

Guidance Document

G1100

Change to Rolling Stock

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MAYOR OF LONDON

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1 Purpose

- 1.1 The purpose of this Guidance is to assist London Underground Employees who are either accountable or responsible in complying with the S2451 "Change to Rolling Stock" (change control) category 2 standard. This is to ensure that all changes falling within the terms of reference of this Standard are managed, recorded and approved in a consistent and systematic manner.

2 Scope

- 2.1 This Guidance applies to all proposed changes to rolling stock falling within the terms of reference for LUL cat 2 standard S2451

3 Guidance

3.1 Completion of Change to Rolling Stock (CRS) form

3.1.1 Reason and benefits for change

This should broadly describe why the change is being made and the expected benefits. It is not intended to contain any detail of business cases or such like.

3.1.2 Description of Change

This should describe the scope of the change

3.1.3 Safety Statement

The safety statement should identify any safety risks being mitigated by the change. Where the change has not completely eliminated all the associated risks it should explain why the remaining risk is tolerable.

A QRA should confirm the risk and determine the priority of the change and this should be used to confirm that the implementation timescale is acceptable. Where the CRS is supporting a CCSO its QRA should be used and the CCSO referenced.

The Safety statement should state why it is safe to make this change and identify any risks associated with its implementation.

3.1.4 Programme for completion (including recordable/not recordable)

This should describe in broad terms the proposed programme and timescale to complete the change allowing for:

- a) availability of rolling stock allowing for continued operation and maintenance;
- b) availability of resource e.g. project, design or depot staff;
- c) availability of facilities e.g. lifting roads, shed space etc.;
- d) availability of finance e.g. project, design, labour or materials;
- e) investigation/design time and time to trial/test prototypes;
- f) consideration must be given for third party sign off;
- g) component lead times;
- h) implementation programme/timescale.



3.2 Technical Details

The technical details should demonstrate due consideration of technical aspects and implications of the change including:

3.2.1 Changes to rolling stock operating environment:

- a) identification of applicable operating duty cycles and environments;
- b) allowance for dynamic movements and associated fatigue stresses;
- c) allowance for chemical, cleaning and lubricating environments.

3.2.2 Operational impact

- a) potential implications for safety, operability, availability, reliability and maintainability;
- b) necessity for operational training, instruction and notices;
- c) provision of suitable instructions, warnings and labels for customers and staff;
- d) provision of adequate and appropriate maintenance documentation, e.g. maintenance regime, technical drawings and data sheets, process instructions, inspections and tests and training information.

3.2.3 Design criteria

- a) applicable Statutory and Corporate requirements, codes and standards;
- b) other safety and technical requirements, codes and standards;
- c) definition of key operational and design criteria;
- d) documentation of design assumptions and process and reasons for the selected design;
- e) adequate technical specifications, standards, drawings and/or samples with which to procure and /or install a consistent product;
- f) identification of critical production processes, items and tolerances and specification of the appropriate controls;
- g) suitability and compatibility of materials with each other and satisfaction of any Health and Safety requirements for materials.

3.2.4 Type and routine approval

- a) independent review to ensure operating and design criteria satisfied;
- b) design supported by appropriate safety case or risk assessment;
- c) involvement of appropriate maintenance, technical and quality staff in 'type' approval and ongoing production process/quality control approval;
- d) final test or release to verify satisfactory performance in service conditions;
- e) issue and control of technical standards.