
Driving Manager	Route Services	Region
Driving Team Leader	Route Services	Region
E&P Engineer (HO) (E&P)	Route Services	Region
Engineer	Route Services	Region
Engineer (HO) (Construction)	Route Services	Region
Engineering Specialist	Route Services	Region
Facilities Manager	Route Services	Region
Fleet Engineer	Route Services	Region
Installation Assistant	Route Services	Region
Fleet Engineer (Plant)	Route Services	Region
Fleet Engineer (Materials Delivery)	Route Services	Region
Fleet Engineering Manager	Route Services	Region
Fleet Engineering Manager (Materials Delivery)	Route Services	Region
Fleet Engineering Manager (MPSB)	Route Services	Region
Fleet Maintenance Manager	Route Services	Region
Fleet Manager	Route Services	
Head of Air Operations	Route Services	
Head of Fleet Maintenance	Route Services	Region
OTM Manager	Route Services	
Installation Team Leader	Route Services	Region
Installer	Route Services	Region
Isolation & Planning Engineer	Route Services	Region
Lead Engineer	Route Services	Region
Lead Engineer (HO) (Construction)	Route Services	Region
Safety Critical Role	**Function / Region**	**Function / Route**
Line Person	Route Services	Region
Locking Assistant	Route Services	Region

Locking Fitter	Route Services	Region
Locking Team Assistant	Route Services	Region
Locking Team Leader	Route Services	Region
Locking Team Member	Route Services	Region
Maintenance Electrician	Route Services	Region
Maintenance Fitter	Route Services	Region
Maintenance Operative (Eastleigh LWRD)	Route Services	Region
Maintenance Planning Specialist	Route Services	Region
Maintenance Supervisor	Route Services	Region
Maintenance Technician	Route Services	Region
Maintenance Technician (HO)	Route Services	Region
Maintenance Workforce Safety & Environment Coach	Route Services	Region
Materials Assistant Fabricator	Route Services	Region
Installation Supervisor	Route Services	Region
Materials Production Manager	Route Services	Region
Mechanical & Electrical Locking Engineer	Route Services	Region
Mechanical & Electrical Locking Fitters Delivery Assistant	Route Services	Region
Mechanical & Electrical Locking Manager	Route Services	Region
Mechanical & Electrical Locking Team Supervisor	Route Services	Region
Mechanical & Electrical Locking Tester	Route Services	Region
Mechanical Locking Assistant	Route Services	Region
Mechanical Locking Fitter	Route Services	Region
Mobile Wheel Lathe Operative	Route Services	Region
National Aerial Survey Specialist	Route Services	
National Lifts & Escalators Delivery & Support Manager	Route Services	
National Lifts & Escalators Delivery Coordinator	Route Services	
National Lifts & Escalators Delivery Manager	Route Services	
On Track Plant Specialist	Route Services	
On Track Plant Specialist (HO) (Track)	Route Services	Region
Operational Logistics Manager	Route Services	
Operational Performance Manager	Route Services	
Operational Planner (HO)	Route Services	Region
Operations Compliance Specialist	Route Services	
Operations Manager	Route Services	
Operations Manager (LF & POM)	Route Services	Region
Operative (HO) (Construction)	Route Services	Region
Operative (Labourer)	Route Services	Region
Operator	Route Services	Region
Safety Critical Role	**Function / Region**	**Function / Route**
OTM Driver & Operator	Route Services	Region
OTM Specialist	Route Services	Region

Principal Delivery Manager (HO) (Construction)	Route Services	Region
Principal Design Engineer (HO) (Track)	Route Services	Region
Operations Delivery Manager (F&E)	Route Services	Region
Operative (Burner)	Route Services	Region
Principal Driving & Operational Standards Expert	Route Services	
Principal Engineering Manager	Route Services	
Principal Fleet Engineering Manager	Route Services	
Production Director (HO)	Route Services	
Programme Manager (Delivery Services)	Route Services	
Programme Manager (MELF)	Route Services	
Programme Manager (National Signal Works)	Route Services	
Programme Manager (OLE Condition Renewals)	Route Services	
Project Engineer	Route Services	
Project Engineer (Signal Works)	Route Services	
Rail Fleet Support Engineer	Route Services	
Rail Loading Operator	Route Services	
Rail Plant Support Engineer	Route Services	
Rail Recovery Supervisor	Route Services	
Regional Facilities Manager	Route Services	
S&T Engineer (HO) (Construction)	Route Services	
S&T Operative (HO) (Construction)	Route Services	
S&T Supervisor	Route Services	
S&T Supervisor (HO) (Construction)	Route Services	
S&T Team Leader (HO) (Construction)	Route Services	
S&T Technician (HO) (Construction)	Route Services	
Safe Work Planner (HO)	Route Services	
Scheme Project Manager (ICE)	Route Services	
Section Planner	Route Services	
Section Planner (ALO)	Route Services	
Section Planner (Signal Works)	Route Services	
Senior Construction Manager	Route Services	
Senior Design Engineer (HO) (Track)	Route Services	
Senior Engineering Manager	Route Services	
Senior Fleet Maintenance Manager	Route Services	
Senior Fleet Maintenance Manager (Non-Ops)	Route Services	
Senior Project Engineer (HO) (E&P)	Route Services	
Safety Critical Role	**Function / Region**	**Function / Route**
Senior Project Engineer (HO)	Route Services	

(Signalling])		
Senior Project Engineer (HO) (Track)	Route Services	
Senior Project Engineer (B&C)	Route Services	
Senior Project Engineer (Signal Works)	Route Services	Region
Senior Project Manager	Route Services	Region
Senior Project Operations Manager	Route Services	Region
Senior Signal Works Tester	Route Services	Region
Senior Testing Engineer (Signal Works)	Route Services	Region
Signal Design Engineer	Route Services	Region
Signal Design Engineer (Signal Works)	Route Services	Region
Signal Engineering Design Manager	Route Services	Region
Signal Principles Designer	Route Services	Region
Signal Works Tester	Route Services	Region
Site Manager	Route Services	Region
Site Manager (Eastleigh LWRD)	Route Services	Region
Site Manager (HO)	Route Services	Region
Site Manager (Holgate)	Route Services	Region
Site Manager (Lifts & Escalators)	Route Services	Region
Site Manager (Crewe)	Route Services	Region
Site Manager (L&E)	Route Services	Region
Site Manager (Westbury)	Route Services	Region
Site Operative	Route Services	Region
Supervisor	Route Services	Region
Supervisor (HO) (Construction)	Route Services	Region
Systems Manager	Route Services	Region
Systems Supervisor	Route Services	Region
Team Leader	Route Services	Region
Team Leader (HO)	Route Services	Region
Team Leader (HO) (Construction)	Route Services	Region
Team Leader (Machine Operator)	Route Services	Region
Technical Specialist (F&E)	Route Services	Region
Technician (HO) (Construction)	Route Services	Region
Welding Inspector (HO) (Construction)	Route Services	Region
Welding Manager (HO) (Construction)	Route Services	Region
Welding Operator	Route Services	Region
Wiring Engineer	Route Services	Region
Works Delivery Manager (Signal Works)	Route Services	Region
Worksite Logistics Manager	Route Services	Region
Absolute Track Geometry Engineer	Region	Route
Safety Critical Role	**Function / Region**	**Function / Route**
Asset Engineer (Building Fabric)	Region	Route

Assistant Electrification & Plant Maintenance Engineer	Region	Route
Assistant Route Communications Engineer	Region	Route
Assistant Signal & Telecoms Maintenance Engineer	Region	Route
Assistant Track Maintenance Engineer	Region	Route
Chief Trains Managers (Birmingham)	Region	Route
Construction Management Assistant	Region	Route
Control Centre Technician	Region	Route
Current Operations Manager (Pre ICC)	Region	Route
Electrical Control Room Operator	Region	Route
Electrification & Plant Maintenance Engineer	Region	Route
Head of Integrated Control	Region	Route
Incident Controller	Region	Route
Incident Officers	Region	Route
Infrastructure Director	Region	
Isolation Planners	Region	Route
Local Operations Manager	Region	Route
Mobile Operations Manager	Region	Route
Operations Controller	Region	Route
Operations Delivery Manager	Region	Route
Operations Delivery Supervisor	Region	Route
Operations Managers	Region	Route
Operative	Region	Route
Operative (B&C)	Region	Route
Platform Staff	Region	Route
Platform Supervisors	Region	Route
Principal Signalling Support Technician	Region	Route
Principal Technical Officer	Region	
Project Engineer	Region	
Rail Management Engineer	Region	
Regional Asset Manager	Region	
Regional Engineer (Discipline)	Region	
Route Communications Engineer	Region	Route
Route Control Manager (Alliance)	Region	Route
Route Operations Manager	Region	Route
Route Engineer (Discipline)	Region	Route
Section Manager	Region	Route
Section Supervisor	Region	Route
Senior Asset Engineer	Region	Route
Senior Asset Engineer (Building Fabric)	Region	
Senior Construction Manager	Region	
Senior Earthworks Management Engineer	Region	
Safety Critical Role	**Function / Region**	**Function / Route**
Senior Operations Delivery Manager	Region	Route

Senior Project Engineer - Signalling	Region	
Senior Signalling Support Technician	Region	
Senior Technical Officer	Region	
Senior Technician	Region	
Shift Signaller Manager	Region	Route
Signallers (including Level Crossing Keeper)	Region	Route
Signal & Telecoms Maintenance Engineer	Region	Route
Signalling Inspector	Region	Route
Signalling Support Technician	Region	Route
Station Operations Manager (Birmingham)	Region	Route
Supervisor (B&C)	Region	Route
S&TINCS Engineer	Region	Route
S&TINCS Technician	Region	Route
Team Leader	Region	Route
Technical Officer	Region	Route
Technician	Region	Route
Track Designer (Absolute Track Geometry)	Region	
Track Maintainers	Region	Route
Track Maintenance Engineer	Region	Route
Track Quality Supervisor	Region	Route
Train Running Controller	Region	Route
Working Supervisor	Region	Route
Works Delivery Manager	Region	Route
Works Delivery Supervisor	Region	Route
Train Operations Principles & Standards Expert	System Operator	
Train Operations Standard and Principal Manager	System Operator	

9.5 Appendix 5 - List of Acronyms and Abbreviations

A			
A2CO	Authority to Change Organisation	AC/DC	Alternating Current/Direct Current
ACOPS	Approved Codes of Practice	ALARP	As Low as Reasonably Practicable
ALCRM	All Level Crossing Risk Model	AMP	Asset Management Policy
AMS	Asset Management Services	AMS	Asset Management Strategy
AMS	Asset Management System	AOCL	Automatic Open Crossing (Locally Monitored)
AOCL+B	Automatic Open Crossing (Locally Monitored) + Barrier	ARC	Audit and Risk Committee
AsBo	Assessment Body	ASPRO	Asset Protection and Optimisation
ATGs	Automatic Ticket Gates	ATPS	Automatic Train Protection System
AWS	Automatic Warning System		

B			
BAU	Business as Usual	BPMF	Business Performance Management Framework
BR/LT	British Rail/London Transport	BS	British Standard
BTP	British Transport Police		

C			
CCT	Common Consequence Tool	CCTV	Closed Circuit Television
CDM	Construction (Design and Management) Regulations 2015	CEFW	Control of Electromagnetic Fields at Work Regulations 2016
CETA	Chief Engineer Technical Authority	CFO	Chief Financial Officer
CIBSE	Chartered Institution of Building Services Engineers	CIOB	Chartered Institute of Building
CIRAS	Confidential Incident Reporting & Analysis System	CMWO	Chief Medical & Wellbeing Officer
CoE	Centre of Excellence	COSHH	Control of Substances Hazardous to Health
COS	Central Operating Section (Elizabeth Line)	COSS	Controller of Site Safety
CPP	Construction Phase Plan	CSAE	Chief Systems Assurance Engineer
CSCG	Company Standards and Controls Group	CSM	Common Safety Method
CSM RA	Common Safety Method for Risk Assessment	CSPGs	Community Safety Partnership Groups
CHSO	Chief Health & Safety Officer	CST	Common Safety Targets
CWR	Continuous Welded Rail		

D			
DCP	Designated Competent Person	DEAM	Director of Engineering and Asset Management
DeBO	Designated Body	DfT	Department for Transport
DoS	Dimensions of Safety	DU	Delivery Unit

E			
EA	Environment Agency	EAP	Employee Assistance Programme
ECM	Entity in Charge of Maintenance	EIM	European Rail Infrastructure Manager
EIS	Entry into Operational Service	ELR	Engineer's Line Reference
ELT	Executive Leadership Team	EMFs	Electromagnetic Fields
ERA	European Rail Agency	ERM	Executive Review Meeting
ERTMS	European Rail Traffic Management System	ETA	Event Tree Analysis
ETCS	European Train Control System	ExCom	Executive Committee

F			
FMEA	Failure Modes and Effects Analysis	FMS	Fault Management System
FNPO	Freight and National Passengers Operators	FRI	Fatigue and Risk Index
FTA	Fault Tree Analysis	FWI	Fatalities and Weighted Injuries

G			
GALP	Group Assurance Letter Process	GB	Great Britain
GDR	Group Digital Railway	GPS	Global Positioning Satellite
GRIP	Governance for Railway Investment Projects		

H			
HAL	Heathrow Airport Ltd	HASAW 1974	Health and Safety at Work Act
HAVS	Hand Arm Vibration Syndrome	HAZID	Hazard Identification
HAZOP	Hazard and Operability Analysis	H&S	Health & Safety
HoS	Head of Sustainability &Consents	HQ	Headquarters
HR	Human Resources	HRSS	Human Resources Shared Services
HSE	Health & Safety Executive	HSMS	Health and Safety Management System
HSMS TU	Health and Safety Management System Transport Undertaking	HSSC	Health, Safety and Sustainability Coordination Meeting
HTA	Hierarchy Task Analysis	HV/LV	High Voltage/Low Voltage

I			
ICE	Institution of Civil Engineers	ICI	Industry Common induction
IECC	Integrated Electronic Control Centre	IET	Institution of Engineering and Technology
IMDM	Infrastructure Maintenance Delivery Manager	IMechE	Institution of Mechanical Engineers
IMR	Industry Minimum Requirements	IMS	Integrated Management System
IP	Infrastructure Projects	IRSE	Institution of Railway Signal Engineers
ISLG	Infrastructure Safety Liaison Group	IWA	Individual Working Alone

J			
JDs	Job Descriptions	JSIP	Joint Safety Improvement Plan
JTA	Job Task Analysis		

K			
KPIs	Key Performance Indicators	KSP	Key Safety Post

L			
LCRIM	Level Crossing Risk Indicator Model	LIN	Lead Investigator
LOI	Letter of Instruction	LOL	London Overground Limited
LSR	Lifesaving Rules	LUCC	London Underground Control Centre
LUL	London Underground Limited		

M			
MCB-OD	Manually Controlled Barrier (Crossing) with Obstacle Detection	MDRs	Managing Directors' of the Regions
MHSWR	Management of Health and Safety at Work Regulations 1999	MSDs	Musculoskeletal Disorders
MSL	(Overlay) Miniature Stop Lights	MSP4NR	Managing Successful Programmes for Network Rail
MSS	Multiple SPAD Signal	MTRC	MTR Corporation (Crossrail) Ltd
MPVs	Multi-Purpose Vehicles		

N			
NCB	Network Certification Body	NCR	Non-Conformance Reports
NIHL	Noise Induced Hearing Loss	NKL	North Kent Lines
NTRs	National Technical Rules	NoBO	Notified Body
NOC	National Operations Centres	NOI	National Operating Instructions
NR	Network Rail	NRAP	Network Rail Acceptance Panel
NRIL	Network Rail Infrastructure Limited	NRIM	Network Rail Interface Manager
NRMI	Network Rail Managed Infrastructure	NRRP	National Recommendations Review Panel
NRT	Network Rail Telecom	NSR	National Safety Rules
NSPSG	National Suicide Prevention Group	NTOM	Network Target Operating Model
NTF	National Task Force	NTSN	National Technical Specification Notice
NVR	National Vehicle Register		

O			
OJEU	Official Journal of the European Union	OLE/ OHLE	Overhead Line Equipment
OHSAS	Occupational Health & Safety Assessment Series	OPSRAM	Operational Risk Reduction and Management
ORR	Office of Rail and Road	OTM	On-Track Machines
OTP	On-Track Plant		

P			
P3M3	Portfolio, Programme and Project Management	PCL	Principal Contract Licensing
PDP	Personal Development Plan	PIC	Person in Charge
PICOP	Person in Charge of Possession	PIM	Precursor Indicator Model
PLO	Process Led Organisation	PLRA	Private Locomotive Registration Agreements
PPE	Personal Protective Equipment	PPF	Putting Passengers First
PPM	Planned Preventative Maintenance	PRFS	Person Responsible for Site Safety
PtED	Prevention Through Engineering and Design	PTI	Platform Train Interface
PTS	Personal Track Safety	PUWER	Provision and Use of Work Equipment Regulations 2002
PWRA	Private Wagon Registration Agreements		

R			
R&D	Research & Development	RACI	Responsible, Accountable, Consulted, Informed
RADAR	Radio Detection and Ranging	RAIB	Rail Accident Investigation Branch
RAM	Route Asset Manager	RCC	Route Control Centre
RDG	Rail Delivery Group	REPACC	Route Emergency Planning and Coordination Committee
RfL	Rail for London Limited	RfLI	Rail for London Infrastructure Limited
RGS	Railway Group Standards	RIAG	Rail Infrastructure Assurance Group
RIBA	Royal Institute of British Architects	RIC	Rail Incident Commander
RICS	Royal Institution of Chartered Surveyors	RIO	Rail Incident Officer
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013	RIHSAC	Railway Industry Health and Safety Advisory Committee
RIS	Railway Industry Standards	RISCC	Rail Industry Standards Coordination Committee
RISQS	Rail Industry Supplier Qualification Scheme	RISSG	Rail Industry Suicide Stakeholder Group
RM3	Risk Management Maturity Model	RMD	Regional Managing Director
RMT	Union of Rail, Maritime and Transport Workers	RMVP	Rail Mounted Vehicle Plant
ROGS	Railways and Other Guided Transport Systems (Safety) Regulations 2006	RRP	Recommendations Review Panel
RSD	Route Services Directorate	RSSB	Rail Safety & Standards Board
RSSCO	Route Services Supply Chain Operations		

S			
S&C	Switches & Crossings	SBP	Strategic Business Plan
SCG	Standards and Controls Group	SCMT	Strategic Crisis Management Team
SFAIRP	So Far as is Reasonably Practicable	SHE	Safety, Health and Environment (Committee)
SHEP	Safety, Health and Environment Performance (Report)	SIC	System Interface Committee
SICA	Signalling Infrastructure Condition Assessment	SINCS	Signalling Incident System
SIO	Station Incident Officer	SMIS/+	Safety Management Information System/+
SO	System Operator	SORA	Signal Overrun Risk Assessment
SPAD	Signal Passed at Danger	SPDHG	Suicide Prevention Duty Holders Group
SRM	Safety Risk Model	SRM-RPT	Safety Risk Model – Risk Profile Tool
SRPs	System Review Panels	SSOW	Safe Systems of Work
STE	Safety Technical and Engineering	SWIFT	Structured What If Technique
SWL	Safe Work Leader	SWP	Safe Work Pack

T			
T&RS	Traction & Rolling Stock	TA	Technical Authority
TARR	Train Accident Risk Reduction	TBRAs	Task Based Risk Assessments
TfL	Transport for London	TfMG	Transport for Greater Manchester
TOCs	Train Operating Companies	TNA	Training Needs Analysis
TOLO	Train Operator Liaison Officer	TOC MD	Train Operating Company Managing Director
TP-RAP	Train Plan Risk Assurance Panel	TP-RAM	Timetable Plan Risk Assessment Meeting
TPWS+	Train Protection and Warning System +	TPWS	Train Protection and Warning System
TSSA	Transport & Salaried Staff Association	TU	Transport Undertakings
TU	Trade Union(s)	TUC	Trade Unions' Congress
TVP	Track Visitor Permit	TVSC	Thames Valley Signalling Centre

U			
UIC	International Union of Railways	USA	United States of America
UWCs	User Worked Crossings		

V			
VPF	Value of Preventing a Fatality		

W			
WARA	Work Activity Risk Assessments	WON	Weekly Operating Notices