



Engineering Recommendation G80

Issue 3 2017

Recommendations for the safe working of utilities' staff and other parties near light rapid transit systems

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Amendments since publication

Issue	Date	Amendment
Issue 3	December, 2017	<p>Minor revision of Issue 2.</p> <p>This issue includes the following principal technical changes.</p> <p>Clause 4.1 Safety Requirements: Added reference to Chapter 12 of the Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters.</p> <p>Clause 4.2 Planning for Safety and Risk Assessments: Added requirements for design work including:</p> <ul style="list-style-type: none">a) Diversion of existing utility cables that fall within the proposed Swept Path.b) Ensuring alternative routes exist for the safe passage of pedestrians and vehicles, where Utilities would reasonably need to establish a Work Site to carry out Works, including the connection or repair of underground cables. <p>Clause 4.3 Precautions: Added recommendation during construction of a LRT system for Utilities to consider where any ducting or physical protection of their underground cables would be required.</p> <p>Clause 4.5 Work Sites: Added requirement to notify the LRT Operator before portable traffic signals are considered for use at or near a level crossing / road crossing point.</p>

		<p>Clause 5.2 Electrical Safety Guidance Outside the Danger Zone:</p> <ul style="list-style-type: none"> • Changed the stated approach distance from OLE, where Utilities should obtain agreement from the LRT Operator beforehand, from 1 m to 3 m. • Added a footnote referencing 'The Code of Practice for Safety at Street Works and Road Works', which requires a certificate to be obtained from the LRT Operator before carrying out any work within 3 m of the OLE. • Added: "...subject to the permission of the LRT Operator..." to work at track or platform level. • Added reference to HSG47 concerning precautions for avoiding danger from underground services when excavating. <p>Clause 7 Summary: Changed approach distance to Live OLE from 1 m to 3 m.</p>
<p>Issue 2</p>	<p>February, 2012</p>	<p>Minor revision of Issue 1.</p> <p>This issue includes the following principal technical changes.</p> <p>Clause 3 Terms and definitions, HMRI: Transfer of roles and responsibilities from HMRI to the Office of Rail Regulation (ORR).</p> <p>Clause 4.1 Safety requirements: RSPG, Part 2. Section G replaced by Railway Safety Publication 2. Guidance on tramways.</p> <p>Clause 4.6 Avoiding collision with LRT vehicles: New recommendations to prevent collision with LRT vehicles.</p> <p>Details of all other technical, general and editorial amendments are included in the associated Document Amendment Summary for this Issue (available on request from the Operations Directorate of ENA).</p>

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Foreword

This Engineering Recommendation (EREC) is published by the Energy Networks Association (ENA) and comes into effect from the date of publication. It has been prepared under the authority of the ENA Engineering Policy and Standards Manager and has been approved for publication by the ENA Electricity Networks and Futures Group (ENFG). The approved abbreviated title of this engineering document is "EREC G80.

This Engineering Recommendation supersedes EREC G80 Issue 2 which is now withdrawn.

The principal objective of this Engineering Recommendation is to ensure that Utilities and Other Parties are made aware of the special Dangers associated with working near Light Rapid Transit (LRT) systems. Such Work is generally governed by legal requirements, and locally developed working agreements. With sensible precautions, it should be possible for Work to go on around a LRT system with vehicles running normally, or with some restrictions as agreed with the LRT Operator.

LRT systems pose Dangers to life and limb that are different from those that are met elsewhere in the highway. LRT vehicles may travel faster than other road vehicles, are quiet in operation, cannot steer and do not follow standard road traffic signals. Exposed overhead lines carry electricity at a dangerous voltage. These recommendations have been written to avoid Danger from:

- moving LRT vehicles;
- the Electric Traction System.

This document also includes a section on action to be taken in the event of an emergency.

Where the term "shall" or "must" is used in this document it means the requirement is mandatory. The term "should" is used in this document to express a recommendation. The term "may" is used to express permission.

NOTE: Commentary, explanation and general informative material is presented in smaller type, and does not constitute a normative element.

1 Scope

This EREC applies to Work undertaken by Utilities' staff and Other Parties on or near LRT systems. Parts of the document may also be applied to works undertaken by any party that may affect the LRT system or the safety of their operatives.

The use of this EREC should in no way weaken or undermine the requirements of the Utilities' or Other Parties' own safety guidelines, or those of the LRT Operator. Where appropriate the two sets of guidelines should be used in parallel as mutually agreed.

The provisions in this EREC do not affect an undertaker's duty under section 93 of the New Roads and Street Works Act 1991 (NRSWA) [N1] to give prescribed notice to the transport authority and to comply with any reasonable requirements to ensure safety and minimise interference with traffic on the LRT system.

This EREC only applies to LRT systems, as defined in this document. They do not apply to main line railways, or the networks operated by London Underground and Strathclyde Underground. Parts of this EREC may be relevant to segregated, fenced sections of Light Railways and Metros such as Tyne and Wear Metro and London Docklands Light Railway. The Utility and/or Other Party must consult the LRT Operator when planning Work in these areas.

For information on the various aspects of the design of an LRT system which may affect Utility services, the reader is referred to ENA Engineering Technical Report 123 [N2].

2 Normative references

The following referenced documents, in whole or part, are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS EN 50122-1 +A4, *Railway applications: Fixed installations: Electrical safety, earthing and the return circuit: Protective provisions against electric shock*

BS EN 50110-1, *Operation of electrical installations. General requirements*

BS EN 50163+A1, *Railway applications: Supply voltages of traction systems*

Other publications

[N1] The New Roads and Street Works Act (NRSWA) 1991

[N2] ENA ETR 123, *Guidelines for managing the interfaces between Utility services and Light Rapid Transit Systems*

[N3] The Transport and Works Act 1992

[N4] The Transport and Works (Guided Transport Modes) Order 1992 (and Amendment Order 1997)

[N5] Office of Rail Regulation, Railway Safety Publication 2: *Guidance on tramways*

[N6] Stationary Office, Safety at Street Works and Road Works: *A Code of Practice*¹

[N7] The Electricity at Work Regulations 1989

[N8] The Health and Safety at Work Act 1974

[N9] The Management of Health and Safety at Work Regulations 1999

[N10] The Electricity Safety, Quality and Continuity Regulations 2002 (and Amendments)

[N11] Department for Transport, Traffic Signs Manual

[N12] ENA ER G55, *Safe tree working in proximity to overhead electric lines*

[N13] HSE, Guidance Note GS6: *Avoidance of danger from overhead power lines*

[N14] The Electricity at Work Regulations (Northern Ireland) 1991

[N15] The Health and Safety at Work (Northern Ireland) Order 1978

[N16] The Management of Health and Safety at Work Regulations (NI) 2000

[N17] The Electricity Safety, Quality and Continuity Regulations (Northern Ireland) 2012

[N18] The Transport Act (Northern Ireland) 2011

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply².

3.1

Approved

meaning, in relation to a device or written procedure, that it is sanctioned by the LRT Operator, statutory authority or other recognised body. In the case of material items they will be of sufficient construction or detail to ensure compliance with all statutory requirements. Written procedures must ensure, as far as is reasonably practicable, the avoidance of Danger

¹ Last published by the Department for Transport in October 2013.

² Whenever a defined term is used in the main body of this document the first letter is capitalised.