

Warning Signs and Notices for Electrified Lines

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Synopsis

This Standard defines the requirements for the provision of warning signs relating to the risk of electric shock in areas with electrified lines.

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Warning Signs and Notices for Electrified Lines

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Part A

Issue record

This Standard will be updated when necessary by distribution of a complete replacement.

Amended or additional parts of revised pages will be marked by a vertical black line in the adjacent margin.

Issue	Date	Comments
One	August 1997	Replaces EHQ/IN/S/032 and ECP 033.

Responsibilities

Railway Group Standards are mandatory on all members of the Railway Group* and apply to all relevant activities which fall into the scope of each individual's Railway Safety Case. If any of those activities are performed by a contractor, the contractor's obligation in respect of Railway Group Standards is determined by the terms of the contract between the respective parties. Where a contractor is himself a duty holder of a Railway Safety Case then Railway Group Standards apply to the activities described in the Safety Case.

* The Railway Group comprises Railtrack and duty holders of Railway Safety Cases accepted by Railtrack.

Compliance

The provisions of this Railway Group Standard are mandatory and shall apply from 6 December 1997.

Health and safety responsibilities

In issuing this Standard, Railtrack PLC makes no warranties, express or implied, that compliance with all or any Railway Group Standards is sufficient on its own to ensure safe systems of work or operation. Each user is reminded of its own responsibilities to ensure health and safety at work and its individual duties under health and safety legislation.

Supply

Controlled and uncontrolled copies of this Standard may be obtained from The Catalogue Secretary, Safety and Standards Directorate, Railtrack PLC, Floor 2, Fitzroy House, 355 Euston Road, London, NW1 3AG.

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Part B

1 Purpose

1.1 The purpose of this Standard is to ensure that a consistent method of warning of the risk of electric shock is displayed to persons on or near Railtrack's electrified lines and associated vehicles. This is achieved by defining the method of application of Statutory Instrument 1996 No. 341 Health and Safety, The Health and Safety (Safety Signs and Signals) Regulations 1996 and Statutory Instrument 1992 No. 2051 Health and Safety, The Management of Health and Safety at Work Regulations 1992.

1.2 This Standard also requires that information relating to the risk of electric shock associated with any new, or change to existing, electrified lines shall be published.

2 Scope

2.1 The contents of this Standard apply to all lineside locations, all rail mounted vehicles, together with other public places which are on or near Railtrack's electrified lines.

3 Definitions

3.1 Warning sign

A safety sign that gives warning of the "Risk of Electric Shock" (BS 5378 Safety Signs and Colours) or Danger: Electricity (The Health and Safety (Safety Signs and Signals) Regulations 1996). An illustration of the warning sign is shown in Appendix A.

3.2 Supplementary sign

A sign with text only that may be used in conjunction with a safety sign in order to provide additional information (BS 5378 Safety Signs and Colours).

3.3 Electrified lines

Those lines of route that have an electrical contact system for supplying electricity to electric trains.

3.3.1 A.C. electrified lines in the text of this Standard is the term applied to those electrified lines where the traction system voltage is nominally 25 kV a.c. supplied by overhead line equipment (OLE).

3.3.2 D.C. electrified lines in the text of this Standard is the term applied to those electrified lines where the current is supplied by conductor rail equipment.

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4 Provision of warning signs

4.1 Railtrack shall ensure that the assessments, required by the Statutory Instrument 1992 No. 2051, to consider the risks associated with being on or near to Railtrack's electrified lines are carried out.

4.2 Where the result of this risk assessment is that, in spite of all other control measures, there is a significant residual risk, then warning signs shall be fitted to provide warning of the risk of electric shock, as required by Statutory Instrument 1996 No. 341.

Note *In some cases it will also be necessary to provide supplementary signs giving instruction of how to reduce the risk and it will also be necessary to provide illumination to ensure that those at risk can see the warning and, where fitted, supplementary signs.*

4.3 Where a line of route has both a.c. and d.c. electrified lines, the warning and, where fitted, supplementary signs shall relate to the risk of electric shock associated with both systems.

4.4 The warning and supplementary signs shall comply with BS 5378, Safety Signs and Colours, in so far as legend and colour are concerned. These are black 'electric bolt' on a yellow background and black text on a yellow background.

Note *The Design Guidance Sheets for these warning and supplementary signs are available from Railtrack. The warning and supplementary sign may be combined into one sign. See Appendix B for a typical combined warning and supplementary sign.*

5 Existing warning signs

5.1 To be compliant with Statutory Instrument 1996 No. 341, which came into force on 1 April 1996, all red warning flash signs and associated supplementary signs shall be replaced. The replacement signs shall comply with clause 4.4 of this Standard. Replacement should be staged such that, so far as is practicable, confusion does not arise at interfaces between new and old.

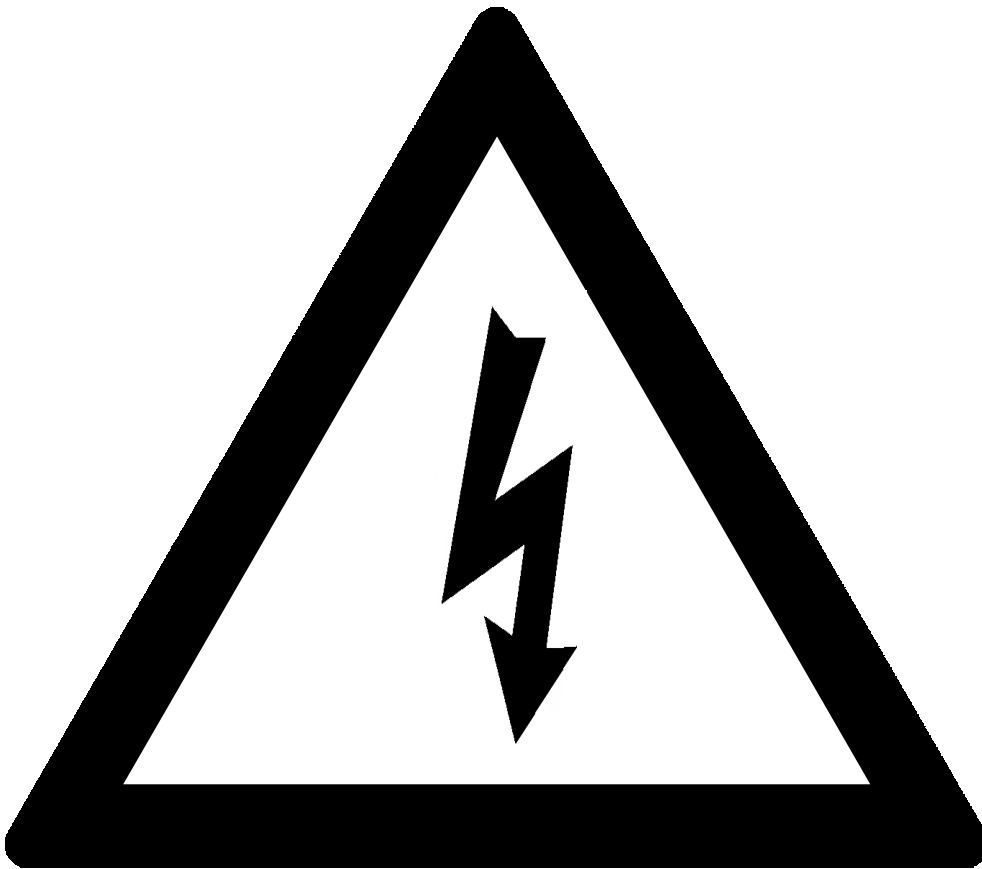
6 Publication of information

6.1 The information relating to the risk of electric shock associated with any new, or significant changes to existing, electrified lines shall be published in a format and disseminated in such a way that it is easily understood by those persons who are considered to be at risk.

Note *A method of dissemination of the information is detailed in Appendix C.*

Warning Signs and Notices for Electrified Lines

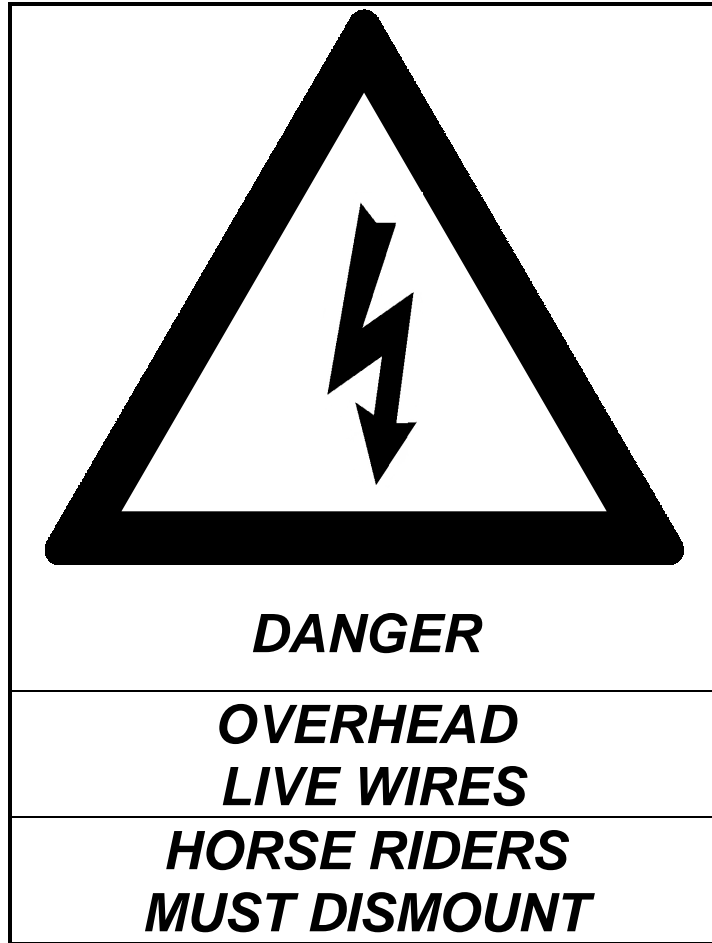
Appendix A Typical warning sign



Black triangle containing a black warning flash on a yellow background.

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Appendix B Typical combined warning and supplementary sign



Text is black on yellow background.

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Appendix C A method of dissemination of the information

C.1 Posters warning of the energisation of electrified lines

C.1.1 To ensure that, so far as possible, all persons who have reason to be on Railtrack electrified lines within the area to be electrified are aware of the impending energisation, posters giving details of the area to be energised and the time, day and date of energisation should be exhibited. These posters should be exhibited at the appropriate entrances to Railtrack electrified lines (Stations, Goods Yards, Depots, etc.), and at booking/signing on points, mess rooms, etc., for 4 working days prior to the date of energisation of any new electrification scheme or major extension of existing electrified lines.

C.1.2 Immediately before energisation an adhesive overlay "NOW" label should be posted over the date. Where staged energisation of sections of equipment occur in the same area, adhesive overlays of different colours should be used.

C.1.3 The poster should be exhibited for three weeks after the date of energisation and should be removed or over-postered at the end of this time.

C.1.4 The posters should display the information in the format shown in Figure 1.

C.2 Periodical Operating Notice

C.2.1 The extent of all new electrified lines which are about to be energised should be shown in a prominent manner on the first pages of the Periodical Operating Notice. Typical Periodical Operating Notice entry is shown in Figure 2.

C.2.2 Publication of the information for each section of line should commence 4 weeks before the date of energisation, and cease 6 months after the date of energisation. If the start of the commercial service is more than 6 months after the date of energisation, the information should continue to be published until 4 weeks have elapsed after the commencement of the commercial service.

C.2.3 Where staged energisation of a line of route takes place, the new sections of line should be shown separately.

C.3 Weekly Operating Notices

C.3.1 The extent of the new electrified lines about to be energised should be shown in a prominent manner on the first pages of the Weekly Operating Notice. Typical Weekly Operating Notice entry is shown in Figure 2.

C.3.2 Publication of the information for each section of line should commence 2 weeks before the date of energisation and cease three weeks after energisation.

C.3.3 Where staged energisation of a line of route takes place, the new sections of line should be shown separately.

C.4 Information to other employers

C.4.1 When a section of line forming part of a new electrification scheme or major extension of existing electrified lines is about to be energised, a letter should be sent to each employer whose staff may require access to Railtrack electrified lines in the area concerned, notifying them of the extent of energisation. The employer should be required to provide a written acknowledgement of receipt of the letter.

C.4.2 The appropriate poster should be made available to all employers for display at their depots and offices for 4 working days prior to the date of energisation, to ensure that all persons who have reason to be on Railtrack electrified lines within the area to be electrified are aware of the impending energisation.

C.4.3 Immediately before energisation an adhesive overlay "NOW" label should be posted over the date. Where a staged energisation of sections of equipment occur in the same area, different colour adhesive overlay labels should be used.

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C.4.4 *The poster should be exhibited for three weeks after the date of energisation and should be removed or over-postered at the end of this time.*

C.5 Information to Education Authorities

C.5.1 *Prior to energisation a letter should be sent to each school within a 2½ mile radius of the route and to the appropriate Education Authorities pointing out the additional danger to children inherent with electrified lines. The letter should include an offer to give talks in schools on the subject.*

C.6 Information to other authorities

C.6.1 *Prior to energisation, a letter should be sent to the following authorities:*

Group i) Police;

Fire Service;

Ambulance;

Group ii) Local Authorities;

Local Press;

Local/Regional Radio/Television Companies, and;

Group iii) as appropriate;

Electricity Companies;

Gas or Other Pipeline Operators;

Gas Companies;

Water Companies;

Post Office;

Customs and Excise;

Shipping Operators;

Bill Posting Companies;

Armed Services (RAF Stations);

Airport Authorities;

National River Authority;

Canal Companies;

Tramway Operators;

Bus Operators (in connection with open top buses);

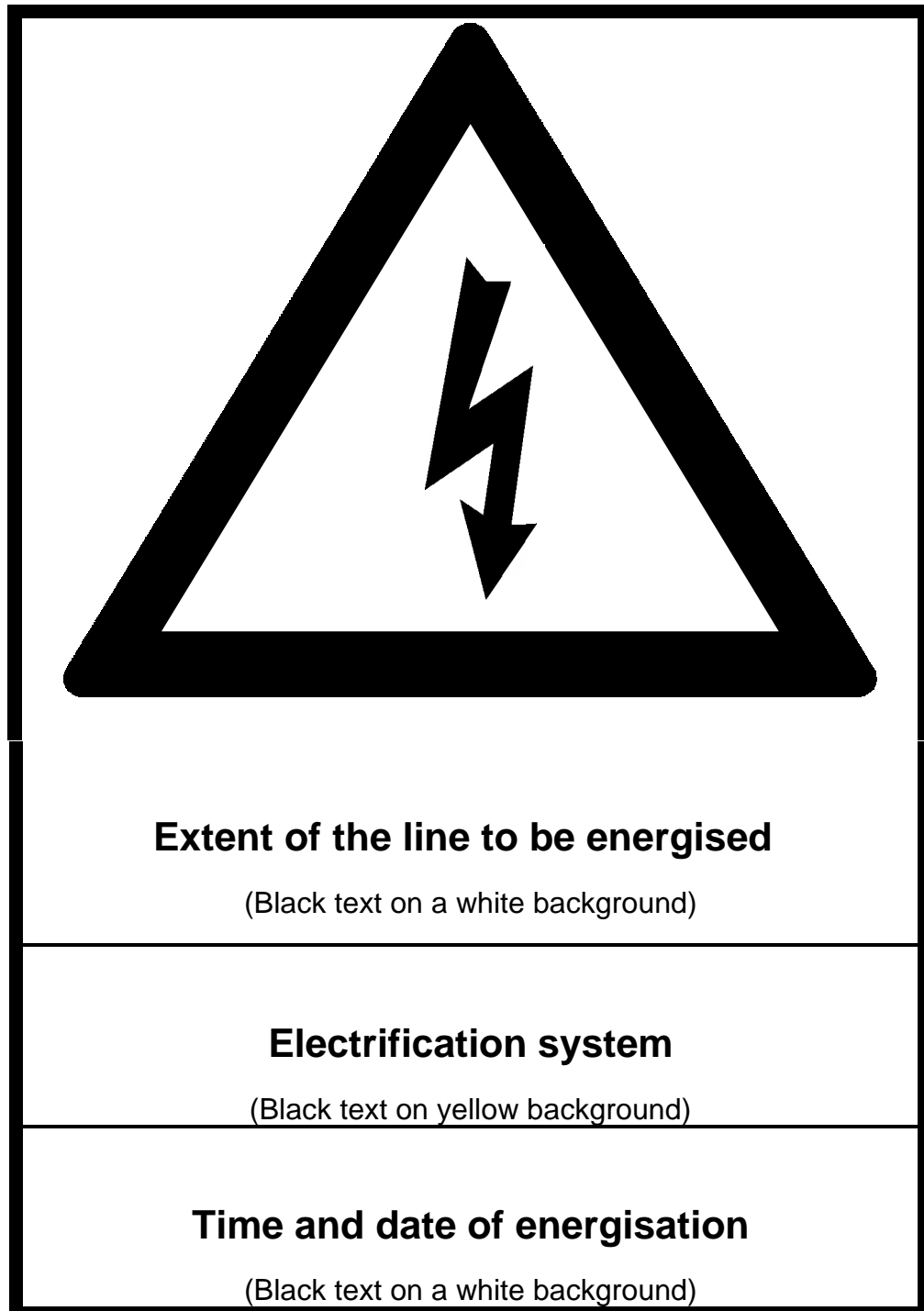
Telecommunication and Cable Operators;

Adjacent industrial premises that use cranes or that emit flammable vapour;

Petrol filling stations that have a boundary with the route to be energised;

and any other organisations or persons whom it seems proper to advise. The letter should include an offer to give talks to Police, Fire and Ambulance Services.

Figure 1 Typical illustration of an electrification poster notice (Bordered in red)



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Figure 2 Typical information published in Weekly and Periodical Operating Notices

 <p>OVERHEAD LIVE WIRES</p>	<p>WARNING</p>	 <p>OVERHEAD LIVE WIRES</p>
<p>A.C. ELECTRIFIED LINES ENERGISATION OF OVERHEAD LINE EQUIPMENT</p> <p>Between GOSPEL OAK (inclusive) & ACTON CENTRAL AND Between WILLESDEN HIGH LEVEL Jnc & MITRE BRIDGE Jnc (exclusive)</p> <p><u>FROM 00.01 HOURS ON THE 18TH AUGUST 1996</u></p>		
<p>THE OVERHEAD LINE EQUIPMENT BETWEEN THE POINTS SHOWN BELOW WILL BE ENERGISED AT 25,000 VOLTS, AND FROM THIS TIME MUST BE REGARDED AS BEING ALIVE AT ALL TIMES.</p>		
<p>THE OVERHEAD LINE EQUIPMENT FROM THE EXISTING ELECTRIFIED LINES BETWEEN KENTISH TOWN WEST AND GOSPEL OAK, STRUCTURE Nos. WG/01/06 & 07, 64m WEST OF 0¾ MILEPOST, HAS BEEN EXTENDED THROUGH GOSPEL OAK, HAMPSTEAD HEATH, FINCHLEY ROAD 7 FRONTAL, WEST HAMPSTEAD, BRONDESBUURY, BRONDESBUURY PARK, KENSAL RISE, WILLESDEN JUNCTION AND ACTON CENTRAL TO THE TERMINATION OF THE OLE EQUIPMENT AT STRUCTURE Nos. WG/12/10 & 11, 129m WEST OF 2 MILEPOST, ON THE GOSPEL OAK - KENSAL GREEN- ACTON WELLS - KEW EAST FAST LINE.</p>		
<p>ALSO FROM THE EXISTING ELECTRIFIED LINES BETWEEN MITRE BRIDGE JUNCTION AND WILLESDEN HIGH LEVEL JUNCTION, STRUCTURE Nos. WK/00/19 & 20, 114m NORTH OF 0¼ MILEPOST TO STRUCTURE Nos. WK 00/01 & 02 ON THE UP AND DOWN HIGH LEVEL LINES AT WILLESDEN HIGH LEVEL JUNCTION.</p>		
<p>THE WORKING INSTRUCTIONS FOR A.C. ELECTRIFIED LINES (BR 29987) WILL APPLY, AND ALL PERSONS CONCERNED MUST ENSURE THAT THEY ARE SUPPLIED WITH A COPY. THERE IS NO DANGER TO PERSONS PROVIDING THESE INSTRUCTIONS ARE STRICTLY OBSERVED.</p>		
<p>THE ELECTRICAL SUPPLY WILL BE CONTROLLED BY WILLESDEN ELECTRICAL CONTROL ROOM WHICH IS MANNED CONTINUOUSLY.</p>		
<p>COMMUNICATION WITH THE ELECTRICAL CONTROL ROOM CAN BE OBTAINED BY:-</p>		
<ol style="list-style-type: none"> 1. VIA RAILWAY ETD 00-40594, 00-46161 OR 00-46211 2. VIA RAILWAY ETD SHORT CODE 172 3. VIA BRITISH TELECOM TELEPHONE NUMBER 0181-965-2304 		
<p>IN THE EVENT OF ANY QUERIES IN CONNECTION WITH THE ELECTRIFICATION OF THE LINES DEALT WITH IN THIS NOTICE (OTHER THAT SOMETHING REQUIRING EMERGENCY ACTION, WHEN THE PROCEDURE LAID DOWN IN THE WORKING INSTRUCTIONS FOR A.C. ELECTRIFIED LINES MUST BE CARRIED OUT), THE MATTER SHOULD BE REFERRED TO THE ELECTRICAL AND PLANT ENGINEER, RAILTRACK PLC CP5, HAMILTON HOUSE, 3 APPOLD STREET, LONDON, EC2A 2AA. tel. no 0171-295 2327 fax no 0171-295 2348</p>		

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References

Reference

Statutory Instrument 1996 No. 341 Health and Safety,
The Health and Safety (Safety Signs and Signals) Regulations 1996

Statutory Instrument 1992 No. 2051 Health and Safety,
The Management of Health and Safety at Work Regulations 1992

BS 5378 Safety Signs and Colours

Clause

Clause 1.1

Clause 1.1

Clause 3.1