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Level 3

Handbook for the examination of Structures Part 1D: Competency, preparation for examinations and other common requirements

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1 Purpose

The purpose of this part of the handbook is to specify those matters that are common to the examination of all types of Structures.

2 Scope

This part of the handbook applies to all types of examination of Network Rail owned or managed Structures including Major Structures, Outside Party Structures and Shared Structures.

3 Competency

3.1 General requirements

Persons appointed to positions with responsibilities or delegated duties in accordance with this handbook shall:

- have the competency, skill, knowledge and experience necessary to undertake their duties commensurate with the type and complexity of the Structures being examined;
- be aware of their responsibilities;
- understand why and be able to judge when urgent action is necessary to ensure safety.

Those appointing persons to positions with responsibility to deliver the requirements and recommendations of this handbook shall confirm that appointees are competent and that they understand their responsibilities. Appointments, responsibilities and duties shall be documented.

The Structure Manager, Examining Engineer and Examiner shall satisfy the relevant competence requirements of [NR/SP/CTM/017](#) units STE1, STE 2, STE4 – STE7 respectively.

An Examining Engineer shall be a registered as chartered with the Engineering Council in a relevant discipline.

3.2 Underwater examinations

In addition to the requirements of Clause 3.1, any diver carrying out an Underwater Examination shall be registered with Her Majesty's Health and Safety Executive and be experienced in the examination of Structures of the type to be examined. The diver and accompanying team shall satisfy the relevant competence requirements of [NR/SP/CTM/017](#): unit STE 7.

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3.3 Examinations which require roped access

In addition to the requirements of Clause 3.1, an Examiner who uses roped access during an examination shall also be competent to a minimum level 1 in accordance with the *Guidelines for Working* (issued by the Industrial Roped Access Trade Association), or to an equivalent level in any superseding Guidelines or standard.

A person who supervises roped access activities shall be competent to a minimum Level 3 of the *Guidelines for Working*, or to an equivalent level in any superseding Guidelines or standard.

4 Preparations for an examination

4.1 General requirements

To enable each examination to be completed effectively it is necessary to identify and obtain information that needs to be taken to site for the examination such as records, reports, drawings, and previous monitoring observation data, and which may include:

- examination reports and other data in the relevant asset database;
- the Structure specific examination, maintenance manual or Major Structures' management strategies where applicable;
- records of repairs or alterations undertaken (or proposed but not yet carried out) since the previous Detailed Examination);
- records of structural details known to be buried or hidden;
- details of defects, or evidence that there may be a defect notified to the Structure Manager following the previous examination;
- the location of and previous readings from monitoring points;
- relevant records of any ESS attached to the Structure;
- public rights of way, site of special scientific interest or ancient monument, protected nesting sites, tree preservation orders or other legal or environmental constraint that may affect the examination etc.
- In preparation for, or during an evaluation of a rapid response examination, any relevant information held in the Fault Management System regarding the geographic location of the structure shall be evaluated. Where considered necessary the Operational Close Call System should also be reviewed for reports made regarding the geographic location of the site in question.
This information should be available from Network Rail Control.

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4.2 CARRS examination identification numbers

For each Detailed Examination, Underwater Examination, Visual Examination or Additional Examination of a Structure listed in the CARRS to be undertaken, a CARRS Examination identification number shall be obtained prior to the examination being undertaken.

This is to enable records of the examination to be uploaded against the correct Structure in CARRS.

For Rapid Response Examinations CARRS Examination IDs may be obtained after the examination.

4.3 Preparations for a Detailed Examination

Copies of pertinent information, including previous examination reports and any Structure-specific examination and/or maintenance manuals or Major Structure management strategies, shall be reviewed by the Examiner to identify any defect, problem or feature that needs to be examined specifically.

The necessity or otherwise for the partial dismantling or exposure of parts of the Structure such suspension bolts, hollow sections without any obvious provision for access, and the removal of brickwork, concrete, timber flooring, timber retainers and Obstructions shall be determined.

The likelihood of damage arising to the Structure, as a result of dismantling or exposing parts, shall be taken into account in deciding whether or not the part should be dismantled or exposed. Such work may only be undertaken if agreed by the Structure Manager.

4.4 Planning requirements for Detailed Examinations

The planning of a Detailed Examination should include giving consideration to the following as applicable to the Structure:

- the scope of any physical works necessary to enable the examination to be carried out (See **Part 1B**);
- requirements for access to within touching distance of the Structure (See **Part 1B**) and the need for any special access arrangements including working at height, whether access to confined spaces will be required etc, the use of divers, and the associated safety precautions required;
- any necessary road closures, track possessions or isolations, Platform closures or other access requirements or restrictions;
- tide tables and local information on access constraints to prevent the Examiner from being trapped by incoming tides;