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Level 2 module

Appendix M: Hand Back to Operations & Maintenance (GRIP Stage 7 & 8)

Endorsement and Authorisation

For endorsement, authorisation and acceptance for use, please refer to NR/L2/SIG/30097, *Modular Signalling*.

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User information

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

Red requirements – *No deviations, could stop the railway*

- **Red requirements shall** always be complied with and achieved.
- Red requirements shall be presented in a red box **with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of red requirements lies with the Professional Head/Standard Owner.
- Red requirements are monitored for compliance.
- Corrective actions shall be enforced if deviations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Amber requirements – *Controlled deviations, approved risk analysis and mitigation*

- **Amber requirements shall** be complied with unless deviation has been approved in advance.
- Amber requirements shall be presented with an amber sidebar **and with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of these requirements lies with the Professional Head/Standard Owner, or their nominated Delegated Authority.
- Amber requirements are monitored for compliance.
- Deviations **may** be permitted. Deviations are approved by the Standard Owner or through existing Delegated Authority arrangements.
- Corrective actions shall be enforced if **non-approved** deviations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Green – *Guidance*

- Guidance is based on good practice. Guidance represents supporting information to help achieve **Red** and **Amber** requirements.
- Guidance shall be presented with a dotted green sidebar **and with the word “should” (usually in notes) or as a direct instruction**.
- Guidance is **not mandatory** and is not monitored for compliance.
- Alternative solutions may be used. Alternative solutions do not need to be formally approved.
- Decisions made by a competent person to use alternative solutions should be backed up by appropriate evidence or documentation.

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1. INTRODUCTION

1.1 Background

The concept of Modular Signalling has been adopted and developed within Network Rail to introduce new products and changes in the implementation of signalling projects in order to bring about significant cost savings. To realise these savings, the Modular Signalling Programme introduces not only new technologies and system architectures but more significantly, new processes and procedures, particularly in the areas of design and testing/commissioning.

The Modular Concept has been driven by the need to make replacement of signalling, typically mechanical based, on secondary routes more economically viable than ongoing repair. The Modular Concept achieves cost effective replacement of signalling on secondary routes by setting standardised requirements throughout the development and delivery process. The concept of a modular approach is to develop standard functional signalling blocks that can be easily replicated without expensive bespoke functionality for specific sites.

1.2 Purpose

This document forms a part of the Modular Signalling Handbook. It defines the hand back to Operations and Maintenance processes that shall apply to Modular Signalling systems. It covers GRIP Stages 7 and 8. The key aim of this document is to allow the system to be able to be handed back into Operations and Maintenance within three months for a "First of Type scheme" and one month for a "Concept Approved" scheme".

1.3 Scope

The document covers the following areas of hand back to Operations and Maintenance: -

- Asset Management Plan Process
- Operational Elements of the Project Requirements Specification Process
- D/FRACAS
- Spares
- Training (Maintenance)
- Training (Operations)/Simulators
- Documentation (As Built Drawings)
- Documentation (Certification including Testing Records)
- Documentation (Health & Safety File)
- Documentation (Operating Publications)
- Documentation (Other)
- Asset Knowledge Date (ELLIPSE and GEOGIS)
- Tools (Maintenance)
- Test Equipment
- Goods Inwards Checks
- Support Arrangements
- Closure of Trial Certificates and Temporary Non Compliances.

The document sections are split between "First of Type" Schemes and "Concept Approved" schemes.

"First of Type" schemes are those deemed to be introducing new modular technologies which have not been proved within a pilot environment. These may be schemes where a new supplier wishes to introduce their modular proposals into the UK market and hence widen the technology choice for Network Rail.

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"Concept Approved" schemes are those deemed to be using technology that has been proved within a pilot environment such as the Invensys Rail and Signalling Solutions Ltd modular solutions.

Appendix E, Maintenance, of the Modular Signalling Handbook provides details on the maintenance philosophy, strategy and processes and procedures to be followed when implementing a modular signalling scheme and this Appendix should be read in conjunction with Appendix E.

Compliance with the Construction (Design and Management) Regulations in force at the time of project implementation and any other statutory legislation is mandatory.

The document excludes the following areas of Hand Back to Operations and Maintenance which will be specified separately in supporting documentation: -

- Equipment and materials used by the Supplier but remaining in their ownership.
- Technical aspects of testing.
- System support prior to the start of work on site.
- Acceptance of the system / equipment.
- Testing or demonstration of compliance/reliability/availability of systems or equipment.

Please note that at the time of writing this document, Network Rail's maintenance and operations are separate departments but will merge to become Network Operations by March 2012. To provide clarity, the terms maintenance, maintainer, operations and operator will be used within this document.

Once a scheme has become "Concept Approved", this does not restrict innovation to further introduce efficiencies into a supplier's Modular Signalling solution. This innovation would need to be discussed with Network Rail to ensure that the risks were assessed and mitigated as they might require derogations, product approvals, etc.

1.4 Definitions and Abbreviations

Common definitions are contained in the main section of the Modular Signalling Handbook.

2. GENERAL REQUIREMENTS

This document defines the hand back to Operations and Maintenance processes that shall apply to Modular Signalling systems. It describes the activities that must be carried out in GRIP Stages 7 and 8 [MSPI 1.1M].

The key aim of this document is to allow the system to be able to be handed back into Operations and Maintenance within three months for a "First of Type scheme" and one month for a "Concept Approved" scheme

3. ASSET MANAGEMENT PLAN (AMP) PROCESS

3.1 Introduction

The requirements for the arrangements for maintenance of new and changed assets are contained within NR/L2/EBM/088 *Arrangements for Maintenance of New and Changed Assets* and NR/L3/EBM/089 *Asset Management Plan and Associated Forms*.