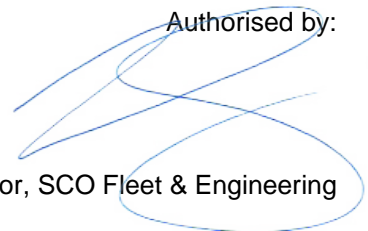


Health and Safety Management System
Transport Undertaking
Supply Chain Operations - Fleet & Engineering

Authorised by:

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Leevan Finney, Director, SCO Fleet & Engineering

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1 OPENING

1.1 Introduction

1.1.1 Network Rail has an established Health & Safety Management System (H&SMS) for meeting the legal requirements of Infrastructure Manager (IM) under ROGS. For clarity, these requirements are referred to in The Network Rail Health & Safety Management System Transport Undertaking (HSMS (TU)) as “The H&SMS (IM)”. However, not all the processes support the requirements of the Fleet & Engineering Directorates roles as a Transport Undertaking (TU). A TU is the legal term under ROGS for those organisations that operate trains or rail vehicles (excluding those who operate rail vehicles wholly within engineering possessions).

1.1.2 For clarity, this document is referred to in the H&SMS (IM) as the H&SMS (TU). The arrangements set out in the following chapters are the H&SMS (TU) for Network Rail based on a process of risk assessment and compliance gap analysis. This H&SMS (TU) describes the principles, roles, responsibilities, systems and processes, which are in place within Network Rail to ensure the health, welfare, safety and security of our employees and others affected by the operations and maintenance of Network Rail’s Directly Operated Fleet.

1.1.3 This H&SMS (TU) is the core of the Network Rail H&SMS and is supported by a suite of Network Rail Standards, Procedures and other working instructions, which together describe the procedural controls in place in the business.

1.1.4 This document satisfies the requirements of a Health and Safety Policy Statement in accordance with Section 2(3) of the Health and Safety at Work etc. Act 1974, and also supports the application by Network Rail for a Safety Certificate to meet the requirements of:

- The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2011; and
- The Railways and Other Guided Transport Systems (Miscellaneous Amendments) Regulations 2013.

Both of these amend the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS).

1.2 Glossary of terms and definitions

ATOC	Association of Train Operating Companies
BS	British Standards
BTP	British Transport Police
CCTV	Closed-Circuit Television
CDG	Capability Development Group
CMO	System used for logging and tracking
CMS	Competence Management System
CSM	Common Safety Method
DOF	Directly Operated Fleet (managed OTMs and wagons as listed in Appendix 4)
DOF driver	(Or “Driver”) Member of staff that has been assessed as competent to undertake mainline train driving

	operations, e.g. OTM Driver & Operator, Driving Team Leader, Driver Manager, etc.
DOF driver management	Group comprising the Principal Driving and Operational Standards Expert and direct reports
ECM	Entity in Charge of Maintenance
F & E	Fleet and Engineering
F & E management team	Group comprising the Director, Fleet & Engineering and direct reports
FAMP	Fleet Asset Maintenance Plan
FOC	Freight Operating Company
FWI	Fatalities and Weighted Injuries
HAZOP	Hazard and Operability Study
H&SMS (IM)	The Network Rail Health and Safety Management System Infrastructure Manager.
H&SMS (TU)	The Network Rail Health & Safety Management System, Transport Undertaking, SCO Fleet & Engineering
IOSH	The Institution of Occupational Safety and Health
KPI	Key Performance Indicator
M & EE	Mechanical and Electrical Engineers – specifically the M & EE Networking Group for OTM train driving
Maintainer	Member of staff that has been assessed as competent to undertake running maintenance and repairs of plant assets, e.g. Maintenance Technicians, Maintenance Supervisors, Maintenance Managers etc.
NIR	National Incident Report (of a high-risk fleet defect)
NOC	Network Rail National Operations Centre
NOP	National Operating Procedure
NTSN	National Technical Specification Notice (formerly TSI)
OB	Operating Base
OHSAS	Occupational Health and Safety Assessment Series
OLE	Overhead Line Equipment
OLET	Overhead Line Equipment Train
OPSRAM	Operational Risk Reduction and Mitigation
ORR	Office of Rail Regulation
OSG	Operations Safety Group
OTM	On Track Machine
OTDR	On Train Data Recorder
PBR	Periodic Business Review (meeting group)
PDOSE	Principal Driving and Operational Standards Expert
PPE	Personal Protective Equipment
RAIB	Rail Accident Investigation Branch (part of the Department for Transport)

RIDDOR	The Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations
RIR	Railways (Interoperability) Regulations 2011
ROGS	The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2011
RPC	Rail Plant Controller in 24/7 SCO Control
RSSB	Rail Safety and Standards Board
SCO	Network Rail Supply Chain Operations
SFAIRP	So far as is reasonably practicable. Also known as As Low As Reasonably Practicable (ALARP). The test for reasonable practicability required under the Health and Safety at Work etc. Act 1974 and defined in civil law through the judgment in the case of Edwards v National Coal Board. (All England Law Reports – Edwards v National Coal Board 1949, Volume 1, pp743-749)
SMIS	Safety Management Information System
SORS	SPaD and Operating Risk Strategy
SP	Safety Management System Procedure
SPaD	Signal Passed at Danger (without authority)
SRM	Safety Risk Model
TOC	Train Operating Company
TOLO	Train Operator Liaison Officer
TPWS	Train Protection and Warning System
TSI	Technical Specification for Interoperability – now superseded by NTSN
T & RS	Traction and Rolling Stock
VMOI	Vehicle Maintenance Overhaul Instruction

1.3 Overview of organisation

1.3.1 The description of operations contained within this section provides an overview of the formation and nature of Network Rail, the characteristics of its operations and explains its relationships with other parts of the rail industry.

1.3.2 The Duty Holder of the Safety Certificate is:

Network Rail Infrastructure Limited,
2nd Floor,
One Eversholt Street,
Euston,
London,
NW1 2DN

1.3.3 The Company is registered in England and Wales, No. 2904587. The registered address for the Company is: Network Rail Infrastructure Limited, 2nd Floor, One Eversholt Street, Euston, London, NW1 2DN.

1.3.4 The Company operates as “Network Rail”, and is referred to as such throughout.

1.4 Size and scope of operations

1.4.1 The size and scope of operations is the national operation of Fleet & Engineering (F&E) Directly Operated Fleet (DOF) assets (see Appendix 4) outside possessions on Network Rail Managed Infrastructure.

1.5 Infrastructure, plant and premise

1.5.1 The operation encompasses all DOF assets as detailed in Appendix 5A and the vehicle classes and associated equipment described in chapter 12 *Operational Control - Maintenance and Engineering*. The DOF assets are overhauled at multiple locations with Operating Bases (OB) providing maintenance facilities for the maintenance schedules for Periodic Planned Maintenance (PPM).

1.6 Scope of the H&SMS (TU)

1.6.1 The Network Rail H&SMS (TU) provides arrangements for the safe operation and maintenance of F&E Plant and T&RS assets.

1.6.2 This system demonstrates Network Rail’s management capability and meets the requirements of the safety certification application criteria

1.7 Interfacing organisations

1.7.1 A list of interfacing organisations can be found in Appendix 1 *Interfacing organisations*.

2 HEALTH AND SAFETY POLICY

2.1 Safety vision statement

- 2.1.1 Network Rail recognises the importance of having clear policies and strategies embedded in the business that demonstrate the organisation's commitment to the health, safety and wellbeing of employees, contractors, passengers, stakeholders and members of the public who may be impacted by its undertaking.
- 2.1.2 Network Rail understands its legal obligation and is determined to work with its employees, contractors, passengers, suppliers, 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 Network Rail has implemented an updated safety policy, in the form of a safety vision. The vision of 'Everyone Home Safe, Every Day' together with our supporting commitments has provided a common thread for all of our interventions and communications around safety. It is at the core of the safety elements of Network Rail's Strategic Business Plan (SBP).
- 2.1.4 The safety vision provides our commitment to the safety of our employees, rail passengers and others who may be affected by our 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. We are absolutely committed to improving safety performance in the railways, whether that is passenger, public or among our workforce. The safety vision explains to staff and contractors the expectations that we have of them regarding safety and safe behaviours. It is underpinned by the arrangements outlined in our health and safety management system.
- 2.1.5 Our vision, our belief is that there is no choice to be made between safety and reliability, and our personal commitments to safety are underpinned by our safety and health and wellbeing strategies. The vision and underpinning strategies demonstrate Network Rail's determination to focus efforts on delivering an environment that recognises the importance of providing an effective management system with supporting processes that enable us to meet our 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 The safety vision statement is brought to the attention of new employees through the induction process. It is available to employees at each Network Rail staffed location and is also available on the company intranet. Significant changes are brought to the attention of employees through the company cascade briefing process.
- 2.1.8 Further details on health and safety policy within Network Rail are detailed in the H&SMS (IM), section 2.

3 PLANNING - RISK

3.1 Introduction

3.1.1 Network Rail recognises that the provision of a rail transport system generates both risks and benefits for society. This chapter recognises that the MHSW Regulations 1999 and Railway and Other Guided Transport System Regulations 2006 require detailed risk assessments to provide an understanding of risks and to appreciate the significant controls that are applied to them.

3.1.2 Network Rail's H&SMS (IM) Section 3 has established risk identification and assessment processes by the use of tools and techniques to assess the risk and the effectiveness of safeguards and mitigations. Specialist advice and support is available to enable managers assess risk and provide a thorough understanding of the outputs necessary to enable the company to manage health and safety effectively.

3.2 Identifying risks associated with operations

3.2.1 Sources of risk are generally identified in the following four areas:

- (1) Inadequate or failed internal processes,
- (2) People,
- (3) Systems; or
- (4) From external events

3.2.2 The methods to identify hazards and assess risk generally fall into the following categories:

- Workshops, use of hazard identification techniques, risk assessment working groups etc. (See H&SMS (IM) section 3.6.5),
- Meeting forums, including quarterly functional reviews (Health, Safety and Sustainability Co-Ordination (HSSC), see H&SMS (IM) section 2.11) and local safety committees (see H&SMS (IM) section 4.8),
- Monitoring of safety data and analysis (see H&SMS (IM) section 7.1 and section 7.3),
- Planned health and safety inspections (see H&SMS (IM) section 8.3.3),
- Management of change through safety validation (see H&SMS (IM) section 6.6 and 6.6.3), including an assurance scrutiny (NR/L2/RSE/100/01 *Network Rail Acceptance Panel* see H&SMS (IM) section 6.6.9),
- Findings from safety audits (see H&SMS (IM) section 7.3),
- Review of safety performance (see H&SMS (IM) section 8.2) and accident investigations (see H&SMS (IM) section 7.4),
- External information sources (ORR, RAIB, HSE, RSSB, professional publications, other train operators)
- Internal review forums e.g. F & E management Performance Review meetings, F & E Fleet Hazard / Risk Review meeting group, SPaD and Operational Risk Strategy (SORS) meetings, Operations Safety Group (OSG), Communication Review Group.

3.3 Risk assessment process

3.3.1 Network Rail carry 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, which describes how to identify, prioritise and manage measures to control or mitigate significant risk, is detailed in H&SMS (IM) section 3. 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.

- 3.3.2 Specific risk assessment tools and techniques are selected appropriate to the type of risk being assessed and applied by competent persons with specialist support and guidance as detailed in H&SMS (IM) sections 3.6 and 3.7.

3.4 Hazard Log

- 3.4.1 For the purposes of TU and ECM requirements, the key areas of risk management applied to DOF asset operations and maintenance on the railway are recorded in the Hazard Log. The Hazard Log is a consolidated document which is derived from:

- Previous OTM Common Safety Method (CSM) Risk Evaluation Assessment (REA) Hazard Records to version 30, dated 23rd March 2018
- The 2015 HAZard and OPerability Analysis (HAZOP) for mainline operations outside possession,
- Hazard Identification (HAZID) workshops undertaken in June, September, November and December 2018
- Safety System Working Groups (SSWG) with manufacturers and suppliers
- Review groups as shown in section 3.2.2
- Data collated from accidents, incidents, near misses and close calls

- 3.4.2 Hazards are categorised within the Hazard Log under the following groups, with recognition given where groups overlap:

- Operational / driving
- Maintenance
- Vehicle Systems
- Network Compatibility

- 3.4.3 Network Rail recognises its activities carry risks with multi fatality potential. The Hazard log identifies potential for multiple fatality risks from high consequence low frequency events using a quantified risk assessment approach and highlights what risks are associated with such incidents are how they can be controlled.

- 3.4.4 The system safety risk profile across Network Rail's infrastructure is described in H&SMS (IM) Section 3.3. Since the Duty Holder's risks from a TU and ECMs responsibility are not considered under the risk profile for H&SMS (IM), the Hazard Log is used for additional risk arising from all hazardous events for DOF operations and maintenance.

- 3.4.5 In compiling the Hazard Log, the process is undertaken of identifying, analysing and evaluating the risks that are related to the work identified with operation of DOF outside possession. Key risks are evaluated to decide the significance of each risk identified with the operation and selecting and implementing appropriate measures to control risk.

- 3.4.6 The Hazard Log is a record following systematic examination of all the activities and identification of the significant hazards involved in DOF operational activities outside possession. The Hazard Log provides the opportunity for sufficient control of identified the significant risks identified and for further identification of areas of possible weakness with the intention that annual reviews will maintain the relevance of the Log to current Network Rail activities.
- 3.4.7 In summary, the Hazard Log is used to:
- Identify all hazards, specifically of an operational nature, associated with the company's operational activities, the populations exposed to the risks arising from the hazards and the means to control these risks,
 - Rank the significance of the hazards and associated risks in accordance with NR/L1/RSK/001 *Network Rail Risk Policy* and NR/SP/OHS/000102 *Work Activity Risk Assessment*
 - Act as the risk register for the Transport Undertaking, with suitable controls and mitigations recorded, reviewed and updated
- 3.4.8 The outcome of the OTM Hazard Log supports the process for validating organisation and associated health and safety management system changes, including arrangements for consulting employees and Trade Union appointed H&S representatives about proposed changes.
- 3.5 Overall Ownership of the Hazard Log**
- 3.5.1 The Director, Fleet & Engineering through the Fleet Engineering Manager is responsible overall for the management, review, co-ordination, retention and update of the Hazard Log.
- 3.5.2 Sub-ownership of specialist categories is as indicated in the Hazard Log and summarised in sections 3.6 and 3.7. It is the responsibility of the specialist category owner to consult and share findings with other affected parties and stakeholders, and notify the Fleet Engineering Manager as holder of the master Hazard Log.
- 3.5.3 The Fleet Engineering Manager leads a periodic joint review group comprising senior specialist representatives from Driving / Operational, Maintenance & Engineering E and Planning & Performance, at which risks are discussed and actioned defined in the light of emerging trends, investigation findings and new developments.
- 3.6 Hazard Log Management – Maintenance & Engineering**
- 3.6.1 The Principal Engineering Manager through the Asset Engineer and Asset Manager as defined in NR/L3/SCO/311 *Supply Chain Operations, T & RS and OTM Engineering and Management Manual* responsible for reviewing, actioning and updating the OTM Hazard Log pertaining to the following hazard categories:
- Maintenance
 - Vehicle Systems
 - Network Compatibility
- 3.6.2 The Principal Assurance Manager is responsible for co-ordinating and monitoring risks that impact on multiple fleets using the data held within Network Rail's risk register in its Active Risk Management (ARM) system. These risks are reviewed at the Fleet & Engineering Technical Asset Meeting as defined in NR/L3/SCO/311/03.

3.7. Hazard Log Management – Operations & Driving

3.7.1 The Principal Driving and Operational Standards Expert (PDOSE) is responsible for reviewing, actioning and updating the OTM Hazard Log pertaining to:

- Operational / Driving hazards

3.7.2 The PDOSE monitors operational and driving risks both within DOF operations and in the wider rail industry with a view to identifying new risks and trends, and assessing the effect on DOF operations. To this end the PDOSE and/or their representatives attend the national M & EE Networking Group, Network Rail and other industry forums where SPaDs and other operational and behavioural risks are identified.

3.7.3 A systematic review of operating and driving performance, and associated risks, takes place at the 3 monthly SPaD and Operational Risk Strategy group, which the PDOSE leads. The structure and objectives of this improvement group are set out in the DOF Fleet & Engineering *SPAD and Operational Risk Strategy* document.

3.8 Key Risks – Operations and Driving

3.8.1. Through the identification of trends at various Network Rail and industry sources which are identified in the DOF F & E *SPAD and Operational Risk Strategy* document, DOF driver management has identified the following key risk areas affecting the safety of its operation:

- Safety Critical Communication
- Driver Management
- Driver Self-Management
- Competence Management Systems
- On Board Data Systems

3.8.2 The SORS process provides the mechanism for the reduction of SPAD and operational risks and the impact that safety of line incidents involving DOF can have on staff, customers, Network Rail as a business and external parties.

3.8.3 The key risk areas in SORS are themselves subject to review as new or increased operational safety risks are identified.

3.9 Risks arising from placing new or altered vehicles into service

3.9.1 Where planned changes (either permanent or temporary) are proposed, they are managed in accordance with Chapter 12, section 12.2 *Engineering acceptance of rail vehicles* and section 12.14 *Control of engineering change to rail vehicles*.

3.9.2 H&SMS (IM) Section 6.6 sets out the arrangements for the management of change through safety validation, including an approval scrutiny in accordance with Network Rail standard NR/L2/RSE/100/01 *Network Rail acceptance panel*. They describe the planning and controlling of changes and classify the significance of the change respectively. Organisation and process change is managed through the safety process NR/L2/HSS/020 *Safety validation of organisational change*. These arrangements provide the process for justification for a proposed material change and demonstrates that risks are acceptable and So Far As Is Reasonably Practicable (SFAIRP) prior to implementation.

3.9.3 A plan for measuring activities designed to prevent the occurrence of injuries and work-related ill health (active monitoring) is in place. Active monitoring is established and reviewed by F & E Management group to ensure the planned safeguards are effective and perform as intended.

3.10 Risks arising from activities of other persons

3.10.1 Network Rail recognises that risk assessments must consider everyone who could be affected by their activities. This includes any contracting out fleet maintenance and supply of maintenance and material, hired operational staff, the use of contractors and activities of persons other than employees.

3.10.2 The potential risks that can be imported by the incorrect specification or quality of safety critical and any other materials, products or services are minimised to ensure they are procured from qualified suppliers. Those responsible for the procuring are competent to qualify suppliers used (or their suppliers). Network Rail maintains records of all their qualified suppliers, the criteria for supplier qualification and any amendments to each supplier's qualification. The arrangements for suppliers of safety-critical products and services are outlined in H&SMS (IM) section 6.2.

3.10.3 The potential risks that can be imported by the employment of contractors and control of suppliers are controlled by the implementation of a robust process. The National Competency Control Agency (NCCA) manages a secure database of persons qualified in Personal Track Safety and associated competencies. Selection and verification of suppliers and contractors are in accordance with NR/L2/SCO/302 *Supplier qualification requirements*. Contractor and supplier management processes include;

- Prequalification of contractors and suppliers to ensure robust arrangements are in place, this could include external 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,

3.10.4 Network Rail recognises that risks can be imported by the presence of, or actions taken by, persons other than its own employee's activities including contractors under Network Rail control. Typically this may include contractor activity not employed by Network Rail, public behaviour such as level crossing misuse, trespasser activity or route crime. Train and station operators are required to comply with relevant Railway Group Standards (RGS) relating to track safety and engage in potential interface risk from its activities.

3.11 Changes affecting interface risk

3.11.1 Network Rail 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 1C *Interface organisations*),
- Maintenance depots used by Network Rail managed by others,
- Risks arising due to the activities of others (section 3.9),
- Risks affecting Network Rail and others following change processes (H&SMS (IM) section 6.6).

- 3.11.2 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. Network Rail and the affected parties will individually or jointly obtain, review and filter shared and individual data for review and, where necessary, follow up actions. Network Rail has a meeting structure in accordance with H&SMS (IM) 2.11 and provides for an escalating arrangement for non-compliance, risk or disputed in accordance with H&SMS (IM) 6.1.38.

3.12 Risk based safety decision making

- 3.12.1 Network Rail have 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.
- 3.12.2 Network Rail H&SMS (IM) Section 3.8 sets out a framework for taking decisions and help meet the reasonably practicable legal standard. Risk assessment, appraisal methods and professional judgement are applied to safety investments in determining reasonable practicability.

3.13 Controlling risk

- 3.13.1 Network Rail control risk through the application of safety management principles developed to support its H&SMSs. Where possible, hazards are eliminated or avoided, otherwise suitable risk control safeguards and mitigation measures are identified, and agreed, as being sufficient to manage risk to as low as reasonably practicable; furthermore, any remaining residual risk is agreed as being acceptable.
- 3.13.2 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 safe systems of work, 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.
- 3.13.3 Risks associated with train operations, maintenance and other safety critical operational tasks are addressed by application of:
- The recruitment, selection and medical fitness screening for suitability, (SP-1.02 *Recruitment and selection of OTM driver operators*)

- Training and competence requirements identified directly in risk assessments (addressed by the application of NR/L2/CTM/201 *Competence Management* and specific competence requirements set out in SP-1.08 *OTM driver competence standard*)
- Training and competence requirements for F & E maintenance staff are addressed by the application of NR/L2/CTM/205 *Competence and Training for the Maintenance of Traction and Rolling Stock and On-track Machines*,
- Rules (GE/RT 8000, National Operating Procedures (NOP) and procedures (SP series and NR/L2/OHS/019 *Safety of people working 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,
- Providing employees with work equipment required to undertake tasks safely (compliant to Provision and Use of Work Equipment Regulations (PUWER) 1998 and the EC Machinery Directive 2006/42/EC),
- Regular information, communication and feedback on issues related to operational health, safety, environment and quality,
- Formal meetings (H&SMS (IM) section 2.11) and escalation (H&SMS (IM) section 6.1.39),
- Effective arrangements for dealing with emergency situations in accordance with the National Emergency Plan NR/L2/OPS/250, the F & E Director On Call Manual NR/PRC/SCO/OCE/001 and the Rail Plant Control Manual NR/PRC/NSC/Control001
- The investigation into accidents, incidents and other near misses to determine their root cause, the subsequent development of additional measures where necessary (H&SMS (IM) section 7.4.36),
- Monitoring the effectiveness of control measures through the setting and measuring against safety Key Performance Indicators (KPI), and through the audit and inspection programme.

3.14 Monitoring the effectiveness of risk control arrangements

- 3.14.1 Network Rail monitors the effectiveness of health and safety management arrangements by specific health and safety performance groups at appropriate levels of the organisation on a regular basis. The arrangements and specific groups at different levels are detailed in chapter 16, *Checking – Performance measurement and monitoring*. Health and safety assurance is provided under the monitoring and review part of the SMS to test and observe policies and arrangements are implemented as intended. NR/SP/ASR/036 *Network Rail assurance framework* provides details of these arrangements.
- 3.14.2 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,
 - Reactive monitoring – health and safety performance against targets, personal accident rates, operational accident and incident rates etc.,
 - Proactive monitoring – measured performance against safety, health, environment and quality plan targets, workplace/worksites 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 safety conversation.
- Feedback from employee health and safety representatives, both informally, and formally via the National Health, Safety and Welfare Council; feedback from industry partners and interface organisations.

3.14.3 Corrective actions necessary to maintain, or improve upon, performance of the H&SMS (TU) 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. These arrangements are outlined within H&SMS (IM) section 8.4.

3.14.4 Progress against corrective actions is monitored during the cross functional quarterly safety assurance meeting, weekly functional Performance Review meetings, periodic Business Assurance meetings, SORS periodic meetings and the F & E Technical Asset meeting.

3.15 Review of risk control arrangements

3.15.1 H&SMS (IM) section 8 *Learning* describes the range of reviews that are adopted for ensuring the effectiveness of Network Rail's health and safety management arrangements.

3.15.2 Specific overall performance of the operational risk management arrangements are reviewed via measurement against operational safety and health performance indicators. This performance is outlined within H&SMS (IM) section 8.2 and is reviewed formally within defined timescales by the following groups:

- Network Rail board exec group 1,
- National Safety Health & Environment review group (NSHERG),
- National safety, health and environment review meetings,
- Functional Periodic Business Review (PBR) meetings,
- Operations Safety Group (OSG),
- National health, safety and welfare council,
- Local health and safety committees.

3.15.3 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.

3.15.4 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 PLANNING, LEGAL AND OTHER REQUIREMENTS

4.1 Legal and other requirements

- 4.1.1 Network Rail is subject to general legislation, one example being statutes such as the Health and Safety at Work etc. Act, 1974, an umbrella act creating a flexible approach to regulatory standards that, is supported by Regulations such as the current Management of Health and Safety at Work Regulations 1999 (delegated/secondary legislation). Other requirements include Approved Codes of Practice (ACOP's). ACOP's are quasi 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 unless alternative measures were equal to or better. RGS published by RSSB provide a mandatory framework for Railway Group Members to follow to achieve safe operation. 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 Network Rail's Heads of Discipline and incorporated into Network Rail's standards and procedures as necessary.
- 4.1.2 Network Rail is also subject to a number of rail specific requirements. The key requirements in the UK are included in the Railways and Other Guided Transport Systems (Safety) Regulations (and amendments thereto). The requirements of these and other statutes are identified by Network Rail's Heads of Discipline and incorporated into Network Rail's standards and procedures as necessary.
- 4.1.3 Network Rail has an established health and safety legal register, which sets out its legal requirements. The health and safety legal register is available on the Company's Connect intranet website.
- 4.1.4 Further details on *Legal and other requirements* within Network Rail are detailed in the H&SMS (IM), section 5 and section 5.1.8.

5 HEALTH AND SAFETY OBJECTIVES

5.1 Objectives, targets and programmes

- 5.1.1 Every year, as part of its business planning cycle, Network Rail reviews its health and safety risks and performance and sets objectives and targets for further risk reduction, therefore meeting Network Rail's related legal obligations and other business requirements.
- 5.1.2 At corporate level the review is carried out by the relevant functional directors. The review considers current performance against health and safety key performance indicators, the outputs of the precursor indicator model, and other information on risk.
- 5.1.3 Functional review groups identify options for further risk reduction and evaluate these against the company safety decision criteria. Specific objectives, targets and actions are then agreed by the functional directors to reduce risk SFAIRP. Following board-level review and endorsement, these are included in the company business plan and progress against these is monitored via the business review process.
- 5.1.4 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 as described in the H &SMS (IM) section 7.1.
- 5.1.5 Safety performance monitoring for operation and maintenance of DOF assets outside of possession includes:
- Management System
 - Workforce reportable accidents (RIDDOR),
 - Competence assessments delivered to plan,
 - Planned audits v. actual undertaken,
 - Competence assessments delivered to plan
 - Control of Working Hours
 - Safety critical communication observations
 - Near misses / Close calls.
 - Safety conversations
 - Operation outside possession (train driving)
 - Signals Passed at Danger (SPaDs);
 - TPWS interventions,
 - OTM speeding,

- Operational Incidents
 - Maintenance
 - Fault reports,
 - Service affecting failures,
 - Safety Critical Product Failures;
- 5.1.6 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. Route managing directors liaise with train operators on the development of Network Rail safety objectives, and objectives being developed by train operators, via the route based Operational Risk Reduction and Mitigation (OPSRAM) or equivalent groups. This informs the development of the Network Rail Business plan with relevant actions for Network Rail being included in the business plan and monitored via the business review process.
- 5.1.7 Actions that require either capital expenditure (Capex) or non-recurring operational expenditure (Opex) and which satisfy the safety decision criteria for health and safety enhancements are progressed in accordance with Network Rail's Investment regulations. Regular reviews of the risk register identify potential enhancements, with their reduction in risk allowing a suitable budget to be set.
- 5.1.8 Rail Safety and 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 Network Rail 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, technical and engineering director co-ordinates Network Rail's input to the Railway strategic safety plan, based on the actions identified by functional directors.
- 5.1.9 Network Rail is committed to applying Common Safety Methods (CSM) for monitoring, as these are defined, to describe:
- How safety levels are measured,
 - The achievement of safety targets; and
 - Compliance with other safety requirements identified in Regulation 19 (2) of the current Railways and Other Guided Transport Systems (Safety) Regulations.
- 5.1.10 Network Rail provides information to the Office of Rail and Road (ORR) to demonstrate its contribution to the achievement of Common Safety Targets (CST).
- 5.2 Line management monitoring**
- 5.2.1 Every manager has a responsibility to monitor the health and safety (including health and wellbeing) performance of their team and work area, including compliance with mandatory standards and procedures. Specifically, managers are required to:
- Review the output of their team's 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 (this includes self-assurance arrangements),
- Conduct formal performance reviews as specified in the formal performance review process, including performance against objectives and how these were achieved, and identify any training and development needs.

6 IMPLEMENTATION AND OPERATION - RESOURCES

6.1 People

6.1.1 Organisation

- 6.1.1.1 Network Rail's organisational structure as described in the H&SMS (IM) section 4 defines how we allocate responsibilities and tasks amongst our workforce and co-ordinate these to deliver our business objectives. Responsibilities are allocated in a structured way so that all employees have a clear understanding of their individual and regulatory safety responsibilities.
- 6.1.1.2 Organisation charts to support the maintenance and operation of DOF are available on Network Rail's intranet on a system called 'ORG Plus'. Other organisation charts are also available on the Company's intranet.
- 6.1.1.3 Employees are issued with job descriptions giving them a clear understanding of their accountabilities. Each line manager is responsible for issuing each of their team with a copy of their job description and briefing them on their roles and accountabilities.
- 6.1.1.4 The specific responsibilities for principal Fleet & Engineering roles as a Transport Undertaking (TU) are shown in Appendix 2b.

6.1.2 Key safety posts

- 6.1.2.1 Certain posts have specific responsibilities identified within the H&SMS (IM) and H&SMS (TU). These posts are designated as key safety posts and the job descriptions endorsed accordingly. Nominated deputies are appointed for each key safety post to cover for periods of absence. Nominated deputies are issued with copies of the job description of the key safety post and briefed on the specific safety responsibilities of the post for which they are deputising in part or in whole.
- 6.1.2.2 The following posts have been identified with specific health and safety responsibilities and nominated deputies:

Key safety post	Nominated deputy
Director, Fleet & Engineering	Principal Driving & Operational Standards Expert and Principal Engineering Manager
Principal Engineering Manager	Fleet Engineering Manager
Head of Fleet Maintenance	Fleet Engineering Manager
Principal Driving & Operational Standards Expert	Driving & Operations Rules Specialist and/or Training and Competency Manager OTM
National Technical Head Traction & Rolling Stock	Chief Systems Engineer and/or Principal Engineer

- 6.1.2.3 These key safety posts exercise decisive authority over actions, products, decisions and policies that have a direct and material effect on the ability of Network Rail to discharge its

duty holder responsibilities under the current Railways and Other Guided Transport Systems (Safety) Regulations.

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

6.1.3 Safety critical work posts

- 6.1.3.1 Certain posts within Network Rail require the occupant of the post to undertake safety critical work as defined in the current Railways and Other Guided Transport Systems (Safety) Regulations (ROGS). These posts are designated as safety critical work posts and the job description is endorsed accordingly. The occupant of the post is required to sign the job description.

- 6.1.3.2 The following posts have been identified as safety critical work posts within the scope and responsibilities of maintenance and operations of DOF:

- **OTM Driving**

- Principal Driving & Operational Standards Expert
- Driving and Operational Rules Specialist
- Training & Competency Manager OTM
- Route Knowledge Manager
- Driving Manager,
- Driving Team Leader
- OTM Driver & Operator

- **Maintenance**

- Head of Fleet Maintenance
- Senior Fleet Maintenance Manager
- Fleet Maintenance Manager
- Maintenance Technician,
- Maintenance Supervisor,
- Depot Operations Manager,
- Depot Operations Supervisor

- **Engineering**

- Principal Engineering Manager,

- Fleet Engineering Manager,
- Fleet Engineer,
- Assistant Fleet Engineer

6.1.4 Head of Disciplines

6.1.4.1 A Head of Discipline is a Network Rail senior professional within a recognised technical discipline.

6.1.4.2 The Head of Disciplines identified for the operation and maintenance are identified in table 1 they are 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. Specific minimum competence requirements are shown in the following table.

Discipline	Post	Competence requirements
Operations principles and standards	Principal Driving & Operational Standards Expert	Extensive experience of train operation principles including detailed knowledge of Rules and Regulations published as RGS.
Plant, traction and rolling stock engineering (Plant & T&RS)	Network Technical Head Traction & Rolling Stock	Chartered Engineer and Member of The Institution of Engineering and Technology, or Member of the Institution of Mechanical Engineering.

7 IMPLEMENTATION AND OPERATION – COMPETENCE, TRAINING AND AWARENESS

7.1 Introduction

7.1.1 This chapter describes the processes that are used where individual's capability is relied upon to control the safe operation and maintenance of DOF.

7.2 Suitability

7.2.1 Suitability means an individual meets the medical / physical 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) set out these requirements.

7.2.2 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/L2/OHS/00124 *Competence specific medical fitness requirements*. Any individual required to go on or near the line shall be able to demonstrate medical fitness and competence in accordance with:

- NR/L2/OHS/00124 *Competence specific medical fitness requirements*,
- NR/L1/OHS/051 *Drugs and Alcohol*,
- Personal Track Safety (PTS)

7.3 DOF Drivers

7.3.1 Additional specific requirements apply to DOF drivers to determine suitability. This includes conducting psychometric assessments as part of the selection process for train drivers according to Rail Industry Standard RIS-3751-TOM *Train driver selection* RIS-3451-TOM, RS 100, and RS 232. Psychometric assessment is part of the overall selection process of DOF drivers. Details of the recruitment process are described in *SP-1.02 Recruitment and selection of OTM driver operators*. Further specific requirements are listed in *SP-1.12 Driver Licence Certificate*.

7.4 Assessment and training

7.4.1 NR/L2/CTM/202 *Quality assurance of training and assessment organisations* sets out the 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.

7.4.2 Through its Capability Development Groups (CDG), trainers and assessors, in addition to providing evidence and obtaining approval of their competence to deliver training and assessments, are also required to specify and obtain approval for the particular training and assessments that they intend to carry out., NR/L2/CTM/202 *Quality assurance of training and assessment organisations* outlines the framework for the approval arrangements.

7.5 Competence standards

7.5.1 Network Rail has an established Competence Management System (CMS) for achieving and maintaining individual competence. The CMS arrangements are set out in H&SMS (IM) Section 4.4 and apply to staff and contractors carrying out safety critical work.

7.5.2 Network Rail standard NR/CS/CTM/001 *Competence management* defines the mandatory requirements for managing the competence of people who undertake safety critical or safety

related work on Network Rail managed infrastructure. The main purpose is to ensure that Network Rail, its contractors and suppliers take a consistent approach to competence management. The standard enables Network Rail to control risks associated with the competent performance. NR/L2/CTM/201 *Competence management* defines the processes that Network Rail implements and maintains as part of its CMS.

7.5.3 Network Rail's CMS mandates a competent person must hold certification which confirms that specific competence has been demonstrated by an individual against the requirements of a competence standard.

7.5.4 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.

7.5.5 Competence standards that apply to a specific job role or post relevant to Network Rail's TU are as follows;

- Track safety competence (NR/L2/CTM/021 *Competence and training in track safety*),
- DOF driver competence (SP-1.08 *OTM driver competence standards*),
- Maintainer competence (NR/L2/CTM/205 *Traction and rolling stock and on-track machines engineering competence units (RVM 1 -18)*,

7.5.6 DOF driver competences are regularly assessed to comply with the requirements of the Rule Book and NOPs during normal, abnormal, degraded and emergency working.

7.5.7 Maintainer competences are regularly assessed to comply with the requirements of basic maintenance (mechanical fitting), diagnose faults, functional test, repair or replacement mechanical components or systems.

7.6 Training standards

7.6.1 Network Rail has an established CMS for achieving and maintaining individual competence. The CMS arrangements are set out in H&SMS (IM) section 4.4 and apply to staff and contractors carrying out safety critical work.

7.6.2 Training that applies to a specific job role or post relevant to Network Rail's TU are as follows:

- OTM driver & operator
- Maintainer,

7.6.3 Specific training modules applicable to the work activities associated with OTM driver & operator and Maintainer, are detailed below.

7.6.4 OTM driver & operator training is modular in structure and consists of rules and Sectional appendix training; traction training and route knowledge in accordance with SP-1.06 *Initial OTM driver training*:

- Module 1: Company induction,
- Module 2: Introduction to railway operations, and role of OTM Driver
- Module 3: Rules and regulations and company procedures

- Module 4: Principles of route knowledge,
- Module 5: OTM traction training and introduction to OTM driving,
- Module 6: Practical OTM driving/experience
- Module 7: Post qualifying period and Interim Assessments
- Module 8: Final Assessments

7.6.5 Maintainer training is modular in accordance with NR/L2/CTM/205 *Competence and Training for the Maintenance of Traction and Rolling Stock and On-Track Machines*. (RVM 1 – 18)

7.7 Qualification and competence requirements

7.7.1 All persons involved with the training and assessment of trainees or established drivers and maintainers shall be able to demonstrate suitable occupational competence in the subject area and role and also hold relevant qualifications. These include the following or other equivalent qualifications:

- a) Those that carry out assessments are;
 - Occupationally competent in the role (for driver trainers minimum 4 years professional practice in OTM driving for driver assessors)
 - Assessed in occupational knowledge of either Network Rail's OTM Driver & Operator or Maintainer competency standard,
 - Assessed in the application of the assessment procedures and documentation for assessment of trainee drivers or maintainers,
 - Qualified to minimum level 3 through Training, Assessment and Quality Assurance (TAQA) or equivalent accredited body,
 - Holders of a level 4 Award in the Internal Quality Assurance of Assessment Processes and practices (IQA) for those assessors responsible for checking the quality of assessment practice.
- b) Those that carry out training are;
 - Occupationally competent in the role
 - (driver trainers) Assessed in knowledge of the company's Driver Competency and Development Standards
 - Have a Chartered Standards Institute of Personnel Development recognised Level 3 Award in Education and training or equivalent training certificate qualification
 - (driver trainers) holders of a valid train driver licence and a valid certificate covering the subject of training on a similar type of line/rolling stock, and who have professional practice in OTM driving of minimum 3 years' duration)
- c) OTM Driving Team Leaders, Maintainer supervisors are;
 - Assessed in instructor techniques.

8 IMPLEMENTATION AND OPERATION – CONSULTATION AND COMMUNICATION

8.1 Consultation and communication

8.1.1 The existing consultation and communication processes are not affected by the addition of DOF operation and maintenance activities. New and transferred employees will be consulted upon and informed with any matter that requires it.

8.1.2 Consultation with in Network Rail is detailed in the H&SMS (IM), section 4.8.

8.2 Employee engagement

8.2.1 Employee engagement with in Network Rail is detailed in the H&SMS (IM), section 7.6.

8.3 Cooperation with other organisations

8.3.1 Network Rail recognises the critical nature of cooperation with other organisations and addresses this in detail with in the H&SMS (IM), section 6.

9 DOCUMENTATION

9.1 Managing standards

- 9.1.1 'Network Rail standards' is the generic term 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 company management system by specifying how Network Rail controls its principal health and safety risks, and how the organisation complies with Technical Specifications for Interoperability (TSIs), domestic legislation, and RGS.
- 9.1.2 The standards framework is designed to enable Network Rail standard owners to:
- Develop requirements that to control and/or help appropriately mitigate identified safety and business risks; and
 - Describe those requirements within a hierarchy of Network Rail standards.
- 9.1.3 Where relevant in terms of the whole life cycle management of assets, these standards align the risk controls to the asset management lifecycle stages that are based on BS ISO 55001 – Asset Management system requirements
- 9.1.4 In addition to these standards Network Rail has developed additional safety management System Procedures (SP) where required to support the H&SMS (TU).
- 9.1.5 Appendix 3 details the rules and TSI's which are referenced to processes in order to define traceability of safety related documents that support the H&SMS (TU). Further details on documentation within Network Rail are detailed in the H&SMS (IM), section 5.

10 DOCUMENT CONTROL AND RECORDS MANAGEMENT

- 10.1 Network Rail standard NR/L2/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. Network Rail 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. This may include external organisations, including train operators, as appropriate. 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 current document which is maintained in electronic format that once printed the document is deemed to be uncontrolled.
- 10.2 Fleet & Engineering management processes and controls for documented information relating to its operations are described in HO P029 *Fleet & Engineering Integrated Management System Document Control Procedure*.
- 10.3 NR/L3/INF/02225 *Records management* specifies the minimum required process for managing Network Rail corporate records. It applies to all records created received and managed by Network Rail and the processes, tools and resources employed to manage them. NR/L3/INF/02226 *Corporate records retention schedule* specifies authorised retention periods for Network Rail's corporate records. It covers all records created, received and managed by Network Rail and the processes, tools and resources used to manage those records. It enables Network Rail: to retain records for no longer than necessary; implement a consistent approach across Network Rail; 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; protect Network Rail's rights and interests and those of its employees, customers, suppliers and the general public affected by its operations. NR/L3/INF/02231 *Disposal of records* specifies how Network Rail 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. The Fleet & Engineering arrangements to support these procedures for the control of records are in HO P029 *Fleet & Engineering Integrated Management System Document Control Procedure*.
- 10.4 Further details on document control and records management within Network Rail is detailed in the H&SMS (IM), section 5.4.

11 OPERATIONAL CONTROL – DOF DRIVING

11.1 Introduction

11.1.1 This chapter describes the detailed processes that are used to control the safe operation of DOF driving activities on the mainline. These operational procedures, driven by the H & SMS (TU), enable the risks that occur to be managed appropriately, and that when they do occur, their consequences are minimised.

11.1.2 For accidents and incidents refer to chapter 17, *Accidents, incidents, non-conformances and corrective and preventative action*.

11.2 Operational risk and SPaD management (management of SPaDs)

11.2.1 Category A' SPaDs – where an OTM passes a signal maintained at danger without the authority of the signaller – have been identified as a significant risk associated with the Network Rail 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 and striking people on the line.

11.2.2 Network Rail therefore 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 SPaD. The key five areas of risk management which the Principal Driving and Operational Standards Expert has adopted as part of the DOF SPaD and Operational Risk Strategy group (SORS) are:

1. Safety critical communication,
2. Training, competence and development,
3. Managing risk and dealing with change,
4. Recognising industry good practice; and
5. Learning from lessons learnt.

11.2.3 The Principal Driving & Operational Standards Expert (PDOSE), as Head of Discipline for Operations, takes lead responsibility in implementing the policy. A risk reduction plan is reviewed regularly 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 in accordance with arrangements set out in chapter 5. In line with this plan the Principal PDOSE on behalf of the Director F & E leads the DOF SORS group as set out in the *SPAD Strategy* document.

11.2.4 DOF drivers are trained and regularly assessed to comply with the requirements of the Rule book and NOPs to pass a signal at danger under their own or other authority or undertake movements in the wrong direction by authorised operating staff. Training and assessment include the circumstances and conditions in which authorised movements can take place in accordance with SP-1.06 *Initial OTM driver training* and SP-1.08 *OTM driver competence standards*.

11.2.5 Responsibility for the prevention and management of operational risks and SPaDs fall in three areas; train operator, rolling stock and infrastructure;

- a) Train operator

Recruitment of DOF drivers:

- Network Rail applies specific criteria to the recruitment of DOF drivers for suitability. This includes conducting psychometric assessments as part of the selection of train drivers according to RIS-3751-TOM *Train driver selection*, RIS-3451-TOM, RS 232, and RS100. Psychometric assessment is part of the overall selection process of train drivers. Details of the recruitment process are described in chapter 7, section 7.2 *Recruitment and selection of OTM driver operators* and SP-1.02 *Recruitment and selection of OTM driver operators*.

Medical fitness requirements:

- Medical examinations are carried out on behalf of Network Rail by a specialist agency and are managed as defined in SP-1.02 *Recruitment and selection of OTM driver operators*. Network Rail specifies the type of examination to be undertaken in accordance with RIS-3451-TOM *Train drivers – Suitability and medical fitness requirements*. Operations supervisors ensure staff attend periodical medical examinations and other referrals as detailed in SP-1.03 *Medical standards for OTM driver operators* to comply with these requirements. SP-1.03 *Medical standards for OTM driver operators* details minimum age, frequency of medical examinations, visual, hearing, colour performance standards and work performance fitness requirements.

Alcohol and drugs:

- Alcohol and drugs screening are carried out on behalf of Network Rail by a specialist agency under contract. Network Rail has an alcohol and drugs policy that complies with the requirements of the Transport and works act 1992 and GE/RT8070 *Drugs and alcohol*. The policy provides information on what constitutes misuse of drugs and alcohol and the arrangements in place for Network Rail to manage this risk. These arrangements include those for pre-employment, 'for cause' and random screening and the circumstances in which disciplinary action will be considered. Details of the alcohol and drugs policy and the process that supports it are described in chapter 13 and further details can be found in H&SMS (IM) 4.6 and NR/L1/OHS/051 *Drugs and alcohol policy*.

Modular training programme:

- Network Rail ensures all training and assessment received by its staff is risk based, relevant and effective and conforms with industry standards and good practice where appropriate,
- Training in rule book knowledge is based on the rule book module matrix in the Standards section of the RSSB web site
- Training is modular in structure and consists of operational rules, company instructions, professional driving policy and Sectional Appendix training; traction training, train handling and route knowledge in accordance with SP-1.06 *Initial OTM Driver Training*,
- Assessment of new drivers is carried out by training and competence managers, whilst existing drivers are assessed by vocationally competent assessors, using processes that are fully compliant with RGSs. Drivers are assessed throughout the training programme using a mixture of formal on the job/off the job assessment,

such as rules and regulations assessments and direct observation of practical driving skills within the cab environment. On completion of training trainees are assessed by an independent assessor who has not been involved in their training programme

Driver simulation:

- Where appropriate, Network Rail uses simulation to provide DOF drivers with practice in out of course situations, providing a tool for both training and assessment. The simulation exercises are also used to assess understanding of new rules if implemented and where applicable to follow up on any competence development requirements following any operational incidents.

Formal staged and initial-training competency-based assessments:

- Trainee drivers are assessed throughout the training programme using a mixture of formal on the job/off the job assessment, such as rules and regulations assessments and direct observation of practical driving skills within the cab environment. Details of the training process are described in chapter 7 *Implementation and operation - Competence, training and awareness* and SP-1.06 *Initial OTM driver training*.

Competency standards for DOF driving:

- Network Rail has an established CMS for achieving and maintaining individual competence and is carried out by DOF driving assessors. The CMS arrangements are set out in H&SMS (IM) Section 4.4 and applies to staff and contractors carrying out safety critical work. The process is detailed in *NR/L2/CTM/201 Competence Management*. These arrangements show how competence is demonstrated and maintained. The design of competency standards for OTM drivers is based on risk assessments – see chapter 3 *Planning - Risk*. The competency standards include non-technical skills. Details of the competency standards are described in chapter 7 *Implementation and operation - Competence, training and awareness* and SP-1.08 *OTM driver competence standards*.

Enhanced assessment and monitoring of newly qualified drivers during their first two years of driving:

- The Post Qualifying Assessment (PQA) plan of a DOF driver is set out in Appendix B of SP-1.06 *Initial OTM driver training*. PQA covers their first two years after qualification and differs in requirements of those with over two years' experience. For OTM driver operators in their PQA period, additional practical assessments, OTDR downloads and off the job interviews are performed at the frequencies detailed in Table A. Each PQA assessment is targeted to be carried out as near to, but not after, the timescales laid out in Appendix B so that the assessments are spread evenly throughout the PQA period.

Enhanced assessment and monitoring of drivers requiring further development:

- Where there are circumstances affecting a driver's performance or a shortfall in expected performance (competence) in accordance with their training has been identified, a development plan is formulated. Implementation of the plan will be followed by enhanced assessment and monitoring by the OTM operations supervisor/training and competency managers. This is done in such a way as to permit review and improvement. The monitoring of drivers' performance includes

practical skills such as the use of professional driving skills. Monitoring may be undertaken for a variety of reasons including the amount of practical driving experience, the type and nature of driving tasks, following incidents in which the driver has been involved or has identified personal or domestic circumstances. Details of the enhanced assessment and monitoring process are described in chapter 7 *Implementation and operation - Competence, training and awareness*, NR/L2/CTM/201 *Competence management*, SP-1.08 *OTM driver competence standards* and SP-1.09 *OTM driver development plan*.

Control of working hours:

- Network Rail has established specific limits within which safety critical staff are rostered to comply with the requirements of legislation and to mitigate the risks associated with fatigue. This includes the process to be followed should a significant change to the hours worked be proposed. Working time limits are exceeded only with prior formal approval, on an infrequent basis and only in exceptional circumstances, as defined within NR/L2/OHS/003 *Fatigue Risk Management*. The DOF Driving Manager and team oversee the arrangements for the management of working hours which includes a Fatigue Management System (FMS) in accordance with industry guidance is described within SP-3.03 *Managing fatigue in safety critical workers*.

Professional driving policy:

- SP-1.01 *Professional OTM driver policy*, supported by the DOF Professional On-Track Machine Driver Handbook, sets out aims, objectives and commitments in thinking ahead and not taking chances with safety. It describes what professional driving means in meeting, and often exceeding minimum competence requirements and seeking opportunities for further improvement in safety performance. This includes enabling techniques to anticipate and respond to operating and environmental conditions in a way that minimises the risks of incidents and accidents.
- The policy also includes being professional outside non-driving aspects of the job such as recognising risks and strategies for personal preparation for duty; lifestyle issues; coping with shift work and fatigue; staying alert during a shift; cab discipline and what to do when taking prescribed and non-prescribed medicines.

Non-Technical Skills

- DOF driver management recognises the role of Non-Technical Skills in potentially impairing performance, and through its recruitment, training, assessment and safety update programme takes steps to educate OTM drivers and monitor the application of Non-Technical Skills with a view to greater understanding and improved performance

Communicating SPaD information:

- 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 Network Rail Weekly Operating Notice arrangements are used to promote the recognition and awareness of multi-SPaD signals. The DOF Route Knowledge Manager receives information on multi-SPaD signals. Section 11.4 and 11.5 describe the arrangements that are in place to ensure that multi-SPaD signals relevant to Network Rail are communicated to drivers. Multi-SPaD signals are also briefed as part of a SPaD awareness module within the driver training programme. Arrangements are detailed within SP-3.06 *General OTM Driver Operators Management Instructions*.

Monitoring

- The monitoring of safety performance is undertaken through regular management review meetings. Network Rail has implemented a performance management regime that enables the setting and monitoring of performance targets across Network Rail's business activities. Safety is a key element of this regime. H&SMS (IM) section 2.13 describes how Network Rail sets safety targets for the business as a whole and how these are monitored. Within DOF Driver Management, data is collected and progress is monitored at periodic F & E management review meetings, OSG and at SORS group meetings.
- Driving Team Leaders carry out unobtrusive monitoring of drivers, including OTDR downloads. The regime for unobtrusive random monitoring, including the use of OTDR equipment, is detailed in SP-1.08 *OTM Driver Competence Standards*

b) Rolling stock

- Network Rail DOF rolling stock is also fitted with a number of features that reduces the risk of, and/or mitigate the consequences of SPaDs with a range of train protection equipment. Appendix 4 contains a list of DOF and outlines which protection equipment is fitted. Details of the train protection systems are described within chapter 12.4 *Train protection and communication systems*. These can be summarised as:
 - Train protection and automatic warning system - to *GE/RT8075*
 - Data recorders – to *GM/RT 2472*
 - Sanding systems – to *GM/RT 2461*, where fitted
 - Driver Reminder Appliance – to *GM/RT2491*, where fitted

c) Infrastructure

- Key health and safety risks and controls for the management of infrastructure are detailed in section 4.3 with specific arrangements detailed in section 4.3.6 on SPaD risk prevention.

11.3 Issue and control of OTM driving licence

11.3.1 All DOF drivers are issued with a licence to operate OTMs outside possession. The licence authorises the driver to drive particular types of OTM, subject to having the necessary route knowledge. Licence details and arrangements for the issue, checking and withdrawal of licences are set out in accordance with this procedure SP-1.12 *OTM driver licence certificate procedure*.

11.3.2 All OTM drivers and Maintainers are safety critical and hold Personal Track Safety certification in accordance with NR/L2/CTM/021 *Competence and Training in Track Safety*

11.4 Communicating safety of the line information

11.4.1 Safety is incorporated within Network Rail's internal communication processes. The H&SMS (IM) and other safety communications are available on the intranet, specific safety briefs are given to staff, safety is incorporated into company publications and safety issues are discussed at a variety of internal meetings. Further details on these arrangements can be found in H&SMS (IM) section 4.19.39 and 4.19.4.

11.4.2 Network Rail has a specific process in place for communicating safety of the line information to drivers. The Principal Driving & Operational Standards Expert 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, Safety Briefing Days and tracked electronic communication. Typical information may include:

- Routine information relating to changes in the infrastructure including Network Rail publications such as the Sectional Appendices, Periodic operating, notices and Weekly operating notices,
- Rule Book and NOP changes communicated through a combination of personal issue of rulebook updates and briefing on changes,
- Urgent or late notices
- SPaD information (see 11.2.5 above)
- Route risk information including route risk assessments and Stabling Point Surveys
- Urgent or late notices,
- Safety of the Line incidents and investigations,
- Network Rail (OPSRAM), national M & EE Working Group and other national conferences and industry workshops.

11.5 Management of signing on duty

11.5.1 Network Rail has systems in place for the communication of information, supply of equipment and fitness of DOF drivers and other operating staff. SP-3.06 *General OTM Driver Operators Management Instructions* details four areas:

- Staff are fit to undertake work and comply with the company's Drugs and alcohol policy and Fatigue Risk Management standards,
- Communicate essential safety and operating information, to ensure effective and timely communication of relevant information,
- Supply and availability of relevant publications and personal equipment,
- Level of supervisory checks on compliance and adequacy of arrangements.

11.5.2 The level of arrangements for booking on duty has been assessed and are designed to control the risks arising from safety critical staff taking duty.

11.5.3 The day-to-day management and supervision of drivers is provided by the Driving Team Leader supported by the Rail Plant Controller (RPC) in 24/7 SCO Control in regards to drivers reporting for duty.

11.5.4 The provision of safety critical information is provided by the RPC when a driver reports for duty. Publications are either provided hard copy by the driving team leader or provided electronically.

11.5.5 Supply or replacement of safety equipment is undertaken by the Driving Team Leader.

11.5.6 Driving Team Leaders undertake frequent monitoring checks to ensure drivers are fit when reporting for duty, are in receipt of the necessary equipment and publications.

11.5.7 The minimum frequency of checking an individual's fitness is four times per year, of which a minimum of 25% will be conducted 'out of hours'. This is defined as being between the hours of 18:00 to 06:00 Monday to Friday, and any time at a weekend or Bank Holiday.

11.6 DOF preparation

- 11.6.1 Competent staff undertake predeparture checks on all DOF.
- 11.6.2 Train preparation safety checks are undertaken in accordance with DOF driving/operating instructions, which OTM drivers & operators have on a personal basis, and VMOIs that are published by Network Rail.

11.7 Access to driving cabs

- 11.7.1 Network Rail has an operational procedure in place that outlines the system of preventing unauthorised access to the driving compartment of Network Rail OTMs. Trained and competent drivers are issued with a driver licence in accordance with SP-1.12 *OTM driver licence certificate procedure*. All other persons authorised to enter driving cabs are issued with a cab pass in accordance with SP-2.01 *Cab access protocol*. The process is supported by the issue of cab passes to persons authorised to enter driving and rear cabs.
- 11.7.2 Access to driving cabs is restricted and only authorised by the Principal Driving & Operational Standards Expert through the Route Knowledge Manager. They are responsible for issuing driving cab passes to a limited number of staff and any external parties with a legitimate requirement for access. DOF drivers are instructed to check that each person entering the cab is in possession of a valid cab pass, legitimate reason for access and has the correct authorisation.
- 11.7.3 The requirements for cab discipline are reinforced through periodic briefing.

11.8 Operations control

- 11.8.1 Network Rail has two separate, distinct and independent functional responsibilities serving the responsibilities of Transport Undertaking (TU) and Infrastructure Manager (IM) at the control centre level. These are the RPC in 24/7 SCO Control, and Route Control (IM) respectively.
- 11.8.2 The 24/7 SCO Control is a continuous control service which is the focal point for DOF driver operations outside and inside possession and on depots. The RPC is staffed on a 24-hour basis and is located in Milton Keynes (Quadrant).
- 11.8.3 RPC competence is detailed within the *Rail plant control manual* (NR/PRC/NSC/Control001) and is monitored through a continuous assessment process.
- 11.8.4 Network Rail Route control (IM) responsibilities and arrangements are described within H&SMS (IM) 4.13.

11.9 Communication

- 11.9.1 DOF drivers are trained and assessed in effective and correct safety critical communication in line with Network Rail communication protocols and Rule Book requirements. This includes the correct use of in-cab, lineside communication equipment and mobile devices, as well as using the correct and appropriate forms when reporting significant information. The process for reactive and proactive monitoring of communications is defined and undertaken in accordance with NR/L2/OPS/037 *Management of spoken safety communications*. DOF driver management arrangements for training and assessing on communication protocols are in SP-1.06 Initial Driver Training and SP-1.08 OTM Driver Competence Standards.
- 11.9.2 For the purpose of communication between drivers and control centres, Network Rail has Global System for Mobile communications – Railway (GSM-R) fitted to its OTMs. The principal means of communication between DOF drivers and the Network Rail Route Control

is through initial contact using GSM-R to the signaller, who will pass information on to the Route Control. In some instances, principally where failure of on-train equipment is involved, parallel communication will occur between the DOF driver and the Network Rail 24/7 SCO Control.

- 11.9.3 In order to enable communications between staff on board, All Network Rail OTMs are fitted with an intercom system between the front and rear cabs and operating cabs to provide a secure means of communication between cabs. OTM drivers are trained in the use of this cab-to-cab communication system, which is only used for specific purposes, when it is safe to do so.

11.10 Shunting operations

- 11.10.1 Shunting has the potential to cause accidents giving rise to fatal and major injuries. They are associated with train collisions; train derailments; collisions with objects; and crushing or striking people on the line.
- 11.10.2 In DOF operations, shunting may involve movements between lines or on the same line over signalled or unsignalled routes, with interlocking or no interlocking provided e.g. over handpoints, and may involve coupling or uncoupling of vehicles. Any person carrying out shunting must be competent to do so.
- 11.10.3 All shunting movements are undertaken in accordance with Rule Book GE/RT 8000 module SS2.
- 11.10.4 Personnel who are required to carry out shunting duties are classed as safety critical workers. For DOF drivers, training is carried out as part of SP-1.06 *Initial Driver Training*, and shunting competence is assessed in accordance with SP-1.08 *OTM Driver Competence Standards*.

11.11 Defective on train equipment

- 11.11.1 Network Rail has identified safety related equipment on its DOF, including high risk defect components. These items of equipment are listed in the SP-2.05 *Defective on train equipment*. Driving Team Leaders and other members of the Driving and Maintenance teams have input to the drafting and reviewing of these arrangements.
- 11.11.2 DOF is operated by trained and competent staff in accordance with NR/L2/CTM/201 *Competence management*, SP-1.06 *Initial OTM driver training* and SP-1.08 *OTM competence standards*, with any defects reported, recorded, rectified and reported to the RPC in 24/7 SCO Control for action in accordance with SP-2.05 *Defective OTM equipment*.
- 11.11.3 SP-2.05 *Defective OTM equipment* details specific defect occurrences on DOF systems or components and the subsequent actions to be taken by the driver. These arrangements cover the types of defect and appropriate actions to meet the requirements of Rule Book GE/RT8000, RIS-3473-TOM, GO/GN3637 and DC lines instructions relating to the fitness of rolling stock. This includes guidance as to when, and where, DOF with defective equipment must be withdrawn from service.
- 11.11.4 Each Network Rail Route Control has an operational contingency plan according to the severity and nature of the defect to support implementation in the event of an incidence of defective on-train equipment on an OTM. All movements of defective DOF are then arranged between RPC in 24/7 SCO Control and the Network Rail Route Control. Instructions are passed to the driver via the Network Rail signaller.

11.12 Degraded and abnormal operation

- 11.12.1 Special arrangements apply when operating under conditions where a component or part of the railway has failed and materially affects safety. These conditions can arise from;
- DOF faults such as isolated/degraded equipment, failure, cab radio failure, hot axle box, partial loss of traction, braking or low adhesion; or
 - External conditions such as temporary and emergency speed restrictions, temporary signals, changes to the service operation, unscheduled shunting, coupling or uncoupling, propelling movements, permissive working and assistance to failed trains or obstructions on or near the line.
- 11.12.2 Network Rail recognises that under these arrangements there is greater reliance on people managing safe train movements. All degraded and abnormal operations are undertaken in accordance with the requirements of the Rule book and NOPs. Specific training and competence requirements for operating under these conditions are included within SP-1.06 *Initial OTM driver training*, SP-1.08 *OTM driver competence standards* and SP-1.10 *OTM driver route knowledge*.
- 11.13 Adhesion – Preparation and incidents**
- 11.13.1 Low wheel/rail adhesion conditions can increase braking distances and therefore increase the level of risk in train operation. Research indicates disc brake systems (disc to pad), lighter and shorter trains are more sensitive to low rail adhesion conditions. The risk levels are considered lower for tread brake stock due to the nature of brake functionality cleaning the surface of the wheel tread with the brake block. Network Rail's professional driving policy provides instruction to DOF drivers on brake types and associated techniques in accordance with the SP-1.01 *Professional driving policy* working instructions and braking instructions. Particular emphasis on braking techniques under low rail adhesion conditions is incorporated in driver training, competence assessment and periodic briefings.
- 11.13.2 The risks which arise from the extension of stopping distances during periods of low rail adhesion are:
- SPaD,
 - Collision,
 - Missed scheduled stopping points; and
 - Derailment.
- 11.13.3 These risks are mitigated by a number of control measures that are implemented on Network Rail's infrastructure and through operational management arrangements.
- 11.13.4 Driving Team Leaders are responsible for carrying out line of route risk assessments as outlined by SP-1.10 *OTM driver route knowledge*. These assessments cover areas of poor and potentially poor rail adhesion. Where the assessments identify potential problems, relevant information is communicated to Network Rail in accordance with RIS-8040-TOM *Low adhesion between the wheel and the rail – Managing the risk*.
- 11.13.5 Network Rail (TU) operations are responsible for implementing the following control measures:
- Professional driving – drivers are periodically briefed and assessed on defensive driving as part of the content of the company policy,
 - Reporting of exceptional conditions – drivers report such conditions to the signaller in accordance with the provisions of the Rule book and Sectional appendix;

- Provision of fit for purpose briefings all persons involved in operating trains on current areas where low adhesion may exist and rules and regulations relating to rail contamination,
 - Increased monitoring of Post Qualifying (PQA) DOF drivers,
 - Leaf fall procedures.
- 11.13.6 Network Rail (IM) is responsible for implementing the following control measures:
- Railhead conditioning - the application of sandite to the railhead to improve adhesion levels,
 - Vegetation management - the control of lineside vegetation to minimise adhesion risks in accordance with NR/L2/TRK/5201 *Lineside Vegetation Management Manual*
 - Publication of 'low rail adhesion' sites in the Sectional appendix,
 - Cautioning of trains in accordance with the Rule book where conditions are exceptional,
 - General warning messages using the in-cab radio communications system.
- 11.13.7 Some of Network Rail DOF is not fitted with auto-sanding equipment to reduce the risk of low adhesion. Details of the specific vehicle fitment are in Appendix 4.
- 11.13.8 Network Rail TU, through the participation of the Principal Driving & Operational Standards Expert, contributes towards the national adhesion working group, an industry body which aims to promote awareness of, and solutions to, low rail adhesion conditions.
- 11.13.9 Special attention is given to the monitoring of performance of newly qualified drivers who have not previously had experience of driving in low rail adhesion conditions.
- 11.13.10 DOF drivers are trained to take action when encountering reportable railhead conditions in order that the Rule book requirements are met to block the line or caution trains on the approach to the section(s) concerned until such time as the railhead is examined, treated (as necessary) and a successful 'controlled test stop' is undertaken.
- 11.13.11 Network Rail (IM) has prime responsibility for this process and utilises portable sandite dispensers to treat the railhead as appropriate. Network Rail's Multi-Purpose Vehicles (MPV) remove railhead contamination (by water jetting) prior to the application of sandite.
- 11.13.12 Network Rail (IM) is also responsible for ensuring that vegetation management is undertaken in accordance with NR/L2/OTK/5201 *Lineside Vegetation Management Manual* and that low adhesion related issues are dealt with in accordance with GE/RT8040 *Low adhesion between the wheel and the rail – Managing the risk*.
- 11.14 Train speed management**
- 11.14.1 Network Rail DOF drivers are trained in accordance with SP-1.06 *Initial OTM driver training*, SP-1.08 *OTM competence standards* and SP-1.10 *OTM driver route knowledge* apply to ensure trains operate within the permanent and temporary speed limits of the track and OTM.
- 11.14.2 Excessive speeds have the potential to cause accidents giving rise to multi-fatalities. They are associated with train collisions, derailments and collisions with road vehicles or people at level crossings. Speed checks are carried out using OTDR downloads in accordance with SP-3.02 *On Train Data Recorder (OTDR) operating requirements*. Such checks are carried

out following reports of overspeeding trains, with appropriate actions defined according to the severity of the incident, and as part of monitoring driver performance.

- 11.14.3 Additional checks also include monitoring from the competence assessment as detailed within NR/L2/CTM/201 *Competence management* and supported by SP-1.08 *OTM driver competence standards*. Periodic monitoring by direct observation and by OTDR download form part of the DOF driver assessment regime, with additional checks being carried out on the performance of those drivers in the “Additional Monitoring” category. Additional speed checks are also undertaken jointly with other operators who also monitor Network Rail trains independently.

11.15 Urgent safety related operating advices

- 11.15.1 Arrangements for managing urgent operating advices is initiated by the Network Rail National Operations Centre (NOC). Upon receipt by the 24/7 SCO Control, the RPC notifies the Principal Driving and Operational Standards Expert’s On Call representative, who assesses the content and determines necessary actions, including telling the RPC to notify drivers. The RPC registers, disseminates and updates notices upon receipt of these advices, and withdraw those at the withdrawal date in accordance with SP-3.06 *‘General OTM Driver Operators Management Instructions’* requirements.

11.16 Route knowledge

- 11.16.1 Route Knowledge is carried out in accordance with SP-1.10 *‘OTM Driver Route Knowledge’* which incorporates a structured approach for establishing appropriate route knowledge and training times. This is achieved by profiling key features relating to route characteristics and potential hazards of train operations in accordance with route risk assessment. The arrangements cover initial briefing, provision of minimum information, trips between two points, complex areas, route learning plans, diagrams and theoretical and practical assessments.
- 11.16.2 Route learning methods always include initial briefing preparation with a competent person (Driving Team Leaders) and normally incorporate route learners to travel on trains between points, where service availability and frequency permits. Where this is not possible, the Route Knowledge Manager makes alternative arrangements for practical route learning purposes.
- 11.16.3 Route learning materials are produced to ensure drivers receive adequate experience over the planned route at various times. These are used in conjunction with the Network Rail Sectional Appendices, route maps and where appropriate signalling plans to assist in attaining a competent knowledge of the route prior to certification. Practical and theoretical assessments are conducted by Driving Team Leaders who are driver qualified and route competent.
- 11.16.4. The Route Knowledge Manager oversees the process for route learning and knowledge retention outlined in SP-1.10 *‘OTM Driver Route Knowledge’*. A variety of media is used for this purpose, including face to face briefing and monitoring, the use of simulation, paper route maps and electronic media to disseminate information, and track and record hours and routes.

11.17 Emergencies

- 11.17.1 When a train evacuation is necessary, Network Rail will attempt to evacuate F&E Plant with personnel on board by arranging to take the train out of service at a suitable location adjacent to a station platform or siding.

- 11.17.2 Where DOF is stranded between stations or sidings, the driver will make arrangements for assistance to a suitable location where evacuation can be undertaken. Network Rail believes that the safest place for personnel is to remain onboard until such times as it can be evacuated.
- 11.17.3 If the circumstances of the emergency require the evacuation of personnel on board away from a station platform or siding, the evacuation is led in accordance with GE/RT8000 Rule book module M1 by the Driver who arranges the necessary protection including appropriate assurances that all train and movements have been stopped and OLE or third rail has been isolated where appropriate.
- 11.17.4 The competency requirements for the driver in emergency evacuation are contained within the Rules and Regulations module of SP-1.06 *Initial OTM driver training*. DOF drivers are assessed on their knowledge in accordance with the processes described in *Chapter 7 'Implementation and operation - Competence, Training and Awareness'*.
- 11.17.5 Network Rail has written plans and procedures in place designed to provide an effective response to foreseeable emergency situations. These plans, at National, Route, Station and Location-specific levels have been developed based on risk assessment, local knowledge, and experience, and are designed to bring accident / incident situations under control as quickly as possible.
- 11.17.6 Network Rail's H&SMS (IM) Section 4.14 '*Emergency Planning*' details a three-tier structure defined as Strategic (Gold) Tactical (Silver) and Operational (Bronze) which is applied to the management of rail response to an incident. This basic structure will apply whatever the severity of the incident.
- 11.17.7 Safety of the Line Incidents are reported to the signaller and Network Rail Route Control (IM) who will in turn liaise with the 24/7 SCO Control regarding the driver and other personnel on board, and other operation. In line with the RPC Control Manual NR/PRC/NSC/Control 001 and the SCO Director F & E On Call Manual NR/PRC/SCO/OCE/001, the RPC and Duty Operations Manager in 24/7 SCO Control follow predefined arrangements depending on the nature and severity of the incident, which may include the initial 'on call' point of contact with the Driving Team Leader. As default the Driving Team Leader acts as 'Bronze' level on call, making decisions on the driver, operational cover and continued safe operation. The Driving Team Leader may nominate another representative if they are suitable, qualified and closer to the incident site if personal attendance is needed, and will agree with the 24/7 SCO Control the need for Silver and if necessary Gold on call representatives to be activated. Typical Safety of the Line Incident events include:
- i. SPaDs
 - ii. Collisions
 - iii. Derailments
 - iv. Speeding incidents
 - v. TPWS Intervention
 - vi. TPWS reset and go
 - vii. Fatalities and serious injuries

11.18 Audit

- 11.18.1 General audit arrangements are dealt with in H&SMS (IM), Section 7.3 and section 7.4.44.
- 11.18.2 The "three lines of defence" monitoring regime described in section 18.1.2 apply.

- 11.18.3 The Principal Driving and Operational Standards, or persons appointed by them, undertakes first line monitoring of DOF driving and operational activities including work carried out by directly employed staff and suppliers of services e.g. training and route conducting.
- 11.18.4 Network Rail carries out management system internal audits of driving and operations. With the approval of the Director, Fleet & Engineering, the Principal Assurance Manager prepares an audit plan in accordance with NR/SP/ASR/036 *Network Rail Assurance Framework*. Audit actions, observations and Non-Conformance Reports (NCR) are logged in CMO, an electronic system. This is populated with all the open NCR's. Close out of NCR's is monitored through the Director, Fleet & Engineering's Performance Review meeting.
- 11.18.4 Additional audits may be undertaken during the year where performance monitoring of DOF driving or operations highlights issues.

12 OPERATIONAL CONTROL – MAINTENANCE & ENGINEERING

12.1 Introduction

- 12.1.1 This Chapter describes the detailed processes that are used to control the maintenance of Network Rail's fleet in compliance with legislation. The maintenance plans include details of tasks, frequency and tolerances. All operational, maintenance and technical documentation is subject to Document Control processes as described in Chapter 9 '*Document Control and Records Management*'.
- 12.1.2 Network Rail has a Maintenance Policy (*NR/L1/RMVP/0001 'Plant and Traction and Rolling Stock (T&RS) Policy'*) which outlines the management systems and Maintenance instructions that apply to ensure the safe operation of all rolling stock operated by Network Rail.
- 12.1.3 Fleet vehicles owned and operated by Network Rail are listed in Appendix 4.
- 12.1.4 The organisation for ensuring compliance with technical standards and Engineering Acceptance of F & E Plant within Network Rail is contained within the Director, Fleet & Engineering department (described in Chapter 6).
- 12.1.5 If there is an introduction of F&E Plant that is new to Network Rail, an Engineering Change is processed and completed by the Principal Engineering Manager to demonstrate compliance with legislation and that risks have been effectively managed. Further details can be found in H&SMS (IM) Section 6.6 '*Change Control*'.
- 12.1.6 Network Rail is accountable for all F&E Plant maintenance and repairs, including the vehicle overhauls. The Maintenance Plan consists of scheduled Vehicle Maintenance Overhaul Instructions (VMOIs), conforming to the requirements of Entity in Charge (ECM) Regulations.
- 12.1.7 VMOIs are the base documents and all relevant reference documents are referenced in the VMOIs. All documents are managed by a document control system to ensure that the latest version is available.
- 12.1.8 All scheduled maintenance is carried out at depots or maintenance facilities e.g. West Ealing, Derby, Crewe PAD, and other maintenance facilities as defined in the Maintenance Plan. These facilities are used for servicing and routine maintenance.
- 12.1.9 VMOIs are detailed live documents providing instructions to maintenance teams regarding the work to be carried out at each examination.
- 12.1.10 VMOIs set out the running and day-to-day maintenance of the fleet, which is carried out by Network Rail staff. They consist of a core set of tasks which are required in order to both retain the asset value of the vehicle and to ensure continued safe operation of the vehicles on Network Rail's infrastructure as required by the ECM Regulations.
- 12.1.11 The Principal Engineering Manager is responsible for the approval of the Maintenance Plan for its production in accordance with legalisation, for controlling risks and for implementing the maintenance policy and reviewing the Maintenance Plan. The Principal Engineering Manager is responsible for adherence to compliant VMOIs. Any amendments to VMOIs are undertaken in a controlled manner in accordance with *NR/L3/SCO/311/04*.
- 12.1.12 All F&E Plant and T&RS are maintained to the VMOIs as detailed in the Maintenance Plan.
- 12.1.13 VMOIs are amended as in-service experience and maintenance experience of the vehicles demonstrates that amendment is required. They also undergo regular review to check they

are still fit for purpose. Any changes that are required will be reviewed by the Principal Engineering Manager to demonstrate that changes are made in accordance with legalisation and that risks are controlled.

- 12.1.14 Each scheduled exam is broken down into tasks, each with an individual description and job number.
- 12.1.15 Individual task descriptions are the key pieces of safety and quality information. Each job includes specific details of the safety conditions, equipment, components and technical documentation that are required in order to undertake the task(s) concerned.
- 12.1.16 Risk assessments are also undertaken for maintenance tasks and safety conditions applied when undertaking certain tasks where such reasonably practicable control measures (such as electrical safety arrangements) can be adopted.
- 12.1.17 The Maintenance Plan for F&E Plant includes details of frequencies at which maintenance activities are carried out. These frequencies are adhered to, otherwise the vehicles are withdrawn from service before the maintenance is overdue. An authorised dispensation for non-compliant maintenance may be granted as per the process in NR/L3/SCO/311/09.
- 12.1.18 The maintenance instructions are supported by other reference documents, including;
 - i. Modification instructions
 - ii. Test specifications
 - iii. Engineering Instructions, work instructions and fleet instructions
- 12.1.19 Network Rail also has a Wheelset and Axle Bearing Manual *NR/L2/RMVP/1332* which is owned by the Network Technical Head Traction & Rolling Stock.
- 12.1.20 The Principal Engineering Manager is responsible for the preparation of a Fleet Asset Management Plan (FAMP) which details the local arrangements for the specific fleets in order to maintain the fleet in accordance with legislation and company standards.
- 12.1.21 The scope of the FAMP includes the technical support e.g. modifications. All modifications are reviewed and approved by the Principal Engineering Manager in accordance with *NR/L3/SCO/311/04*.
- 12.1.22 Network Rail also make use of appropriately qualified consultants and other third parties in the provision of technical support, investigations and modifications in accordance with its *Contracts and Procurement Policy* document and *NR/L2/SCO/302 Supplier Qualification Requirements*. Such organisations are qualified in accordance with the requirements of *RIS-2750-RST Supplier Assurance* and Railways and Other Guided Transport Systems (Safety) Regulations 2006, Regulation 23 safety critical tasks, Regulation 24 'competence and fitness of safety critical workers' Regulation 25 'manage fatigue', *GE/GN8570 'Guidance on the Management of Drugs and Alcohol'* and *RIS-8070-TOM 'Testing Railway Safety Critical Workers for Drugs and Alcohol'* (as appropriate) and work in accordance with depot operating instructions.
- 12.1.23 Safety issues which arise from experience with rolling stock elsewhere within the Railway Group are dealt with in accordance with Railway Group Standard *GE/RT8250*.
- 12.1.24 The FAMP is a valuable management tool for ensuring that:
 - i. Staff are properly trained,

- ii. Suitable tools and test equipment are provided,
- iii. Documentation is accurate,
- iv. Materials used are suitable,
- v. There is clear responsibility for control of the maintenance process.

12.2 Approval of Rail Vehicles

- 12.2.1 All rolling stock approved to operate under the Network Rail Entity in Charge of Maintenance Certification is identified in the National Vehicle Register (NVR).
- 12.2.2 The Principal Engineering Manager is responsible for the approval of all F&E Plant in accordance with *NR/L3/SCO/311/04*.
- 12.2.3 In the case of F&E Plant is contracted in by Network Rail to operate its services, a supplier is selected as detailed in its *Contracts and Procurement Policy and NR/L2/SCO/302 Supplier Qualification Requirements*
- 12.2.5 Where it is proposed that any engineering or operational change is proposed to be made to existing F&E Plant (whether physical modification or amendment to a technical specification), then Network Rail follow *NR/L3/SCO/311/04*, as per the CSM Risk Evaluation Assessment.
- 12.2.6 Engineering change includes: new builds, permanent changes and changes to documentation and operation.
- 12.2.7 The process contained in this procedure specifically demonstrates that, where applicable:
 - i. Acceptance in accordance with relevant standards.
 - ii. Route Acceptance is obtained from Network Rail as per *RIS-8270-RST*.
 - iii. Authorisation is obtained from the safety authority and vehicle owners.
 - iv. Completion of a CSM assessment
 - v. Updates to VMOIs, training materials, operational instructions and reference documents are completed
- 12.2.8 Where approval is conditional upon certain criteria being met or imposes a restriction on the operation of F&E Plant then the Principal Engineering Manager is responsible for the controlled distribution of this information to relevant stakeholders and made available to all relevant staff including Network Rail NOC, Route and 24/7 SCO Control Centres and planning offices.

12.3 Maintenance of Vehicles

- 12.3.1 All vehicles have approved VMOIs which include specific requirement for vehicle components and systems maintenance and overhaul.
- 12.3.2 If an accident or incident occurs, post incident inspections are carried out in accordance with *NR/L3/SCO/311/10*

12.4 Train protection and communication systems

- 12.4.1 DOF is fitted with a range of train protection equipment. These include:

- Automatic Warning System (AWS)
 - Train Protection and Automatic Warning System (TPWS) - to *GE/RT8075*
 - On Train Data Recorders – to *GM/RT2472*
 - Global System for Mobile communications Rail (GSMR)
- 12.4.2 The role of the train protection systems fitted to Network Rail DOF in lessening the severity of the consequence of a SPaD is outlined in Chapter 11, Operational Control – DOF Driving.
- 12.4.3 Maintenance of train protection and communications equipment is undertaken in accordance with the relevant Vehicle Maintenance Instructions (VMOIs) These documents are produced and certificated by the Principal Engineering Manager in accordance with *NR/L2/RMVP/0090 'Management and Maintenance for Rolling Stock for On Track Machines and On Track Plant'*.
- 12.4.4 The maintenance documentation specifies the tasks to be undertaken to ensure the continued serviceability of the train protection and communication equipment together with the periodicity at which those tasks will be undertaken. This includes functional testing of train protection and communication equipment.
- 12.4.5 In the event of train protection equipment becoming defective in service, the arrangements as outlined in Chapter 11, Section 11 will apply. Employees carry out these arrangements in accordance with *SP-2.05 'Defective OTM Equipment'*. Train preparation (see Chapter 11, Section 6) includes checks on the basic functionality of train protection equipment prior to a train entering service. Employees carry out train preparation in accordance performance standards set out in *SP-1.08 'OTM Driver Competence Standards'*.
- 12.5 Maintenance and servicing facilities**
- 12.5.1 The minimum facilities that are necessary to implement the maintenance plans for F&E Plant are generally dependent upon the level of maintenance activity required to be carried out.
- 12.5.2 Maintenance and servicing facilities are provided for 'running maintenance' and 'heavy maintenance' requirements. For 'heavy maintenance' requirements maintenance depots are used at suitable depots (NR owned or leased). *NR/L3/SCO/311/16* includes the requirements for maintenance facilities to meet the different levels of maintenance and servicing.
- 12.5.3 Requirements for facilities are specified in *NR/L3/SCO/311/16* to satisfy the requirements of the Health and Safety at Work etc. Act 1974 and include the following:
- i. Direct access or the means of removing/returning vehicles to Network Rail managed infrastructure.
 - ii. Sidings to provide vehicle storage awaiting maintenance or returning to Network Rail managed infrastructure.
 - iii. Covered accommodation to satisfy the requirements of the workplace (Health, Safety and Welfare) Regulations,
 - iv. Vehicle cleaning facilities to mitigate fire/health hazards to operatives.

- v. Examination pits that ensure safe access/egress to enable attention to safety critical equipment and execution of the plan.
 - vi. Fueling facilities, including recovery/interceptor systems to ensure no spillage to surface water drainage systems or ground contamination.
 - vii. Workshop machinery compliant to the Provision and Use of Work Equipment Regulations.
 - viii. Transport/lifting/jacking facilities, as required of sufficient capacity to separate vehicle bodies from bogies/wheelsets or removal of major components in accordance with the Lifting Operations and Lifting Equipment Regulations (LOLER).
 - ix. Requirements for special tools and calibration equipment are referenced with the relevant task of each component of the plan.
 - x. Track and facilities are maintained by a contractor who has the relevant competency in this particular discipline.
- 12.5.4 Maintenance is not planned in any location that has overhead electrified lines or third rail, however if emergency repairs are required, local procedures are in place to ensure that electrical isolations of the overhead electrified line and third rail systems are taken where necessary using a permit to work system as laid down in *RIS-1800 ENE 'Network and Depot Interface Management – Isolation Documentation'*.
- 12.5.5 Only nominated persons, trained by specified staff and certified as competent in the relevant instructions, are authorised to carry out the requirements of the permit to work system to ensure the work is carried out in a safe manner.
- 12.5.6 The boundaries between Network Rail depots and Network Rail Managed Infrastructure are marked with identification plates. Maintenance and inspection is undertaken to ensure compliance with *NR/L3/TRK/1011 'Management of Permanent Way'*.
- 12.5.7 Movements of F&E Plant into and out of depots and sidings are controlled by the Network Rail Signaller. Depot protection arrangements encompass the depot limits, to ensure the safety of staff whilst vehicles are being moved. Protection within sidings is arranged by the Designated Person (DP) with the 'Person in Charge' (PIC) or Network Rail Signaller.
- 12.6 Protection arrangements for staff working on vehicles**
- 12.6.1 Network Rail has arrangements to ensure any person who is required to repair, service, maintain or clean F&E Plant is suitably protected from train movements. The arrangements apply to all staff including engineering staff who may be required to attend train failures on Network Rail managed Infrastructure.
- 12.6.2 A personal track safety certificate and designated person (DP) competence will be held by staff that are required to apply the protection arrangements and carry out maintenance activities on Network Rail Managed Infrastructure.
- 12.6.3 The Head of Fleet Maintenance ensures that suitable "local protection arrangements" are devised (as outlined in SP-4.11) and in conjunction with the requirements of GE/RT8000 module T10, for all of the locations identified requiring such arrangements.
- 12.6.4 A dynamic risk assessment is carried out where circumstances are such that work is required outside these locations (e.g. failure).
- 12.7 Maintenance policy**

- 12.7.1 Network Rail has a Maintenance Policy that complies with the requirements the Entity in Charge of Maintenance (ECM) regulations.
- 12.7.2 This policy involves the inspection and control of equipment and systems degradation such that safety, reliability and the value of the F&E Plant is maximised consistent with good practice, risk and financial analysis.
- 12.7.3 The maintenance policy is described in *NR/L2/RMVP/0090 'Management of Maintenance and Change for Railbound Vehicles and On-Track Plant'*
- 12.8 Maintenance plan**
- 12.8.1 Maintenance Plans are approved by the Principal Engineering Manager via the Engineering Change process. The Principal Engineering Manager is responsible for monitoring the application of the Maintenance Plan for each vehicle type.
- 12.8.2 The Maintenance Plan for each vehicle type details the requirements, specify safe limits of wear and degradation and also the periodicity of attention for all components including safety critical equipment.
- 12.8.3 Where third party maintenance of vehicles is required, the Maintenance Plan is cascaded to third party maintainers who carry out maintenance of these vehicles on behalf of Network Rail.
- 12.8.4 Each Maintenance Plan satisfies the requirements of the Entity in Charge of Maintenance (ECM) regulations
- 12.8.5 Where external organisations are used to enable Network Rail to carry out maintenance they are as a minimum accredited to or working toward Qualified Supplier status in accordance with the requirements of *RIS-2750-RST*. This process is detailed in *NR/L2/SCO/302 Supplier Qualification Requirements*
- 12.8.6 The Maintenance Plan and related documents are subject to regular review by the Principal Engineering Manager as required following:
- In-service monitoring and maintenance experience
 - The result of audit
 - Findings or instruction by the Director, Fleet & Engineering derived from:
 - i. Statistical analysis from safety performance monitoring shows unacceptable risk.
 - ii. Significant incidents affecting safety occur such as catastrophic failure and potentially catastrophic failures.
 - iii. When planning significant changes to vehicle designs, methods of working, staff or maintenance facilities covered by the plans.
 - Notification by other organisations of potential risk due to incidents with rail vehicles of the same type operated by other organisations, regulatory bodies.
- 12.8.7 The Principal Engineering Manager is responsible for review of the Maintenance Plan. Changes to the maintenance documents are approved by the Principal Engineering Manager via the engineering change process.

12.9 Introduction of new vehicles

- 12.9.1 Network Rail manages in conjunction with Assessment Bodies all the necessary Safety and Regulatory approvals, including the potential for adverse material effect on safety from the introduction into service of new vehicles and approved by the Principal Engineering Manager via the engineering change process.
- 12.9.2 These arrangements are applied whenever:
- a) New F&E Plant is to be operated by Network Rail
 - b) Existing F&E Plant within the Network Rail fleet is required to operate on routes and infrastructure other than those over which they are currently authorised to operate.
 - c) Existing F&E Plant is modified or transferred into the Network Rail fleet.
- 12.9.3 The Principal Engineering Manager determines whether the change is 'significant' (requiring AsBo CSM approvals) and 'major' (requiring NoBo Interoperable approvals) and determine the actions required to approve the change. For operational issues the Principal Driving & Operational Standards will appoint a responsible and competent person to assist.
- 12.9.4 These arrangements include the identification of risks and the approvals required to introduce the vehicle into service.

12.10 Hired-in and sub-leased vehicles

- 12.10.1 The following arrangements are in place when Network Rail hires in vehicles from an owner:
- i. The supplier must be qualified in accordance with the requirements of GM/RT2750.
 - ii. The hirer confirms current approvals status including the transfer of information relating to any limitations for operation and supplies the appropriate approvals documentation.
 - iii. The hirer confirms an approved maintenance plan which conforms to the requirements of *RIS-2004-RST* and ECM Regulations and supplies relevant supporting documentation.
 - iv. The hirer has arrangements in place carrying out safety inspections of the vehicles following maintenance, repair, overhaul etc. and supplies relevant supporting documentation.
 - v. The hirer has arrangements in place to ensure compliance with Railways and Other Guided Transport Systems (Safety) Regulations 2006, Regulation 23 '*Safety critical tasks*', Regulation 24 '*Competence and fitness of safety critical workers*' Regulation 25 '*Manage fatigue*' and *GE/GN85700 'Guidance on the Management of Drugs and Alcohol'* governing the competence and fitness to work of those undertaking maintenance on the vehicles concerned.
 - vi. The hirer provides reasonable access to Network Rail to audit their engineering and operational management systems.
- 12.10.2 Regular and long-term hiring of vehicles not under direct engineering control require assurance through regular audit and monitoring. The Principal Assurance Manager is responsible for the audit programme for 3rd party suppliers.

- 12.10.3 The Principal Assurance Manager confirms through audit processes in accordance with NR/SP/ASR/036 Network Rail Assurance Framework, *SP-4.03 'Supplier Accreditation for Safety Critical Engineering Products and Services'* and *NR/L2/SCO/302 'Supplier Qualification Requirements'* that processes are in place to manage the fleet in accordance with the Maintenance Policy,
- 12.10.4 Detailed lists of rail vehicles safety critical systems and services, which are incorporated in such an audit, can be referred to in and *NR/L2/SCO/302 'Supplier Qualification Requirements'*.
- 12.11 Control of purchasing of plant, equipment and components**
- 12.11.1 Network Rail control of purchasing of plant, equipment and components through the Procurement Manual as described in H&SMS (TU) Chapter 14 Suppliers and H&SMS (IM) Section 6.2 Suppliers.
- 12.12 Control of suppliers**
- 12.12.1 Arrangements for the purchasing of plant, equipment and spare parts are outlined in the Network Rail Contracts and Procurement Policy document. Network Rail only purchases safety related items from approved suppliers who are selected in accordance with the criteria in the Contracts and Procurement Policy
- 12.12.2 The process of procuring safety critical products and services includes a requirement to specify the relevant specifications against which the products and services are to be compliant with.
- 12.12.3 The Contracts and Procurement Policy provides the framework for the requirements of Railway Industry Standard *RIS-2750-RST* to be met and for specific controls to be in place via the approved suppliers' accreditation system and Network Rail's 'BravoNR' supplier accreditation system.
- 12.12.4 Specific controls are in place in respect of the procurement of spare parts via approved suppliers.
- 12.12.5 The contract between Network Rail and approved suppliers obliges them to comply with *RIS-2750-RST* and has a management system that has been accredited and periodically reviewed by 'BravoNR'.
- 12.12.6 All safety critical and safety related products and services are identified by the Principal Engineering Manager as required by *NR/L3/SCO/311 Supply Chain Operations, T&RS and OTM Engineering and Management Manual*.
- 12.12.7 The risk assessment process has identified those safety critical products and services that constitute the most risk to DOF operations in the event of non-compliance to laid down specifications.
- 12.12.8 Network Rail's process for managing change outlined in H&SMS (IM), Section 6.6 '*Change Control*' includes a requirement to validate any change in the supplier of the high-risk safety critical spares.
- 12.12.9 As part of the spares, management system that is operated by Network Rail incoming spare parts are subject to appropriate controls in terms of inward inspection and formal acknowledgement of receipt to the supplier concerned.

- 12.12.10 Processes are in place for non-conforming spare parts to be returned to the supplier as rejected items. A warranty process also exists to ensure that items that fail prematurely are also returned to the supplier for investigation.
- 12.12.11 Major components are also subject to specific tracking using the Fleet Asset Management System (FAMS) which ensures that such components can be easily traced to individual vehicles in the event of a product re-call or other similar requirement arising where it is necessary to trace individual components.
- 12.12.12 The arrangements for the control of calibrated tools and equipment is described in *NR/L2/RMVP/00172 'Management of the control and calibration of inspection, measuring and test equipment.'*

12.13 Control of engineering change

- 12.13.1 Network Rail has an Engineering Change process in place to ensure that vehicles are modified in accordance with the level of risk. Engineering change for new vehicles is managed in accordance with *NR/L2/RSE/100/04 'Introduction of New or Modified Vehicles'*. Vehicles being tested are supplied by a supplier qualified in accordance with of *NR/L2/SCO/302 Suppler Qualification Requirements*
- 12.13.2 Where a vehicle has been subject to an Engineering Change it shall not be placed into service until the Engineering Change has been approved by the Principal Engineering Manager. All changes are assessed and relevant approvals obtained before any modification takes place in accordance with *NR/L3/SCO/311/04' Supply Chain Operations, T & RS and OTM Engineering and Management Manual / Engineering Change* before the vehicle is placed into service.
- 12.13.3 Where necessary modifications will be safety validated using Network Rail's change control arrangements for assessment of compatibility through the Network Rail Acceptance Panel (NRAP). Further details can be found in H&SMS (IM) Section 6.6 '*Change Control*'.
- 12.13.4 The Engineering Change process includes a form which is used to assess the safety significance of any proposed change. The Principal Engineering Manager, who acts as the suitably qualified person, then specifies relative levels of controls and approvals. Identification of manuals and drawings etc. that need to be updated to reflect the modification is part of the modification approval procedure and strengthens what constitutes significant changes and the overall controls over manufacturers design or modification changes.
- 12.13.5 Modifications take into account ergonomic design principles for compatibility with users to ensure the vehicle is still fit for use by the driver. Appropriate Head of Disciplines, including the Principal Driving & Operational Standards, will consider these factors taking into account consultative groups (H&SMS IM 4.8 and SMS TU Chapter 8, Section 8.1 and 8.2.).
- 12.13.6 The Principal Assurance Manager is responsible for an annual audit programme which includes all critical assurance process. The audit programme is risk based and therefore the periodicity is based on a range of factors, including previous findings, accident statistics and the perceived level of risk.
- 12.13.7 All personnel undertaking maintenance on the vehicles concerned comply with the requirements of Railways and Other Guided Transport Systems (Safety) Regulations 2006, Regulation 23 '*Safety critical tasks*', Regulation 24 '*Competence and fitness of safety critical workers*' Regulation 25 '*Manage fatigue*' and GE/RT8070 '*Drugs and Alcohol*'

governing the competence and fitness to work of those undertaking maintenance on the vehicles concerned.

- 12.13.8 The Principal Engineering Manager is responsible for the updating of manuals, drawings, procedures and other relevant maintenance documentation to reflect the engineering change.

12.14 Competence of maintenance staff

- 12.14.1 The quantity of maintenance staff is determined based on factoring maintenance and service cycles, repair work, number of vehicles assigned to the location, depot movements and foreseeable eventualities such as training, sickness and modification work over and above routines.
- 12.14.2 As part of the overall supervision of those involved in the running of the railway, several systems are in place to ensure that the work is undertaken in compliance with instructions and staff are competent to do the work. In addition, arrangements are in place for the monitoring of Safety Critical Work staff with regard to the effects of drugs and/or alcohol when booking on and off duty.
- 12.14.3 A system of random testing for drugs and alcohol is in operation in accordance with the requirements of *RIS-8070-TOM 'Testing Railway Safety Critical Workers for Drugs and Alcohol'* and NR/L1/OHS/051 '*Drugs and Alcohol Policy*'.
- 12.14.4 All Network Rail Maintainers are subject to a competence management system (H&SMS (IM), Section 4.4 '*Implementation and Operations - Competence, Training, Development and Awareness*') and Chapter 7 '*Implementation and Operation – Competence, Training and Awareness*'. Network Rail set out the competence requirements in *NR/CS/CTM/001 Competence Management* which is implemented through *NR/L2/CTM/201 'Competence Management'* procedure. The Policy and Procedure ensures that the requirements of Railway Safety Publication 1 - Developing and Maintaining Staff Competence (ORR, 2016) are met. This procedure, together with H&SMS (IM), Section 6.2 '*Suppliers*' and Network Rail's Contracts and Procurement Policy, outlines the methods of selection and surveillance of safety critical suppliers.
- 12.14.5 Network Rail determine and implement relevant work performance standards with consideration of National Standards, where appropriate. The implementation of practical competencies includes Assessor and Work Standards e.g. the principles of ENTO (Employment National Training Organisations): National Occupational Standards for Assessors and GoSkills: National Occupational Standards for Railway Operation and Railway Engineering. This ensures that both performance on the job and the underpinning knowledge aspects of the job are assessed to the standard required in an objective rather than subjective manner.
- 12.14.6 Where no relevant standard applies Network Rail determines the appropriate time for re-assessment of competency to take place.
- 12.14.7 All relevant technical staff work towards and obtain competence qualifications using the standards which incorporate the requirements of The Railways and Other Guided Transport Systems (Safety) Regulations 2006.
- 12.14.8 Competent maintainers carry out periodic assessments against vehicle maintenance instructions. The staff are re-assessed against the standards within the specified timescales.

- 12.14.9 The competency standards worked to are;
- DOF drivers *SP1.08 'OTM Driver Competence Standards'*
 - Maintainers *NR/L2/CTM/205/RVMP 1-19 'Competence and Training for the Maintenance of Traction and Rolling Stock and On-Track Machines'*
- 12.14.10 Where Maintainers are undergoing DOF driver training and post-validation assessments, the responsibility for compliance with training, assessments and record keeping falls to the Principal Driving and Operational Standards Expert.
- 12.14.11 Assessment records for other than DOF driving are maintained by the Maintenance Manager. These assessment records are available for inspection by verifiers, the Awarding Bodies (where applicable) and/or ORR.
- 12.14.12 When new Maintainers are recruited they are subject to Suitability and Fitness requirements in accordance with H&SMS (IM) Section 4.5 '*Fitness for work and Management of Fatigue*' and section 11.15. An initial assessment is undertaken to ascertain whether they are capable of achieving the standards of performance as outlined in the relevant Job Descriptions and maintenance documentation.
- 12.14.13 Maintainers undergo periodic assessment against vehicle maintenance instructions in accordance with *NR/L2/CTM/205/RVMP 1- 19 'Competence and Training for the Maintenance of Traction and Rolling Stock and On-Track Machines'* in the performance of individual maintenance tasks, with the regular assessments being carried out. This frequency is proportionate to the risks which could be introduced into train operation by incorrectly undertaking the task(s) concerned. Training and re-assessment is undertaken when identified as necessary, including as a result of incident analysis where the performance of an individual has been, or is suspected of being, contributory to an incident. The process for supporting and managing competence is referenced in H&SMS (IM), Section 4.4 '*Implementation and Operations - Competence, Training, Development and Awareness*' and *NR/L2/CTM/201 'Competence Management'* procedure.
- 12.14.14 Network Rail out-based Maintainers are trained and assessed to Designated Person level in order that they can undertake maintenance in sidings and operate under abnormal conditions such as failures and derailments. Training includes all associated procedures including emergency contacts and the setting up of a safe system of work in such operating conditions. The Rail Plant Controller in the 24/7 SCO Control Centre acts in accordance with Chapter 12, Section 12.22 & *SP-2.05 Defective OTM Equipment* on the fitness of vehicles to remain in service.

12.15 Development and approval of maintenance standards

- 12.15.1 All maintenance documentation is reviewed when created and modified by the Principal Engineering Manager using the Engineering Change process. The minimum requirements for maintenance documentation content is detailed in *NR/L2/RMVP/0090, 'Management of Maintenance and Change for Railbound Vehicles and On-Track Plant'*.
- 12.15.2 The Principal Engineering Manager approves proposed changes to maintenance documentation and notifies the proposer of the change. The Principal Engineering Manager will ensure that when reviews are completed the revisions/developments are approved and any relevant third-party approvals have been granted. Where required, a 'technical brief' will be developed by the Fleet Engineering Manager to support implementation.

12.15.3 The review of maintenance documentation includes circulating a draft document to relevant parties for review i.e. Maintainers, DOF driver, engineers etc. If there are any further amendments that transpire as a result of this consultation the Principal Engineering Manager or a competent representative will decide if the proposed amendments are justified prior to any changes being implemented.

12.15.4 When this process is completed the Principal Engineering Manager shall complete the Engineering Change process to confirm that any approvals from a competent authority have been received e.g. AsBo, NoBo, NRAP.

12.16 Control of heavy maintenance / overhauls

12.16.1 Depots with the correct facilities for heavy maintenance and overhauls are sourced through the 'maintenance facility framework contract' for the Network Rail owned vehicles. Further details are described in the vehicle maintenance instructions which provide a specification for each type of vehicle requirements.

12.17 Fitness for service

12.17.1 Where safety critical components and systems have been identified as defective the vehicle is withdrawn from service. The notice to withdraw a vehicle from service will be sent to Rail Plant Control in 24/7 SCO Control detailing the reason why the request has been made. Rail Plant Control update the vehicle status in the daily situational report, vehicles recorded as 'red carded' on TOPS and are not permitted on the network until the status has been changed.

12.17.2 Rail Plant Control hold an up-to-date list of named individuals who are permitted to remove the red card status permitting vehicles to be returned to traffic. The Fleet Engineering Manager has the responsibility of maintaining this list and supplying it to Rail Plant Control. Where a request to remove the red card status is made without the necessary repair being completed the engineering team will complete a dispensation form that details the level of risk presented as a result of returning the vehicle to traffic, the mitigation put in place and the appropriate level of approval in accordance with NR/L3/SCO/311/09 *Deferral of Maintenance or Repair*. Where a safety critical defect has been rectified the Maintainer or supplier will undertake a full test of the system prior to the release to traffic. Results of this test are recorded on FAMS when completed by Network Rail or form part of the handover / handback documentation from the supplier.

12.18 Deferred work

12.18.1 Where no reasonably practicable course of action is available to ensure that an examination or repair is carried out within a specified timescale, the Fleet Engineering Manager will ensure that non-compliant maintenance dispensations are managed in accordance with NR/L3/SCO/311/09 *Deferral of Maintenance or Repair*.

12.18.2 A risk assessment is completed for all deferred work to assess any potential increased risk with regard to the safe running of the vehicle. Where deferral is approved, the vehicle records are updated and a plan implemented for ongoing routine maintenance and safety monitoring for the period up to the new date at which the deferred work will be undertaken.

12.18.3 It is the responsibility of the Fleet Engineering Manager to ensure that any control measures required to support a dispensation are applied prior to a vehicle entering service.

12.19 Urgent repair following safety critical defect reporting

- 12.19.1 On receipt of a National Incident Report or Urgent Safety Related Defect, the Principal Engineering Manager will determine the appropriate action to be taken to demonstrate the continued safety of the fleet in accordance with NR/L3/SCO/311/06.
- 12.19.2 In the event of a safety critical incident on any vehicle, an immediate assessment review by the Fleet Engineering Manager will take place, and the Principal Engineering Manager will decide whether a National Incident Report should be raised in accordance with NR/L3/SCO/311/10 *Post Incident and Accident*. The review will include examining the potential for similar incidents in the remainder of the fleet and what immediate action should be taken.

12.20 Operation of vehicles fitted with wheel skates

- 12.20.1 In the event of a crippled vehicle requiring rescue and a wheelset is not fit to rotate, the Principal Maintenance Manager shall have in place an accredited and approved supplier in accordance with and NR/L2/SCO/302 *'Supplier Qualification Requirements'*.
- 12.20.2 *SP-4.05 'Operation of Vehicles Fitted with Wheelskates'* sets out the arrangements on
- Requirement to have a competent provision in place for wheelskate provision
 - The supply of wheelskates is undertaken in accordance with and NR/L2/SCO/302 *'Supplier Qualification Requirements'*.
 - When Network Rail 24/7 SCO Control Centre call on the competent provision for fitment of wheelskates
 - The presence of the contracted recovery engineer who ensures wheelskate fitment, including lifting, jacking, recovery and emergency movement of rail vehicles, and the safe movement is carried out.
- 12.20.3 The train driver shall report to the Network Rail 24/7 SCO Control Centre who will discuss with the On-Call Engineer the condition, temporary remedial action or rescue and update the Route Control. Where rescue is considered, an on-site preliminary investigation is carried out by the contracted recovery engineer who has the necessary technical competence to examine or repair specified items of equipment forming part of a train or vehicle.

12.21 Arrangements for withdrawing vehicles from service

- 12.21.1 Network Rail has arrangements contained in *SP-2.05 Defective OTM Equipment* that details the actions to be taken by staff in the event of a safety related and other systems or component defect occurring. This document draws together the provisions of all publications (including the Rule Book *GE/RT8000*, *RIS-3437-TOM*, *GO/GN3637*) relating to the fitness of vehicles entering service and in service. The procedure ensures that Network Rail manages defects consistently so that such defects do not import risk into train operations.
- 12.21.2 Any safety related defect is reported to the signaller in accordance with the rule book. Network Rail Control Centre is then advised in accordance with the contingency plan, *SP-2.05 'Defective OTM Equipment'*. The contingency plan (*SP-2.05*) describes the defect conditions and, depending on these conditions, relates to a designated terminating point, which is decided by competent Maintainers, Fleet Engineering Manager or Fleet Engineer.

- 12.21.3 Safety related maintenance defects are categorised into high, medium or low risk. These are reviewed by the Maintenance Manager depending on the level of risk. High risk categories are investigated for underlying causes of the defect. The outcome of the review on high-risk categories determines whether the defect is general, requiring an NIR specific to the nature of occurrence. NIRs are initiated by the Principal Engineering Manager.

12.22 Rail vehicle safety performance monitoring

- 12.22.1 Safety performance monitoring of the fleet of vehicles operated by Network Rail is monitored and reviewed in the following way
- i. Any safety related defects or incidents involving the fleet are reported to the SCO; 24/7 Control and reported to the responsible manager.
 - ii. Analysis of safety, reliability, assurance feedback, NIRs and recommendations is carried out on a periodic basis and reviewed at the technical safety meeting. Where required action plans are required, they are created and assigned to responsible managers for closure.
 - iii. When a Network Rail train activates a Hot Axle Box detector, the arrangements laid down in *GE/RT8014* are followed, and liaison with Network Rail Control Centre is carried out as necessary.
 - iv. The above also applies to other condition monitoring systems, such as wheel impact load detector etc.

12.23 Rail vehicle safety critical defect reporting

- 12.23.1 The arrangements, which apply in so far as safety critical defects are concerned, are outlined in NR/L3/SCO/311/06 and the FAMP and complies with RGS *GE/RT8250*. The Principal Engineering Manager reviews and responds to all National Incident Reports (NIRs) in accordance with NR/L3/SCO/311/06. Vehicles involved in accidents or incidents are subject to special testing in accordance with NR/L3/SCO/311/10. An On-Call Engineer is available at all times to provide advice or respond to the discovery of high-risk safety related defects.
- 12.23.2 The key principles of this particular element of the fleet H&SMS (TU) are:
- i. the generation of an internal 'High Risk Defect' (HRD) where applicable;
 - ii. the risk rating of such HRDs;
 - iii. the generation of a RIS-8250 Reporting High Risk Defects (NIR) Report where applicable;
 - iv. the receipt and assessment of HRD Reports received via Network Rail's National Control Centre;
 - v. Monitoring fleet safety performance against agreed targets.
- 12.23.3 For hiring of staff and vehicles, reporting lines are established between the supplier organisation's staff, Network Rail SCO Operations and Network Rail Route Control Centre. The supplier's organisation's vehicle defects reporting process incorporates rule book responsibilities for first reporting to signaller and then Network Rail 24/7 SCO Control Centre where defects occur outside depot boundaries. Network Rail 24/7 SCO Control Centre ensures reporting details are forwarded to the hiring organisation for rectification at depot. Contingency arrangements for dealing with vehicle incidents are in accordance with *SP-2.05 'Defective OTM Equipment'*. The hiring organisation is responsible for reporting defects within depots.

12.23.4 Performance against Fleet Safety Targets and Safety Related Defects / Urgent Safety Related Defect incidents are reviewed at the periodic F & E management team meeting.

12.24 Checking of vehicles

12.24.1 The Maintenance Plan VMOIs set out the frequency and type of maintenance checks that are carried out to ensure the safety of Network Rail vehicles. Level 1 inspections or maintenance inspections provide a system of spot checks on selected maintenance work. Vehicle Maintenance Records are recorded on FAMS and are subject to periodic inspection and audit.

12.24.2 Calibration of equipment used during maintenance checks is undertaken in accordance with the FAMP.

12.24.3 DOF drivers carry out operational train preparation checks to establish the train's fitness for service. The process for DOF drivers is outlined in Chapter 11, Section 11.6. Where vehicles are being hauled in the train formation e.g. the OLET train, then a competent person carries out the pre-departure checks listed on form FE F-147 Pre-Departure Record of Vehicle Safety Checks (Certificate of Readiness) for handover to the driver prior to completion of checks. Where any vehicle in the formation leads to the train being out of gauge or another defect is found, then no movement is made without prior technical resolution or the intervention of the RPC in 24/7 SCO Control or Principal Planning and Performance Manager.

12.25 Technical specification audit

12.25.1 General audit arrangements are dealt with in H&SMS (IM), Section 7.3 and section 7.4.44. Technical audit arrangements relating to engineering are found in NR/L3/SCO/311 *Supply Chain Operations, T & RS and OTM Engineering and Management Manual*

12.25.2 The Principal Engineering Manager, or person appointed by them, undertakes monitoring of compliance with technical specifications.

12.25.3 Network Rail carries out internal audits with maintenance activities at a number of levels including In Process Evaluation, Finished Work Inspection, Product audits and Procedure audit; Maintenance & Overhaul Policy audits in accordance with NR/L3/SCO/311/11 *Level 1 Inspection* and NR/SP/ASR/036 Network Rail Assurance Framework. Development and implementation of the audit plan are the responsibility of the Principal Assurance Manager and approved by the Director, Fleet & Engineering. An audit plan is produced and describes the number, type and frequency of audits. All audit actions, observations and Non-Conformance Reports (NCR) are logged in CMO, an electronic system. This is populated with all the open NCR's and close out of NCR's is monitored through the Technical Safety Meeting.

12.25.4 Additional audits may be undertaken during the year where fleet safety or reliability performance monitoring highlights issues. In addition to checking adherence to the specifications, product audits also involve a check that any mandatory requirements or codes of practice in the area concerned are being complied with.

12.25.5 Procedural audits cover the adherence to the procedures that form part of the FAMP. The Principal Engineering Manager undertakes a programme of Level 1 in accordance with NR/L3/SCO/311/11 to check application of relevant standards and the FAMP.

13 OPERATIONAL CONTROL – OCCUPATIONAL HEALTH AND SAFETY

13.1 Work Activity Risk Assessments

- 13.1.1 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. We have therefore established a central database of work activity risk assessments.
- 13.1.2 Network Rail standard *NR/SP/OHS/00102 Work Activity Risk Assessment* details the principal process by which we assess risks associated with the work activities carried out by our employees and documents and makes available the findings of those assessments.
- 13.1.3 Further details on Work Activity Risk Assessment (WARA) within Network Rail is detailed in the H&SMS (IM), section 3.7 Work Activity Risk Assessment.
- 13.1.4 The suite of WARAs that are relevant to the Transport Undertaking (TU) are controlled by the Fleet and Engineering document controller. These include all mandatory WARAs and those for specific maintenance, driving and operations tasks.
- 13.1.5 The TU WARAs are developed with those staff carrying out the tasks and are reviewed on a biannual basis. Reviews are also triggered by a number of factors, including staff feedback, incident experience and audit reports.

13.2 Personal protective equipment

- 13.2.1 Suitable Personal Protective Equipment (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 current PPE at Work Regulations. Minimum standards and requirements for PPE and workwear are specified in Network Rail standard *NR/L2/OHS/021 Personal Protective Equipment and Workwear*. Task-specific PPE requirements are identified by work activity risk assessments.
- 13.2.2 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
- 13.2.3 If a hazard is identified that cannot be mitigated by any other means, a further 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 / Network Rail standard.

13.3 Work safe procedure

- 13.3.1 No employee of Network Rail, or any contractor, or visitor working for Network Rail is expected to carry out any task where the risk to themselves or any other person is unacceptable. Network Rail standard *NR/SP/OHS/00112 Worksafe Procedure* is the process by which employees immediately stop unsafe work activities and inform their supervisor / line manager. It supports Network Rail's commitment to the development of a blame free culture and which recognises that workers invoking the Worksafe Procedure, reporting close calls or

accidents do so free from any sanctions. Safe systems of work 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.

- 13.3.2 Further details on the Worksafe procedure with in Network Rail is detailed in the H&SMS (IM), section 2.5 Individual Accountability.

13.4 Drugs and alcohol policy

- 13.4.1 Network Rail 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 Network Rail being unfit through drugs or alcohol while at work. The Policy demonstrates Networks Rail'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
- encourage those employees who misuse Drugs and Alcohol to voluntarily seek help 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

- 13.4.2 Contractors are required to provide their own drugs and alcohol policy to support Network Rail's Standard as part of their health and safety management arrangements.

- 13.4.3 All Network Rail employees recruited for 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, and no-one is employed if they fail or refuse this test. All employees recruited to other posts are required to confirm that they understand and will comply with Network Rail's Drugs and Alcohol policy. Safety critical work employees and those that are Sentinel card holders are subject to random testing for drugs or alcohol. Employees are also subject to 'for cause' testing for drugs or alcohol, where appropriate, following involvement in a safety critical accident or where breach of the policy is suspected. Line managers undertake spot checks on employees carrying out safety critical work.

13.5 Lifesaving rules and fair culture principles

- 13.5.1 Our Lifesaving Rules are at the heart of our safety vision – 'everyone home safe every day' – and the result of our ongoing commitment to eliminate all injuries and fatalities in Network Rail and our industry. They underpin our safety values and vision, and they are for everyone; whether office based or working on the 'front line'.

- 13.5.2 The Fair Culture principles are aimed at creating the environment in which close call reporting is supported and define how we will investigate potential breaches of the Life Saving Rules in a way which identifies the root cause, and moves away from a perceived culture of blame. There will be an increased focus on the consistent application of the Fair Culture principles across our contractors and supply chain.
- 13.5.3 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.
- 13.5.4 Further details on Workforce Health and Safety with in Network Rail is detailed in the H&SMS (IM), section 4.20 Workforce Health and Safety.

14 OPERATIONAL CONTROL - SUPPLIERS**14.1 Suppliers**

- 14.1.1 The Contracts and Procurement Director has overall responsibility for setting policy and implementing governance arrangements for all expenditure with suppliers and these are available on Network Rail's intranet site. Our expenditure with suppliers is managed through a standard sourcing process.
- 14.1.2 *Network Rail Contracts and Procurement Policy*
- This policy specifies the high-level sourcing and supplier governance structure and processes within Network Rail for supplier management and sourcing projects. It also outlines the framework for obtaining assurance that all reasonable practical steps have been taken to appoint suitably competent suppliers in order to meet Network Rail's safety objectives.
- 14.1.3 *NR/L2/SCO/302 Supplier Qualification Requirements*
- This document specifies the arrangements for the 'qualification' activity within the Network Rail 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 2006 are met.
- 14.1.4 Further details on Supplier Management within Network Rail is detailed in the H&SMS (IM), section 6.2 Suppliers.
- 14.1.5 Further details regarding DOF Products can be found in H&SMS (TU) Chapter 12 and in *NR/L1/RMVP/0001 Supply Chain Operations, T & RS and OTM Engineering Management Manual*.

15 OPERATIONAL CONTROL – EMERGENCY PREPAREDNESS AND RESPONSE**15.1 Emergency planning**

15.1.1 Network Rail 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 Network Rail infrastructure. Network Rail has arrangements to regularly review the National Emergency Plan and update it whenever necessary.

15.1.2 The Operational Security & Continuity Planning Manager acts as the overall co-ordinator of emergency planning for Network Rail, overseeing the compilation of emergency plans such that they are produced in accordance with Railway Group standard *RIS-TOM-3118 Incident Response Planning & Management* and are consistent across Network Rail'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 & Continuity Planning Manager and team when required.

15.2 Arrangements and communication of emergency response

15.2.1 The contents of emergency plans are communicated to all relevant personnel through briefing, training, and during exercises. *NR/L2/OPS/250* contains a brief description of the roles and responsibilities of posts that Network Rail 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 Freight / Train Operating Companies (FOCs / TOCs) and the Emergency Services. Network Rail 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.

15.3 Provision of first aid/medical treatment

15.3.1 Network Rail 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 current Health and Safety (First Aid) Regulations, and Approved Code of Practice. The level of first aid provision is defined by the number of Network Rail employees in the workplace or worksite and the level of health and safety risk posed by the work activities undertaken.

15.3.2 First aid arrangements are specified for each location or as a result of risk assessment undertaken in accordance with *NR/L2/OHS/00110* 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.

15.4 Maintenance of emergency response equipment

15.4.1 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.

15.4.2 Fire extinguishers installed in facilities are all embraced 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.

15.4.3 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 program. Plant and equipment maintenance is carried out against a planned maintenance schedule. Auditable maintenance records are retained by the maintenance contractor.

15.4.4 DOF cab emergency equipment is addressed in the vehicle maintenance regimes and inspections, checks, tests and renewals are carried out in accordance with the Maintenance Plan.

15.5 Testing of emergency procedures

15.5.1 Emergency plans are regularly tested and reviewed. Network Rail 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. Network Rail also participates in planning meetings and exercises with external organisations, and provides access to its premises and infrastructure for familiarisation purposes.

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

15.6 Liaison with external bodies/interfaces

15.6.1 The Operational Security & Continuity Planning Manager acts as the overall co-ordinator of emergency planning for Network Rail, overseeing the compilation of emergency plans such that they are produced in accordance with Railway Group standard RIS-3118-TOM Incident Response Planning & Management and are consistent across Network Rail'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 & Continuity Planning Manager and team when required.

16 CHECKING – PERFORMANCE MEASUREMENT AND MONITORING

16.1 Learning

16.1.1 Network Rail uses the knowledge derived from our operations and maintenance activities, combined with planned and targeted research, to review the effectiveness of our health and safety management arrangements and drive continual improvement. This deepens our understanding of risk and informs the development of systems and controls based on a philosophy of 'predict and prevent'.

16.1.2 Network Rail recognises the importance of learning with other TU Organisations that operate trains or rail vehicles 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 other Transport Operators to discuss respective safety performance. Further details are referenced in the H&SMS (IM), section 6 Managing Interfaces and section 4.8 Consultation and Communication.

16.2 Review of health and safety performance indicators

16.2.1 Each group of health and safety performance indicators is reviewed by the Fleet and Engineering management team meeting on a 4 weekly basis. This includes analysis of performance against targets and trends and is used to identify areas for further improvement (see section 5.1 Health and Safety Performance Indicators).

16.2.2 Performance against the health and safety performance indicators is published four-weekly in the safety, health and environment performance report and regularly reviewed at Network Rail Board, National Safety Health and Environment (NSHERG) review group, Executive Management Group (ExecCom), National Safety, Health and Environment Review 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.

16.2.3 Our selected Safety Performance Indicators are

- Management System
 - Workforce reportable accidents (RIDDOR),
 - Planned audits Vs. actual undertaken,
 - Competence assessments delivered to plan,
 - Control of Working Hours
 - Safety critical communication observations
 - Near misses / Close calls.
 - Safety conversations.
- Operation outside possession (train driving)
 - Signals Passed at Danger (SPaDs);
 - TPWS interventions,
 - OTM speeding
 - Operational Incidents
- Maintenance
 - Fault reports,
 - Service affecting failures,
 - Safety Critical Product Failures;

16.2.4 Further details on Health and Safety Performance Indicators with in Network Rail is detailed in the H&SMS (IM), section 8 Learning

16.3 Annual safety performance report

- 16.3.1 The Director, Safety Strategy will compile an annual safety performance report for submission to the Office of Rail and Road which comply with the requirements of the Railways and Other Guided Transport (Safety) (Amendment) Regulations 2011 and ORR Guidance, such that Network Rail's safety performance can be aggregated by ORR for reporting on a national basis in compliance with European requirements.
- 16.3.2 Network Rail will submit the annual safety performance report by the deadline of 30th June, to cover the preceding calendar year.

17 CORRECTIVE ACTION – ACCIDENTS, INCIDENTS, NON-CONFORMANCES AND CORRECTIVE AND PREVENTATIVE ACTION

17.1 Overview

17.1.1 Network Rail's arrangements for maintenance and operational accidents are defined in Network Rail standard *NR/L2/INV/002 Accident and Incident Reporting and Investigation*. The standard is supported by a *Reporting and Investigation Manual* that incorporates modules for reporting and investigating accidents and incidents and tracking the progress of investigations and managing associated recommendations.

17.2 Reporting of accidents and incidents

17.2.1 *NR/L2/INV/002 Accident and Incident Reporting and Investigation* standard is additional to the statutory reporting requirements of the current Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and the Railways (Accident Investigation and Reporting) Regulations.

17.2.2 Maintenance and Operational accidents and incidents include collisions with rolling stock; derailments; collisions with objects; collisions with road vehicles at level crossings; and striking people on the line.

17.2.3 Line managers / Supervisors inform employees for whom they are responsible of the requirements of the procedures for reporting. DOF employees are required to advise the Rail Plant Control in 24/7 SCO Control and their line manager as soon as possible whenever they have had an accident, assault or a case of occupational ill health.

17.2.4 Further details on Accident and Incident Reporting and Investigation within Network Rail are detailed in the H&SMS (IM), section 7.4 Accident and Incident Reporting and Investigation.

17.2.5 All information in respect of accidents, incidents and cases of occupational ill health in managed through the Safety Management Information System (SMIS). Reports are provided to RAIB, ORR and the rail industry as required.

17.2.6 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. Network Rail standard *NR/L2/OPS/035 Dissemination of Urgent Operating Advice* defines how this arrangement is applied by Network Rail.

17.2.7 Network Rail has arrangements in place for complying with the requirements of Railway Group standards RIS-8250-RST Reporting High Risk Defects and RIS-0707-CCS Management of Safety Related Control, Command and Signalling System.

17.3 Learning from experience

17.3.1 Network Rail's processes for the reporting and investigation of accidents and incidents, including the management of recommendations and local actions (see section 16.1 Health and Safety Performance Indicators), are included within the *Reporting and Investigation Manual*. The overarching standard is *NR/L2/INV/002 Accident and Incident Reporting and Investigation*.

17.3.2 Further details on Learning from Experience with in Network Rail is detailed in the H&SMS (IM), section 8 Learning

17.4 Competent investigators

- 17.4.1 Network Rail standard *NR/SP/OHS/032 Training, Competence and Assessment in Accident and Incident Investigation* and for specific operations *SP-2.06 'Incident Investigation and Safety of the Line investigations'* details the competence arrangements for employees undertaking accident and incident investigation activities, i.e. DCPs and lead investigators.

17.5 Procedures for investigating

- 17.5.1 All accidents / incidents occurring on the network are investigated to determine 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 Network Rail-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.

- 17.5.2 The actual and potential consequences of the accident / incident 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 Railway Group Standard RIS-3119-TOM);
- the RAIB;
- the ORR or Health & Safety Executive (including Public Inquiries),;
- the British Transport Police;
- A coroner.

- 17.5.3 The Rail Accident Investigation Branch (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 Network Rail and the RAIB through the Director, S&SD Risk & Assurance. All parties in the Railway Group, or those undertaking work on their behalf, have a duty to co-operate in accident investigations.

- 17.5.4 Further details on Accident Investigation within Network Rail is detailed in the H&SMS (IM), section 7.4.

17.6 Managing DOF incidents

- 17.6.1 Following an accident or incident, the recovery and subsequent inspection and testing of Network Rail DOF will be in accordance;

- NR/L3/SCO/311/10 Post Incident Inspection
- NR/L2/INV/002 Accident and Incident Reporting and Investigation
- NR/L3/INV/3001 Reporting and Investigation Manual
- NR/L3/OPS/045/4.04 Incident Management (section 20 on Breakdown)

17.7 Investigations led by other organisations

- 17.7.1 In the majority of instances Network Rail take the responsibility and will lead the investigation.
- 17.7.2 Significant railway accidents will be investigated by RAIB, and Network Rail will ensure close co-operation with RAIB Inspectors. Network Rail (TU) has managers who are trained to act as a Train Operator Liaison Officer (TOLO). A list of posts requiring the TOLO qualification is in the SCO Director F & E On Call Manual NR/PRC/SCO/OCE001.
- 17.7.3 Where a Rail Industry Duty Holder is the lead body for investigating an incident, the Corporate Investigation and Assurance Manager will be responsible for agreeing the investigation remit on behalf of Network Rail, and for ensuring Network Rail 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. Driving Team Leaders carry out investigation into all SPaDs and other Safety of the Line Incidents in accordance with *SP-2.06*.
- 17.7.4 Managers within the F&E management team who represent Network Rail at Accident and Incident Investigations are formally appointed to act on behalf of Network Rail by the Designated Competent Person of the Network Rail Route or the Business Function concerned.
- 17.7.5 Network Rail will ensure that staff co-operate with any other party leading an investigation, including RAIB, ORR, and British Transport Police.

17.8 Systems for analysis and review

- 17.8.1 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. Network Rail's processes for the reporting and investigation of accidents and incidents, including the management of recommendations and local actions (see section 16.1 Health and Safety Performance Indicators) are included within the *Reporting and Investigation Manual*. The overarching standard is *NR/L2/INV/002 Accident and Incident Reporting and Investigation*.
- 17.8.2 Recommendations may be directed towards Network Rail from the following sources:
- Judicial and Health & Safety Executive (HSE) Inquiries;
 - Rail Accident Investigation Branch (RAIB) Investigation Reports;
 - Industry Formal or Local Investigation Reports;
 - Coroners' Inquests.
- 17.8.3 The process for managing and tracking recommendations from these sources within Network Rail is detailed in standard *NR/L3/INV/3001/901 Management of recommendations and local actions*.
- 17.8.4 Reports and recommendations arising from RAIB Investigations and Network Rail led Formal Investigations are reviewed by the National Recommendations Review Panel (NRRP), which meets every four weeks. The NRRP also review recommendations from Coroners Inquests or Public Inquiries.

17.9 Process for National Incident Reports (NIRs)

- 17.9.1 Network Rail arrangements for dealing with National Incident reports is defined in *.NR/L3/SCO/311 Supply Chain Operations T&RS and OTM Engineering and Management Manual*.

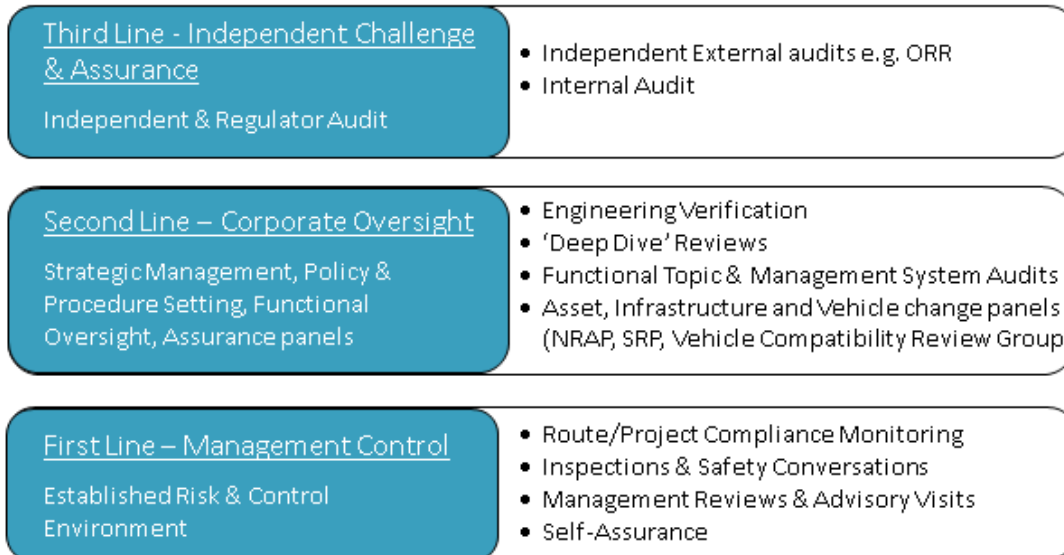
18 CORRECTIVE ACTION – COMPLIANCE MONITORING

18.1 Compliance monitoring and Safety assurance

18.1.1 Network Rail has monitoring 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 Network Rail’s health and safety management arrangements.

18.1.2 The “three lines of defence” monitoring regime is illustrated below;

Lines of Defence



18.1.3 Network Rail’s arrangements for auditing are further defined in NR/L2/ASR/036 *Network Rail Assurance Framework* and NR/L3/SCO/311 *Supply Chain Operations T&RS and OTM Engineering and Management Manual*.

18.1.4 The Network Rail assurance framework aims to provide the Board and management groups with confidence in the levels of compliance with Network Rail’s Health & Safety Management System, formal company 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 Network Rail, and how to plan, carry out and review these effectively.

18.1.5 NR/L3/SCO/311 *Supply Chain Operations T&RS and OTM Engineering and Management Manual* defines the Rail Vehicle Engineering technical audit and engineering assessment process and gives guidance on the general principles for the planning and management of these audits and assessments. This procedure supports the Network Rail corporate assurance framework requirements specified in NR/SP/ASR/036 and Rail Vehicle Engineering standard NR/L2/RVE/0003.

18.1.6 All corrective actions are tracked via the Network Rail Safety Assurance Tool CMO which includes actions and recommendations from audits, accident investigations, ORR inspection reports, inspections and safety conversations.

- 18.1.7 Managing and tracking recommendations from within Network Rail is well established and is detailed in standard *NR/L3/INV/3001/901 Management of recommendations and local actions*
- 18.1.8 Full details on Compliance Monitoring and Safety Assurance with in Network Rail is detailed in the H&SMS (IM), section 7.3 Safety Assurance.

19 MANAGEMENT REVIEW

19.1 Senior management review

- 19.1.1 Network Rail has review mechanisms in place that afford the Network Rail Board and management with an overview of safety performance.
- 19.1.2 The Board's Safety Health and Environment (SHE) Committee, and its Executive Committee, 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".
- 19.1.3 The National Safety, Health and Environment Review 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 National Safety, Health and Environment Review meeting monitor, challenge and test the assumptions of the outcomes from accident and incident investigations (including the work of the Rail Accident Investigation Branch), and the National Recommendations Review Panel (NRRP). The National Safety, Health and Environment Review meeting also regularly review Network Rail's major risks 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.
- 19.1.4 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.
- 19.1.5 Network Rail also encourages – through team meetings and briefings – the reporting of the results of investigations, company responses to confidential reports, local actions from self-assurance activity, and employee engagement scores.

19.2 Change management

- 19.2.1 Network Rail 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 DOF route compatibility, product acceptance, and any other factors which may affect the safety of the operational railway.
- 19.2.2 Engineering Change Management can be found in H&SMS (TU) chapter 12, which details the Network Rail engineering change *process PE/MS/005 Engineering Change*.
- 19.2.3 Full details Change Management arrangements, including changes associated with significant risk and the Common Safety Methods (CSM) process are detailed Network Rail's H&SMS (IM), section 6.6 Change Management.

19.3 Safety certificate changes

- 19.3.1 The Director, Fleet & Engineering is overall custodian of the H&SMS (TU). The Director, Fleet & Engineering maintains regular liaison with ORR to exchange views regarding the contents of the system, Network Rail's compliance with it, and to discuss any proposed

major/substantial changes. The Director, Fleet & Engineering monitors 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.

- 19.3.2 The Director, Fleet & Engineering undertakes an on-going review of the contents of the health and safety management system over the period of validity of the Safety Certificate. Where this review reveals the need for revisions, the Director, Fleet & Engineering will prepare the necessary changes and, where necessary, submit them to the ORR for acceptance.

Appendices

Appendix 1 – Interface Organisations

Appendix 2a – Organisation Charts

Appendix 2b – Responsibilities

Appendix 3 – Rules and NTSN Compliance

Appendix 4 – Directly Operated Fleet assets list

APPENDIX 1 - INTERFACE ORGANISATIONS

In the course of its activities NETWORK RAIL (TU) interfaces with the Mainline Railway Infrastructure Manager (NETWORK RAIL (IM)) and with a number of other Infrastructure Managers (IM) and Transport Undertakings (TU). The main interfaces are set out below:

Interface Activity	Description	Railway Interface
Accident Investigation	Communication and co-ordination managed through Controls. Includes incidents such as SPaDs.	NETWORK RAIL (IM) Passenger and Freight TUs
Best Practice in operations and engineering safety	Sharing and review of safety performance reports and significant audit findings relating to interface safety risk	M & EE Networking Group Passenger and Freight TUs in RDG Passenger and Freight TUs in cross industry Safety Liaison NETWORK RAIL (IM); Infrastructure Contractor TUs; Freight & Passenger TOC TUs in OPSRAM
Driver Training	Transfer of personnel Accredited trainers Driver Licensing (in conjunction with ORR)	Infrastructure Contractor TUs Freight & Passenger TOC TUs Accredited rail safety trainers e.g. RDG
Emergency Planning	NETWORK RAIL (IM) has a principal role in leading Emergency Planning and Establishing EP forums live and table top exercises.	NETWORK RAIL (IM) Infrastructure Contractor TUs Freight & Passenger TOC TUs
Emergency Response	Communication and co-ordination managed through respective IM & SCO 24/7 SCO (TU) Controls.	NETWORK RAIL (IM) Infrastructure Contractor TUs Freight & Passenger TOC TUs
Risk Identification and Assessment	Managed through RSSB Application for an amended certificate through consultation with ORR Significant changes to the type or extent of operations managed through ORR	NETWORK RAIL (IM) Infrastructure Contractor TUs Freight & Passenger TOC TUs Affected Parties
Real Time Control (Including OTM contingency planning)	Communication and co-ordination managed through respective NETWORK RAIL 24 / 7 SCO (TU) Control and NETWORK RAIL (IM) Control.	NETWORK RAIL (IM)
Route Conductors	Prior checks & regular assurance audit to ensure provision of competency for contracted services. Route learning on services.	Infrastructure Contractor TUs Freight & Passenger TOC TUs
TOPS Input	NETWORK RAIL 24/7 SCO (TU) Control	NETWORK RAIL (IM)
Train Path Planning	Running line movements including into / out of Possessions / Depots / OBs – arranged by NETWORK RAIL 24/7 SCO (TU) Control	NETWORK RAIL (IM) Infrastructure Contractor TUs

INTERFACE ORGANISATIONS

Interface Organisation	Purpose	Responsible Post
Accredited Training Provider	Provide training and / or assessment services in train driving and other operational competencies	Principal Driving & Operational Standards Expert Business Manager
Assessment Bodies	Accredited approval of new vehicles	Principal Engineering Manager
British Transport Police	Security and safety (Crime) Emergency arrangements and plans, and in the periodic testing of the effectiveness of those arrangements. Includes Community Safety Partnership Groups	Each Route Managing Director Head of Safety & Sustainable Development Senior Project Managers Operations Security & Continuity Planning Manager Security and Emergency Planning Specialist Community Safety Managers
Emergency Services (Fire, Police, Ambulance)	Fire, Police, Ambulance See BTP above. Involved in project-specific and issue-specific security and safety initiatives	Each Route Managing Director Head of Safety & Sustainable Development Senior Project Managers
Freight Operating Companies	Provision of route conductors Training of drivers. TOPS input and provision of rail haulage services where hired. Route learning and familiarisation. Planning and delivery of engineering train movements required for railway infrastructure engineering work. Interface on site.	Principal Driving & Operational Standards Expert Training & Competence Manager Driving Manager Principal Planning & Performance Manager Senior Project Managers
NETWORK RAIL (IM) Infrastructure Contractor TUs	Emergency Response Responsible Post liaises with their counterparts in their Infrastructure Contractor's organisation in the establishment of emergency arrangements and plans, in the periodic testing of the effectiveness of those arrangements, and in response to operational incidents.	Network Rail Regions (Route Director) Head of Safety & Sustainable Development Head of Discipline [Plant and T&RS] Principal Driving & Operational Standards Expert (Head of Discipline, Operations) SCO 24/7 (TU) Duty Operations Manager
NETWORK RAIL (IM) Infrastructure Contractor TUs Freight & Passenger TOC TUs	Key safety issues and Improving safety of operation Working groups established jointly by the senior executives tasked with improving safety of operation. Participate in well-established groups such as OPSRAM, ISLG and M&EE FSC which spread good practice and target improvements in the field of train operation.	Network Rail Regions (Route Director) Principal Driving & Operational Standards Expert Head of Discipline [Plant and T&RS]
NETWORK RAIL (IM) Infrastructure Contractor TUs	Accident Investigation Operational and engineering professionals to sit on joint incident inquiry panels.	Head of Safety & Sustainable Development Director, SCO Fleet & Engineering

Freight & Passenger TOC TUs		Principal Driving & Operational Standards Expert Head of Discipline [Plant and T&RS] Principal Assurance Manager (F & E)
Infrastructure Contractor TUs Freight & Passenger TOC TUs	Competence and Fitness Transfer of personnel. Arrangements for route learning and familiarisation for NETWORK RAIL DOF drivers.	Principal Driving & Operational Standards Expert Training & Competency Manager Route Knowledge Manager Driving Manager
Occupational Health Service	Medical Examinations. Health Advice Responsible Posts liaise with OHS to set up arrangements for recruitment screening, periodic examinations, referrals, ongoing health checks, where appropriate health surveillance, and the testing of employees for drugs and alcohol.	Human Resources Director Head of Health and Wellness Strategy Head of Safety & Sustainable Development
Office of Road & Rail	Inspections. Monitoring of H&S performance Responsible Posts work with ORR on specific safety issues and incidents, on planned inspection and evidence-based assessment, and in making statutory applications, notifications and reports. Central management of driver licensing process Regular (6 monthly) Meetings.	Head of Safety & Sustainable Development Principal Driving & Operational Standards Expert Training & Competency Manager Head of Discipline [Plant and T&RS]
Rail Safety and Standards Board	Industry standards and best practice Responsible Posts participate in Standards Committee work, leadership themes through conferences, development work through workshops and in the development of the Railway Strategic Safety plan etc.	Head of Safety & Sustainable Development Principal Driving & Operational Standards Expert Driving & Operations Rules Specialist Head of Discipline [Plant and T&RS]
Trade Unions	Consultation with Safety Representatives / Committees Responsible Posts work with full-time Trades Union personnel and company representatives in operating arrangements for formal consultation and negotiation. Regular meetings (3 monthly) and ad-hoc meetings	Director, Human Resource Each Route Managing Director Principal Driving & Operational Standards Expert Driving Manager Principal Engineering Manager

DETAILS OF INTERFACE ORGANISATIONS

Passenger TU groups

Caledonian Sleeper – Chiltern Railways – CrossCountry – East Coast Trains (Lumo) - East Midlands Railway – Essex Thameside – Eurostar International - Grand Central - Great Anglia – Great Western Railway – Hull Trains - Inter City East Coast (LNER) – London Overground – Merseyrail – Northern – ScotRail – Southeastern (Integrated Kent) – South Western Railway – TfL Rail (Crossrail) - Thameslink,

Southern and Great Northern – Trans Pennine Express – Wales and Borders -West Coast Partnership – West Midlands Trains

Freight TU groups

Colas Rail - DC Rail - Direct Rail Services (DRS) – DB Cargo UK – Freightliner – GB Railfreight – Mendip Rail

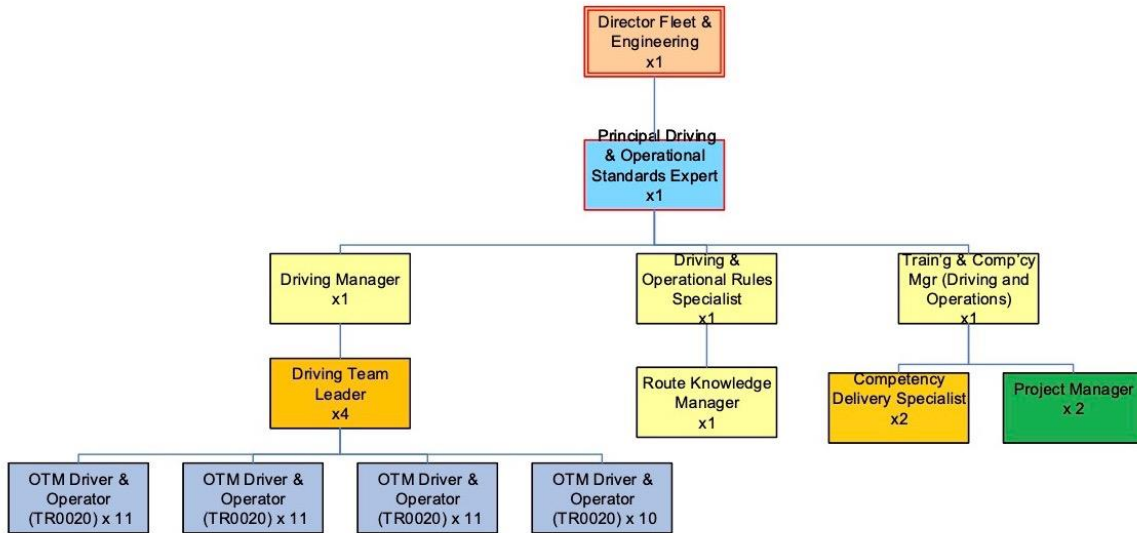
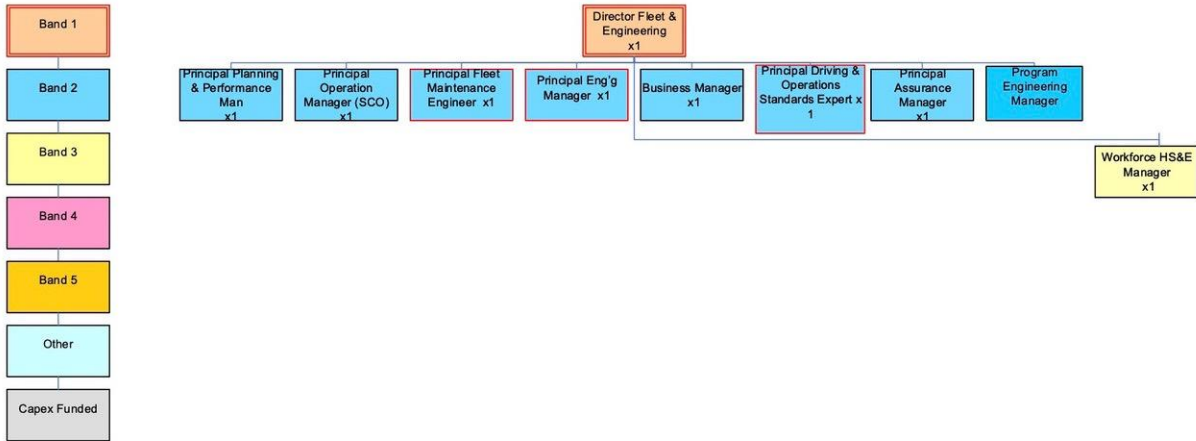
Infrastructure Contractor TUs

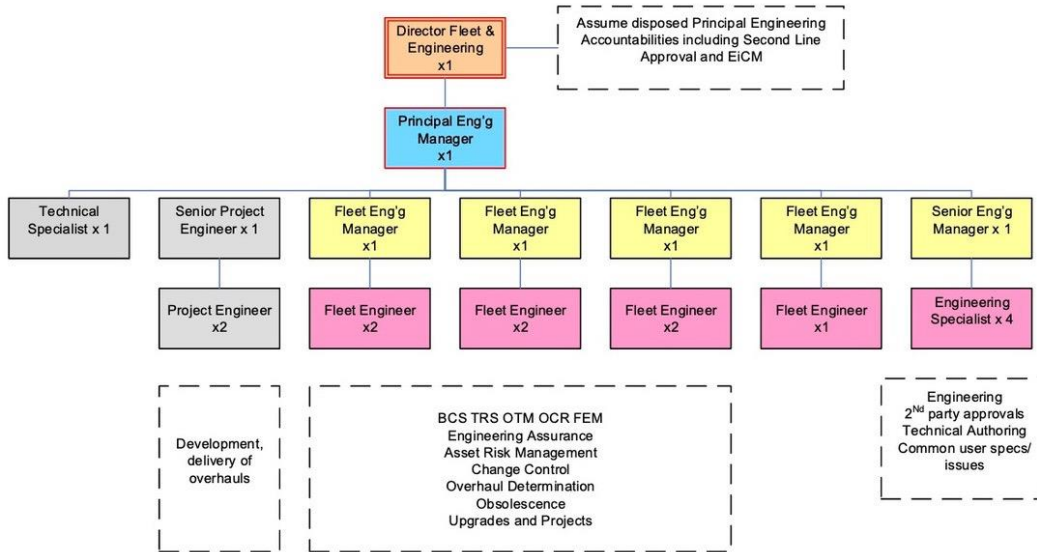
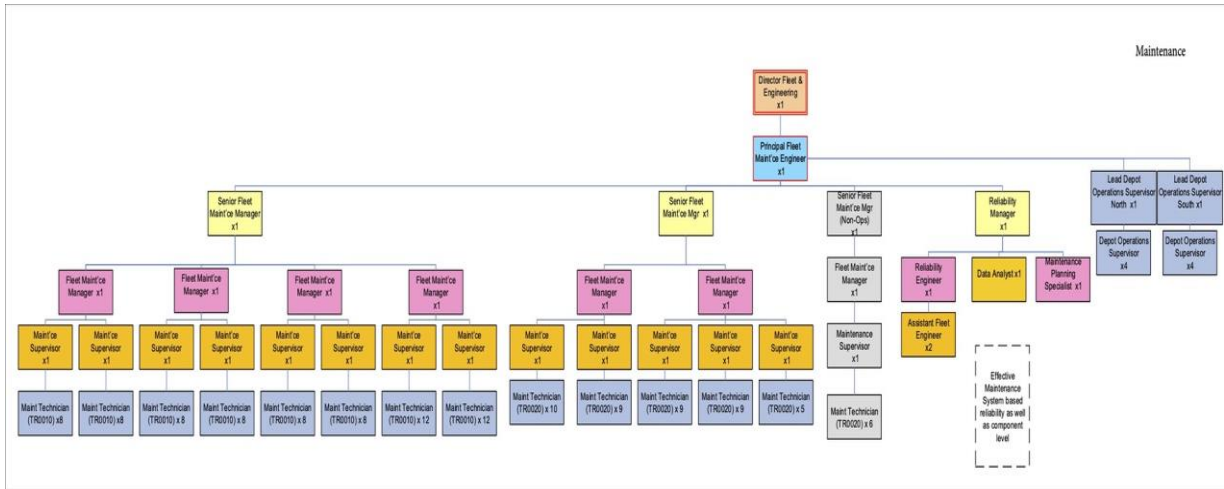
Amey Fleet Services Ltd – Swietelsky Babcock Rail Ltd - Balfour Beatty Rail Plant Ltd – Balfour Beatty Infrastructure Services Ltd – Harsco Rail Ltd - Network Rail Infrastructure Ltd – Victa Railfreight - VolkerRail Ltd

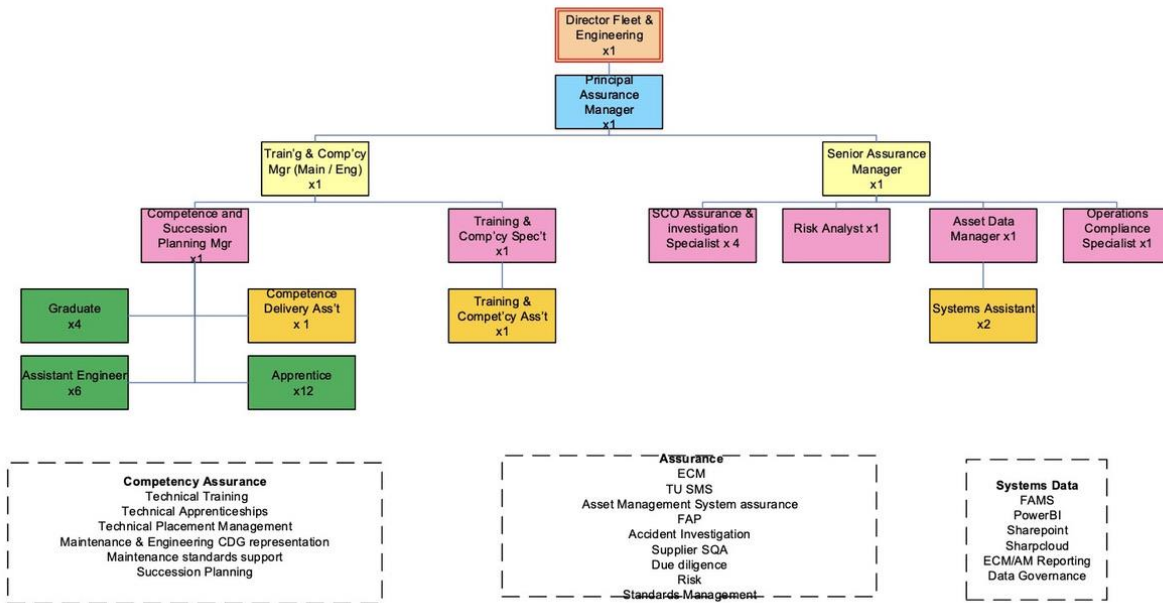
Other TUs

Devon & Cornwall Railways Ltd – Hanson & Hall Rail Services - Loram (UK) Ltd – Rail Operations (UK) - Rail Operations Group (ROG) - SLC Operations - Vintage Trains – Heritage operators including West Somerset Railway, East Lancs Railway

APPENDIX 2A - ORGANISATION CHARTS







APPENDIX 2B - KEY RESPONSIBILITIES

Director, Fleet & Engineering

Responsible for:

- Compliance with standards and legislation applicable to activities undertaken by Fleet and Engineering
- Providing technical leadership and setting the strategic direction for operations, engineering and asset management
- Setting the strategic direction for risk management including directing the delivery of an effective Level 2 assurance programme which controls risk within Fleet and Engineering
- The development of train operations and engineering standards, processes and tools to allow the safe and effective delivery of operations, engineering and asset management activities in accordance with legislation and standards
- Ensuring the provision of sufficient resources to meet legislative standards
- Compliance with the Network Rail procedures for appointing contractors and ensuring that Traction and Rolling Stock specifications and RGS requirements are fully met
- Ensuring appropriate assurance activities are in place and effectively carried out to manage risks associated with the third parties with whom Network Rail contracts

Head of Fleet Maintenance (formerly Principal Fleet Maintenance Engineer)

Responsible for:

- Review of vehicle incidents or defects, and remedial action to be undertaken, in conjunction with the Principal Engineering Manager
- Provision of accredited and approved competent supplier for wheel skates
- Adherence to maintenance periodicities and withdrawal of vehicles from service before they become overdue
- Approval of (low risk) deferred work
- Review and recording of safety related maintenance defects
- Monitoring of compliance with maintenance plan
- Development and implementation of maintenance safe systems of work, task risk controls and work activity risk assessments
- Ensure “Fitness for Service Certificate” (hired in vehicles) or “Fitness to Run Certificate” issued prior to vehicles entering service

Principal Engineering Manager

Responsible for:

- Approval of proposed engineering changes to rail vehicles
- Changes to maintenance plans and their authorization and endorsement in conjunction with the Head of Fleet Maintenance
- Accountable for:
 - The development, approval and review of maintenance plans
 - The process for approval of high risk deferred work

- Determining whether a National Incident Report (NIR) should be raised following discovery of urgent safety-related defects on relevant vehicles
- Review and update of relevant risks on the level 3 and level 4 risk registers, managing close out of mitigating actions, allocation of action owners and escalation to the Director, Fleet & Engineering where required
- Ensure appropriate advice is made available or published where operational restrictions or conditions exist
- Identification of any medium or long-term actions required as a result of an NIR
- Assessment of the competence of maintenance managers to release vehicles to traffic in accordance with NR/L3/SCO/311/08

Fleet Engineering Manager

Responsible for:

- Development of the Fleet Asset Management Plan for detailing local arrangements
- Development of technical specifications for maintenance contracts
- Review of and changes to the maintenance plan
- Confirmation that maintenance facilities are suitable for all planned maintenance
- Development of process for removal and release of vehicles to traffic
- Planning and delivery of level 1 “in process” and facility inspections
- Implement new or amended VMOI/VOI in accordance with a VMOI/VOI timescale implementation plan
- Agree requirements with Principal Engineering Manager (office hours) for short-term response to NIRs
- Confirm requirement (outside office hours when on-call) for short term response to NIRs
- Examine the vehicle history, repair history and overhaul dates following a safety critical incident on Network Rail rolling stock
- Lead and facilitate review group for operational and maintenance Hazard Log / Risk Register
- Monitor and ensure control measures are identified and implemented by relevant action owners to mitigate identified risks
- Ensure suitable protection arrangements are in place and in use at all maintenance locations
- Ensure that all deferred work is managed in accordance with NR/L2/SCO/311/09
- Manage changes to the vehicles, maintenance and operational procedures in accordance with NR/L2/SCO/311/04 and NR/L2/SCO/311/19
- Provide professional guidance on responses to NIRs
- Immediate assessment review following a safety critical incident on Network Rail rolling stock
- Response to Network 24/7 SCO Rail Control Centre to deal with urgent repairs or fault finding in service
- Provision of advice and response to the discovery of high-risk safety related defects
- Ensure safe wheel skate fitment and movement of rail vehicles

Maintenance Supervisors*Responsible for:*

- Support the competence requirements of maintenance staff
- Carry out staff periodic assessments against vehicle maintenance instructions
- Coach candidates who do not yet meet the standard
- Ensure all safety critical work is carried out prior to a vehicle entering service
- Receive Urgent Safety Related Defects and determine continued safety of the rolling stock fleet
- Safety related defect incident is investigated for remedial action and report submitted
- Categorise safety related maintenance defects into high, medium and low and entered in a database
- Advise the relevant maintenance depot of any safety related defects or incidents involving vehicles allocated to that depot
- Respond to Network Rail 24/7 SCO Control Centre to deal with urgent repairs or fault finding in service

Maintainers*Responsible for:*

- Complete scheduled exam job number, tasks with individual descriptions
- Record in service defects and subsequent actions in vehicle repair book
- Record in service defects and subsequent actions in vehicle repair book)
- Carry out maintenance activities in accordance with the maintenance Policy and Plan

Business Support Manager – Technical Support*Responsible for:*

- The Procurement of Safety Critical goods and services from competent and approved suppliers

Principal Assurance Manager – Central Assurance

- Annual development and implementation of a functional audit plan
- Jointly approve with the Director, Fleet & Engineering the functional audit plan for maintenance activities, such as; ECM compliance audits, supplier quality assurance and asset condition audits.

Senior Assurance Manager - Central Assurance*Responsible for:*

- Manage the technical auditing process as laid down in Network Rail standards
- Additional audits undertaken where fleet safety or reliability performance monitoring indicates this requirement
- Those who carry out Fleet Training and Assessing- Central Assurance
- Carry out depot classroom training
- Carry out practical training and coaching
- Carry out maintenance competence assessments

Principal Driving & Operational Standards Expert*Responsible for:*

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- Developing operational strategy
- Develop and implement the SPaD and Operational Risk management policy
- Provide operational advice and support
- Represent DOF driving and operational expertise at SCO Fleet & Engineer Director management group, in wider Network Rail groups and at rail industry forums
- Define and deliver the process for verification of competence activities in order to demonstrate line manager, assessor and trainer competence
- Ensure the content, target group and method of communication is timely, relevant and appropriate so that knowledge within the DOF team is shared and understood
- Provide operational input and expertise, and develop plans in respect of new technology, new and upgraded fleet and other operational developments
- Promote awareness of, and solutions to, low rail adhesion conditions
- Lead operational response and investigation following incidents
- Review and follow up all matters relating to train / infrastructure interface
- Identify and implement quality and efficiency improvements, communicating them to the DOF management team and securing engagement in meeting business objectives

Driving & Operations Rules Specialist

Responsible for:

- Develop and manage the driving and operational Standards (SPs) for rules, regulations, instructions, and other operational publications
- Analyse rail industry and other developments applicable to DOF driving and update DOF driving standards to conform to current industry requirements
- Provide technical input into the development of proposals arising from incidents and technological changes
- Provide Subject Matter Expert input on driving / operations principal and risk to System Review Panels
- Prepare operational safety briefs and communicate updates on driving and operational Standards to the DOF team, and affected external parties
- Lead investigations into operational accidents and incidents, prepare investigation reports and disseminate lessons learnt
- Support the Principal Driving and Operational Standards Expert and DOF management team in identifying and furthering operational principles and policy developments with ORR, RSSB and other external bodies

Training and Competency Manager OTM

Responsible for:

- Develop an annual plan for the timely delivery of competence assessments for DOF driving staff
- Prepare and update material for assessors and line managers to understand and complete competence assessments
- Arrange the necessary updates for trainers, assessors and other members of the DOF management team

- Develop training programmes in accordance with business needs, identifying and arranging trainers and resources to meet the programme
- Maintain a Competency Matrix and records of competence assessments
- Monitor progress against the annual plan, taking remedial action to address shortfalls
- Assure the competence of external suppliers hired to drive trains and deliver training and assessment for DOF
- Manage and comply with Train Driver Licencing and Certificates Regulations (TDLCR) on behalf of DOF and provide guidance to DOF driver management team for implementation
- Act as liaison point for ORR over TDLCR updates
- Provide technical expertise for retention and recognition by ORR for Network Rail being an approved Training and Examination Centre
- Support the Principal Driving and Operational Standards Expert and DOF management team in identifying and furthering operational principles and policy developments with ORR, RSSB and other external bodies

Route Knowledge Manager OTM

Responsible for:

- Responsible for the development, implementation and delivery of plans for the acquisition and retention of driver route knowledge
- Develop, review and revise driver route risk assessments
- Maintenance of route knowledge records in accordance with the TU main line driving certificate
- Development of route learning methods
- Identification and implementation of route knowledge capability in order to deliver the plan
- Control and authorise access to driving cabs through the issuing driving cab passes
- Support the Principal Driving and Operational Standards Expert and DOF management team in identifying and furthering operational principles and policy developments with ORR, RSSB and other external bodies

Driving Manager

Responsible for:

- Direct the Driving Team Leaders to develop and deliver programmes of work safely, on time and to budget
- Develop and monitor Driving Team Leaders so that they are trained and qualified
- Manage the selection, recruitment and training of Driving Team Leaders and OTM drivers & operators
- Monitor and take action to control DOF driver working hours
- Manage efficient allocation of DOF driver resources in conjunction with the Principal Planning & Performance Manager's team
- Provide guidance to the Principal Planning and Performance Manager and 24/7 SCO Control over the management of DOF drivers
- Undertake incident investigations as remitted by the Designated Competent Person

- Manage driver specific processes such as Network Rail SPaD policy, specifically Monitored Driver and seasonal driving techniques
- Support the Principal Driving and Operational Standards Expert and DOF management team in identifying and furthering operational principles and policy developments with ORR, RSSB and other external bodies
- Those that carry out OTM Driver & Operator Assessments
- Carry out and maintain individual competence (7.7.1a)
- Assess and maintain individual competence to Network Rail's OTM driver & operator competency standard
- Carry out enhanced assessment and monitoring of OTM driver & operators requiring further development with a development plan
- Preparation and initial briefing of Route learning methods and services for travel
- Those who carry out OTM Driver & Operator Training
- Carry out training of OTM driver & operators and assess progress throughout the training programme (11.2.4)
- Assessed in knowledge of Network Rail's OTM driver & operator competency standard (7.4.1 and 7.7.1b)

Driving Team Leaders

Responsible for:

- Direct OTM drivers & operators' activities
- Assessed in instructor techniques
- Oversee the arrangements for the management of working hours
- Communicate safety of the line information e.g. SPAD Information, seasonal driving techniques and other operational risk mitigation plans
- Carry out unobtrusive monitoring of drivers, including OTDR downloads
- Carry out Fitness for Duty checks
- Supervise the availability and display of essential information, supply of publications and equipment and an individual's fitness for work
- Involved in drafting and reviewing engineering and operational arrangements
- Carry out line of route risk assessments
- Conduct practical and theoretical assessments who are driver qualified and route competent

OTM Driver & Operators

Responsible for:

- Operate safe movements of trains on the main line, in possessions and on depot in accordance with Network Rail training
- Train preparation checks for service
- Check that each person entering the cab is in possession of a valid cab pass, legitimate reason for access and has the correct authorisation
- Communicating effectively in an accurate, clear and concise manner, in line with Network Rail communication protocols and Rule Book requirement

Head of Discipline [T&RS] – External organisation

Responsible for:

- Ensuring that the Maintenance Policy is produced
- Approval of proposed engineering changes to Rail Vehicles before physical changes are made to vehicles
- Decide the type of change and specify the scope of the approvals.
- Instruct, where required, during maintenance plan review and related documents

APPENDIX 3 - RULES AND NTSN COMPLIANCE

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Initial Integrity				
RSSB Railway Group Standards RSSB Standards Catalogue	Derogations, Deviations, Temporary Non -Compliance	NR/L2/CSG/STP001/01 Principles of Standard and Control Management NR/L2/CSG/STP001/04 Managing Variations to Network Rail Standards and Control Documents and Railway Group Standards NR/L3/SCO/311/09 Deferral of Maintenance or Repair		Head of Safety & Sustainable Development Fleet Engineering Manager
Safety Validation of Organisational Change	Documented Process, Contractor selection, adequacy	NR/L2/HSS/020 Safety Validation of Organisational Change		Head of Safety & Sustainable Development
Railways Act 2005	Transfer of responsibilities regarding railway safety purposes to the Office of Rail and Road (ORR) from health and safety executive	NR/L3/INV/3001/902 Management of Recommendations and local Actions NR/L3/INV/3001/904 Reporting of and responding to enforcement action.		
Health & Safety / Enforcing authority for Railways & Other Guided Transport Systems Regulations 2006 and subsequent amendments	Requirement to respond and report to the ORR for the enforcement of health & safety in law in relation to the operation of railways			
Railways Infrastructure (access & management) Regs 2016	Set out number of requirements in relation to; Access to railway infrastructure by both international and domestic freight operators	Health & Safety Management System (IM)		Head of Safety & Sustainable Development

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Railways (Interoperability) Regulations 2011 as amended for EU exit	Interoperability aims to harmonise technical standards and other processes governing the supply of equipment & the running of trains on trans-European networks	NR/L2/RSE/100/03 Compliance with interoperability regulations for infrastructure projects Placing vehicles into service NR/L2/RSE/100/04 Introduction of new or modified vehicles		Principal Engineering Manager
Railway (Licensing of Railway Undertaking) Regulations (Amendment) Regulations 2021	Provide the ORR with the power to grant licences to railway undertakings	Health & Safety management system (TU)		
Railway Safety Regulations 1999	Provisions with respect to use of a train protection system			
Railways & Other Guided Transport Systems (Safety) Regulations 2006 and subsequent amendments	A set of regulations developed to implement the EU railway safety directive	Health & Safety management system		Director, SCO Fleet & Engineering
Train Driver Licences and Certificates Regulations 2010	Sets requirements for any new driver post 29 th Oct 2013 and existing drivers by 29 th Oct 2018 who must have a train driver licence and certificate to drive on the mainline railway. Doctors, psychometric assessors and training and examination centres who assess new train drivers must be recognised by ORR.	Safety management system (TU) SP-1.12 'OTM Driver Licence Certificate'		Professional Head (Principal Driving and Operational Standards Expert – PDOSE)
Assurance				
GMRT2400 Engineering Design of On-Track Machines in Running Mode	Application of document Evidence required for engineering acceptance, Review and revision	NR/L1/RMVP/0001 Maintenance policy NR/L2/RMVP/0090 – Management of Maintenance and Change for Railbound Vehicles and On Track Plant NR/L3/SCO/311/04 Supply Chain Operations T & RS and OTM Engineering and Management Manual / Engineering Change	Rail Vehicle policies & procedure documents	Professional Head (Plant and T&RS)

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
RIS-2750-RST Supplier Assurance	Qualified suppliers Responsibilities of Network Rail Fleet & Engineering services	Network Rail Contracts and Procurement Policy NR/L2/SCO/302 Supplier Qualification Requirements NR/L3/SCO/320 Supplier Quality Assurance	FAMS	Director, SCO Fleet & Engineering
Health & Safety at work act 1974	An act to make further provision for securing the health, safety and welfare of persons at work, for protecting others against risks to health or safety with activities of persons at work	Health & Safety management system		
Management of health and safety at work regulations 1999	Assess and control risks arising from hazards at work, to protect employees	NR/L3/MTC/RCS0216 Risk Control Manual NR/SP/OHS/00102 Work Activity Risk Assessment NR/L3/MTC/SE0116 Work Activity Risk Management OTM operation Fleet Hazard Record / Risk Assessments		
Employers Liability regulations 1998	The requirement for compulsory insurance for risks relating to employees	Business insurance certification		Head of Safety & Sustainable Development
Supply of machinery (Safety) regulations 2008	Machinery will not be supplied unless it satisfies the relevant essential health and safety requirements including the appropriate conformity assessment procedure is implemented	NR/L2/RSE/100/04 Introduction of New or Modified Vehicles	FAMS	Professional Head (Plant and T&RS)
Train Maintenance				

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
RIS-2004-RST Rail Vehicle Maintenance	Principles Maintenance policy Accreditation of maintenance facilities and competency Maintenance plan	NR/L1/RMVP/0001 -Maintenance policy NR/L2/RVMP/01327 Maintenance Facilities for Rail Vehicles NR/L3/RMVP/0201 Calibration Work Instruction Manual NR/L1/CTM/001 Competence Management NR/L2/CTM/205 Competence and Training in On-track Plant Operation and Activities NR/L2/RMVP/0090 – Management of Maintenance and Change for Railbound Vehicles and On Track Plant		Professional Head (Plant and T&RS)
RIS-2646-RST Axle bearing maintenance	Overall requirements	NR/L2/RMVP/1332 Wheelset and Axle Bearing Manual NR/L2/RMVP/0090 – Management of Maintenance and Change for Railbound Vehicles and On Track Plant		Professional Head (Plant and T&RS)
GM/RT 2466 Railway Wheelsets	Overall requirements	NR/L2/RMVP/1332 Wheelset and Axle Bearing Manual NR/L2/RMVP/0090 – Management of Maintenance and Change for Railbound Vehicles and On Track Plant		Professional Head (Plant and T&RS)
Construction (design and management) regulations 2007	Impose requirements and prohibitions with respect to design and management aspects of construction work, on the implementation of minimum safety and health requirements at temporary of mobile construction Impose requirements with respect to health, safety and welfare of persons at work carrying out construction work and of others who may be affected by the work	Work package planning and associated safe system of work planning NR/L3/INI/CP0036 Provision of Welfare facilities		Head of Safety & Sustainable Development

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Workplace (Health, Safety and welfare) regulations 1992	Impose requirements with respect to health, safety and welfare of persons in a workplace, requirements are imposed upon employers, persons who have to any extent, control a workplace, and persons who are deemed to be the occupiers	NR/L3/INI/CP0036 Provision of Welfare facilities		
Control of noise at work regulations 2006	Introduce new, lower levels at which employers must control exposure to noise, including a new exposure limit value above which employers are obligated to take immediate action to reduce exposure	NR/SP/OHS/00122 Specialist Risk Assessment - Workplace Noise		
Control of substances Hazardous to Health Regulations 2002	Requires employers to control exposure to hazardous substances to prevent ill health, to protect both employees and others who may be exposed	NR/L2/OHS/00103 Specialist Risk Assessment COSHH		
Control of vibration at work regulations 2005	Duties on employers to protect employees who may be exposed to risks from either hand –arm-whole-body vibration at work, and any other persons who might be affected by work undertaken	NR/SP/OHS/00114 Specialist Risk Assessment - Hand Arm Vibration		
Confined spaces regulations 1997	Apply in premises and work situations in UK subject to HSW act, with the exception of driving operations and below ground in a mine	NR/L3/MTC/SE0115 Confined Spaces - Working and Entry Procedure		
Electrical equipment (safety) regulations 1994	Relate to electrical equipment designed for use with certain voltage limits, they required electrical equipment to be safe and constructed in accordance with excellent engineering practice	Equipment, Vehicles and Plant NR/L1/ELP/27000 Policy Requirements for Electrical Power Assets		
Electricity at work regulations 1989	Impose requirements with regard to the carrying out of Plant and Equipment work activities including the operation, use and maintenance of electrical systems and work near electrical systems	Equipment, Vehicles and Plant		Head of Safety & Sustainable Development
Lifting operations and lifting equipment (LOLER) regulations	Imposes requirements with lifting equipment, with respect to strength and stability, the way the equipment is positioned and installed, the marking of machinery and accessories, the organisational of lifting operations, the thorough examination and inspection of lifting equipment	Safe lifting operations NR/L2/RMVP/0200/P503 Lifting Operations		
Pressure systems safety regulations 2000	Impose safety requirements with respect to pressure systems that are used or intended to be used at work	Equipment, Vehicles and Plant		

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Personal protective equipment at work regulations 1992	Requires employers to provide suitable PPE to employees if necessary, PPE must be regarded as last resort and only used when risks cannot be adequately controlled by more effective measures	PPE & Work wear NR/L2/OHS/021 Personal Protective Equipment and Workwear		
Provision and use of work equipment regulations 1998	Mandate the minimum health & safety requirements for the use of work equipment by workers at work	Equipment, Vehicles and Plant		
Manual Handling operations regulations 1992	Imposes requirements to reduce the risk of injury to those employees arising out of there undertaking any such manual handling operations to lowest level reasonably practicable.	NR/L2/OHS/00106 Management of Manual Handling		
Work at height regulations 2006	Place duties on employers to make sure that all work at height is properly planned, supervised and carried out by people who are competent to do so	Working at Height-Work Equipment NR/L2/OHS/022 Working Safely at Height		
Train Operations				
RIS-0707-CCS Management of Safety Related Control, Command and Signalling System	Purpose and introduction Requirements for managing information about control, command and signaling system failures Application to railway undertakings Health and safety responsibilities	Maintenance policy NR/L1/RMVP/0001		Professional Head (Plant and T&RS)
		SP-1.01 Professional Driving Policy		Professional Head (PDOSE)
RIS-2273-RST Post incident and Post-Accident Testing of Rail Vehicles	Health and safety responsibilities Requirements for examination and testing Specific requirements for derailments and collisions	NR/L3/SCO/311/10 Post incident & accident testing of rail vehicles		Professional Head (Plant and T&RS)
RIS-3751-TOM Rail Industry Standard for Train Driver selection	Health & Safety responsibilities Selection criteria Selection process Review of selection process Audit of selection process Driver selection criteria & psychometric tests Transfer of safety critical information (applicant with previous experience as a train driver)	SP-1.02 Recruitment and selection of OTM drivers SP-1.06 Initial OTM Driver Training SP-1.07 Transfer of OTM Drivers SP-1.08 OTM Driver Competence Standards		Professional Head (PDOSE)

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
RIS-3451-TOM Train Drivers – Suitability and Medical Fitness Requirements	Staff suitability & fitness requirements Requirements relating to train movement Application railway undertaking Health & safety responsibilities Visual acuity for train drivers-colour vision etc. Safe use of medicines Railway workers & diabetes Obstructive sleep apnea	SP-1.03 Medical Standards for OTM Driver Operators		
RS 100 Good Practice Guide on Competence Development	Development of train driver competence Consideration Course content Consideration of learner requirements Training structure Evaluation of training Assessment cycle Monitoring & review	SP-1.01 Professional Driving Policy SP-1.06 OTM Driver Training SP-1.08 OTM Driver Competence standards		
RS 232 Good practice guide on cognitive and individual risk factors	Human factors & system safety The human operator- last line of defence Concentration & attention, fatigue, stress, trauma Understanding the difference between human error and violations Risk mitigation techniques	SP-1.01 Professional Driving Policy SP-1.08 OTM Driver Competence standards SP-1.09 OTM Driver Development Plan		Professional Head (PDOSE)
RIS-3350-TOM Communication of Urgent Operating Advice	Professional head review & action as necessary	NR/L2/OPS/035 Dissemination of Urgent Operating Advice NR/L3/OPS/045 section 3.24 RIS-3350-TOM Urgent Operating Advice & RIS-8250 Safety Related Defect Reports SP-2.02 Urgent Safety Related Operating Advice		Head of Safety & Sustainable Development Professional Head (PDOSE)

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
RIS-8250-RST Reporting High Risk Defects	High risk defects Action when high risk defect is identified Administration NR-online Availability of NIR on-line Application railway undertakings Health & safety responsibilities Application of NIR –online to other rail vehicles, equipment and plant machinery Flow chart –Urgent safety related defects Safety related defect monitoring	NR/L3/OPS/045 section 3.24 RIS-3350-TOM Urgent Operating Advice & RIS-8250 Safety Related Defect Reports NR/L3/SCO/311/06 Safety Performance Monitoring NR/L3/SCO/311/10 Post Accident and incident		Professional Head (Plant and T&RS)
RIS-3437-TOM Defective on train equipment	Responsibilities of infrastructure managers Responsibilities of railway undertakings Application Railway undertakings Health & Safety responsibilities	NR/L3/OPS/045/3.15 Defective on train equipment SP-2.05 Defective OTM Equipment		Head of Safety & Sustainable Development Professional Head (PDOSE)
Accident and Incident Management and Reporting				
RIS-3118-TOM Incident response Planning and Management	Immediate action requirements from Network Rail	NR/L3/OPS/250/01 Emergency Procedure / Incident Response Framework NR/L3/OPS/045 section 3 Incident Management & Security SP-3.04 Managing OTM Incidents SP-4.05 Operation of Vehicles Fitted with Wheelskates NR/L3/SCO/311/10 Post Accident and Incident		Head of Safety & Sustainable Development Director, SCO Fleet & Engineering
RIS-3119-TOM Rail Industry Standard for Accident & Investigation	Responsibilities of the lead organisation for formal investigations Responsibilities of the lead organisation for local investigations Responsibilities or railway undertakings Application railway undertakings Health & safety responsibilities Decision criteria – formal investigations	NR/13/INV/3001/900 Leading an Investigation NR/SP/OHS/032 Training, Competence and Assessment in Accident and Incident Investigation SP-2.06 Safety of the Line Investigations		Head of Safety & Sustainable Development Director, SCO Fleet & Engineering

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Reporting of injuries, diseases and dangerous occurrences regulations 1995	The requirements to notify, and subsequently send a report to the relevant authority (ORR / RAIB) or other authority of fatal and non-fatal accidents arising out of or in connection with work or certain specified disease and dangerous occurrences	NR/L3/INV/3001/03 Reporting of Accidents, Incidents and Occupational Health		Head of Safety & Sustainable Development
RIS-8047-TOM Reporting of safety related information	Requirements for reporting safety related information Responsibilities of infrastructure managers and railway undertakings for reporting safety related information to statutory authorities (ORR, RAIB) Application of the document to railway undertakings Health & Safety responsibilities Events to be reported Accidents resulting in death or injury to people	NR/L3/INV/3001/03 Reporting of Accidents, Incidents and Occupational Health NR/L3/INV/3001/904 Reporting of and Responding to Enforcement Actions NR/L3/INV/3001/903 Risk Ranking Events including Operational Close Calls, their Reporting and Level 1 Investigations SP-3.04 Managing OTM Incidents SP-2.06 Safety of Line Investigations		Head of Safety & Sustainable Development Director SCO, Fleet & Engineering
Competence Management				
Competence Management for safety critical work	System Requirements	Competence management system NR/L1/CTM/001 Competence Management NR/L2/CTM/201 Competence Management NR/L2/CTM/202 Quality and Assurance in Training and Assessment		Director SCO, Fleet & Engineering
	Competence standards	NR/L2/CTM/205 Competence and Training for the Maintenance of Traction and Rolling Stock and On Track Machines SP-1.08 OTM Driver Competence Standards SP-1.07 Transfer of OTM Drivers SP-1.12 OTM Driver Licence Certificate		Professional Head (Plant and T&RS) Professional Head (PDOSE)

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
	Medical fitness standards	NR/L2/OHS/00124 Competence Specific Medical Fitness Requirements and Occupational Health Service Provider Requirements for Medical Assessments SP-1.03 Medical Standards for OTM Driver Operators		Head of Safety & Sustainable Development Professional Head (PDOSE)
	General fitness	NR/L2/OHS/00124 Competence Specific Medical Fitness Requirements and Occupational Health Service Provider Requirements for Medical Assessments SP-1.02 Recruitment and Selection of Driver operators SP-3.06 General OTM Driver Operators Management Instructions		Director SCO, Fleet & Engineering
	Monitor & review	Selection & recruitment policy		
Occupational Health & Safety				
GE/RT8070 Drugs & Alcohol	Purpose & Introduction	NR/L1/OHS/051 Drugs & Alcohol Policy		Head of Safety & Sustainable Development
	Positive Result	See 'For cause' below.		
	Laboratories for drugs & Alcohol testing	NR/L2/OHS/018 Supplier Requirements for the Approval of Medical Assessments & Drug & Alcohol Screening & Certification		
	For cause drugs & Alcohol testing	D&A testing of staff for unannounced screening NR/L2/OHS/00120 Pre-employment, Pre-appointment & Periodic Testing for Drugs & Alcohol NR/L2/OHS/00118 Random Testing for Drugs and Alcohol NR/L2/OHS/00119 'For Cause'		

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Changes in working hours-safety critical work	Risk assessment of change	Control & monitoring of Excessive working hours NR/L2/OHS/003 Fatigue Risk Management		Head of Safety & Sustainable Development
	Control measures	Hours for Employees Undertaking Safety Critical Work NR/L3/NDS/006 NDS Process for the Management of Fatigue and Working Hours for Employees Undertaking Safety Critical Work SP-3.03 Managing Fatigue in Safety Critical Workers SP-3.06 General OTM Driver operators Management Instructions		Director SCO, Fleet & Engineering
Fire safety order 2005	Ensure so far as reasonably practicable the safety of employees; general duty in relation to non-employees to take such fire precautions as may reasonably be required in the circumstances to ensure premises are safe	Fire Safety NR/L3/FIR/102 Fire Operational Estate NR/L3/FIR/107 Fire risk assessment NR/L3/FIR/108 Fire Extinguishers NR/L3/FIR/109 Fire Log Book		Head of Safety & Sustainable Development
Communications				
Safety representatives & safety committees regulations 1997	Provide for the appointment of safety representatives and prescribe their function in relation to employees they represent in the work place	Network Rail trade union agreements		Head of Safety & Sustainable Development
Health & Safety information for employees regulations 1989	Require information relating to health, safety and welfare to be communicated to employees, including the name and address of the enforcing authority; The address of the employment medical advisory service	Internal communication		Head of Safety & Sustainable Development
Health & Safety (Safety signs and signals) regulations 1995	Impose requirements in relation to the provision and use of safety signs and signals including the minimum requirements for the provision of safety and or health signs at work	Safety signs		Head of Safety & Sustainable Development

Standard/Legislation	Description of Requirement	Procedure	Contained in	Owner
Health & Safety (consultation with employees) regulations 1996	Require employers to consult either that employees directly or representatives elected by their employees where there are employees not represented by safety representatives appointed by trade unions under the 1997 regulations	Collective bargaining		Head of Safety & Sustainable Development

APPENDIX 4 - DIRECTLY OPERATED FLEET ASSETS LIST

Fleet Vehicles Owned and Operated by Network Rail:

Type	Model	Vehicle No.	Approved Vehicle Owner
Tamper	09-3X	DR73114	Network Rail
Tamper	09-3X	DR73115	Network Rail
Tamper	09-3X	DR73116	Network Rail
Tamper	09-3X	DR73117	Network Rail
Tamper	09-3X	DR73118	Network Rail
Tamper	09-3X	DR73120	Network Rail
Tamper	09-2X	DR73121	Network Rail
Tamper	09-2X	DR73122	Network Rail
Ballast Regulator	USP6000	DR77010	Network Rail
Ballast Regulator	USP5000	DR77904	Network Rail
Ballast Regulator	USP5000	DR77905	Network Rail
Ballast Regulator	USP5000	DR77906	Network Rail
Ballast Regulator	USP5000	DR77907	Network Rail
Ballast Regulator	USP5000	DR77909	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 1.1.1	DR76901	Network Rail
Wagon	Wagon 1.1.2	DR76902	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 1.1.3	DR76903	Network Rail
Wagon	Wagon 1.1.4	DR76904	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 1.1.5	DR76905	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 1.2.1	DR76906	Network Rail

Wagon	Wagon 1.2.2	DR76907	Network Rail
Wagon	Wagon 1.2.3a	DR76908	Network Rail
Wagon	Wagon 1.2.3b	DR76909	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 1.2.4	DR76910	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.1.1	DR76911	Network Rail
Wagon	Wagon 2.1.2	DR76912	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.1.3a	DR76913	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.2.1	DR76914	Network Rail
Powered Wagon	Powered Wagon 2.2.2	DR76915	Network Rail
Wagon	Wagon 2.2.2b	DR76916	Network Rail
Wagon	Wagon 2.2.3	DR76917	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.2.4	DR76918	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.3.1	DR76919	Network Rail
Powered Wagon	Powered Wagon 2.3.2	DR76920	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 2.3.3	DR76921	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 3.1	DR76922	Network Rail
Multi-Purpose Vehicle (MPV)	MPV 3.2	DR76923	Network Rail
Wagon	Wagon	WHD 97308	Network Rail
Wagon	Wagon	WHD 97309	Network Rail
Wagon	Wagon	WHD 97310	Network Rail
Wagon	Wagon	WHD 97303	Network Rail
Wagon	Wagon	WHD 97301	Network Rail

Notes:

- i) All Tamperers, Ballast Regulators and MPV (excluding powered wagons) are fitted with TPWS / AWS.
- ii) MPV (excluding powered wagons) are fitted with Drivers Reminder Appliance (DRA)
- iii) MPV (excluding powered wagons) are fitted with sanders
- iv) Contingency arrangements for defective on train equipment are referenced in Chapter 11 and managed in accordance with SP-2.05 'Defective OTM Equipment' and SP-3.04 'Managing OTM Incidents'. Maintenance schedule procedures are managed as declared in Chapter 12.

