

Ref:	NR/L2/SIG/11201 – Mod A4
Issue:	5
Date:	03/09/2011
Compliance date:	03/09/2011

Level 2

Signalling Design: Module A4 - Design Specification Guidelines

Endorsement and Authorisation

For endorsement and authorisation, please refer to
NR/L2/SIG/11201

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Issue record

Issue	Date	Comments
4	June 2011	Modularisation of handbook and guidance notes, contains content of former NR/GN/SIG/11701 Part C.
5	03/09/2011	Amended references due to withdrawal of NR/L3/SIG/30018

Compliance

This Module is mandatory and shall be complied with by Network Rail and its contractors if applicable from 03/09/2011.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

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1 Production Method

A draft specification should be prepared in which all of the topics contained within the following guidelines are considered for inclusion if their application is appropriate to the signalling scheme.

To enable the specification to be recognised within a standard format there may be benefit in providing all headings in every specification and endorsing 'N/A' those which are not applicable. In this way omissions due to errors of judgement at the draft stage are less likely to occur.

The draft specification should be ratified by holding a review meeting, chaired by the responsible design engineer, with attendance by representatives from each discipline, function or sub-contractor involved. Each representative should be able to discuss any item relating to the party which they represent. The meeting should be held at the earliest opportunity, and the specification should be based on an approved scheme plan.

Care should be taken to maintain the meeting within the scope of the client remit and outline project specification (OPS) or equivalent. Any attempts to change the scope of the project should be treated as a change subject to change control.

2 Acceptance

After the draft specification has been updated to agree with the proceedings of the meeting, it should be signed by the responsible design engineer, and accepted by Network Rail. Procedures should be in place to define the Acceptance responsibilities, which should generally involve both operational and infrastructure concerns.

3 Format

The content of the design specification should enable the client's requirements, in terms of train operations and dependability (see [NR/L2/SIG/11201, Module A20](#)), to be met.

The scheme should be considered under the following headings:

3.1 Outline and Scope

A brief description of the agreed scheme should be provided, as defined by the client remit, OPS and the scheme plan and the extent of works.

Where existing signalling is being altered, the existing arrangements should be described with a statement of what it is proposed to retain. New, retained and abolished signal boxes or other control points should be stated.

3.2 Standards

Reference should be made to the standards to which the works are to be designed, as listed on the scheme plan or certificate of compliance (see Figure 1).

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Certificate of Compliance
Name of Project / Signalling Scheme I certify that the signalling design produced for the above project has been produced, independently checked and approved by competent persons. Reasonable care and diligence has been exercised in the development of the design to confirm that - any risk assessment and design calculation has been correctly performed; - the resulting signalling system and equipment, if constructed as designed, will be capable of meeting the client's specified requirements; and - the design conforms to the signalling principles and standards listed below: [see Figure 3 below; the version of each should also be quoted] The design also conforms to; - Health and Safety Legislation; - HMRI Railway Safety Principles and Guidance; - British and European Standards; - Railway Group Standards; - Network Rail Company Standards; and - other relevant regulations and standard's, current at the time of scheme plan approval. apart from the exceptions listed below; [specific derogations or temporary non-compliances, etc. should be listed here] Signed Date Responsible Design Engineer

Figure 1 – Typical Certificate of Compliance

3.3 Timescales

A bar chart should be provided, showing proposed dates for the key milestones appropriate to each alteration or stage (defined in the stagework programme).

This should feature most of the activities listed in Figure 2 below, in particular dates closure lists are to be issued and final records handed back.

3.4 System Safety Assurance

A statement of the level of safety to be provided by the signalling system should be included (see [BS EN 50129](#)).

This may include risk assessment, together with any mitigation or control measures arising, or functional safety analysis. Any decisions based on risk Assessment should be stated.

Reference should be made to any risk assessment reports or safety cases. See [NR/L2/SIG/11201, Module A9](#) for further guidance.