

Category 1 Standard

S1167 Operational Boundary Fencing

Issue No.: A3

Issue date: September 2013
Review date: September 2018

MAYOR OF LONDON

 **Documents**
Document Sharing Hub



Contents

1	Purpose	3
2	Scope	3
3	Requirements	3
3.1	General	3
3.2	Design schemes	3
3.3	Fencing type (height, material and mesh size)	4
3.4	Anti-trespass toppings	5
3.5	Criteria for replacement of existing fencing	6
3.6	Inspection	6
3.7	Maintenance	7
3.8	Records	7
3.9	Evidence of compliance	7
4	Responsibilities	7
5	Supporting information	8
5.1	Background	8
5.2	Safety considerations	8
5.3	Environmental considerations	8
6	References	9
6.1	References	9
6.2	Abbreviations	9
6.3	Definitions	10
6.4	Person accountable for the document	10
6.5	Document history	10
7	Attachments	11
7.1	Example of an operational boundary fencing inspection report	11
7.2	Legacy fencing materials permitted for localised repairs	12



1 Purpose

- 1.1 The purpose of this standard is to set out the requirements for operational boundary fencing.

2 Scope

- 2.1 This standard applies to the design, inspection and maintenance of operational boundary fencing. It does not apply to fencing within operational land, such as along the backs of station platforms: this is covered by standard 1-132.
- 2.2 Where it is mandatory that any of the supporting information in Section 5 of this standard is to be applied, the appropriate requirement is set in Section 3.

3 Requirements

3.1 General

- 3.1.1 Operational boundary fencing, including access points, shall at all times deter unauthorised entry onto LU operational infrastructure.
- 3.1.2 When an access point is to be taken out of use, the gate shall be removed and the fence line secured.
- 3.1.3 A design scheme shall be prepared for each site where:
- a) new or replacement operational boundary fencing is to be installed;
 - b) temporary operational boundary fencing is needed to protect the railway during replacement or maintenance work. Temporary fencing shall not normally be deployed for a period exceeding two months.

3.2 Design schemes

- 3.2.1 The fencing scheme shall take account of the following:
- a) the operational uses of the site, their degree of sensitivity to risk and the consequent level of security required;
 - b) the vulnerability of the site as evidenced by the known incidence of unauthorised entry and trespass;
 - c) the nature of the land uses adjoining the operational boundary, in particular the proximity of roads, footpaths, open ground and schools;
 - d) the condition of existing operational boundary fencing;
 - e) the condition of existing structures and their capacity to support the additional loading imposed by new fencing, with particular reference to mountings;
 - f) the need to avoid gaps or discontinuities in the fence line, in particular the presence of gates, which shall be included only where they are essential for access to the track;
 - g) the need to resist climbing;
 - h) the need for a secure transition where different types of fencing adjoin each other, or where a fence abuts a bridge or other structure;

Note: when abutting a fence to a structure:

- 1) it may be desirable to connect it directly to the structure if the structure's foundations preclude the placing of a fence post sufficiently close. Approval of the LU Professional Head - Bridges and Structures will be necessary in this situation;
- 2) consideration should be given to means of preventing any adjacent part of the structure, e.g. a wing wall, from being used to gain access over the fence

- i) the requirement to minimise the need for fencing maintenance and maximise the service life of fencing;
- j) the appearance and environmental impact of the operational boundary fencing, particularly in respect of the choice of colour (e.g. green in customer-facing or environmentally significant areas) and any trespass-resistant toppings;
- k) the need for consultation with neighbouring landowners;
- l) the need to bury the bottom of the fence alongside areas with burrowing animals.

3.2.2 Where a fence is vulnerable to vehicle impact or penetration, deterrent measures shall be provided in accordance with standard S1051-A6 clause 3.1.16.6, in order to prevent the fence from being struck by an errant vehicle.

3.2.3 Where a gate is provided:

- a) the hinges shall be configured in such a manner as to resist the gate being lifted off;
- b) the width of the opening shall be not less than 1.4m;
- c) S1 padlocks shall be provided;
- d) signage shall be provided regarding the use of personal protective equipment, presence of electrified rails, rules for certification of staff accessing the line, and contact details in the event of vandalism or the gate being left open.

3.3 Fencing type (height, material and mesh size)

3.3.1 The choice of fencing type shall be made on the basis of scores attributed against the parameters in Table 1.

Table 1: Assessment of type for new or replacement fencing					
A Area outside fenceline		B Area inside fenceline		C Trespass history (evidence of attempted intrusion, damage to assets)	
Rural, e.g. field with crop or livestock	1	Running ,line	1	None	1
Residential, e.g. private property	2	Depots, sidings	2	Some	2
Industrial or public area	3			Severe	3
School or playground	4			Stone-throwing	3
A =		B =		C =	
A x B x C =					

3.3.2 The fencing type shall be determined from the score (A x B x C) in Table 1, as shown in Table 2. Regardless of the actual derived score, fencing adjacent to schools or playgrounds shall be accorded a score of at least 6, and fencing adjacent to depots