

Category 1 Standard

S1201 Signalling and Signalling Control - Approvals



**Please read the Written Notices
attached to this standard**

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Contents

1	Purpose	3
2	Scope	3
3	Requirements	3
3.1	Systems Assurance and Safety Processes	3
3.2	System Design Process	4
3.3	Installation Process	4
3.4	System certification for service	4
3.5	EMC Processes	4
3.6	Security of Signalling Equipment Rooms and Cases	5
3.7	AWC's For Task Authorisation & Certification	5
3.8	Approval Requirements for Specific Equipment or Systems	9
3.9	Evidence of Compliance	9
4	Responsibilities	9
5	Supporting information	10
5.1	Background	10
5.2	Safety considerations	10
5.3	Other information	11
6	References	11
6.1	References	11
6.2	Abbreviations	11
6.3	Definitions	12
6.4	Technical Content Manager	13
6.5	Document history	13
7	Current Written Notices attached to this standard are:	13

1 Purpose

The purpose of this Standard is to state the main approval requirements for processes and systems or equipment.

2 Scope

2.1 The Standard covers the following systems which are used on the London Underground Railway:

- a) Safety Signalling Systems;
- b) Signalling Control Systems.

2.2 This Standard focuses on the requirements for Approvals throughout the lifecycle. The totality of requirements contained within the complete suite of Signalling and Signalling Control Standards (see 5.1.2) must be complied with for these systems.

Note: This standard provides a summary of the main approvals that are required by the other standards in the suite and repeats approval requirements from these other standards.

2.3 This issue of the standard replaces 1-201 A3.

3 Requirements

3.1 Systems Assurance and Safety Processes

3.1.1 Roles

3.1.1.1 A Safety Authority shall be nominated for each system application and equipment type. The nomination shall be approved by the Asset Engineer or his designated representative.

Note 1: The Asset Engineer is an accredited professional engineer in Tube Lines or London Underground who has delegated authority for discharging safety and acceptance responsibilities on behalf of the Professional Head of Signalling. He is accountable within the Supplier as the Safety Authority. This role may be delegated but the accountability remains with the Asset Engineer.

Note 2: The Asset Engineer will usually be the Safety Authority for each system.

Note 3: The Safety Authorities for a system application and for an equipment type may be the same or separate.

Note 4: The Asset Engineer cannot simultaneously hold the role of Safety Authority and Design Authority.

3.1.1.2 Design Authority(ies) shall be nominated for system applications and for equipment types throughout the lifecycle stages of a system.

Note 1: The Design Authorities for a system application and for an equipment type may be the same or separate.

Note 2: During the lifecycle of a system the person or entity designated as a Design Authority is likely to change.

Note 3: Where a person is the nominated Design Authority for a system application, another competent person will be required to approve design work that is carried out directly by the Design Authority.

3.1.1.3 When it is proposed to change existing assets or introduce new assets the supplier shall produce the submissions required by standard 1-538, Assurance.

3.1.1.4 An Assurance Plan shall be prepared in accordance with 1-538, Assurance..

Note: Additional requirements for the content of the Assurance Plan are contained in standard S1196, Signalling and Signalling Control - Concept and Requirements.

3.2 System Design Process

3.2.1 Table Of Controls

3.2.1.1 The specification for the data content of the Table of Controls shall be proposed in accordance with 1-538.

Note: The traditional format for the table of controls has been a layout which reads left to right across the page, the particular function (e.g. a route) being shown to the left with columns of the required operation and logical conditions within that function reading to the right.

3.2.1.2 The table of controls and the associated scale plans shall be approved by the Design Authority and shall be submitted to the Professional Head of Signalling for acceptance.

3.3 Installation Process

Note:

- a) Approvals are likely to be required from custodians within the suppliers organisation (e.g. for track and cable runs); from other suppliers (e.g. other infracos, suppliers under PFI's); and from LU Landlords or LU Operations.
- b) Prior to the commencement of work, approval may be required from the custodians of neighbouring or adjacent infrastructure and systems that may be affected by the work to be carried out.

3.3.1 The sighting of a new signal or altered signal shall be carried out in accordance with the formally documented agreement of the Signal Sighting Committee to the arrangements.

3.4 System certification for service

3.4.1 A new or altered system shall be taken into service in accordance with S1200, Signalling and Signalling Control - Alterations to Systems.

3.4.2 New or altered systems shall not be used for service until they have been certified as 'fit for service'. The sign-off of an Authority to Work Certificate (AWC) issued to commission the new or altered system shall certify that it is fit for service.

3.5 EMC Processes

3.5.1 EMC shall be addressed in accordance with the following LU standards:

- a) 1-222, Electromagnetic Compatibility (EMC);
- b) S1196, Signalling and Signalling Control - Concept and Requirements;

- c) 1-193, Electromagnetic Compatibility with LU Signalling System Assets.

Note: These standards define the management of EMC issues, that could potentially affect the safe and reliable operation of signalling system assets, and include documentation, test, certification and assurance requirements.

3.6 Security of Signalling Equipment Rooms and Cases

Any proposals by the Supplier to implement a change to the security system for signalling equipment rooms or external equipment cases shall be submitted to the Professional Head of Signalling for 'no objection'.

3.7 AWC's For Task Authorisation & Certification

3.7.1 General

Note 1. This section defines the principal requirements for authorising and recording engineering tasks which interrupt or interfere with the workings of the commissioned signalling system.

Note 2. This process also applies to the commissioning of new systems.

3.7.1.1 The Supplier shall establish a procedure for the management of an AWC process, in accordance with the requirements of section 3.7.

3.7.1.2 The requirements of the AWC process shall be applied to signalling systems, at any location for which LU is the Infrastructure Controller under the Railways (Safety Case) Regulations.

3.7.2 AWC Process

3.7.2.1 Any signal engineering task on the operational railway which:

- a) interrupts or interferes with the workings of the commissioned signalling system (such as a disconnection, or the removal of a component in order to change it); or
- b) makes an adjustment to a working system (such as a track circuit feed, or the angle of a signal head); or
- c) disturbs a working system in a way which carries a significant risk of affecting its correct operation,

shall only be undertaken following the issue of an AWC.

Note: In item c), the determination of what constitutes a 'significant risk' is generally a matter for decision between the Issuer and the Holder of the AWC, subject to the guidance of the Asset Engineer or his appointed representative in cases of doubt.

3.7.2.2 The Authority to Work Certificate (AWC) shall:

- a) authorise the work beforehand (by the Issuer);
- b) certify the work on completion (by the Holder);
- c) record the details of what was done, when and by whom (for the archive).

3.7.2.3 The AWC process shall embody the following three 'principles of control':

- a) that the scope of all interference shall be appropriately defined, formally authorised, and registered with the Asset Steward before commencement;