Health and Safety Management System

Transport Undertaking

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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 (SMS (TU)) as “The H&SMS (IM)”. However, not all of these processes support the requirements of 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). For clarity, these requirements are referred to in the H&SMS (IM) as the SMS (TU). The arrangements set out in the following chapters are the H&SMS (TU) for Network Rail as a result of risk assessment and compliance gap analysis.

1.1.2 The 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 our transport undertaking.

1.1.3 The H&SMS (TU) is structured around BS OHSAS 18001:2007, and this description of the health & safety management system follows the convention and structure used in 18001:2007, and can be cross referenced as shown below.

BS OHSAS 18001:2007 section	BS OHSAS 18001:2007 section title	Equivalent Network Rail SMS TU chapter
4.1	General requirements	1.0
4.2	OH&S policy	2.0
4.3.1	Hazard identification, risk assessment and determining controls	3.0
4.3.2	Legal and other requirements	4.0
4.3.3	Objectives and programmes	5.0
4.4.1	Resources, roles, responsibility, accountability and authority	6.0
4.4.2	Competence, training and awareness	7.0
4.4.3	Communication, participation and consultation	7.0
4.4.4	Documentation	9.0
4.4.5	Control of documents	9.0
4.4.6	Operational control	11.0, 12.0, 13.0, 14.0
4.4.7	Emergency preparedness and response	15.0

4.5.1	Performance measuring and monitoring	16.0
4.5.2	Evaluation of compliance	4.0
4.5.3	Incident investigation, nonconformity, corrective action and preventative action	17.0
4.5.4	Control of records	10.0
4.5.5	Internal audit	18.0
4.6	Management review	19.0

1.1.4 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.

1.1.5 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
CMS	Competence Management System
CSM	Common Safety Method
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 Safety Management System Transport Undertaking
IOSH	The Institution of Occupational Safety and Health
KPI	Key Performance Indicator
NRN	National Radio Network

OHSAS	Occupational Health and Safety Assessment Series
OPSRAM	Operational Risk Reduction and Mitigation
ORR	Office of Rail Regulation
OTM	On Track Machine
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
RSSB	Rail Safety and Standards Board
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
SP	Safety Management System Procedure
SPaD	Signal Passed At Danger (without authority)
SRM	Safety Risk Model
TOC	Train Operating Company
TOLO	Train Operator's Liaison Officer
TPWS	Train Protection and Warning System
TSI	Technical Specification for Interoperability
T & RS	Traction and Rolling Stock

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 to be national operation of On Track Machines (OTM) operating outside possessions on Network Rail Managed Infrastructure.

1.5 Infrastructure, plant and premise

1.5.1 The operation includes 10 tampers and 7 regulators known as OTMs. Assets are described in Appendix 5A. Vehicle classes operated by Network Rail and associated equipment is described in chapter 12 *Maintenance Requirements*. The OTMs are overhauled at multiple locations with High Output Operating Bases (HOOB) providing mobile maintenance support between overhaul maintenance schedules for Periodic Planned Maintenance (PPM).

1.6 Scope of the H&SMS (TU)

1.6.1 The Network H&SMS (TU) provides arrangements for the safe operation and maintenance of OTM's.

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 1C *Interfacing organisations*.

2 HEALTH AND SAFETY POLICY

2.1 Safety vision statement

2.1.1 Network Rail recognises the importance of having a clear policy 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 that safety and business performance go hand in hand, 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.

NetworkRail
Safety
Our Vision
Everyone Home Safe Every Day
Our Belief
Outstanding safety performance and outstanding business performance go hand in hand.
Our Personal Commitments
Safety is a core value and key to our success. Whether you are an employee, contractor or subcontractor, by delivering on our commitments we will achieve outstanding performance. This is how we will deliver a better railway for a better Britain.
Safe behaviour is a requirement of working for Network Rail.
We will always comply with our Lifesaving Rules.
We will plan work to ensure that it can be done safely.
Our work environments will be tidy - and we will leave them tidy when we've finished.
We will ensure people have the skills and the equipment required to work safely.
We will stop work if it cannot be done safely.
We will personally intervene if we feel a situation or behaviour might be unsafe.
We will use Close Calls to report unsafe behaviours and conditions.
We will use our Fair Culture principles to investigate incidents and learn lessons to prevent them occurring again.
We will relentlessly strive to find new ways to keep ourselves, colleagues, passengers and the public safe.
We will design, construct, inspect, operate and maintain the railway to keep everyone safe.
Safety leadership is key to how we assess our people's performance and readiness for progression.
Mark Carne
Chief Executive
March 2014
Our Safety Vision commitments are underpinned by the arrangements set out in our Safety Vision addendum. You can download a copy of the addendum at: www.safety.networkrail.co.uk/Commitment-and-Rules/Mark-Carnes-Safety-vision-statement or http://connect/assurance/SafetyAndCompliance/HandSMS/HealthSafetyPolicyStatement.aspx
everyone home safe every day

NetworkRail

Safety Vision Addendum

Our Safety Vision

Sets out our belief that safety and performance go hand in hand and our personal commitments to getting 'Everyone home safe every day'.

Our Safety Targets

Our safety strategy sets out our safety targets for the end of CP5:

- No serious workforce major injuries or fatalities
- 50% reduction in passenger risk
- Further 25% risk reduction in level crossing risk.

Our Responsibilities

Safe behaviour is a requirement of everyone who works with and for Network Rail.

- We expect every individual to comply with the Lifesaving Rules and emergency procedures, report unsafe acts and conditions and be 'fit for work'
- We expect leaders and managers to role model safety leadership by having open and honest safety conversations, always applying our principles of fair culture and acting supportively in resolving and learning from Close Calls, incidents and accidents.

Measuring Progress

We have robust planning, reporting, analysis and management systems in place to:

- Understand trends in safety-related accidents and incidents
- Continually improve our risk assessment processes, controls, policies and standards
- Investigate and learn from accidents and incidents so they don't happen again
- Share best safety practice across the business and industry for a joined-up approach
- Audit compliance with health and safety processes
- Identify and prepare for risks that might impact on future safety performance
- Meet our legal obligations to deliver a safer railway.

Stakeholder Collaboration

We recognise the value of working closely with our trade union, contractor, wider rail industry and community partners to:

- Protect everyone who works on our infrastructure from physical harm and longer term health risks
- Reduce the risks associated with misuse of our infrastructure as much as we reasonably can
- Protect passengers, public and vulnerable individuals, from harm at stations, level crossings and in transit
- Be considerate of our lineside neighbours when planning and delivering safety and performance improvements.

everyone home safe every day

This addendum sits alongside our Safety Vision. It sets out the arrangements we have in place to achieve 'Everyone home safe every day.'

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 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 7.3.9 and 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).

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) section 3.6.5**.**

3.3.3 For the purposes of TU requirements, there are three key areas of risk management applied to mainline OTM operations and maintenance on the railway, each of which are considered in turn:

- Safety Risk Model (SRM) to provide a system safety risk profile across Network Rail's Transport Undertaking operation,
- HAzard and OPerability Analysis (HAZOP) for mainline operations outside possession,
- Fault Tree Analysis (FTA) for movements on maintenance depots.

3.4 Safety risk model

3.4.1 Network Rail recognises its activities carry risks with multi fatality potential. The SRM 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.

3.4.2 The system safety risk profile across Network Rail's infrastructure is described in H&SMS (IM) Section 3.3**.** Since the Duty Holders risks from a TUs responsibility are not considered under the risk profile for H&SMS (IM), the SRM is used for additional risk arising from all of the hazardous events under mainline OTM operations and maintenance.

3.5 Hierarchy task analysis

3.5.1 A Hierarchy Task Analysis (HTA) was carried out to have a clear understanding of the scope and what work is involved with operations. This method was favoured as it breaks down complex tasks into a number of more simplistic ones to allow detailed examination and to allow them to be easily understood and followed. The HTA outputs formed the basis for conducting a HAZOP. The results can be found in internal document '*Task analysis - OTM Drivers*'.

3.6 Hazard operability analysis.

3.6.1 Following the HTA, a HAZOP study was then carried out to identify, analyse and evaluate the risks that are related to the work identified with operation of OTMs outside possession. Key risks were then evaluated to decide the significance of each risk identified with the operation and selecting and implementing appropriate measures to control risk.

3.6.2 The HAZOP study systematically examined all the activities and identified the significant hazards involved in Network Rail's OTM operational activities outside possession. The

HAZOP provided the opportunity to ensure that the significant risks identified were sufficiently well controlled and to identify areas of possible weakness with the intention that annual reviews will maintain the relevance of the study to current Network Rail activities.

3.6.3 In summary, the HAZOP study was used to:

- Identify all significant 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 in accordance with NR/L1/RSK/001 and NR/SP/OHS/00102 *Work activity risk assessment*.

3.6.5 The outcome of the HAZOP 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. The results can be found in an internal report *Hazard operability study (HAZOP) to support the Safety Certificate application on behalf of Network Rail for operation of On Track Machines*.

3.7 Fault tree analysis

3.7.1 Network Rail recognises that OTM movements on depots present a different range of risk factors which require separate causal analysis. Network Rail carried out a FTA exercise to identify, analyse and evaluate the risks that are related to the work identified with operation of OTMs outside possession. Key risks identified from failure paths recorded five hazardous events. 1) train derailment, 2) Signal Passed at Danger (SPaD), 3) collision, 4) struck or striking an object; and 5) contact with buffer stops.

3.7.2 The results can be found in the internal report *Identify operational train movement hazards on maintenance depots to support Network Rail safety certification*.

3.8 Risks arising from placing into service new or altered vehicles

3.8.1 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*.

3.8.2 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.

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

3.9 Risks arising from activities of other persons

3.9.1 Network Rail recognises that risk assessments must consider everyone who could be affected by their activities. Broadly speaking this includes any contracting out fleet maintenance and supply of maintenance and material; the use of contractors and activities of persons other than employees.

3.9.2 The potential risks that can be imported by the incorrect specification or quality of safety critical 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.

3.9.3 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/CPR/302 *Supplier qualification – Core 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,

3.9.4 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.

3.10 Changes affecting interface risk

3.10.1 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 other operators,
- Risks arising due to the activities of others (section 3.5),
- Risks affecting Network Rail and others following change processes (H&SMS (IM) section 6.6).

3.10.2 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 issues in accordance with H&SMS (IM) 6.1.37.

3.11 Risk based safety decision making

3.11.1 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.

3.11.2 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.

3.12 Controlling risk

3.12.1 Network Rail control risk through the application of safety management principles developed to support its SMS. 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.

3.12.2 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.

3.12.3 Risks associated with train operation 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*)
- Task requirements, taking account of HTA,

- Training and competence requirements identified directly in the risk assessments (*HAZOP Study, Feb 2015*) 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,*
- Rules (GE/RT 8000*,* National Operating Instructions (NOI)) 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),
- 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 6.1.37),
- Effective arrangements for dealing with emergency situations in accordance with the applicable standards,
- The investigation into accidents, incidents and other near misses to determine their root cause, the subsequent development of additional measures where necessary (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.

3.13 Monitoring the effectiveness of risk control arrangements

3.13.1 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.

3.13.2 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/worksite management visits, safety conversations, completed, effective briefs delivered, competence assessments completed etc.,
- Findings from audits conducted,

- Findings from health and safety inspections and senior management visits,
- Feedback from employee health and safety representatives, both informally, and formally via the National Health, Safety and Welfare Council; feedback from industry partners and interface organisations.

3.13.3 Corrective actions necessary to maintain, or improve upon, performance of the SMS 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.

3.13.4 Progress against corrective actions is monitored during the cross functional quarterly safety assurance meeting.

3.14 Review of risk control arrangements

3.14.1 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.

3.14.2 Specific overall performance of the operational risk management arrangements will be reviewed via measurement against operational safety and health performance indicators. This performance is outlined 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,
- National health, safety and welfare council;
- Local health and safety committees.

3.14.3 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.

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

4 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 Head of Disciplines 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 European Union has issued a number of directives aimed at promoting the efficient provision of rail services by providing open access to rail infrastructure and giving infrastructure managers a status independent of the state. These directives have been implemented through a number of European and domestic regulations, including the Railways and Other Guided Transport Systems (Safety) Regulations (and amendments thereto) and the Railways (Interoperability) Regulations (and amendments thereto). The requirements of these and other statutes are identified by Network Rail's Head of Disciplines 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 5.1.25.

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 Rails 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 by the Risk and assurance team within the Safety, technical and engineering function.

5.1.5 Safety performance monitoring for operation and maintenance of OTM outside of possession includes:

- SPaDs,
- Workforce reportable accidents (RIDDOR),
- TPWS interventions,
- Competence assessments delivered to plan,
- OTM speeding,
- Defect reports,
- Maintenance failures,
- Planned audits Vs. actual undertaken,
- Safety critical communication observations; and
- Close calls.

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.

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 As required by Directive 2004/49/EC Railway safety directive, 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 safety responsibilities.

6.1.1.2 Organisation charts to support the maintenance and operation of OTMs 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.

6.1.2 Key safety posts

6.1.2.1 Certain posts have specific responsibilities identified within the H&SMS (IM) and 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 prolonged 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, SCO Technical Services	Principal Engineering Manager
Principal Engineering Manager	Fleet Manager
Fleet Manager	Fleet Engineering Manager
Head of Driving Standards	OTM Performance Manager
OTM Performance Manager	Head of Driving Standards

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 OTMS

- Maintenance technician,

- Maintenance supervisor,
- Maintenance technician (PPM),
- Training and competency manager,
- OTM supervisor (OTM operator/driver),
- OTM operators/driver.

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	Head of Driving Standards	Extensive experience of train operation principles including detailed knowledge of Rules and Regulations published as RGS.
Plant, traction and rolling stock engineering	Head of Discipline [Plant and T&RS]	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 OTM's.

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) sets 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*,
- Safety Critical Work Identification card (SCWID) and the Personal Track Safety (PTS) – see SP-1.12 *OTM Driver Licence Certificate*.

7.3 OTM driver operators

7.3.1 For OTM drivers, there are requirements in addition to above. Network Rail specific criteria to the recruitment of OTM Train Drivers for 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 selectio*n GO/RT 3451, RS 100*,* and RS 232. Psychometric assessment is part of the overall selection process of OTM train drivers. Details of the recruitment process are described in *SP-1.02 Recruitment and selection of OTM driver operators.*

7.4 Assessment and training

7.4.1 NR/L2/CTM/202 *Quality assurance in training and assessment* 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.

7.5 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 a certificate 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. The design of competence standards for OTM train drivers is based on a HTA and risk assessment (HAZOP Study).

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*),
- OTM driver competence (SP-1.08 *OTM driver competence standards*),
- OTM maintainer competence (NR/L2/CTM/205 *Traction and rolling stock and on-track machines engineering competence units* (RVM 1 -17),
- Shunter competence (NR/L2/CTM/205 *Traction and rolling stock and on-track machines engineering competence units* (RVM 18).

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

7.5.7 OTM 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,
- OTM Maintainer,
- Shunter.

7.6.3 Specific training modules applicable to the work activities associated with OTM driver and asset maintenance, overhaul, inspection, and/or testing on assets and shunters are detailed below.

7.6.4 OTM driver 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,
- Module 3: Driver rules and regulations operating risk awareness and defensive driving,
- Module 4: Principles of route learning,
- Module 5: Basic traction and introduction to driving techniques,
- Module 6: On the job training (practical handling).

7.6.5 OTM maintainer training is modular in structure in accordance with NR/L2/CTM/205 *Traction and rolling stock and on-track machines engineering competence units* (RVMP 1 -19).

7.6.6 OTM shunter training is modular in structure in accordance with NR/L2/CTM/205 *Traction and rolling stock and on-track machines engineering competence units* (RVMP 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 OTM fleet assessments and OTM operations assessments

- Assessed in knowledge of either Network Rail's OTM driver and maintainer competency standard,
- Assessed in the application of the assessment procedures and documentation for assessment of trainee drivers or maintainers,
- Employment National Training Organisation (ENTO) Unit A1 assess candidates using a range of methods; or
- NVQ Level 3 award in Assessing competence in the work environment (Unit 1 and 2),
- V1 qualification for those assessor's responsible for ensuring the quality of assessment practice.

b) Those that carry out OTM fleet training and OTM operations training

- Assessed in knowledge of Network Rail's OTM driver and maintainer competency standard,
- Preparing to Train in the Life Long Learning Sector (PTTLS); or
- NVQ Level 3 in training and development,
- NVQ Level 3 in learning and development,
- NVQ Level 3 in direct training,
- CIPD Certificate in training practice,
- City and Guilds further and adult education certificate - C&G 7301/7306,
- Employment national training organisation 'L' Units L9, L10, L11 and L13.

c) OTM Maintenance team supervisors and operations team supervisors

- 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 `operation and maintenance of OTM 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 are designed 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: Management system requirements, published by the British Standards Institution. This standard provides a requirements checklist of good practices in physical asset management.

9.1.4 In addition to these standards Network Rail has developed additional safety management System Procedures (SP) where required to support the SMS (TU). These SP's will be adopted within the standards regime as part of the joint safety certification and authorisation process during the next application.

9.1.5 Appendix 4A details the Network Rail standards and procedures, Appendix 4B details the rules and TSI's, and Appendix 4C details necessary rules and TSI's referenced to processes, which ensure traceability of safety related documents that support the 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 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.

10.3 Further details on document control and records management within Network Rail is detailed in the H&SMS (IM), section 5.6.

11 OPERATIONAL CONTROL – OTM OPERATIONS

11.1 Introduction

11.1.1 This chapter describes the detailed processes that are used to control the safe operation of OTM operations. The processes described here ensure that legislation, RGS (including the Rule Book) and technical specifications are complied with. These operational procedures, supported by the SMS (TU), ensure that the risks that occur are appropriately managed and that when they do, 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 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 Head of driving standards, as Head of Discipline of operations, takes lead responsibility in implementing the policy. An annual risk reduction plan is provided to identify and implement safety improvements in order to prevent or reduce the likelihood of recurrence, or mitigate the consequences of an accident or incident in accordance with arrangements set out in chapter 5.

11.2.4 Drivers are trained and regularly assessed to comply with the requirements of the Rule book and NOIs to pass a signal at danger under own or other authority or undertake movements in the wrong direction by Network Rail operating staff. Training and assessment includes 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 OTM drivers:

- Network Rail applies specific criteria to the recruitment of OTM drivers for suitability. This includes conducting psychometric assessments as part of the selection of train drivers according to RIS-3751-TOM *Train driver selectio*n, RIS-3451-TOM issue 1*,* RS 232 issue 1, and RS100 issue 1. 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 under a contract managed by Health and Wellbeing. Network Rail specifies the type of examination to be undertaken in accordance with RIS-3451-TOM issue 1*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 for all new entrants:

- 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 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 will use simulation to provide train 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 OTM driving:

- Network Rail has an established CMS for achieving and maintaining individual competence and is carried out by OTM operations 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 a HTA and risk assessment (HAZOP Study). 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) of OTM a driver is set out in Table A 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 Table A 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 approval, on an infrequent basis and only in exceptional circumstances, as defined within NR/L2/ERG/003 *Management of*

fatigue: Control of working hours for staff undertaking safety critical work. Operations supervisors 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-101 *Professional OTM driver policy* sets out aims, objectives and commitments in thinking ahead, using common sense 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.

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. Network Rail receives information from on multi-SPaD signals in CD ROM format. Section 11.5 and 11.6 describe the arrangements that are in place to ensure that multi-SPaD signals relevant to Network Rail are communicated to drivers (by SPaD notice cases at OTM driver operator depots, SPaD focus groups etc.). Network Rail. Multi-SPaD signals are also briefed as part of a SPaD awareness module within the driver training programme. Arrangements are detailed within SP-306 *Management of signing on points*.

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. Operations Supervisors carry out unobtrusive monitoring of drivers, including OTMR downloads.

b) Rolling stock

- Network Rail rolling stock is also fitted with a number of features that will reduce the risk of, and/or mitigate the consequences of SPaDs with a range of train protection equipment. Details of the train protection systems are described within chapter 12.5 *OTM protection systems.* These can be summarised as:
  - Train protection and automatic warning system - to *GE/RT8075*
  - Driver reminder appliance - to *GM/RT2491*, where fitted

- Track circuit actuator - to *GM/RT 2477*, where fitted
- Data recorders – to *GM/RT 2472*
- Sanding systems – to *GM/RT 2461*, 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 license and safety critical identification

11.3.1 All OTM drivers are issued with a license to operate OTMs outside possession. The license authorises the driver to drive particular types of OTM, subject to having the necessary route knowledge. The license incorporates Safety Critical Work Identification card (SCWID) and the Personal Track Safety (PTS). License details and arrangements for the issue, checking and withdrawal of licences are set out in accordance with this procedure SP-1.12 *OTM driver license certificate procedure*.

11.3.2 All OTM maintenance technicians are safety critical and are issued with SCWID.

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 2.11.

11.4.2 Network Rail has a specific process in place for communicating safety of the line information to drivers. The Head of driving standards is responsible for ensuring the content, target group and method of communication is timely, relevant and appropriate. Typical methods include: publications, face to face briefings, route risk assessments, training and competence assessment. 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 NOI changes communicated through a combination of personal issue of rulebook updates and briefing on changes,
- Urgent or late notices,
- Safety of the Line incidents and investigations,
- SPaD information (see section 11.2.5 above),
- Adhesion related incidents and autumn preparation,
- Network Rail (OPSRAM), ATOC Operations council, ATOC Operations standards forum, national conferences and industry workshops.

11.5 Management of signing on points

11.5.1 Network Rail has systems in place for the communication of information, supply of equipment and fitness of OTM drivers and other operating staff. SP-3.06 *Management of driver operators booking on duty* details four areas:

- Staff are fit to undertake work and comply with the company's Drugs and alcohol policy,
- 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 will be sufficient in order to control the risks arising from safety critical staff taking duty. Alternative methods can be considered providing they have been documented, and subjected to a suitable and sufficient risk assessment, and which provide the equivalent or better control over the risks.

11.5.3 The day to day management and supervision of drivers is provided by the operations supervisors supported by DOF control in regards to drivers reporting for duty.

11.5.4 The provision of safety critical information is provided by the control when a driver reports for duty. Publications are either provided hard copy by the operations supervisor or provided electronically.

11.5.5 Supply or replacement of equipment is undertaken by the operations supervisor.

11.5.6 Supervisors 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 Due to the nature of the drivers work, where they are constantly working under supervision when entering a possession, the minimum frequency of checking an individual's fitness is twice yearly. Of which a minimum of 20% will be conducted 'out of hours'. This is defined as being between the hours of 19:00 to 07:00 Monday to Friday, and any time at a weekend or Bank Holiday.

11.6 OTM preparation

11.6.1 All OTM's are subject to train preparation before their initial entry into service at the start of their daily diagram.

11.6.2 OTM's that have undergone maintenance at a depot are subject to train preparation checks before entry into service. At locations such as depot and stabling points, train preparation checks before entry into service will be carried out by a qualified OTM driver.

11.6.3 Train preparation is undertaken in accordance with OTM driving/operating instructions that are published by Network Rail and issued to OTM driver operators on a personal basis.

11.6.4 Before any OTMs' are brought into service after being stabled, the OTM driver operator will undertake a safety check against a checklist of items contained within the OTM operating instructions.

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 OTM's. Trained and competent drivers are issued with a driver license in accordance with SP-1.12 *OTM driver license certificate procedure*. All other persons authorised to enter driving and rear 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 Head of driving standards or OTM performance 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. OTM 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 will have 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 SCO; 24/7 - Control (TOC) (TU) and Route control (IM) respectively.

11.8.2 Network Rail has a continuous control service as the focal point for the OTM driver operations outside and inside possession and on depots. The control is staffed on a 24-hour basis by a Rail Plant Controller (RPC). The control function is located in Milton Keynes (Quadrant).

11.8.3 Once deemed competent in the eight modules detailed within the *Rail plant control manual* (NR/PRC/NSC/Control001) the Network Rail RPC competence is monitored through a continuous assessment process.

11.8.4 Network Rail Route control (IM) responsibilities and arrangements are described within H&SMS (IM) 4.13.1.

11.9 Communication

11.9.1 Poor communication has been associated with persons being struck or crushed by a train, derailments and collision between trains.

11.9.2 OTM driver operators are trained and assessed in communicating effectively in an accurate, clear and concise manner, 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 communication*s.

Communications between drivers and control centres:

11.9.3 Network Rail have Global System for Mobile communications – Railway (GSM-R) fitted to their OTMs Therefore the principle means of communication between OTM driver operator and the Network Rail Route control will be through the use of GSM-R to

contact to the signaller, who will pass information on. In some instances, principally where failure of on-train equipment is involved, parallel communication will occur between the OTM driver operator and the Network Rail SCO; 24/7 - Control.

Communications between operating staff:

11.9.4 All Network Rail OTMs are fitted with a means of direct and secure communication between the front and rear cabs to provide a secure means of communication between cabs. OTM driver operators are trained in the use of this cab-to-cab communication system and is only used for specific purposes, when it is safe 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 Shunting of OTM's can be carried out under signalled movements which mostly occur when the OTM is in service, or can be carried out under the control of a shunter or other personnel who is competent to carry out the duties of a shunter.

11.10.3 All shunting movements are undertaken in accordance with Rule Book GE/RT 8000 module SS2 and NOI 19. Local instructions on the movement and protection arrangements on vehicles within Network Rail operated depots are briefed to all relevant employees and embraced in their competency assessments.

11.10.4 Personnel who are required to carry out shunting duties are classed as safety critical workers. They are assessed in accordance with NR/L2/CTM/205 RVM 18.

11.11 Defective OTM equipment

Identifying safety related equipment:

11.11.1 Network Rail has undertaken an exercise to identify those components of OTM's that are classed as safety-related equipment, including high risk defect components. These components are listed in the SP-2.05 *Defective on train equipment*. The operational and engineering Head of Disciplines involve operation supervisors in the drafting and reviewing of these arrangements.

Dealing with defective on-OTM equipment:

11.11.2 OTM's are 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 SCO 24:7.

11.11.3 SP-2.05 *Defective OTM equipment* details specific defect occurrences on OTM 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, GO/RT3437, GO/RC3537 and DC lines instructions relating to the fitness of rolling stock. This includes guidance as to when, and where, an OTM with defective on-OTM equipment must be withdrawn from service.

11.11.4 An operational contingency plan has been developed and agreed with Network Rail Route control to support implementation. All movements of defective OTM's are then

arranged between Network Rail Rail Plant control and Network Rail Route control. Instructions will be 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 an OTM component or part of the railway has failed and materially affects safety. These conditions can arise from;

- OTM faults such as isolated/degraded equipment, OTM 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 OTMs 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 OTM movements. All degraded and abnormal operations are undertaken in accordance with the requirements of the Rule book and NOIs'. 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. However, both types of OTMs incorporate different braking 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,
- Buffer stop collision,
- Scheduled stopping points; and
- To a lesser degree, derailment.

11.13.3 These risks are mitigated against by a number of control measures that are implemented on Network Rail's infrastructure and through operational management arrangements.

11.13.4 OTM operations supervisors 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 GE/RT8040 *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 OTM's briefing 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 recently promoted staff operating OTMs,
- Leaf fall procedures.

11.13.6 Network Rail (IM) are 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 *Management of lineside vegetation*,
- 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 OTM radio communications system.

11.13.7 The Network Rail TU fleet is not fitted with auto-sanding equipment to reduce the risk of low adhesion.

11.13.8 Network Rail TU, through the participation of the Head of driving standards, 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 Where a driver reports exceptionally low railhead conditions the Rule book requires that trains are cautioned on the approach to the section(s) concerned until such time as the railhead is examined, treated (as necessary) and a successful 'controlled brake test' undertaken.

11.13.11 Network Rail (IM) have prime responsibility for this process and utilise portable sandite dispensers to treat the railhead as appropriate. When introduced, Network Rail's Multi-Purpose Vehicles (MPV) will also remove railhead contamination (by water jetting) prior to the application of sandite.

11.13.12 Network Rail (IM) are also responsible for ensuring that vegetation management is undertaken in accordance with NR/L2/TRK/5201 *Management of lineside vegetation* 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 OTM speed management

11.14.1 Network Rail OTM 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* to ensure trains operate within the permanent and temporary speed limits of the track and OTM.

11.14.2 Random speed checks are carried out using OTDR downloads in accordance with SP-3.02 *On Train Data Recorder (OTDR) operating requirements*. The location for speed checking is organised to cover a variety of locations (i.e. significant speed reductions such as temporary and permanent speed restrictions, slow speed areas, approaches to level crossings). Speed checking is carried out any time in a 24 hour period and seven days of the week. Excessive OTM 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.

11.14.3 Additional checks also include monitoring from the competence assessment as detailed within NR/L2/CTM/201 *Competence management* and unannounced monitoring of train speeds by use of direct observation. 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 SCO; 24/7 -Control (TU) to each relevant area appertaining to the urgent advice. Personnel in the area register, post and update notices upon receipt of these advices, and withdraw those at the withdrawal date in accordance with *SP-3.06 'Management of Signing on Points'* 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 OTM 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 (Operations Supervisors) and normally incorporate route learners to travel on trains between points, where service availability and frequency permits. Where this is not possible, alternative arrangements are made 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 Operations Supervisors who are driver qualified and route competent.

11.17 Emergencies

Organised OTM evacuation in emergency:

11.17.1 Wherever possible, Network Rail will attempt to evacuate OTM's with personnel on board by arranging for them to be taken out of service at a suitable location adjacent to a station platform or siding.

11.17.2 Where OTMs are stranded between stations or sidings, the driver will make arrangements for the OTM to be assisted to a suitable location where evacuation can be undertaken. Network Rail believes that the safest place for personnel on board to remain on the OTM until such times as the OTM can be evacuated.

11.17.3 In the unlikely event that the circumstances of the emergency require the evacuation of personnel on board from the OTM, a controlled evacuation is undertaken is led by the Driver after appropriate assurances have been received that all train and OTM 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 from OTM's are contained within Rules and Regulations and are assessed in accordance with the processes described in *Chapter 7 'Implementation and operation - Competence, Training and Awareness'.*

On call arrangements:

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 In the event of a Safety of the Line Incident, the matter will be reported to the signaller and Network Rail Route Control (IM) who will in turn liaise with the Network Rail SCO; 24/7 - Control (TOC) regarding the OTM driver and operation. Network Rail SCO; 24/7 - Control (TOC) will follow predefined arrangements depending on the nature and severity of the incident which may include the initial 'on call' point of contact with the Operations Team Leader. The Operations Team Leader shall decide whether to escalate to 'Bronze' level on call before making a decision on the OTM driver, operational cover and continued safe operation. Typical Safety of the Line Incident events are as follows;

Safety of the Line Incident which includes the following:

i. Category A SPaDs
ii. Category D SPaDs
iii. Collisions
iv. Derailments
v. Speeding incidents
vi. TPWS Intervention
vii. TPWS reset and go
viii. Fatalities

12 OPERATIONAL CONTROL - MAINTENANCE

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 have a Maintenance Policy (*NR/L1/RMVP/0001 'Network Rail's 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 (See Appendix 5A).

12.1.3 The OTMs operated by Network Rail is described Appendix 5A.

12.1.4 The organisation for ensuring compliance with technical standards and Engineering Acceptance of OTMs within Network Rail is contained within the Director, SCO Technical Services Central Support and technical departments (described in Chapter 6).

12.1.5 If there is an introduction of an OTM 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 OTM maintenance and repairs, including the heavy overhaul of vehicles. The programme consists of 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 High Output Operating Bases (HOOBS) or major depots e.g. West Ealing, Derby, Crewe, Beeston, Willesden and Parkston depots. The depots have the capability of undertaking routine maintenance and heavy overhaul.

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 the responsibility of Network Rail. It consists 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 is produced in accordance with legalisation and that risks are controlled. The Director, Technical Services is responsible for ensuring that the maintenance policy is implemented and reviewed. The Fleet Manager is responsible for ensuring that up to date VMOIs are in place. Any amendments to VMOIs are undertaken in a controlled

manner in accordance with *NR/GN/INF/00850 'Controlled Publications – Document Control'* Handbook.

12.1.12 All OTMs are maintained and overhauled 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, test equipment, spare parts and technical documentation that may be 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 All maintenance instructions for OTMs include details of the frequency at which the maintenance is to be carried out. These frequencies are adhered to, and the vehicles withdrawn from service before they become overdue.

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 Policy and Axle Bearing Policy *NR/L2/RMVP/1332* which is owned by the Head of Discipline (T&RS).

12.1.20 The Fleet Manager prepares a fleet handbook which details the local arrangements adopted for the fleet in order to maintain the fleet in accordance with company standards.

12.1.21 The scope of the fleet handbook includes the technical support, improvements to the way maintenance is carried out or to the design of the vehicle (i.e. modifications), All modifications are approved by the Principal Engineering Manager in accordance with *PE/MS/005 Engineering Change Procedure*.

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 *NR/L1/CPR/101 'Sourcing and Purchasing Policy'* for purchasing - goods and services. Such organisations are qualified in accordance with the requirements of *GM/RT2450* 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, and *GE/RT8070 '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 fleet handbook 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 OTMs in accordance with *PE/MS/005 Engineering Change Procedure*.

12.2.3 In the case of OTMs are contracted in by Network Rail to operate its services, a supplier is selected as detailed in *NR/L1/CPR/101 'Sourcing and Purchasing Policy'*.

12.2.5 Where it is proposed that any engineering change be made to existing OTMs (whether physical modification or amendment to a technical specification), any change be made which might affect the compatibility between the OTMs and the infrastructure or new vehicles be introduced, then Network Rail follow *PE/MS/005* '*Engineering Change Procedure.*

12.2.6 Engineering change includes: new builds, permanent changes and changes to documentation.

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 *GE/RT8270*.

iii. Authorisation is obtained from the safety authority and Vehicle Owners.

iv. Completion of a CSM assessment

v. Updates to VMOIs, training materials 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 OTMs then the Fleet Manager is responsible for the distribution of this information to interested parties and made available to all relevant staff including Network Rail Control Centre.

12.3 Structural performance

12.3.1 VMOIs include specific requirements for vehicle components, to ensure security of all structural area. An under frame exam also takes place at regular intervals to check the security and condition of attachments.

12.3.2 Vehicle painting arrangements ensure that, in so far as is reasonably practicable, the risk of impaired structural performance arising from corrosion are kept to a minimum due to periodic inspection and repair of OTM.

12.3.3 Where an accident or incident causes structural damage then post incident inspections are carried out in accordance with NR/MB/5112 '*Post Incident Inspection*' and in SP-2.05 *'Defective OTM Equipment*'.

12.4 Braking performance

12.4.1 Network Rail maintains train braking systems in accordance with the VMOIs for each type of vehicle. Safety critical components, such as brake cylinders and distributors, as part of the calendar based maintenance exams.

12.4.5 Where an accident or incident causes doubt over the integrity or performance of the brake system, post inspections are carried out in accordance with NR/MB/5112 '*Post Incident Inspection*'.

12.5 Train protection and communication systems

12.5.1 Network Rail services are fitted with a range of train protection equipment. These can be summarised as:

- Automatic Warning System (AWS)
- Train Protection and Automatic Warning System (TPWS) - to *GE/RT8075*
- Track Circuit Actuator TCA), where fitted - to *GM/RT2477*
- On Track Data Recorders – to *GM/RT2472*
- Global System for Mobile communications Rail (GSMR)

12.5.2 The role of the train protection systems fitted to Network Rail OTMs in lessening the severity of the consequence of a SPaD is outlined in Chapter 11, Operational Control – OTM Operations.

12.5.3 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 a the Fleet Manager in accordance with *NR/L2/RMVP/0090* '*Management and Maintenance for Rolling Stock for On Track Machines and On Track Plant*'.

12.5.4 The maintenance documentation specify 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.

12.5.5 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 on Train 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*'.

12.6 Maintenance and servicing facilities

12.6.1 The minimum facilities that are necessary to implement the maintenance plans for OTMs are generally dependent upon the level of maintenance activity required to be carried out.

12.6.2 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 /L2/RVE/01327 'Depot Facilities'* standard provides the general depot facilities to meet the different levels of maintenance and servicing requirements.

12.6.3 Facilities are defined in *NR /L2/RVE/01327 'Depot Facilities* 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. Fuelling 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.

12.6.4 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'*.

12.6.5 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.

12.6.6 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'*.

12.6.7 Movements of units into and out of depots are limited in number and are controlled by the signalling controller within the IECC as far as the boundary of the depots. Depot protection systems encompass the depot limits, to ensure the safety of staff whilst vehicles are being moved.

12.7 Protection arrangements for staff working on OTM vehicles

12.7.1 Network Rail has arrangements to ensure any person in charge (PIC) who is required to repair, service, maintain or clean traction and OTMs are suitably protected from train movements. The arrangements apply to staff including engineering staff who may be required to attend train failures on Network Rail managed Infrastructure.

12.7.2 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.

12.7.3 The Fleet Engineering Manager ensures that suitable "local protection arrangements" are devised (as outlined in SP4.*11*) and in conjunction with the requirements of GE/RT8000 module T10, for all of the locations identified requiring such arrangements.

12.7.4 A dynamic risk assessment is carried out where circumstances are such that work is required outside these locations (e.g. failure).

12.8 Maintenance policy

12.8.1 Network Rail has a Maintenance Policy that complies with the requirements the Entity in Charge of Maintenance (ECM) regulations.

12.8.2 This policy involves the inspection and control of equipment and systems degradation such that safety, reliability and the value of the OTMs' is maximised consistent with good practice, risk and financial analysis.

12.8.3 The maintenance policy is described in *NR/L2/RMVP/0090 'Management of Maintenance for Traction and Rolling Stock, On-Track Machines and On-Track Plant*.

12.9 Maintenance plan

12.9.1 Maintenance Plans are approved by the Principal Engineering Manager via the Engineering Change process. The Fleet Engineering Manager is responsible for monitoring the application the Maintenance Plan for each vehicle type. The maintenance plans detail the requirements, specify safe limits of wear and degradation and also the periodicity of attention for all components including safety critical equipment.

12.9.2 The Maintenance Plans for all OTMs, except vehicles maintained by third parties, have been developed and evolved over the period of time since the vehicles have been in service. 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.

12.9.3 Where third party maintenance of vehicles is required, the Maintenance Plan will be cascaded to the third party maintainers, who will carry out maintenance of these vehicles on behalf of Network Rail.

12.9.4 Each Maintenance Plan includes maintenance that satisfies the requirements of the Entity in Charge of Maintenance (ECM) regulations..

12.9.5 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 *GM/RT2450*. This process is detailed in NR/L1/CPR/103 Supplier Assurance Framework.

12.9.6 The Maintenance Plan and related documents are subject to regular review by the Fleet Manager on as required following:

- In-service monitoring and maintenance experience
- The result of audit
- Findings or instruction by the Head of Discipline (Plant and T&RS) 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.
- Notified by other organisations of potential risk due to incidents with rail vehicles of the same type operated by other organisations, regulatory bodies.

12.9.7 The Fleet 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.

12.10 Introduction of New OTM's

12.10.1 Network Rail manages 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 Engineering Manager via the engineering change process.

12.10.2 These arrangements are applied whenever:

a) New OTMs are to be operated by Network Rail

b) Existing OTMs within the Network Rail fleet are required to operate on routes other than those over which they are currently authorised to operate.

c) Existing OTMs are modified or transferred into the Network Rail fleet.

d) Existing vehicles are reintroduced from long-term storage (exceeding 12 months).

12.10.3 The Principal Engineering Manager 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 Head of Driving Standards will delegate a responsible manager to assist.

12.10.4 These arrangements include the identification of risks and the approvals required to introduce the vehicle into service.

12.11 Hired-in and sub-leased vehicles

12.11.1 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/RT2450.

ii. The hirer confirms current approvals status including the transfer of information relating to any limitations for operation.

iii. The hirer confirms an approved maintenance plan which conforms to the requirements of *GM/RT2004* and ECM Regulations.

iv. The hirer has arrangements in place carrying out safety inspections of the vehicles following maintenance, repair, overhaul etc.

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/RT8070 '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 for the OTMs.

vii. A list of hired in type of vehicle agreements operated by Network Rail staff is included in the table Rolling Stock Hired and Operated by Network Rail which can be referenced in Appendix C *'Vehicle Classes Operated by Network Rail'*.

12.11.2 Regular and long term hiring of vehicles not under direct engineering control require assurance through regular audit and monitoring. The Principal Engineering Manager is responsible for the audit programme for 3rd party suppliers..

12.11.3 The Fleet Engineering Manager, shall ensure 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' NR/L2/CPR/201 'Supplier Qualification'* and *NR/L2/CPR/302* '*Supplier Qualification – Core Requirements*' that processes are in place to manage the fleet in accordance with the Maintenance Policy,

12.11.4 Detailed lists of rail vehicles safety critical systems and services, which are incorporated in such an audit, can be referred to in *NR/L2/CPR/201 'Supplier Qualification'* and *NR/L2/CPR/302* '*Supplier Qualification – Core Requirements*'.

12.12 Control of purchasing of plant, equipment and components

12.12.1 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.

12.13 Control of suppliers

12.13.1 Arrangements for the purchasing of plant, equipment and spare parts are outlined in the Network Rail Procurement Manual as described in Chapter 3, Planning – Risk. Network Rail only purchases safety related items from approved suppliers who are selected in accordance with the criteria in the Procurement Manual.

12.13.2 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.

12.13.3 The Procurement Manual ensures that the requirements of Railway Industry Standard *RIS-2450-RST* are met and specific controls are in place via approved suppliers accreditation system and 'Link Up' supplier accreditation system.

12.13.4 The Procurement Manual ensures that the requirements of *RIS-2450-RST* are met and specific controls are in place in respect of the procurement of OTM spare parts via approved suppliers via the Link-Up supplier accreditation system. .

12.13.5 Specific controls are in place in respect of the procurement of OTM spare parts via approved suppliers.

12.13.6 The contract between Network Rail and approved suppliers obliges them to comply with *RIS-2450-RST* and has a management system that has been accredited and periodically reviewed by 'Link Up'.

12.13.7 All safety critical products and services are detailed in *NR/L1/RMVP/0001* '*Network Rail Plant Traction and Rolling Stock (T&RS) Policy*'.

12.13.8 The risk assessment process has identified those safety critical products and services that constitute the most risk to train operations in the event of non-compliance to laid down specifications.

12.13.9 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.

12.13.10 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.

12.13.11 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.

12.13.12 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.

12.13.13 The arrangements for the control of calibrated tools and equipment is described in *NR/L2/RMVP/0090* '*Management of Maintenance for Traction and Rolling Stock, On-Track Machines and On-Track Plant*'.

12.14 Control of engineering change to OTMs

12.14.1 Network Rail has an Engineering Change process in place to ensure that vehicles are modified in accordance with the level of risk. Details of the criteria for levels of engineering change are detailed in *NR/L2/RSE/100/04 'New or Changed Vehicles on Network Rail Infrastructure'*. Vehicles being tested are supplied by a supplier qualified in accordance with the requirements of sections 12.12 and 12.13.

12.14.2 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/NSC/311* '*Engineering and Management Control Arrangements for the National Supply Chain and TRS and OTM Fleet* before the vehicle is placed into service.

12.14.3 Where necessary modifications will be safety validated using Network Rails 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*'.

12.14.4 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.

12.14.5 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 Head of Driving 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.).

12.14.6 The Principal Engineering Manager is responsible for the correct application in accordance with the approved Engineering Change pack. The Head of Discipline (T&RS) takes responsibility in what constitutes a significant modification change.

12.14.7 Assistance in the event of failure is by other rolling stock fitted with an appropriate adapter coupling. The emergency and recovery plan is agreed with Network Rail.

12.14.8 The Principal Engineering 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.

12.14.9 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.

12.14.10 Manuals, drawings procedures and other relevant maintenance documentation will be updated as required to reflect the engineering change and stored by the Engineering Manager.

12.15 Competence of maintenance staff

12.15.1 The quantity of maintenance staff is determined based on factoring maintenance and service cycles, repair work, no. of OTM assigned to the location, depot movements and foreseeable eventualities such as training, sick and modification work over and above routines.

12.15.2 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.

12.15.3 A system of random testing for drugs and alcohol is in operation in accordance with the requirements of *GE/RT8070 'Drugs and Alcohol'* and NR/L1/OHS/051 *'Drugs and Alcohol Policy'*.

12.15.4 All Network Rail maintenance and technical staff are subject to a competence management system (H&SMS (IM), Section 4.4 '*Competence, Training and Awareness*') and Chapter 7 *'Implementation and Operation – Competence, Training and Awareness*'. Network Rail set out the competence requirements in *NR/L1/CTM/001* Competence Management Policy 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, second edition (ORR, 2007) are met. This procedure, together with H&SMS (IM), Section 6.2 '*Suppliers*' and *NR/L1/CPR/101 'Sourcing and Purchasing Policy*', outlines the methods of selection and surveillance of safety critical suppliers.

12.15.5 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.

12.15.6 Where no relevant standard applies Network Rail determines the appropriate time for re-assessment of competency to take place.

12.15.7 All relevant technical staff will work towards and obtain competence qualifications using the standards which incorporate the requirements of The Railways and Other Guided Transport Systems (Safety) Regulations 2006.

12.15.8 Designated maintenance team members carry out periodic assessments against vehicle maintenance instructions. The staff are re-assessed against the standards within the specified timescales.

12.15.9 The competency standards worked to are:-

- Maintenance Staff *NR/L2/CTM/205/RVMP 1- 19 'Competence and Training for the Maintenance of Traction and Rolling Stock and On-Track Machines'*
- Operating Staff *SP1.08* '*OTM Driver Competence Standards'*

12.15.10 Assessment records are maintained locally. These assessment records are available for inspection by the Verification staff, the Awarding Bodies (where applicable), ORR.

12.15.11 When new maintenance staff 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.

12.15.12 Maintenance staff 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 '*Competence, Training and Awareness*') and *NR/L2/CTM/201 'Competence Management*' procedure.

12.15.13 Network Rail outstation staff are trained and assessed to Designated Person level in order that they can undertake 'running maintenance' 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 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.

12.16 Development and approval of OTM maintenance standards

12.16.1 All maintenance documentation is reviewed when created and modified by the Engineering Manager using the Engineering Change process. The minimum requirements for maintenance documentation content is detailed in *NR/L2/RMVP/0090,* '*Management of Maintenance for Traction and Rolling Stock, On-Track Machines and On-Track Plant*'.

12.16.2 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.

12.16.3 The review of maintenance documentation includes circulating a draft document to relevant parties for review i.e. maintenance staff, operations, engineers etc. If there are any further amendments that transpire as a result of this consultation the author will

decide if the proposed amendments are justified prior to any changes being implemented.

12.16.4 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.

12.17 Control of heavy maintenance

12.17.1 Depots with the correct facilities for heavy maintenance are sourced through the 'maintenance facility framework contract' for the Network Rail owned vehicles. Further details are described in *NR/L2/RMVP/0090* '*Rolling Stock for On Track Machines and On Track Plant*' and the vehicle maintenance instructions which provide a specification for each type of vehicle requirements.

12.18 Fitness for service

12.18.1 Where safety critical components have been identified as defective the vehicle must be withdrawn from service. Any request to withdraw a vehicle from service will be sent to Rail Plant Control detailing the reason why the request has been made. Rail Plant Control update the vehicle status in the daily situational report, vehicles marked in red 'red carded' are not permitted on the network until the status has been changed.

12.18.2 Rail Plant Control hold an up to date list of named individuals who are permitted to remove the red status permitting vehicles to be returned to traffic. Where a request to remove the red status is made without the necessary repair being completed the engineering team will complete a dispensation form this will detail the level of risk presented as a result of returning the vehicle to traffic the mitigation put in place and the appropriate level of sign off in accordance with NR/L3/NSC/311. Where a safety critical defect has been rectified the maintenance technicians or supplier will undertake a full test of the system prior to the release to traffic. Results of this test will be recorded on FAMS when completed by Network Rail Staff or will form part of the handover / handback documentation from the supplier.

12.19 Deferred work

12.19.1 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 any work deferred is managed in accordance with *NR/L3/NSC/311* '*Engineering and Management Control Arrangements for the National Supply Chain T&RS and OTM*'.

12.19.2 A risk assessment will be completed for any deferred work to manage any increased risk with regard to the safe running of the train. Where deferment is agreed, the vehicle records shall be 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.

12.19.3 Low risk deferrals can be approved by Fleet Engineering Manager, and medium risk deferrals can be approved by Fleet Manager . Any High risk deferrals shall require the approval of the Principal Engineering Manager via the Engineering Change process:

12.19.4 It is the responsibility of Fleet Engineering Manager to make sure that any control measures required to support a deferral are applied prior to a vehicle entering service.

12.20 Urgent repair following safety critical defect reporting

12.20.1 On receipt of a National Incident Report or Urgent Safety Related Defect, the Fleet Engineering Manager will determine the appropriate action to be taken to demonstrate the continued safety of the fleet. The Fleet Engineering Manager will contact the Principal Engineering Manager for professional guidance where appropriate.

12.20.2 Where a medium risk (as defined by the corporate risk matrix) then the Fleet Manager is responsible for agreeing any short term actions with the Principal Engineering Manager.

12.20.3 The Fleet Manager is responsible for identifying any medium or long term actions required as a result of the Urgent Safety Related Defect and monitoring the progress of such actions. .

12.20.4 In the event of a safety critical incident on Network Rail OTMs, 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. The review will include examining the potential for similar incidents in the remainder of the fleet and what immediate action should be taken.

12.21 Operation of vehicles fitted with wheel skates

12.21.1 In the event of a crippled vehicle requiring rescue and a wheelset is not fit to rotate, the Fleet Manager shall have in place an accredited and approved supplier in accordance with *NR/L2/CPR/201 'Supplier Qualification'* and *NR/L2/CPR/302 'Supplier Qualification – Core Requirements*'.

12.21.2 *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 *NR/L2/CPR/201 'Supplier Qualification'* and *NR/L2/CPR/302* '*Supplier Qualification – Core Requirements*'.
- When Network Control Centre call on the competent provision for fitment of wheelskates
- The presence of an On Call engineer who ensures wheelskate fitment, including lifting, jacking, recovery and emergency movement of rail vehicles, and the safe movement is carried out.

12.21.3 The OTM Driver shall report to the Network Rail Control Centre who will discuss with the Fleet Engineering Manager the condition, temporary remedial action or rescue. Where rescue is considered, an on-site preliminary investigation is carried out by the On Call Engineer who has the necessary technical competence to examine or repair specified items of equipment forming part of a train or vehicle.

12.22 Arrangements for withdrawing vehicles from service

12.22.1 Network Rail has arrangements contained in *SP-2.05 Defective OTM on Train Equipment* that details the actions to be taken by staff in the event of a safety related system or component defect occurring on OTMs. This document draws together the provisions of all publications (including the Rule Book *GO/RT3000, GO/RT3437,*

GO/RC3537) relating to the fitness of OTMs on entering service and in service. The procedure ensures that Network Rail manages OTMs defects in timescales consistent with the risk which such defects might potentially import into train operations.

12.22.2 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 on Train 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 maintenance staff, fleet engineer or Engineering Manager. The incident is investigated for remedial action, including depot test procedures, and a report is signed off by the Team Leader by means of vehicle records held on depot and a status change to accept the train back into service.

12.22.3 Safety related maintenance defects are categorised into high, medium or low risk by the Supervisor and entered into the FAMS database. These will be reviewed by the Fleet Manager or Principal Engineering 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 determine whether the defect is general, requiring an NIR or specific to the nature of occurrence. NIRs are initiated by the Principal Engineering Manager.

12.23 Rail vehicle safety performance monitoring

12.23.1 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.

12.24 Rail vehicle safety critical defect reporting

12.24.1 The arrangements, which apply in so far as safety critical defects are concerned, are outlined in *NR/L3/NSC/311 Engineering and management control arrangements for the National Supply Chain T&RS and OTM* and the OTM Fleet Handbook and complies with RGS *GE/RT8250*. The Fleet Engineering Manager reviews and responds to all National Incident Reports (NIRs) as directed by the Principal Engineering Manager. The Principal Engineering Manager, manages the closure of NIRs. Any special checks arising from NIRs are instructed immediately by the Fleet Engineer. Vehicles involved in accidents or incidents are subject to special testing in accordance with NR/MB/5112 'Post Incident Inspection. On Call Engineers and Supervisors are deployed as necessary by the Network Rail Control Centre to deal with urgent repairs or fault finding in service. On-Call Engineer is available at all times to provide advice or respond to the discovery of high-risk safety related defects. Process for Dealing with National Incident Reports is managed through SP-4.04 *'Process for Dealing with National Incident Reports'.*

12.24.2 The key principles of this particular element of the fleet H&SMS (TU) are:

i. the generation of an internal 'Safety Related Defect' (SRD) where applicable;

ii. the risk rating of such SRD's;

iii. the generation of a GE/RT8250 Urgent Safety Related Defect (USRD) Report where applicable;

iv. the receipt and assessment of URSD Reports received via Network Rail's National Control Centre;

v. Monitoring fleet safety performance against agreed targets.

12.24.3 For hiring of staff and OTMs, reporting lines are established between the supplier organisation's staff, Network Rail Operations and Network Rail Control Centre. The supplier's organisation's vehicle defects reporting process incorporates Network Rail Operations responsibilities for reporting to signaller and then Network Rail Centre where defects occur outside depot boundaries. Network Rail 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 on Train Equipment'*. The hiring organisation are responsible for reporting defects within depots and fitness for leaving depots are established through the issue of a fitness to run certificate and train list each day.

12.24.4 Performance against Fleet Safety Targets and Safety Related Defects / Urgent Safety Related Defect incidents are reviewed at the OTM management team in the team meeting.

12.25 Testing of vehicles

12.25.1 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 inputted into FAMs and are subject to periodic inspection and audit.

12.25.2 Calibration of equipment used during maintenance checks is undertaken in accordance with the Fleet Handbook.

12.25.3 Train Preparation checks are undertaken by maintenance technicians (Chapter 12, Section 12.18 and by OTM driver operators before units are passed as fit to enter service. A train preparation slip is left in the cab to advise the train driver that the train has been prepared for service. This process for OTM driver operators is outlined in Chapter 11, Section 11.6.

12.26 Technical specification audit

12.26.1 General audit arrangements are dealt with in H&SMS (IM), Section 7.3.38 and section 7.4.49. Technical audit arrangements relating to engineering are found in *NR/L3/RVE/1006* '*Technical Audit Procedure for Rail Vehicle Engineering*'.

12.26.2 The Fleet Manager, or person appointed by the Fleet Manager, undertakes monitoring of compliance with Technical Specifications.

12.26.3 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/RVE/1006 '*Technical Audit Procedure for Rail Vehicle Engineering'*. They are jointly approved by the Director, SCO Technical Services and Principal Engineering Manager. Development and implementation of the audit plan is the responsibility of the Principal Engineering Manager. 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 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. Auditors manage the technical auditing process as laid down in *NR/L3/RVE/1006* '*Technical Audit Procedure for Rail Vehicle Engineering'*.

12.26.4 Additional audits may be undertaken during the year where fleet safety or reliability performance monitoring indicates this requirement. In addition to checking adherence to the laid down specification, product audits also involve a check that any mandatory requirements or codes of practice in the area concerned are being complied with.

12.26.5 Procedural audits cover the adherence to the laid down procedures that form part of the Fleet handbook. The Fleet Manager undertakes a programme of Level 1 in accordance with *NR/L3/NSC/311* '*Engineering and Management Control arrangements for the National Supply Chain*, *T&RS and OTM*' to check application of relevant standards and the fleet handbook.

12.26.6 Audits are undertaken in accordance with procedures *NR/SP/ASR/036* Network Rail Assurance Framework.

13 OPERATIONAL CONTROL – OCCUPATIONAL HEALTH AND SAFETY

13.2 Work activity risk assessment

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.

13.2.2 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.

13.2.3 Further details on Work Activity Risk Assessment with in Network Rail is detailed in the H&SMS (IM), section 3.7 Work Activity Risk Assessment.

13.3 Personal protective equipment

13.3.1 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.

13.3.2 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

13.3.3 If a hazard is identified that cannot be mitigated by any other means, a risk assessment is undertaken. A specific assessment may not be necessary where the requirement to wear PPE is absolute, e.g. the wearing of high-visibility clothing when working on or near the line. In these circumstances, the requirement for PPE is defined in the relevant Railway Group / Network Rail standard.

13.4 Work safe procedure

13.4.1 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 considered to be unacceptable. Network Rail standard *NR/SP/OHS/00112 Worksafe Procedure* identifies the process by which employees should bring unsafe work activities to the attention of their 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 shall do so free from the fear of 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.

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

13.5 Drugs and alcohol policy

13.5.1 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 seek help voluntarily at an early stage, before their performance at work is adversely affected and to deal fairly, consistently and in a supportive manner with those employees, provided they co-operate fully with the treatment programme
- assist managers/supervisors in dealing with drugs and alcohol misuse incidents at work
- establish clear guidelines for dealing with misconduct arising from drugs and alcohol misuse

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

13.5.3 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.

13.6 Lifesaving rules and fair culture principles

13.6.1 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'.

13.6.2 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.

13.6.3 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.

13.6.4 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 *NR/L1/CPR/102 Sourcing and Supplier Governance*

- The purpose of this policy is to specify the high level sourcing and supplier governance structure and processes within Network Rail.

14.1.3 *NR/L1/CPR/103 Supplier Assurance Framework*

- The purpose of this document is to state Network Rail's supplier assurance policy and describe the framework by which Network Rail obtain assurance that all reasonably practical steps have been taken to appoint suitably competent and adequately resourced suppliers.

14.1.4 *NR/L2/CPR/201 Suppler Qualification*

- The purpose of this document is to specify 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.

14.1.5 Further details on Supplier Management with in Network Rail is detailed in the H&SMS (IM), section 6.2 Suppliers.

14.1.6 Further details regarding OTM Products can be found in H&SMS (TU) Chapter 12 and in *NR/L1/RMVP/0001 Networks Rails Plant and Traction and Rolling Stock (T&RS) Policy*.

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 *GO/RT3118 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 OTM 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 GO/RT3118 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 OTM 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

- Signals Passed at Danger (SPaDs);
- Work Force Reportable Accidents;
- Competence Assessments delivered to plan;
- OTM Speeding;
- Defect Reports;
- Safety Critical Product Failures;
- Planned Audits versus Actual undertaken; and
- Safety Critical Communication observations.
- Near Misses / close calls.

- TPWS activations.

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 Regulation 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 Typical Maintenance and Operational accidents and incidents could include Collisions; Derailments; Collisions with objects; Collisions with road vehicles at level crossings; and striking people on the line.

17.2.3 Line managers advise employees for whom they are responsible of the requirements of the procedures for reporting. Employees are required to advise the relevant Control and their line manager as soon as possible whenever they have had an accident, assault or a case of occupational ill health.

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 GE/RT8250 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/CTM/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 both the basic and underlying causes and identify appropriate corrective action in order to prevent, or reduce, the risk of their recurrence. Some types of accident / incident will not be the subject of a 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 GO/RT3119 and 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 with in Network Rail is detailed in the H&SMS (IM), section 7.4 Accident Investigation.

17.6 Managing OTM incidents

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

- NR/FEI/5112 Post Incident Inspection
- NR/L2/INV/002 Accident and Incident Reporting and Investigation
- NR/L3/INV/301 Reporting and Investigation Manual
- NR/01071 Breakdown and Recovery Engineering Manual Volume 1

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 front line operational on call managers are trained to act as a Train Operator Liaison Officer (TOLO).

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. Operations Supervisors 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 OTM 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 well established and is detailed in standards *NR/L3/INV/3001/RIM301 Tracking of investigations, recommendations and local actions* and *NR/L3/INV/3001/RIM302 Management of recommendations and local actions*.

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 dealing with national incident reports

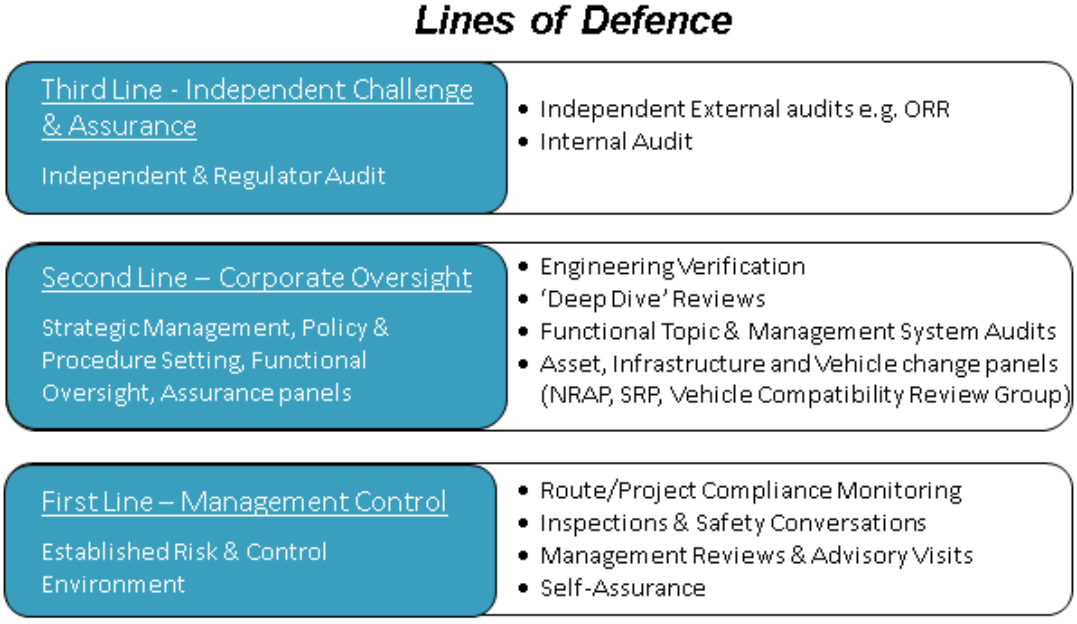
17.9.1 Network Rail arrangements for dealing with National Incident reports is defined in NR/L1/RMVP/0001 *Plant and Traction and Rolling Stock (T&RS) Policy.*

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;



18.1.3 Network Rail's arrangements for auditing are further defined in NR/L2/ASR/036 *Network Rail Assurance Framework* and *NR/L3/RVE/1006 Technical Audit Procedure for Rail Vehicles & On-Track Plant.*

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/RVE/1006 Technical Audit Procedure for Rail Vehicles & On-Track Plant* 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 standards:

- *NR/L3/INV/3001/RIM301 Tracking of investigations, recommendations and local actions*
- *NR/L3/INV/3001/RIM302 Management of recommendations and local actions*
- *NR/L3/INV/3001/RIM117 Management of recommendations from ORR inspection plan reports*

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 OTM 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, SCO Technical Services is overall custodian of the SMS (TU). The Director, SCO Technical Services 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, SCO Technical Services 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, SCO Technical Services 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, SCO Technical Services will prepare the necessary changes and, where necessary, submit them to the ORR for acceptance.

Appendices

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 Undertakings
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	Passenger and Freight TUs in ATOC Passenger and Freight TUs in cross industry ISLG M&EE.OFG NETWORK RAIL (IM); Infrastructure Contractor TUs; Freight & Passenger TOC TUs in OPSRAM
Driver Training	Transfer of personnel Accredited trainers Driver Licensing	Infrastructure Contractor TUs Freight & Passenger TOC TUs
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 & 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 though 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 (TU) Operations Control and NETWORK RAIL (IM) Control.	NETWORK RAIL (IM)
Route Conductors	Prior checks & regular audit to ensure provision of competency for contracted services. Route learning on services.	Infrastructure Contractor TUs Freight & Passenger TOC TUs
TOPS Input	NETWORK RAIL (TU) Operations Control	NETWORK RAIL (IM)
Train Path Planning	Running line movements including into / out of Possessions / Depots / HOOBs	NETWORK RAIL (IM) Infrastructure Contractor TUs

INTERFACE ORGANISATIONS

Interface Organsiation	Purpose	Responsible Post
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	Training of drivers. TOPS input and provision of rail haulage services. Route learning and familiarisation. Planning and delivery of engineering train movements required for railway infrastructure engineering work	Head of Driving Standards (P. Head) Operations Trainers and assessors OTM Performance Manager Senior Project Managers
NETWORK RAIL (IM) Infrastructure Contractor TUs	Emergency Response Responsible Post liaises with their counterparts in their Infrastructure Manager'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] Head of Driving Standards (Head of Discipline) Duty Control 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) Head of Discipline [Plant an T&RS] Head of Driving Standards (P. Head) Head of Capacity Planning
NETWORK RAIL (IM) Infrastructure Contractor	Accident Investigation Operational and engineering	Head of Safety & Sustainable Development

Interface Organsiation	Purpose	Responsible Post
TUs Freight & Passenger TOC TUs	professionals to sit on joint incident inquiry panels.	Head of Driving Standards (P. Head) Head of Discipline [Plant and T&RS]
Infrastructure Contractor TUs Freight & Passenger TOC TUs	Competence and Fitness Transfer of personnel. Arrangements for route learning and familiarisation for NETWORK RAIL OTM drivers.	Head of Driving Standards (P. Head) Operations Trainers and assessors
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 Rail Regulation	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. Regular (6 monthly) Meetings.	Head of Safety & Sustainable Development Head of Driving Standards (P. Head) 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 Head of Driving Standards (P. Head) 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

DETAILS OF INTERFACE ORGANISATIONS

Freight Passenger TUs

Amey Fleet Services Ltd; Babcock Rail Ltd; Colas Rail Ltd; DB Schenker Rail (UK) Ltd; Direct Rail Services Ltd; Freightliner Heavy Haul Ltd; GB Railfreight Ltd; Harsco Rail Ltd; Rail Express Systems Ltd; Abellio Greater Anglia Ltd; Alstom Transport UK Limited; Bombardier Transportation UK Ltd; The

Chiltern Railway Company Ltd; Direct Rail Services Ltd; East Midlands Trains Ltd; Eurostar International Ltd; First Greater Western Ltd; First ScotRail Ltd; Freightliner Ltd; Govia Thameslink Railway Limited; GW Railway Ltd; Hitachi Rail Europe Ltd; London and Birmingham Railway Ltd; London and North Western Railway Co Ltd; London and South Eastern Railway Ltd; London Overground Rail Operations Ltd; Merseyrail Electrics 2002 Ltd; Northern Rail Ltd; NXET Trains Limited; Rail for London Limited; Siemens Plc; Southern Railway Limited; Stagecoach South Western Trains Ltd; West Coast Traincare Ltd; Virgin East Coast.

Infrastructure Contractor TUs

Balfour Beatty Rail Plant Ltd; Balfour Beatty Rail Infrastructure Services Ltd; Network Rail Infrastructure Ltd; VolkerRail Ltd

Appendix 2A ORGANISATION TO SUPPORT TU REQUIREMENTS

Chart A ENGINEERING – CHAPTER 12

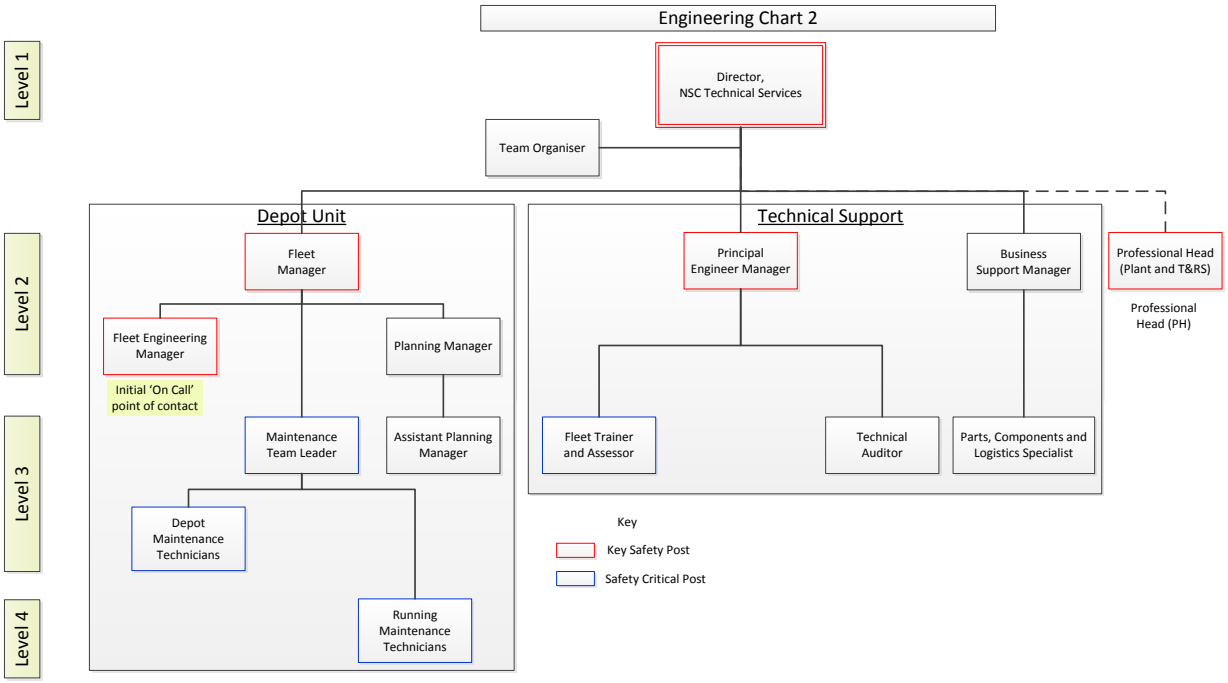
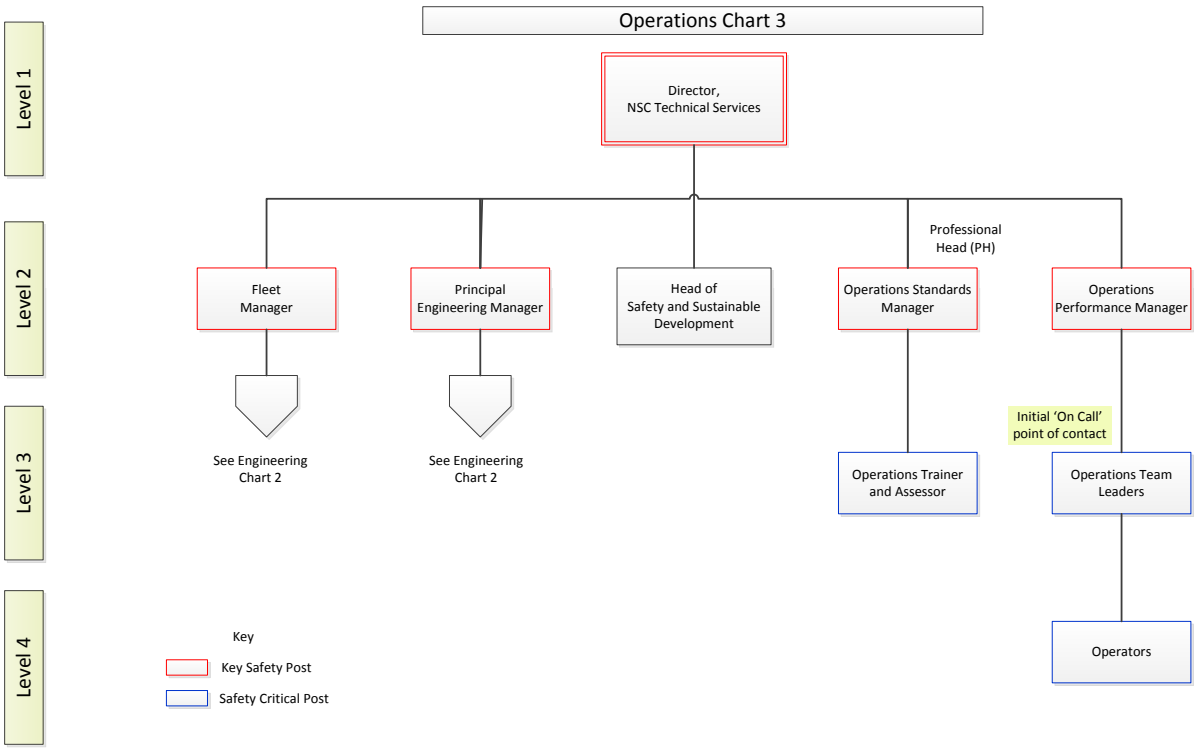


Chart B OPERATIONS (Chapter 11)



Appendix 2B KEY RESPONSIBILITIES

The generic responsibilities are described in Organisation and Arrangements for the Management of Health and Safety. All Managers have a duty to support and apply the general safety responsibilities contained in the Company Health and Safety Policy and detailed in their individual Safety Responsibility Statements.

Chart A ENGINEERING – CHAPTER 12

Director, SCO Technical Services

1. Technical standards, Engineering acceptance and technical services central support team
2. Technical support and new trains
3. Ensuring that the maintenance policy is implemented and reviewed
4. Ensure thorough supplier audit processes in accordance with NwR standards
5. Monitoring the progress of such actions by the nominated champion
6. Comply with the Network Rail procedures for appointing contractors and ensures that Traction and Rolling Stock specifications and RGS requirements are fully met
7. Responsible for 3rd party suppliers from whom Network Rail hire and will ensure those fundamental checks and inspections are carried out
8. Ensure thorough suppliers audit processes in accordance with NwR standards

Principal Engineering Manager – Technical Support

1. Approval of proposed engineering changes *to* Rail Vehicles before physical changes are made to vehicles
2. Approve or reject proposed changes / development of VMOI/VOI and notification to proposer
3. Ensure that when reviews are completed the revisions/developments are authorised and endorsed in conjunction with the Fleet Manager
4. Present VMOI/VOI documents to a competent authority (e.g. VAB) under the ROGS regulations for approval and certification
5. Approval of (high risk) deferred work
6. decide whether a National Incident Report should be raised with Network Rail National Control Centre following a safety critical incident on Network Rail L rolling stock
7. Initiate NIRs where outcome of the review on high risk categories require it
8. Annual development and implementation of a technical audit plan
9. Prepares fleet handbook for detailing local arrangements
10. Ensure appropriate advice is made available or published where restrictions or conditions exist
11. Ensure relevant approvals are obtained for new or modified services prior to entering service
12. Maintenance documents are produced and certified in accordance with Network Rail standards
13. Jointly approve with the Director, SCO Technical Services the range of types of audit appertaining to maintenance activities such as In Process Evaluation, Finished Work Inspection, Product audits and Procedure audit; Maintenance & Overhaul Policy audits, supplier audits.

Head of Discipline [T&RS] – External organisation

1. Ensuring that the Maintenance Policy is produced
2. Approval of proposed engineering changes *to Rail Vehicles* before physical changes are made to vehicles
3. Decide the type of change and specify the scope of the approvals. Appoint a Competent Project Manager for the introduction to new OTM's
4. Approval of (high risk) deferred work
5. Instruct, where required, during maintenance plan review and related documents

Fleet Manager

1. Identifying any medium or long term actions required as a result of the Urgent Safety Related Defect
2. Jointly approve with the Principal Engineering Manager the analysis of the reason for the vehicle incident or defects and remedial action to be undertaken by the depot
3. Accredited and approved Competent provision and supplier for wheelskate provision in place
4. Tolerances are adhered to, and vehicles withdrawn from service before they become overdue
5. Internal review of Maintenance Plan and related documents are subject to internal review on a three yearly basis
6. Approval of (low risk) deferred work
7. Review Safety related maintenance defects and recorded in the vehicle maintenance records
8. Jointly approve with the Director, SCO Technical Services the analysis of the reason for the vehicle incident or defects and remedial action to be undertaken by the depot
9. Undertake monitoring of compliance with Technical Specifications
10. Ensuring that up to date VMOIs are in place and amended accordingly
11. Provide scheduled exam job number, individual task descriptions including safety conditions, test equipment, spare parts and technical documentation
12. Provide details of the frequency of maintenance to be carried out
13. Ensure maintenance instructions are supported by other specifications such as modification instructions, test specifications, Engineering, work and fleet instructions
14. Develops the vehicle maintenance documents in response to fleet reliability and safety issues
15. Develop a 'technical brief' to support new or amended VMOI/VOI in accordance with a VMOI/VOI timescale implementation plan
16. Examine the vehicle history, repair history and overhaul dates following a safety critical incident on Network Rail rolling stock

Fleet Engineering Manager

1. Review of and changes to the maintenance plan
2. Ensure the depot facilities support depot maintenance requirements
3. Implement new or amended VMOI/VOI in accordance with a VMOI/VOI timescale implementation plan

4. Ensure fitness for Service Certificate' (Hired in vehicles) or 'Fitness to Run Certificate issued prior to vehicles entering service
5. Agree requirement (office hours) to carry out any short term action with Fleet Director for Urgent Repair following Safety Critical Defect Reporting
6. Examine the vehicle history, repair history and overhaul dates following a safety critical incident on Network Rail rolling stock
7. Ensure suitable "local protection arrangements" are devised for all of the locations identified requiring such arrangements
8. Ensure that any work deferred is managed in accordance with Guidance for Deferred Work
9. Provide professional guidance on urgent Repair following Safety Critical Defect Reporting
10. Agree requirement (outside office hours) to carry out any short term action with Fleet Director for Urgent Repair following Safety Critical Defect Reporting
11. Carry out an immediate assessment review following a safety critical incident on Network Rail rolling stock
12. Respond to Network Rail Control Centre to deal with urgent repairs or fault finding in service
13. Available at all times to provide advice or respond to the discovery of high-risk safety related defects
14. Ensure safe wheelskate fitment and movement of rail vehicles

Business Support Manager – Technical Support

1. Responsible for arranging Safety Critical Supplier Assessment

Depot maintenance Technicians - Depot

1. Complete scheduled exam job number, tasks with individual descriptions
2. Record in service defects and subsequent actions in vehicle repair book

Supervisors - Depot

1. Operate trains on depot
2. Support the competence requirements of maintenance staff
3. Carry out staff periodic assessments against vehicle maintenance instructions
4. Coach candidates who do not yet meet the standard
5. Ensure all safety critical work is carried out prior to a vehicle entering service
6. receipt of an Urgent Safety Related Defect determine continued safety of the rolling stock fleet
7. Safety related defect incident is investigated for remedial action and report submitted
8. Categorise Safety related maintenance defects into high, medium and low and entered in a database
9. Advise the relevant maintenance depot of any safety related defects or incidents involving vehicles allocated to that depot
10. Respond to NETWORK RAIL Control Centre to deal with urgent repairs or fault finding in service

Technical Auditor- Technical Support

1. Manage the technical auditing process as laid down in Network Rail standards
2. Additional audits undertaken where fleet safety or reliability performance monitoring indicates this requirement

Those that carry out Fleet Training and Assessing- Technical Support

1. Carry out depot classroom training
2. Carry out practical training and coaching
3. Carry out maintenance competence assessments

See Chart B OPERATIONS (Chapter 11) in next section for further details

Running Maintenance' Technicians

1. Record in service defects and subsequent actions in vehicle repair book)
2. Carry out maintenance activities in accordance with the maintenance Policy and Plan

Chart B OPERATIONS (Chapter 11)

1. Head of Driving Standards Responsible for implementing the SPaD policy
2. Provide operational advice and support
3. Assessment of driver assessors
4. Ensure the content, target group and method of communication is timely, relevant and appropriate
5. Control and authorise access to driving cabs through the issuing driving cab passes
6. Promote awareness of, and solutions to, low rail adhesion conditions

OTM Performance Manager

1. Control and authorise access to driving cabs through the issuing driving cab passes
2. Review all matters relating to the interface between the infrastructure and the trains

Those that carry out OTM Fleet and Operations Assessments

1. Carry out and maintain individual competence
2. Assess and maintain individual competence to Network Rail's OTM Driver and Maintainer competency standard
3. Carry out enhanced assessment and monitoring of OTM drivers requiring further development with a development plan
4. Preparation and initial briefing of Route learning methods and services for travel

Those that carry out OTM Fleet Training and OTM Operations Training

1. Carry out training in OTM drivers and Maintainers and assess progress throughout the training programme (11.2.4a, ii)
2. Assessed in knowledge of Network Rail's OTM Driver and Maintainer competency standard (7.5.1b)

OTM Maintenance Supervisors and Operations Supervisors

1. Assessed in instructor techniques
2. Oversee the arrangements for the management of working hours
3. Communicate safety of the line information e.g PAD Information

4. Carry out unobtrusive monitoring of drivers, including OTMR downloads
5. Supervise the availability and display of essential information, supply of publications and equipment and an individual's fitness for work
6. Train preparation is undertaken in accordance with OTM Operating Instructions
7. Provide a vehicle Preparation Slip in the driving cab to confirm to the driver that the OTM has been prepared
8. Involved in drafting and reviewing engineering and operational arrangements
9. Carry out line of route risk assessments
10. Carry out checks on train speed using RADAR speed equipment
11. Conduct practical and theoretical assessments who are driver qualified and route competent

OTM driver operators

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

Appendix 3A OTM TRAINING SYLLABUS

INSTRUCTOR REQUIRED	CLASSROOM BASED	OTM REQUIRED ASSESSMENT	EXTERNAL COURSE	SITE VISIT	PROGRESS ASSESSMENT	SUITABILITY REVIEW

Module name	Week / Module	Monday	Tuesday	Wednesday	Thursday	Friday
MODULE 1 INTRODUCTION	Week 1 M1 1	**Corporate Induction** *[TBC]*	**Corporate Induction** *[TBC]*	**Corporate Induction** *[TBC]*	**Corporate Values** *[TBC]*	**Corporate Values** *[TBC]*
	Week 2 M1 2	**Course Induction** *Introduction to Driver Training*	**Publications and Equipment** *Rule Book / Standards / WONS / PONS*	**Publications and Equipment** *Section Appendices*	**Book on/off procedures** *Unit 1.1*	**Non-Technical Skills** Safe behaviour Learning from accidents
	Week 3 M1 3	**Personal Track Safety** *Theory*	**Personal Track Safety** *Practical*	**Communication** *Unit 2.1; 2.2 & 2.3*	**Communication** *Unit 2.1; 2.2 & 2.3*	**Simulation Experience** Review and revise
MODULE 2 DEPOT WORKING	Week 4 M2.1	**Depot Induction** *Site Rules / instructions Depot familiarisation*	**OTM Induction** *Intro to OTM Cab familiarisation Cab discipline*	**Theory of Depot Movements** *Depot signalling*	**Incidents** SPAD, Derailment and Collision *Unit 5.4*	**Professional Driving** *Human error; SPaD Avoidance Unit 4.2 & 4.3*
	Week 5 M2.2	**Preparation #** *Unit 2.1, 2.2 & 3.1*	**Preparation #** *Unit 2.1, 2.2 & 3.1*	**Changing ends and Stabling #** *Unit 2.1; 2.2;2.3;3.3 & 4.4*	**Attaching and Detaching #** *Unit 2.2; 3.1; 3.2*	**Start Trains** *Unit 2.1; 2.2; 4.1 & 4.2*
	Week 6 M2.3	**Shunting, Propelling & Associated Risks** *Unit 2.1 & 3.2*	**Systems Failure** *OTM or Signal Unit 5.1 & 5.2*	**Low Speed Movements #** *Unit 2.1 & 3.2*	**Review and Revise**	**Simulation Experience** Review and revise
	Week 7 M2.4	**Depot handling Experience ¥** *Unit 3.1; 3.2 & 3.3*	**Depot handling Experience ¥** *Unit 3.1; 3.2 & 3.3*	**Depot handling Experience ¥** *Unit 3.1; 3.2 & 3.3*	**Depot handling Experience ¥** *Unit 3.1; 3.2 & 3.3*	**Depot handling Experience ¥** *Unit 3.1; 3.2 & 3.3*
	Week 8 M2.5	**Principles of Depot route learning** *Unit 4.5*	**Change ends. Conducting drivers. Handover** *Unit 3.3; 5.1 & 4.4*	**Prep for Module 3 Review and revise**	**Operations Assessor** *Assessment Module 1*	**Operations Assessor** *Assessment Module 2*
MODULE 3 NORMAL WORKING	Week 9 M3.1	**Front End Experience ¥** *Unit 4.1; 4.2; 4.3; 4.4 & 4.5*				
	Week 10 M3.1	**Front End Experience ¥** *Unit 4.1; 4.2; 4.3; 4.4 & 4.5*				
	Week 11 M3.2	**Train Regulation** *Signal I.D. / A.B. Unit 4.1; 4.2 & 4.3*	**Train Regulation** *TCB. Unit 4.1; 4.2 & 4.3*	**Detention of trains** *Signal irregularities Unit 4.1 & 5.1*	**Simulation Experience** Review and revise	**SITE VISIT Manual box visit Power box visit**
	Week 12 M3.3	**Tampers** *Unit 4.1; 4.2; 4.3 & 5.2*	**Engine layout, drive line, water, and oil.** *Unit 4.1; 4.2; 4.3 & 5.2*	**Air, brake, and suspension systems** *Unit 4.1; 4.2; 4.3 & 5.2*	**Safety systems Expansion** *Unit 4.1; 4.2; 4.3 & 5.2*	**Driving in service theory** *Unit 4.1; 4.2;4.3;4.4 & 4.5*
	Week 13 M3.4	**Grinders** *Unit 4.1; 4.2; 4.3 & 5.2*	**Engine layout, drive line, water, and oil.** *Unit 4.1; 4.2; 4.3 & 5.2*	**Air, brake, and suspension systems** *Unit 4.1; 4.2; 4.3 & 5.2*	**Safety systems Expansion** *Unit 4.1; 4.2; 4.3 & 5.2*	**Driving in service theory** *Unit 4.1; 4.2;4.3;4.4 & 4.5*
	Week 14 M3.5	**Single lines / Level crossings** *Unit 4.2 & 5.1*	**SITE VISIT Level crossings and single lines**	**Professional driving &SPAD avoidance** *Unit 4.2 & 4.3*	**Assessment** Progress report	**Review and revise** Preparation for handling
	Week 15 M3.6	**Practical Handling experience ¥** *Unit 4.1; 4.2; 4.3; 4.4 & 4.5*				
	Week 16 M3.6	**Practical Handling experience Ø** *Unit 4.1; 4.2; 4.3; 4.4 & 4.5*				
	Week 17 M3.6	**Practical Handling experience Ø** *Unit 4.1; 4.2; 4.3; 4.4 & 4.5*				**Instructor Suitability Review Ø** *Unit 4.1; 4.2; 4.3; 4.4 & 4*

References

Classroom training– 1 Trainer to a maximum of 12 trainees;
#– Ratio 6 trainees to 1 instructor;
¥– Ratio 2 trainee to 1 instructor or assessor;
Ø– Ratio 1 trainee to 1 instructor or assessor;

INSTRUCTOR REQUIRED	CLASSROOM BASED	OTM REQUIRED ASSESSMENT	EXTERNAL COURSE	SITE VISIT	PROGRESS ASSESSMENT	SUITABILITY REVIEW

Module name	Week / Module	Monday	Tuesday	Wednesday	Thursday	Friday
MODULE 4 ABNORMAL WORKING	Week 18 **M4.1**	**Assessment Feedback** Work experience Review	**Passing Signal with authority / Examining line** *Unit 2.1 & 5.1*	**Passing Signal on own authority Wrong direction** *Unit 2.1 & 5.1*	**Unscheduled Shunt / Propelling** *Unit 2.1 & 5.1* Review and revise	**Instructor Suitability Review Ø**
	Week 19 **M4.2**	**Practical Handling experience Ø** *Unit 4 & 5.1*				**Simulation Experience** Review and revise
	Week 20 **M4.3**	**Practical Handling experience Ø** *Unit 4 & 5.1*				**Operations Assessor** *Assessment Module 3 & 4*
MODULE 5 DE-GRADED WORKING	Week 21 **M5.1**	**T.S.R. / ESR Temporary signals** *Unit 2.1; 2.2 & 5.1*	**Temporary Block Working,** *Unit 2.1; 2.2 & 5.1*	**Single Line Working / Pilotman** *Unit 2.1; 2.2; 5.1 & 5.2*	**Level Crossing Failure** *Unit 2.1; 2.2; 5.1 & 5.2*	**Adverse weather / low adhesion** *Unit 5.1*
	Week 22 **M5.2**	**Train faults and failures** *Unit 2.1; 2.2 & 5.2*	**Train faults and failures** *Unit 2.1; 2.2 & 5.2*	**Train stopped by train failure** *Unit 2.1; 2.2 & 5.3*	**Assistance to failed train** *Unit 2.1; 2.2 & 5.3*	**Simulation Experience** Review and revise
	Week 23 **M5.3**	**Practical Handling experience Ø** *Unit 4 & 5.1*				
	Week 24 **M5.3**	**Practical Handling experience Ø** *Unit 4 & 5.1*				**Instructor Suitability Review Ø**
MODULE 6 EMERGENCY WORKING	Week 25 **M6.1**	**Hazards and Emergency Situations** *Unit 5.4*	**Dealing with emergencies, protection and Safety** *Unit 5.2; 5.3 & 5.4*	**Unusual occurrences, near misses, fatalities / trespass** *Unit 5.4*	**Professional driving &SPAD awareness** *Unit 4.2 & 5.1*	**Operations Assessor** *Assessment Module 5 & 6*
MODULE 7 PRACTICAL HANDLING	Week 26 **M7.1**	**Practical Handling experience Ø** *Unit 1, 2, 3, 4 & 5*				
	Week 27 **M7.1**	**Practical Handling experience Ø** *Unit 1, 2, 3, 4 & 5*				
	Week 28 **M7.1**	**Practical Handling experience Ø** *Unit 1, 2, 3, 4 & 5*				**Principles of route learning (M/Line)** *Unit 4.5*
	Week 29 **M7.2**	**Practical Handling experience Ø** *Unit 1, 2, 3, 4 & 5*				
	Week 30 **M7.2**	**Practical Handling experience Ø** *Unit 1, 2, 3, 4 & 5*				**Simulation Experience** Review and revise
MODULE 8 FINAL ASSESSMENT	Week 31 **M8.1**	**Review and Revise**	**Review and Revise**	**Assessment** Theory Assessment *Module 1, 2 & 3* Practical Handling *Module 2 & 3*	**Assessment** Theory Assessment *Module 4, 5 & 6*	**Final Assessment** Practical Handling Assessment *Module 7*

Instructor required	Classroom training	On the job training	Competence development assessment (CDA)	Simulator assessment (SA)	Competence assessment (CA)

Module name	Module	Week	Day 1	2	3	4	5
Company induction	**1**	1	To induct trainees into the company, outlying policies and procedures, appreciation of railway operations and its safety culture.				
Introduction to railway operations	**2**	2	Trainees shall be provided with an appreciation of railway operations, and an understanding of the role of a train Driver before embarking on more specific training in rules and regulations				
		3	Part A' Basic introduction to rules and Part B' Workplace experience and cab riding				TDA
Driver Rules & Regulations, operating risk awareness and defensive driving	**3**	4	Introduction, Including Non-Technical Skills	Safety, Security, Publications, Booking on duty	Safety, Security, Publications, Booking on duty	Railway Infrastructure	Preparing a train for service, Designated Person
							TDA
		5	Shunting,	Control of train movements	Infrastructure, Trains in Service	Communications with the signaller	T3 Engineering possessions
							TDA
Workplace experience		6	T3 possessions	T3 possessions	T3 possessions	T3 possessions	T3 possessions
Driver Rules & Regulations, operating risk awareness and defensive driving		7	Review of practical weeks training and recap	Level Crossings, Single Lines,	Passing Signals at Danger, Temporary Block Working	Adverse Weather, Defective On Train Equipment (Big 5)	Temp, Emergency Speed Restrictions,
							TDA
		8	Defective On Train Equipment (all)	Accidents and incidents	Propelling, Wrong Direction Moves, Review and recap	Single Line Working, Working by Pilotman	Trainees development day for rules presentations
		9	Trainees development day for rules presentations	Trainees delivery Selected Rule Book Modules	T3 Possessions role play and simulations	Feedback, Course round up and review	End of module assessment (CA)
Principles of route learning	**4**	10	Operational/ SPAD risk awareness	Principals of route learning	Principals of route learning prepare map	Principals of route learning, cab riding over route	Principals of route learning, map completion
							TDA
Basic traction	**5**	11	Equipment layout/identification	Static	Safety systems inc fault rectification	Driving in service theory	Professional driving policy
		12	Coupling/ uncoupling	Machine prep and disposal	Machine prep and disposal	Machine movement	TDA
Introduction to driving techniques		13					
		14					
Interim assessment of underpinning knowledge, traction and train handling		15	CA	*Successful assessment will result in an application to the ORR for an ETDL. ETDL will only be issued when the trainee passes module 7.*			
80 hours of which 40 hours is dark driving*. * Minimum duration	**6**						
		16					
The trainee driver undertakes their practical handling with a local driver instructor/mentor. Includes one day simulator training and assessment (to be arranged once a minimum of 60 hours has been achieved		17					
		18					
While under the guidance of a Mentor Driver the probationary driver shall:-		19					
1 Develop practical train handling skills		20					
2 Develop a knowledge of rules and regulation to the operational railway		21					
3 Assimilate route knowledge		22					
4 Practice defensive driving and SPAD avoidance techniques in a variety of railhead conditions		23		SA			
5 Drive during the hours of daylight and darkness in order to gain experience		24					
6 Be exposed to both normal, abnormal (out-of-course) and emergency situations		25					
Final Assessment – independent Assessor	**7**	26	CA Doc review	CA Operating Rules	CA Traction Theory	CA Daylight Practical handling	CA Darkness Practical handling

Appendix 3B OTM DRIVER OPERATOR AND MAINTAINER COMPETENCE STANDARDS

Appendix 3B-1 OTM Driver Competence Standards (Outside Possession)

The table below summarises the scope of OTM Driver competence units.

Unit No.	Unit Title
1	**Prepare for Duty**
1.1	Prepare for and complete duty
2	**Communicate Effectively**
2.1	Communicate safety critical information using correct protocols
2.2	Use in cab and line side communication equipment
2.3	Communicate using written methods
3	**Prepare and Shunt On Track Machine**
3.1	Prepare and mobilise On Track Machine
3.2	Move On Track Machine within depots, yards and sidings
3.3	Dispose of and stable On Track Machine
4	**Operate On Track Machine**
4.1	Start On Track Machine
4.2	Drive On Track Machine
4.3	Stop On Track Machine
4.4	Handover On Track Machine in service
4.5	Route competence
5	**Respond to Out of Course Situations**
5.1	Operate under degraded circumstances
5.2	Identify and respond to On Track Machine faults and failures
5.3	Obtain assistance of and to assist failed On Track Machine
5.4	Respond to hazards and emergency situations

Details of Unit Elements, Performance statements, Knowledge statements, Scope of Competence and Performance Evidence Requirements for each Unit Element are detailed in SP-1.08 '*OTM Competence Standards.*

Training shall be a mix of formalised classroom training, on-site development activities and knowledge enhancement exercises, where necessary to meet the minimum criteria and level of each competence in accordance with SP-106 '*Initial OTM Driver Training'.*

Appendix 3B-2 Traction and Rolling Stock and On-track Machines Engineering Competence Units

The table below summarises the scope of the traction and rolling stock, and on-track machines competence units.

RVM Unit No.	Unit Title
RVM 1	Undertake maintenance of mechanical components and systems
RVM 2	Undertake maintenance of hydraulic and pneumatic components and Systems
RVM 3	Undertake maintenance inspection and repair of structures and coachwork
RVM 4	Maintenance of axle bearings
RVM 5	Undertake inspection of axles and wheels
RVM 6	Undertake maintenance of safety and emergency equipment
RVM 7	Undertake maintenance or replacement of gearboxes and cardan shafts
RVM 8	Undertake maintenance repair or replacement of engines
RVM 9	Undertake maintenance of electrical equipment and systems
RVM 10	Undertake corrective and preventive maintenance on electrical components
RVM 11	Undertake corrective and preventative maintenance of TPWS equipment
RVM 12	Undertake corrective and preventative maintenance of AWS equipment
RVM 13	Undertake corrective and preventative maintenance of OTMR equipment
RVM 14	Undertake corrective and preventative maintenance of Track Circuit Actuator (TCA)
RVM 15	Undertake Corrective and Preventative Maintenance of Radio Equipment
RVM 16	Undertake maintenance of brake systems
RVM 17	Undertake maintenance of bogies

Details of Unit Elements, Performance statements, Knowledge statements, Scope of Competence and Performance Evidence Requirements for each Unit Element are detailed in NR/L2/CTM/205 '*Appendix A Traction and Rolling Stock and On-track Machines Engineering Competence Units.*

Training shall be a mix of formalised classroom training, on-site development activities and knowledge enhancement exercises, where necessary to meet the minimum criteria and level of each competence in accordance with NR/L2/CTM/202 '*Quality Assurance in Training and Assessment*'.

Appendix 3B-3 Shunting Competence Units

The table below summarises the scope of the traction and rolling stock, and on-track machines

RVM Unit No.	Unit Title
RVM 18	Undertake movement or shunting of rail vehicles or OTMs

Appendix 4A NETWORK RAIL STANDARDS SUPPORTING THE SMS (TU).

Standard Number	Description
NR/SP/RSC/01702	Actions in response to Confidential Incident Reporting and Analysis System (CIRAS) reports
NR/SP/OHS/069	Lineside Facilities for Personnel Safety
NR/SP/OHS/00122	Workplace Noise
NR/SP/OHS/00114	Hand Arm Vibration
NR/SP/OHS/00112	Worksafe Procedure
NR/SP/OHS/00106	Manual Handling
NR/SP/OHS/00102	Work Activity Risk Assessment
NR/L3/MTC/SE0116	Work Activity Risk Management
NR/SP/OCS/043	National Control Instructions
NR/SP/CTM/032	Training, Competence and Assessment in Accident and Incident Investigation
NR/L3/OCS/041/5-15	Estimating the Effectiveness of TPWS when Undertaking Signal Overrun Risk Assessment
NR/L3/OCS/041/2-02	Control of Excessive Working Hours for Persons Undertaking Safety Critical Work
NR/L3/MTC/SE0117	Planned general safety inspections
NR/L3/MTC/RCS0216	Risk Control Manual
NR/L3/INV/3001/RIM302	Management of recommendations and local actions
NR/L3/INV/3001/RIM301	Tracking of investigations, recommendations and local actions
NR/L3/INV/3001/RIM117	Management of Recommendations from ORR Inspection Plan Reports
NR/L3/INV/3001/RIM116	Reporting of and responding to enforcement action.
NR/L3/INV/3001/RIM115	Network Rail and National Safety Authority (ORR) interface and liaison arrangements
NR/L3/INV/3001/RIM114	Advising Safety Representatives of Accidents and Incidents
NR/L3/INI/CP0073	Supplier Licensing Requirements
NR/L3/INF/02231	Disposal of records
NR/L3/INF/02226	Corporate Records Retention Schedule
NR/L3/INF/02225	Records Management
NR/L2/RSE/100/07	System Review Panels
NR/L2/RSE/100/06	How to decide what needs product acceptance via

Standard Number	Description
	NR/L2/RSE/100/05
NR/L2/RSE/100/05	Product introduction and change
NR/L2/RSE/100/04	New or changed vehicles on Network Rail infrastructure
NR/L2/RSE/100/03	Compliance with interoperability regulations for infrastructure projects
NR/L2/RSE/100/02	Safety verification
NR/L2/RSE/100/01	Network Rail Acceptance Panel
NR/L2/RSE/100	Network Rail Acceptance Panel processes
NR/L2/RSE/070	Engineering Verification
NR/L2/OPS/110	Requirements for the Weekly Operating Notice, Periodical Operating Notice and Local Operating Instructions (incl. Sectional Appendix)
NR/L2/OPS/037	Management of Spoken Safety Communications.
NR/L2/OPS/035	Dissemination of Urgent Operating Advice
NR/L2/OHS/050	Sentinel Scheme Rules
NR/L2/OHS/021	Personal Protective Equipment and Workwear.
NR/L2/OHS/019	Safety of People Working On or Near the Line
NR/L2/OHS/0047	Application of the Construction Design and Management Regulations to Network Rail Construction Projects
NR/L2/OHS/00124	Competence Specific Medical Fitness Requirements.
NR/L2/OHS/00123	Health Screening and Surveillance for Noise Induced Hearing Loss).
NR/L2/OHS/00117	New and Expectant Mothers
NR/L2/OHS/00113	Health Screening and Surveillance for Hand Arm Vibration),
NR/L2/OHS/00110	First Aid at Work
NR/L2/OHS/00107	Display Screen Equipment
NR/L2/OHS/00103	Hazardous Substances
NR/L2/OCS/250	Network Rail National Emergency Plan
NR/L2/OCS/096	Determining High Risk Sites for Low Rail Adhesion.
NR/CS/OPS/250	Emergency Response Manual
NR/L2/OCS/070	Major Infrastructure Changes - The Provision of Staff Briefing Material to Train Operators
NR/L2/OCS/042	Railway Operational Code Implementation, Variation and Review Process

Standard Number	Description
NR/L2/OPS/021	Weather – Managing the Operational Risks
NR/L2/MTC/006	Maintenance and Contents of the National Hazard Directory
NR/L2/INV/002	Specification – Accident and Incident Reporting and Investigation
NR/L2/INF/02204	Controlled Publications – Process and Accountabilities
NR/L2/HSS/020	Safety Validation of Organisational Change and Consequential Health and Safety Management System Changes.
NR/L2/ERG/003	Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work
NR/L3/NDS/006	NDS Process for the Management of Fatigue and Working Hours for Employees undertaking Safety Critical Work
NR/L2/CSG/STP001/04	How to manage deviations to Network Rail and Railway Group Standards
NR/L2/CSG/STP001/03	How to draft Network Rail standards
NR/L2/CSG/STP001/02	How to manage a standards change project
NR/L2/CSG/STP001/01	Principles of standards management
NR/L2/CSG/STP001	Managing standards – Index of Modules
NR/L2/CTM/202	Quality Assurance in Training and Assessment.
NR/L2/CTM/201	Competence Management
NR/L2/CPR/302	Supplier Qualification – Core Requirements
NR/L2/CPR/201	Supplier Qualification
NR/L2/ASR/036	Network Rail Assurance Framework.
NR/L1/RMVP/0001	Network Rail's Plant and Traction and Rolling Stock policy
NR/L1/OPS/010	Signals Passed at Danger and Signal Reversions.
NR/L1/OHS/051	Drugs and Alcohol Policy
NR/L2/OHS/018	Supplier Requirements for the Approval of Medical Assessments & Drug & Alcohol Screening & Certification
NR/L2/OHS/00118	Random Testing for Drugs and Alcohol
NR/L2/OHS/00119	'For Cause' Testing for Drugs and Alcohol
NR/L1/CTM/001	Competence Management
NR/L1/CPR/102	Sourcing and Supplier Governance
NR/L1/CPR/103	Supplier Assurance Framework
NR/GN/OPS/030	Risk Assessment of Timetable Change
NR/GN/INI/001	Guidance on the Management of door to door work and travel time

Standard Number	Description
NR/CS/OHS/002	Policy on Working Safely
NR/CS/INF/02203	Controlled Publications - Issue and Receipt
NR/BS/LI/345	Safety Verification - Letter Of Instruction
	Guide To Network Rail Key Meeting Structures
NR/L2/CTM/205	Competence And Training For The Maintenance Of Traction And Rolling Stock And On-Track Machines
NR/L2/RMVP/0090	Management Of Maintenance For Traction And Rolling Stock, On-Track Machines And On-Track Plant
NR/PLANT/0200/P500	Infrastructure Plant Manual - Module P500: Competence And Fitness
NR/L2/RVE/0002	Maintenance, Operation And Use Of Rail Vehicles And On-Track Plant
NR/L3/OCS/043/1.8	National Control Instructions - Section 1.8: Current Operating Publications
NR/L3/OCS/043/2.4	National Control Instructions - Section 2.4: Railway Operational Code (Routes Code Of Practice)
NR/L3/OCS/043/2.5	National Control Instructions - Section 2.5: GERT 3350 (Urgent Operational Advices)
NR/L3/OCS/043/4.9	National Control Instructions - Section 4.9: Rolling Stock Management
NR/L3/NSC/311	Engineering And Management Control Arrangements For The National Supply Chain T&RS And OTM Fleet
NR/L3/TRK/003/TEF/3071	OTM Site Check And Handback
NR/L3/NDS/047	Train Operations Manual - Contents
NR/NOI/002	National Operating Instructions
NR/L2/RSK/001	Enterprise Risk Management
NR/L2/RMVP/1332	Wheelset and Axle Bearing Manual
NR/L2/RVE/01327	Depot Facilities
NR/L2/RMVP/0172	Management of the control and calibration of inspection, measuring and test equipment
NR/L2/RVE/0003	Assurance, Performance and Monitoring of Rail Vehicles
NR/L3/NDS/306	Planned General Safety Inspections
NR/L3/MTC/SEO117	Planned General Safety Inspections
NR/L3/RVE/1006	Technical Audit Procedure for Rail Vehicle Engineering
NR/L3/RMVP/0201	Calibration Work Instruction Manual
RT/E/C/27035	Depot Protection Equipment List

Standard Number	Description
NR/L3/OCS/111	Weekly Operating Notice - Format and Content
NR/L2/OPS/03 4	Management of Rule Book Change
NR/GN/CPR/401	Guidance on Contractual Health and Safety Requirements
RT/CES/3/01328	Accident and Incidents Concerning Rail Vehicles
PE/MS/005	Engineering Change Procedure
NR/MB/5112	Post Incident Investigation

New Network Rail Safety Procedures in support of the Transport undertaking SMS

Safety Procedure Number	Description
SP-1.01	Professional OTM Driver Policy
SP-1.02	Recruitment and selection of OTM driver operators
SP-1.03	Medical Standards for OTM driver operators
SP-1.04	Training needs analysis for OTM driver operators
SP-1.05	*Not in Use*
SP-1.06	Initial OTM Driver Training
SP-1.07	Transfer of OTM drivers
SP-1.08	OTM Driver Competence Standards
SP-1.09	OTM Drivers development plan
SP-1.10	OTM Driver Route Knowledge
SP-1.11	OTM Type Knowledge
SP-1.12	OTM Driver Licence Certificate Procedure
SP-2.01	Cab Access
SP-2.02	Urgent safety related operating advice
SP-2.03	Adhesion – Preparation and Incidents
SP-2.04	OTM Driver Personal Electronic Devices Protocol
SP-2.05	Defective OTM Equipment
SP-2.06	Safety of the Line investigations
SP-3.01	OTM Speed Management
SP-3.02	On Train Data Recorder (OTDR) Operating Requirements

Safety Procedure Number	Description
SP-3.03	Managing Fatigue in Safety Critical Workers
SP-3.04	Managing OTM Incidents
SP-3.05	Chain of Care
SP-3.06	Management of Signing on Points
SP-4.05	Operation of Vehicles Fitted with Wheelskates
SP-4.11	Protection arrangements for working on OTMs

Appendix 4B PRINCIPAL STANDARDS APPLYING TO ON-TRACK MACHINES.

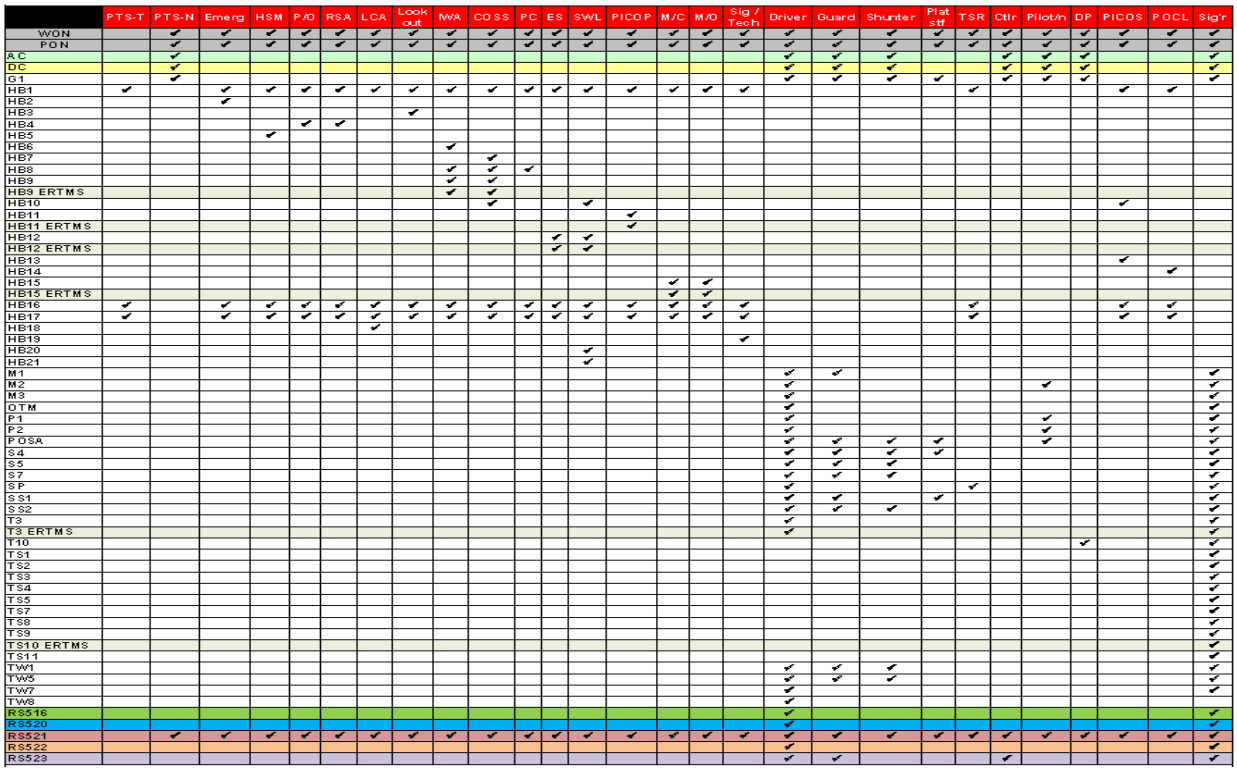
Standard Number	Description
RGSC03 Iss 1	An Industry Strategy for Standards 2016 - 2019
GERT8270 Iss 3	Assessment of Route Compatibility of Vehicles and Infrastructure
GE/GN8640	Planning CSM
GE/GN8641	System Definition
GE/GN8642	Hazard Identification And Classification
GE/GN8643	Risk Evaluation And Risk Acceptance
GE/GN8644	Hazard Management
GE/GN8645	Independent Assessment
RIS-0707-CCS	Management of Safety Related Control, Command and Signalling System
RIS-2450-RST	Qualification of Suppliers of Safety Critical Engineering Products and Services
GM/RT2453	Identification Of Rail Vehicles
GM/RT2400	Engineering Acceptance And Design Of On-Track Machine
RIS-1702-PLT Iss 1	Rail Industry Standard for the Design of On-track Machines in Working and Travelling Modes
GM/RT2100	Requirements For Rail Vehicle Structures
GM/RT2466	Railway Wheelsets
RIS-1701-PLT	Rail Industry Standard for Portable and Transportable Plant Used for Infrastructure Work
GMRT2045 Iss 4	Compatibility Requirements for Braking Systems of Rail Vehicles
GMRT2045	Compatibility Requirements for Braking Systems of Rail Vehicles
RIS-2700-R1	Rail Industry Standard for Verification of Conformity of Engineering Change to Rail Vehicles

Standard Number	Description
GM/RT2004	Requirements For Rail Vehicle Maintenance
RS100	Good Practice Guide On Competence
RIS-1700-PLT	Safe Use Of Plant For Infrastructure Work (Part 2,3,4 And 8)
GE/RT8054	Shared Information Systems
RIS-2700-RST Iss 1	Rail Industry Standard for Verification of Conformity of Engineering Change to Rail Vehicles
RIS-1530-PLT	Rail Industry Standard for Technical Requirements for On-Track Plant and their Associated Equipment and Trolleys
RIS-2700-RST Iss 1	Rail Industry Standard for Verification of Conformity of Engineering Change to Rail Vehicles
GM/RT2190	Compatibility Requirements For Rail Vehicle Couplings And Interconnectors,
GM/RT2149	Requirements For Defining And Maintaining The Size Of Railway Vehicles
GM/RT2185	Train Safety Systems
GM/RT2045	Braking Principles For Rail Vehicles
GM/RT2141	Resistance Of Railway Vehicles To Derailment And Roll-Over
GM/RT2142	Resistance Of Railway Vehicles To Roll - Over In Gales
GE/RT8047	Safety Related Information (Accidents & Incidents Reporting)
RIS-3701-TOM	Confidential Reporting
GO/RT3350	Urgent Operational Advices
GO/RT3215	WONS, PONS And Sectional Appendix
GO/RT3118	Incident Response Planning &Management
GO/GN3518	Guidance on Incident Response Planning & Management
GO/GN3519	Guidance on Accident and Incident Investigation
GO/RT3119	Accident And Incident Investigation

Standard Number	Description
GE/RT8046	Spoken Safety Communications
GE/GN8516	Guidance On Recording And Monitoring Of Safety Communications
GE/RT8250	Safety-Related Defect Reports,
GERM8000	Master Module Manual
GM/RT2100	Requirements for Rail Vehicle Structures
GM/GN2685	Guidance On Lifting, Jacking, Recovery
RIS 3751	Tom Train Driver Selection
GO/RT3452	Medical Fitness
GE/RT8070	Drugs And Alcohol
GO/GN3655	Safety Critical Workers
GE/GN8570	Drugs And Alcohol
RS504	Fatigue Management - A Good Practice Guide
GM/RT2461	Sanding Equipment (Axle Load >10t Per Axle)
GE/RT8040	Low Adhesion Between The Wheel And The Rail – Managing The Risk
RIS-3708-TOM	Arrangements Concerning the Non-Operation of Track Circuits During the Leaf Fall Contamination Period
	Sectional Appendices - Relevant Sectional Appendices For Routes
RIS-3702-TOM	Management Of Route Knowledge For Drivers, Train Managers, Guards And Driver Managers
GO/RT3451	Train Movement Staff – Fitness Requirements
GO/RT3436	Information For Safe Train Operation
RIS-3436-TOM	Information for Safe Train Operation
RIS-2273-RST Iss 1	Post Incident and Post Accident Testing of Rail Vehicles
GO/RT3119	Accident And Incident Investigation
GO/RT3437	Defective On Train Equipment,

Standard Number	Description
GM/RT2472	Requirements For Data Recorders
GMRT2131 Iss 1	Audibility and Visibility of Trains
RIS-2701-RST	Rail Industry Standard For NDT Processes On Rail Vehicles,
GM/RT2045	Braking Principles For Rail Vehicles
GM/RT2130	Vehicle Fire, Safety And Evacuation
GM/RT2477	Track Circuit Assister Configuration for Rail Vehicles (Requirements For The Testing Of A Vehicles Ability To Operate Track Circuits And Configuration Of Track Circuit Actuators)
RIS-2701-RST	Rail Industry Standard for NDT Processes on Rail Vehicles
RIS-2004-RST	Rail Vehicle Maintenance
2008/110/EC	The Revised Railway Safety Directive

Appendix 4C RULE BOOK AND JOB INDEX DISTRIBUTION LIST



Reference

These publications are used to update the Rule Book - (WON) weekly and (PON) quarterly
This module is required when working in AC electrified areas
This module is required when working in DC electrified areas
This non-mandatory handbook is for drivers and signallers when working in CSR areas
This non-mandatory handbook is for drivers and signallers when working in IVRS areas
This non-mandatory handbook is for all staff who need to understand the meaning of signals, handsignals, indicators and signs
This non-mandatory handbook is for drivers and signallers who need to understand AWS and TPWS
This non-mandatory handbook is for drivers, signallers and controllers who need to understand the GSMR Radio
These ERTMS documents are for staff who work on ERTMS lines with no line side signals
PTS T = PTS Track worker
PTS N = PTS Non track worker
Emerg = Track workers who use emergency protection equipment
HSM = Handsignaller. This requires PTS T and at least IWA.
P/O = Points operator. This requires PTS T and at least IWA unless person is restricted to working with a RSA
RSA = Route setting agent. This requires PTS T and at least IWA, if working with a P/O must be COSS
LCA = Level crossing attendant. This requires PTS T and at least IWA
Lookout = Lookout and site warden. This requires PTS T
IWA = Individual working alone. This requires PTS T
COSS = Controller of site safety. This requires PTS T
PC = Protection Controller. This requires PTS and COSS T
ES = Engineering Supervisor. This requires PTS T and COSS.
PICOP = Person in charge of possession. This requires PTS T and at least IWA
M/C = Machine controller. This requires PTS T and COSS
M/O = Machine operator. This requires PTS T
Sig/Tech = Signalling Technician. This requires PTS T
TSR = A person who sets up emergency and temporary speed restrictions. This requires PTS T
Ctlr = Operatiions Controller
Pilot/h = Pilotman. This requires PTS T and at least IWA
DP = Designated Person this requires PTS N
Sig'r = Signaller
PIC- = Person in charge when using a hand trolley
PICOS = Person in charge of sidings possession
POCL = Person in charge of loading and unloading
SWL = Safe work leader Last updated: September 2016

Appendix 4D RULES AND TSI'S REFERENCED TO PROCESSES

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
Initial integrity				
RGSC03 Iss 1 An Industry Strategy for Standards 2016 - 2019	Derogations, Deviations, Temporary Non - Compliance	NR/L2/CSG/STP001/01 Principles of standards management NR/L2/CSG/STP001/04 How to manage deviations to Network Rail and Railway Group Standards		Head of Safety & Sustainable Development
Safety Validation of Organisational Change	Documented Process, Contractor selection, adequacy	NR/L2/HSS/020 Safety Validation of Organisational Change and Consequential Health and Safety Management System Changes. NR/L3/INV/3001/RIM115 Network Rail and National Safety Authority (ORR) interface and liaison arrangements NR/L3/INV/3001/RIM116 Reporting of and responding to enforcement action. NR/L3/INV/3001/RIM117 Management of Recommendations from ORR Inspection Plan Reports		Head of Safety & Sustainable Development
Railways Act 2005	Transfer of responsibilities regarding railway safety purposes to the office of rail regulation from health and safety executive			
Health & Safety/Enforcing authority for Railways & other guided transport systems)regulations 2006	Ensure the office of rail regulation for the enforcement of health & safety in law in relation to the operation of railways			

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
Railways Infrastructure (access & management) Regs 2005	Set out number of requirements in relation to; Access to railway infrastructure by both international and domestic freight operators	Health & Safety management system		Head of Safety & Sustainable Development
Railways (Interoperability) Regulations 2006	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 New or changed vehicles on Network Rail infrastructure		Principal Engineering Manager
Railway (Licensing of railway undertaking)regulations 2005	Provide the office of rail regulation with the power to grant licenses to railway undertakings	Health & Safety management system		
Railway safety regulations 1999	Provisions with respect to use of a train protection system			
Railways & other guided transport systems (safety) regulations 2006	A set of regulations developed to implement the EU railway safety directive	Health & Safety management system		Director, SCO, Technical Services
Train Driver Licences and Certificates Regulations 2010	Sets requirements for any new driver post 29th Oct 2013 and existing drivers by 29th Oct 2018 who must have a train driver license 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 SP1.12 '*OTM Driver License Certificate'*		Director, SCO, Technical Services
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 for T&RS, On-Track Machines and On-Track Plan PE/MS/005 Engineering Change Procedure	Rail Vehicle policies & procedure documents	Head of Discipline (Plant and T&RS)

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
GM/RT2400 Engineering acceptance and design of on-track machines	Application of document	NR/L1/RMVP/0001 Maintenance policy NR/L2/RMVP/0090 - Management of Maintenance for T&RS, On-Track Machines and On-Track Plan NR/L3/NSC/311 Engineering And Management Control Arrangements For The National Supply Chain T&RS And OTM Fleet	Rail Vehicle policies & procedure documents	Head of Discipline (Plant and T&RS)
GM/RT 2450 Qualification of suppliers of safety-critical engineering products and services RIS-2450-RST Iss 1 Qualification of Suppliers of Safety Critical Engineering Products and Services	Qualified suppliers Responsibilities of Network Rail Fleet services	NR/L3/INI/CP0073 Supplier Licensing Requirements NR/L1/CPR/102 Sourcing and Supplier Governance NR/L1/CPR/103 Supplier Assurance Framework	FAMS	Director, SCO, Technical Services
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 Risk Assessment (HAZOP; FTA; SRM)		
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 New or changed vehicles on Network Rail infrastructure	FAMS	Head of Discipline (Plant and T&RS)
Train Maintenance				

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
RIS-1700-PLT Safe use of plant for infrastructure work (Part 2,3,4,8)	Requirements for use, approval and maintenance of plant Preparing a safe system of work for use of plant Safety requirements for use of infrastructure plant Competence and fitness	NR/L1/RMVP/0001 Maintenance policy NR/L1/CTM/001 Competence Management NR/L2/CTM/205 Competence and Training for the Maintenance of Traction and Rolling Stock and On-track Machines		Head of Discipline (Plant and T&RS) Principal Engineering Manager
RIS-2004-RST Iss 1 Rail Vehicle Maintenance	Principles Maintenance policy Accreditation of maintenance facilities and competency Maintenance plan	NR/L1/RMVP/0001 -Maintenance policy NR/L2/RVE/01327 Depot Facilities NR/L3/RMVP/0201 Calibration Work Instruction Manual NR/L1/CTM/001 Competence Management NR/L2/CTM/205 Competence and Training for the Maintenance of Traction and Rolling Stock and On-track Machines NR/L2/RMVP/0090 - Management of Maintenance for T&RS, On-Track Machines and On-Track Plan		Head of Discipline (Plant and T&RS)
RIS-2004-RST Iss 1 Rail Vehicle Maintenance GMGN2646 Iss 1 Guidance on Axle Bearing Maintenance	Overall requirements	NR/L2/RMVP/1332 Wheelset and Axle Bearing Manual NR/L2/RMVP/0090 - Management of Maintenance for T&RS, On-Track Machines and On-Track Plan		Head of Discipline (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 for T&RS, On-Track Machines and On-Track Plan		Head of Discipline (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 within	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 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 COSHH Risk assessment procedure-		
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 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 Entry into confined spaces NR/PRC/MTC/SE0115 Permit to Enter Confined Space		
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 Asset Management Policy 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

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
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/PLANT/0200/P503 Planning for 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		
Personal protective equipment at work regulations1992	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 PPE		
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.	Manual Handling NR/SP/OHS/00106 Specialist MH RA		
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	Purpose and introduction Requirements for managing information about control, command and signaling system failures Application railway undertakings Health and safety responsibilities	Maintenance policy NR/L1/RMVP/0001		Head of Discipline (Plant and T&RS)

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
RIS-2273-RST Iss 1 Post Incident and Post Accident Testing of Rail Vehicles	Health and safety responsibilities Requirements for examination and testing Specific requirements for derailments and collisions	Post incident & accident testing of rail vehicles		
RIS-3751 Rail industry standard for train driving selection Part 1).2.1.2.2 2.3.2.4 2.5 Appendix A & Appendix B	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)	Recruitment selection & transfer of OTM drivers SP 106 OTM Driver Training SP 108 OTM Driver competence assessment		Head of Driving Standards (PH)
GO/RT3451 Train movement-staff suitability and fitness requirements Part 2) 3.2.3.3	Requirements relating to train movement Application railway undertaking Health & safety responsibilities	Medical fitness OTM		
GO/RC 3561 Staff suitability & fitness requirements Part 2) Appendix A,B,C,E,F,G,H,I. RIS-3451-TOM Iss 1 with effect from 04/03/2017	Staff suitability & fitness requirements Visual acuity for train drivers-colour vision etc. Safe use of medicines Railway workers & diabetes Obstructive sleep apnea	Medical fitness OTM		
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 106 OTM Driver Training		
RS 232 Good practice guide on cognitive and individual risk factors Part) 2.3.4.5.6.	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 108 OTM Driver competence assessment		Head of Driving Standards (PH)

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
GORT 3119 Accident & Investigation RIS-3119-TOM Iss 1 Accident And Incident 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	Reporting GSI's, incidents, Close calls, Near misses and contact guidance on the RIDDOR Regulations		Head of Driving Standards (PH) Head of Safety & Sustainable Development
GO/RT 3350 Communication of urgent operating advise Part) 1.2.3. RIS-3350-TOM Iss 1 Communication of Urgent Operating Advice	Head of Discipline review & action as necessary	NR/L3/OCS/043/National Control Instruction		Head of Driving Standards Head of Discipline (Plant and T&RS)
Defective on train equipment Part 1), 2.1, 2.2, 3.2, 3.3.	Purpose and introduction Responsibilities of infrastructure managers Responsibilities of railway undertakings Application Railway undertakings Health & Safety responsibilities	Defective on train equipment		
GO/RT3199 Accident incident investigation RIS-3119-TOM Iss 1 Accident And Incident Investigation	Immediate action requirements from Network Rail	Emergency procedure		Director, SCO, Technical Services
GE/RT8250 (High risk defects) 2.1.2.2.3.1.3.2.4.2.4 .3 Appendix A.B.C RIS-3119-TOM Iss 1 Accident And Incident Investigation	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	Reporting of defects, incidents and accidents Handling of urgent advice NR/L3/OCS/043/National Control Instruction		Head of Discipline (Plant and T&RS)

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
Reporting of injuries, diseases and dangerous occurrences regulations 1995	The requirements to notify, and subsequently send a report to the relevant authority (ORR) or local authority of fatal and non-fatal accidents arising out of or in connection with work or certain specified disease and dangerous occurrences	Reporting of GSI, accidents, near miss, close calls procedure		Head of Safety & Sustainable Development
Accident / Incident management				
GE/RT 8047 Reporting of safety related information Part)2 2.1,3.2,3.3 Table A, Table B RIS-8047-TOM Iss 1 Reporting of Safety Related Information	Requirements for reporting safety related information Responsibilities of infrastructure managers and railway undertakings for reporting safety related information Application of the document to railway undertakings Health & Safety responsibilities Events to be reported Accidents resulting in death or injury to people	Reporting of GSI, accidents, near miss, close calls procedure		Head of Safety & Sustainable Development
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		Head of Driving Standards (PH)
	Competence standards	Selection & recruitment policy		
	General fitness			
	Medical fitness	NR/L2/OHS/00124 Medical Fitness		Head of Safety & Sustainable Development
	Monitor & review			
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		

Standard/ Legislation	Description of requirement	Procedure	Contained within	Owner
	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' Testing for Drugs and Alcohol		
Changes in working hours-safety critical work	Risk assessment of change	Control & monitoring of Excessive working hours NR/L2/ERG/003 Management of Fatigue: Control of Working Hours for Staff Undertaking Safety Critical Work		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		
	Change			
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 there 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	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 within	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 5A VEHICLE CLASSES OPERATED BY NETWORK RAIL

B.1 Fleet Vehicles Owned and Operated By Network Rail

Type	Model	Vehicle No.	Approved Vehicle Owner	Sets	Vehicles	Total
Tamper	09-3X-D-RT	DR73111	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73113	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73114	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73115	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73116	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73117	Network Rail	1	1	1
Tamper	09-3X-D-RT	DR73118	Network Rail	1	1	1
Tamper	09-2X	DR73121	Network Rail	1	1	1
Tamper	09-2X	DR73122	Network Rail	1	1	1
Tamper	09-3X	DR73120	Network Rail	1	1	1
Ballast Regulator	USP5RT	DR77903	Network Rail	1	1	1
Ballast Regulator	USP5RT	DR77904	Network Rail	1	1	1
Ballast Regulator	USP5RT	DR77905	Network Rail	1	1	1
Ballast Regulator	USP5RT	DR77906	Network Rail	1	1	1
Ballast Regulator	USP5RT	DR77907	Network Rail	1	1	1
Ballast Regulator	USP5000	DR77010	Network Rail	1	1	1
Ballast Regulator	USP5000	DR77909	Network Rail	1	1	1
					17	**17**

Notes:

i) All vehicles are fitted with TPWS / AWS.

ii) Ballast vehicles fitted with TCA.

iii) No vehicles fitted with DRA.

iv) Contingency arrangements for defective on train equipment are referenced in Chapter 11 and managed in accordance with SP-205 'Defective OTM Equipment' and SP-3.04 'Managing OTM Incidents'. Maintenance schedule procedures are managed as declared in Chapter 12.

Appendix 5B DOCUMENTS USED TO IMPLEMENT THE MAINTENANCE PLAN

- 09-3X-D-RT Tamper - Vehicle Maintenance and Overhaul Instructions RMVP/VMO/0013
- 09-3X / 09-2X - Vehicle Maintenance and Overhaul Instructions RMVP/VMOI/0115
- USP 5000 (DR77010) Ballast Regulator - Vehicle Maintenance and Overhaul Instructions RMVP/VMO/0116
- USP 6000 Ballast Regulator - Vehicle Maintenance and Overhaul Instructions RMVP/VMO/0117
- USP 5000 RT Ballast Regulator - Vehicle Maintenance and Overhaul Instructions RMVP/VMO/0014
- Integrated Maintenance Plan ISS – Snapshot detail below.

OTM maintenance planner

		2017																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
		01-/	08-/	15-/	22-/	29-/	06-/	13-/	20-/	27-/	03-/	10-/	17-/	24-/	01-/	08-/	15-/	22-/	29-/	05-/	12-/	19-/	26-/
77904	USP5000 regulator	6M				1M				1M				3M				1M					1M
73115	09-3X tamper				1M				1M				6M				1M				1M		
77905	USP5000 regulator			1M				1M					3M			1M					1M		
73116	09-3X tamper		1M					1M				3M				1M				1M			
77906	USP5000 regulator		1M					1M				3M				1M				1M			
73117	09-3X tamper					12	12																
77907	USP5000 regulator					12	12																
73120	09-3X tamper			12	12																		
77010	USP5000 regulator			12	12																		
73121	09-2X tamper																						
77909	USP6000 regulator																						
73111	09-3X tamper		1M				3M				1M				1M					6M			
73118	09-3X tamper			1M				1M					3M			1M					1M		12
73122	09-2X tamper																					6M	
76323	BCS1A	O/H	O/H	12M	12M	O/H	O/H	O/H	O/H	O/H	O/H	2M	2M							2M	2M		
76324	BCS1B					2M	2M								2M	2M							2M
76501	BCS2						2M	2M							2M	2M							
76502	BCS3		2M	2M							2M	2M								3Y	3Y		
76503	BCS4	M				2M	2M								2M	2M							2M
76504	BCS5					M				M				3M				M				M	
78821	TRS2					M				M				M				M				M	
78822	TRS4	6M	6M					M				M				M				M			