

Guidance Document

G0132 Guidance on Barriers and Fencing

Issue No.: A3

Issue date: March 2014
Review date: March 2019

MAYOR OF LONDON



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This document must not form part of Contractual terms and conditions between London Underground and Suppliers.

Neither London Underground nor Suppliers are bound to provide any of the items or services or follow any processes described in this document unless they are also required to provide them explicitly by other, contractually binding, documents.

The information within this document must not be used by London Underground or Suppliers to raise or moderate expectations of delivery by Suppliers or London Underground over and above Contractual requirements.

1 Purpose

- 1.1 The purpose of this Guidance Document is to support the delivery of project or maintenance works on assets required to comply with Cat 1 standard S1132 Premises - Barriers and Fencing.
- 1.2 This guidance is to assist designers and specifiers to select the correct barrier or fence for the location and to provide guidance to installers on workmanship.
- 1.3 For fencing, this guidance is not to be read as the only solution for boundary demarcation and security, but if this guidance is adopted it will be deemed to satisfy LU requirements.
- 1.4 The object of this guidance document is to provide sufficient criteria to:
 - a) Ensure the necessary degree of security, boundary protection and trespass deterrence to LU assets;
 - b) to prevent fare evasion;
 - c) Fulfil the statutory requirements for fencing of railway land;
 - d) Provide optimum selection of fencing types to facilitate ease of maintenance;
 - e) Present a uniform corporate style;
 - f) Ensure safety of the public and staff.

2 Scope

- 2.1 This guidance applies to all new and altered barriers and non-lineside fences installed in and around London Underground operational, controlled property where London Underground or its suppliers and/or partners are responsible for the installation and maintenance of the fence.
- 2.2 This document should apply to the construction of new or replacement barriers and fences around LU property except for operational boundary (lineside) fencing, for which reference should be made to the LU Cat 1 Standard S1167 Operational Boundary Fencing.
- 2.3 This guidance does not describe the requirements for a brick, masonry or concrete walls constructed to form a barrier. For this type of barrier refer to LU Cat 1 standard S1135 Premises - Finishes and associated guidance document G0135.
- 2.4 Ornamental railings will probably be considered as a "Heritage Feature" and any work to repair or replace should be guided by LU Cat 1 standard 1-355 Listed Buildings and other Structures of Design or Historical Importance and associated guidance.
- 2.5 Temporary barriers, fences or hoardings, generally for construction activity, should be designed erected and cleared in accordance with the LU Cat 1 Standard 1-027 *Site Hoarding Fencing and Barriers*.

3 Guidance

3.1 Designing barriers

- 3.1.1 Purpose – Barriers may be used for any of the following:
 - a) Traffic;
 - b) Pedestrian – both separation and transverse. See 3.1.6

- c) Platform end barriers (PEB) - see 3.1.13;
- d) Temporary, including hoardings - See also LU Cat 1 standard S1354 Customer Facing Aspects of Temporary Works at Stations and the [Standard for TfL products](#), section 4.6
- e) Collapsible gates are covered by the guidance document for doors and gates
- f) Platform edge doors are outside the scope of this document.
- g) Edge protection barriers on roofs - see 3.1.14

3.1.2 Loading on barriers should comply with LU Cat 1 standard S1053 Civil Engineering – Building & Station Structures.

3.1.3 The following is a list of design considerations for barriers; it is not to be used to preclude any specific requirement a stakeholder may have.

Note: Heights of barriers and balustrades should generally be as defined in the Building Regulations Approved Document K but see also S1132 clause 3.4.5 and 3.4.6 for additional requirements for barriers to bridges over the railway.

3.1.4 Security – If the barrier is to stop a vehicle at the entrance then consider a swinging boom or a drop-down ramp. If a barrier is to prevent a hostile vehicle getting too close to the asset being protected then bollards at 1.2m spacing can be considered. Protection of a fence or wall from accidental damage by a vehicle can be achieved by the installation of a motorway style crash barrier.

3.1.5 Location – are there specific requirements that will influence the design of a barrier due to its location? For instance, certain boroughs only allow the canon style of bollard. Street furniture and planters may also be considered.

3.1.6 Internal and external pedestrian barriers at stations should be designed in accordance with the [Standard for TfL products](#), section 4.7 and 4.8,

3.1.7 Vehicle speed – If there is a long run up to the asset being protected then the barrier will have to withstand the kinetic forces that will be imposed upon it by a heavy vehicle travelling at speed. Traffic calming measures may be appropriate to slow vehicles down on the approach.

3.1.8 Depth below pavement level – particularly around the entrances to sub-surface stations, the depth to which a bollard can be installed could be restricted. There are bollards designed for this situation with a large plate under the pavement surface. Operational Security will facilitate liaison with the Centre for the Protection of National Infrastructure for specialist guidance. (CPNI guidance)

3.1.9 Vehicular Access – consideration need to be given to occasional vehicular access to an area sectioned off by bollards. Special bollards are available that can drop down into the street, fold down or be lifted off and stored out of the way. In these cases theft of the removable bollard is a distinct possibility and the method of securing needs careful consideration.

3.1.10 Manifestation comprising a 30% visual contrast will be required on bollards in the public realm.

3.1.11 In sensitive locations, replacement railings around existing subway entrances could be designed and installed to PAS 69:2006 Guidance for the selection, installation and use of vehicle security barriers.

3.1.12 Defensive planting may be considered where deterrence is required in an area that is close to public access. However this option does have a maintenance cost and it is difficult to remove debris and rubbish that accumulates in vegetation.