

Category 1 Standard

S1184 The Acceptance of Third Party Vehicles

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MAYOR OF LONDON

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1 Purpose

- 1.1 The purpose of this Standard is to state the requirements for the acceptance of Third Party vehicles.

2 Scope

- 2.1 This standard defines the particular requirements that apply to the acceptance of vehicles for operation to run on LU-controlled infrastructure, under a Third Party Operator's (TPO's) Railway safety certificate accepted by the Office of Rail Regulation in accordance with The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS). This standard does not address the TPO's obligation under ROGS which should be dealt with directly between the TPO and ORR. It forms the specific instructions for LU staff and TPOs to use, in conjunction with S1538 Assurance.
- 2.2 This standard applies to the vehicle-related aspects of operations on LU-controlled infrastructure that involve through running of vehicles from a contiguous infrastructure not controlled by LU, where such vehicles operate under a TPO's safety certificate. It does not address safety of operations on infrastructure for which LU is not infrastructure Manager. It does however address risk imported on to LU controlled infrastructure from vehicles (e.g. through inadequate maintenance).
- 2.3 This standard applies to both existing vehicles that are not currently approved to run over LU infrastructure and new build vehicles proposed to operate over it. This standard also applies to the approval of vehicles of existing train operators that currently work over LU controlled infrastructure and organisations that propose to operate vehicles in the future. In addition, the standard applies to any subsequent significant modification to vehicles previously approved to operate over LU controlled infrastructure. Modifications that effect performance or interface with LU operations or infrastructure are likely to be deemed significant.
- 2.4 This standard does not address requirements for the approval of rolling stock to be operated under LU or Transplant safety certificates, which is addressed using LU Standard S1538 and other supporting LU documents and standards.
- 2.5 This standard replaces Manual of Good Practice G-184 A2.

3 Requirements

- 3.1 This standard sets out the procedures to be followed by the TPO proposing to run its vehicles on LU infrastructure. It details the roles of LU staff - The National Rail Agreement Team, Professional Head of Rolling Stock, Line HSQE Advisor, Network Improvement Manager, Line Performance Manager (trains), and Safety Certificate Manager.
- 3.2 The process and requirements described within the document form part of the change control process detailed within LUL's Safety Management System (SMS) approved by the ORR. Therefore regardless of change control or safety assessment process contained within the TPO's SMS in order for LU to be able to agree compatibility with the infrastructure and LU's operations this process must be followed.

3.3 Principles

- 3.3.1 The TPO shall demonstrate, by reference to relevant LU and other applicable standards, that:
- a) the operation of any vehicle on LU controlled infrastructure does not import unacceptable risk onto the infrastructure;
 - b) the operation of the vehicle is compatible with LU infrastructure, other vehicles operating over affected lines, LU operating practices and the environment.
- 3.3.2 The TPO is also required to demonstrate its ability to apply appropriate risk control measures and the continuance of such measures throughout the period of operation of such vehicles over LU infrastructure. In all cases it is to be demonstrated that measures are in place to make sure that the level of such risk is ALARP.
- 3.3.3 The TPO shall demonstrate that reference has been made to RSPG and the output and evidence of this reference are required by LU.
- 3.3.4 It is an accepted principle that the vehicles covered by this document may have been constructed in accordance with, or have been designed and built to comply with RGSs and that many of these standards may not be fully compatible with LU standards. The TPO must therefore document and demonstrate the rationale for compliance or non-compliance by reference to LU standards, and where occurs should propose their alternative risk control measures in respect of the standard(s) concerned.
- 3.3.5 All requests for the approval of a third party vehicle shall be referred to the National Rail Agreements Team who shall manage the application on behalf of London Underground.

3.4 Outline Submission

- 3.4.1 An outline submission detailing key engineering, operations, safety and risk parameters shall be submitted by the TPO to LU. The information shall be sufficient to provide initial assessment of a given proposal. The submission needs to detail the Lines and extent of operation, and provide a statement relating to broad compliance with LU standards.

It is strongly advised that basic parameters, principles and working arrangements are informally discussed and agreed prior to making an 'outline submission' and shall include:

- a) New or existing vehicles;
 - b) Type approval proposal;
 - c) Vehicle acceptance and third party validation (e.g. Engineering Acceptance certification).
- 3.4.2 The outline submission is to further include the following detail as a minimum:
- a) Design engineering
 - i) Communication system;
 - ii) Provision of fixed and portable safety equipment, e.g. lights, whistles, fire extinguishers, LU compatible short-circuiting devices etc;
 - iii) Motive Power – type and performance;
 - iv) Crash worthiness;
 - v) Security of fixtures and fittings on the underframe;



- vi) Type of materials employed – fire performance;
 - vii) Electrical installation – traction of control;
 - viii) Reliability;
 - ix) Data - sufficient drawings and other documentation available.
- b) Compatibility with infrastructure over the route of intended operation:
- i) Performance of service, emergency and parking brakes;
 - ii) Kinetic envelope and swept envelope based upon alignment of the route;
 - iii) Route availability – vehicle mass, distribution over underbridges;
 - iv) Track – wheel rail interface, minimum radius curves, wheel unloading, wheelslip & slide protection, sanders;
 - v) Signalling – satisfactory and safe operation, including EMC requirements;
 - vi) Train Protection Systems (e.g. Tripcock (TPWS, ATP etc));
 - vii) Power supply – third and fourth rails, position and type of collector shoe gear, traction current loading;
 - viii) Station, train and passenger interface – stepping height and distance, door operation;
 - ix) Coupler systems;
 - x) Mirrors and CCTV systems;
 - xi) Emergency Response Unit – supply of information to facilitate a recovery in event of a derailment or immobilised train;
 - xii) Diesel engine and noise emissions.
- c) Maintenance regime:
- i) Safety Inspection Plan;
 - ii) Routine Maintenance Plan;
 - iii) Overhaul Plan.
- d) Operations:
- Any proposals that mean compliance with LU or Network Rail rules or rulebook cannot be attained, which include:
- i) Type and frequency of operation;
 - ii) Train despatch;
 - iii) Driver or operator arrangements;
 - iv) Recovery of trains and any special or non standard coupling arrangements needed.
- e) Safety:
- i) safety certificate change implications;
 - ii) risk parameters;
 - iii) overall risk profile impact.
- 3.4.3 The Outline proposals shall be submitted for all 'new to LU' vehicles and additionally for proposed significant modifications to existing vehicles that operate over LU controlled infrastructure that effect performance or interface with LU operations or infrastructure. In the case of existing stock a submission will be required at preliminary design proposal stage.
- 3.4.4 The Outline Submission shall be presented in such way that it meets the requirements of a Change Assurance Plan (CAP) as described in standard S1538. Basically this is the identification of the difference between current approvals, typically for operation of Network Rail infrastructure, and the requirements for operation on London Underground. The plan shall then describe the actions required to provide assurance the risks associated with these differences are controlled to a level that is ALARP.



3.4.5 London Underground are to be consulted to provide guidance on the production of the Outline Submission to ensure that all the specifics of London Underground's infrastructure are considered.

3.4.6 In response to the CAPand in line with the requirements of S1538, LU will develop a risk based Verification Activity Plan (VAP) of actions to verify the assurance evidence provided by the TPO.

3.5 Directors Risk Assurance and Change Control Team

3.5.1 The Assurance standard S1538 requires all changes to which Schedule 4 of ROGS applies or any changes that are perceived as complex or introducing significant risk are to be submitted to LU's Director's Risk Assurance and Change Control Team for review. It is therefore likely that all requests for rolling stock approvals are submitted to DRACCT. Under normal conditions this team meet monthly and so time for DRACCT review must be considered when planning approval timescales.

3.5.2 It is likely that DRACCT will require a representative of the TPO, together with the LU employees assessing the proposal to present the proposal and the case for acceptance to the DRACCT team.

3.6 Process Overview

3.6.1 Process chart

3.6.1.1 The chart in Fig 1 shows the overview of the process for acceptance of vehicles by LU for operation over LU controlled infrastructure. It applies to new stock, existing stock (not currently approved), and modifications to vehicles previously approved to operate over LU controlled infrastructure. The chart also shows the concurrent actions required under ROGS. It does not show any change control process required by the TPO's own Safety Management System.