

Category 1 Standard

S1133

Premises - Stairways and Ramps

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1 Purpose

- 1.1 The purpose of this standard is to define the performance requirements for stairways, steps, fixed ladders, ramps and handrails in all operational LU premises and property.

2 Scope

- 2.1 This standard applies to new and altered public stairways, temporary stairways, fire escape stairways, non-public stairways and steps, fire fighting stairways, fixed ladders, public ramps, non-public ramps, fire escape ramps and temporary ramps.
- 2.2 For existing public stairways, refer to CIRIA C722 Safer stairs in public places – assessment of existing stairs.
- 2.3 For stairways and ramps loading requirements, refer to S1053 Civil Engineering – Building and Station Structures.
- 2.4 For embankment/cutting step design, refer to S1054 Civil Engineering – Earth structures.

Note: This standard is supported by G1033 Guidance on Stairways and Ramps.

3 Requirements

3.1 General Requirements

- 3.1.1 Stairways, stairs, fixed ladders, ramps and handrails shall comply with the Building Regulations and relevant British Standards. Where any conflicts arise between the Building Regulations and this Standard, compliance with this Standard shall take precedence except where a breach in the Law would arise.
- 3.1.2 Guarding to stairways and ramps shall comply with Approved Document Part K of the current Building Regulations. Refer also to S1132 Premises - Barriers and Fencing (Non-Lineside).
- 3.1.3 Stairways and ramps shall be designed for the location in which they are to be installed. Generally within LU premises this will mean one of four categories or types of requirements:

- a) Public – All locations where the customers have regular access and where the minimum standard is defined in BS 5395-1 and BS 8300. Spatial requirements for public stairways and ramps are defined in LU Category 1 Standard S1371 Station planning.

Note: S1371 Station planning requirements for minimum stair widths and maximum distance between handrails varies from BS 5395-1 and BS 8300. For the design of public stairs, S1371 Station planning requirements shall take precedence.

- b) Staff – Back of house locations where the minimum standard is defined in the current Building Regulations.
- c) Escape – A stair designed solely as a means of escape where the minimum standard is defined in Approved Document Part B of the current Building Regulations.
- d) Maintenance – A stair / ladder / ramp designed solely for access to assets for maintenance purposes where the minimum standard is defined in BS EN ISO 14122.

Note: BS EN ISO 14122 Safety of machinery. Permanent means of access to machinery applies not only to machinery access but dedicated maintenance access to and within buildings.

- 3.1.4 The components covered by this Standard shall be replaceable as defined in BS ISO 15686-1 & BS ISO 15686-2. The design life for major replaceable components in public areas shall be a minimum of 40 years.

3.2 Public Stairs

- 3.2.1 New curved or spiral stairs shall not be used except where replacing a pre-existing facility.
- 3.2.2 Heavy Duty London Transport (HDLT) pattern stair nosings as illustrated in G0133 Guidance on Stairways and Ramps do not comply with BS 5395-1 and BS 8300 and may only be used for the maintenance of existing stairs. An equivalent compliant nosing has been developed as shown in Figures 1 and 2 of this Standard. Alternative overlays or nosings may be used provided the performance of the traditional stair nosings can be achieved. Whole life costings may be part of this consideration.

Note: BS 5395-1 and BS 8300 require a visual contrast to each tread of 50mm to 65mm and each riser of 30mm to 55mm for the full width of the stair.

- 3.2.3 In stairways to sub-surface stations a 'Station Area Identification Sign' shall be fixed on the right hand side of the second riser from the bottom. Refer to S1035 Location coding system.
- 3.2.4 Public stairs shall be protected from the weather.

Note: Consideration should be given to protecting external public escape stairs from the weather.