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# Level 2 module

# Appendix L: GRIP Stage 6 – Installation and Commissioning

## 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

Network Rail's specification for signalling installation is set out in Company Standard NR/L3/SIG/11303 Signalling Installation Handbook which details general installation techniques and the installation of specific types of signalling equipment.

This document forms a part of the Modular Signalling Handbook. It sets the requirements and guidance for suppliers of a Modular Signalling system to demonstrate that their proposed system offers installation and commissioning benefits and will contribute to the required efficiencies of a Modular Signalling scheme.

## 1.3 Scope

This document provides requirements and guidance for the installation and commissioning activities for a Modular Signalling scheme. Suppliers should demonstrate that they have met the principles detailed in this document before commencing a Modular Signalling scheme.

Testing and verification activities carried out on-site and to support commissioning are detailed in Appendix K of the Handbook.

References are provided in Appendices to supplier documentation for approved modular signalling systems. These detail the processes adopted for a particular suppliers Modular Signalling system where these have successfully been implemented through a pilot.

## 1.4 Definitions

Common definitions are contained in the main section of the handbook.




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