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[NR L3/SIG/30075](#) Issue 02

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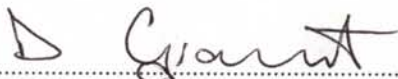
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Level 3

Production of Non-Conceptual Signalling Design

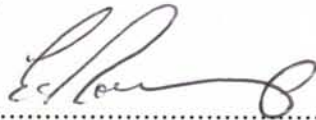
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User information

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 will** always be complied with and achieved.
- Red requirements are presented in a red box **with the word “shall” or 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 will 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 will** be complied with unless deviation has been approved in advance.
- Amber requirements are presented with an amber sidebar **and with the word “shall” or 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 will 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 is presented with a dotted green sidebar **and with the word “should” (usually in notes)**.
- 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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Issue record

Issue	Date	Comments
02	March 2012	Amended to clarify scope of non-IRSE licensed designers completing non-conceptual design to compliment NR/L2/SIG/30014/G110. Amended to RAG format.

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors where applicable from 02 June 2012.

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 reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

NR/L2/SIG/11201	Signalling Design Handbook
NR/L2/SIG/30003	Engineering Assurance Arrangements for Signalling Engineering Schemes and Services
NR/L2/SIG/30014	A210 - Design and Testing Processes for Minor or Repetitive Alterations
NR/L2/SIG/30014	G110 – Signalling Non-Conceptual Works and Emergency Testing
NR/L3/SIG/30075/Form A	Design Remit
NR/L3/SIG/30075/Form B	Method Statement
NR/L3/SIG/30075/Form C	Independent Check Record
NR/L3/SIG/30075/Form D	Issue Record

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1 Purpose

This standard defines an appropriate design production and management process for:-

- Campaign changes,
- Equipment upgrades,
- Emergency works,
- Recovery of redundant trackside assets.

The design may be based on site records rather than source records where appropriate.

This standard allows the design to be produced and checked by competent staff within a maintenance or minor projects organisation.

2 Scope

The process is applicable only to works deemed to be non-conceptual in nature, as defined within this standard, authorised by a Responsible Signal Engineer (RSE).

Changes to interlocking safety controls, as depicted on control tables or locking charts, are not permitted using this process.

The works are restricted to trackside equipment, its control and proving circuits, the interface to the interlocking at the trackside housing and condition monitoring or event recording equipment. The temporary removal or permanent elimination of trackside equipment and the maintenance of proving at the trackside housing is within the scope of this standard.

3 Roles and responsibilities

3.1 Responsible Signalling Engineer

For the purposes of this standard, the RSE is responsible for:-

- Identifying works which fall within the category of non-conceptual design, by confirming that works do not add, amend or remove signalling controls
- Producing the remit NR/L3/SIG/30075/Form A,
- Obtaining a design request reference number from the asset manager,
- Checking competence and appointing the Non Conceptual (NC) designer, Non Conceptual (NC) design checker and individuals to testing roles.

This role will normally be performed by an experienced signal engineer within Infrastructure Maintenance, however a designated project engineer with signal engineering experience may fulfil this role. The RSE is expected to liaise directly with the affected maintenance engineer or asset manager.

3.2 Asset Manager

For the purposes of this standard, the Asset Manager is responsible for:-

- Issuing a design request reference number for approved NCD works

Note Consideration should be given to the likely impact of the NCD work on any other projects / works.

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- Maintaining a register of approved NCD works for their area of control
- Retaining a list of approved NCD personnel in their area.

This role is performed by an experienced signal engineer within Network Operations. The Asset Manager is expected to liaise directly with the affected maintenance engineer & RSE.

3.3 Non-Conceptual (NC) Designer

The NC Designer is responsible for completing the non-conceptual signalling design method statement NR/L3/SIG/30075/Form B and for producing design work that satisfies the non-conceptual design criteria.

3.4 Non-Conceptual (NC) Design Checker

The NC Design Checker is responsible for reviewing the design remit to confirm that:

- The works are non-conceptual in nature and
- The design maintains the safety requirements of the signalling system and
- Equipment specified is product accepted and appropriate for that application.

The NC Design Checker is also responsible for reviewing the method statement to confirm that the details are appropriate and will deliver the outputs specified in the remit.

4 Abbreviations and Definitions

4.1 Non-conceptual Design

Signalling design that does not affect the interlocking principles and is restricted to equipment within the scope of this standard (specific details in section 5 below).

It includes the renewal or upgrade of functionally equivalent equipment, emergency / temporary alterations of equipment and temporary / permanent elimination of an item of trackside equipment, which may include:

- Design, provided to support planned minor renewals or engineering work;
- Design, provided to support campaign changes, where formal design templates exist
- Design, provided to support unplanned work i.e. required because of a failure e.g. broken rails, failed signalling equipment etc.

4.2 Temporary NC Design

A change to the existing signalling that is not intended to be permanent and not planned to exceed 6 months. Temporary NC design will be removed and replaced with either:

- The original circuitry and equipment, or
- Become permanent as part of an approved project which may further amend the circuits or equipment.

Where temporary alterations are required for more than 6 months, or temporary alterations are made permanent, the RSE shall seek authority from the affected asset manager in order that additional risk mitigations, detailed in NR/L2/SIG/30014/G110