

BRITISH STANDARD

Specification for cattle grids

ICS 65.040.10



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Foreword

Publishing information

This British Standard was published by BSI and came into effect on 28 April 2006. It was prepared by Technical Committee B/201, *Fences and gates*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 4008:1991, which is withdrawn.

Information about this document

This revision updates the standard in line with changes to other standards and legislation and clarifies some aspects of the standard.

The factors to be considered before it is decided to use a cattle grid for the containment of animals are so diverse and the variations available so numerous that this document specifies only the fundamental requirements for a cattle grid and contains advice on associated topics in Annex A. The associated fencing and alternative access are essential to the successful operation of a cattle grid but requirements will vary with location, frequency of use and stock to be contained and recommendations are contained in the Annex.

Maintenance is a vital factor in the success of a cattle grid and some advice is given.

If the incentive for escape is great enough, escapes and attempted escapes will occur. The requirements of this document are aimed at limiting both the occurrence and consequences of escape or attempted escape.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

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

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for cattle grids suitable for the containment of stock whilst permitting the passage of pneumatic tyred vehicles. This standard covers grids suitable for containment of cattle, sheep, deer, goats and pigs; and in certain circumstances, suitable for the containment of horses. Annex A gives recommendations on the use, location, design, construction and maintenance of cattle grids.

2 Normative references

The following referenced documents 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.

BS 187, *Specification for calcium silicate (sandlime and flintlime) bricks*

BS 873 (all parts), *Road traffic signs and internally illuminated bollards*

BS 1070, *Specification for black paint (tar-based)*

BS 1722 (all parts), *Fences*

BS 3416, *Specification for bitumen-based coatings for cold application, suitable for use in contact with potable water*

BS 3921, *Specification for clay bricks*

BS 4729, *Specification for dimensions of bricks of special shapes and sizes*

BS 4921, *Specification for sherardized coatings on iron or steel*

BS 5328 (all parts), *Concrete*

BS 5502-22, *Buildings and structures for agriculture – Code of practice for design, construction and loading*

BS 5628 (all parts), *Code of practice for use of masonry*

BS 5709, *Gaps, gates and stiles – Specification*

BS 6073 (all parts), *Precast concrete masonry units*

BS 6457, *Specification for reconstructed stone masonry units*

BS 8110 (all parts), *Structural use of concrete*

BS 8118-1, *Structural use of aluminium – Code of practice for design*

BS 8118-2, *Structural use of aluminium – Specification for materials, workmanship and protection*

BS EN 10025 (all parts), *Hot rolled products of structural steels*

BS EN 10143, *Continuously hot-dip metal coated steel sheet and strip – Tolerances on dimensions and shape*

BS EN 10240, *Internal and/or external protective coatings for steel tubes – Specification for hot dip galvanized coatings applied in automatic plants*

BS EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*

BD 37/01, *Design manual for roads and bridges: Volume 1 – Loads for Highway Bridges*

NOTE BD 37/01 is available from The Highways Agency, Buckingham Palace Road, London, SW1W 9HA.

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1 **cattle grid**

device, set in a roadway, consisting of a number of transverse members supported over a pit; it forms a barrier to stock but provides access for vehicles

NOTE Guard fences and by-pass facilities if provided form part of the grid.

3.2 **transverse members**

series of members set at right angles to the road to provide a running surface

3.3 **pit**

cavity formed below the transverse members

3.4 **stock**

animals to be contained within a boundary of which the cattle grid forms a part

3.5 **side walls**

walls at the edge of the pit parallel to the road

3.6 **end walls**

walls at the edge of the pit at right angles to the road

3.7 **intermediate supports**

walls or beams supporting the transverse members, at right angles to them

3.8 **guard fence**

barriers associated with the cattle grid to prevent encroachment by animals

3.9 **by-pass facilities**

alternative means of passage

4 Animal welfare

4.1 **General**

The design, location and construction of the cattle grid shall, as a minimum, provide for the welfare of the stock being contained, small wild animals and other animals using the by-pass facility.

4.2 Small animal ramps

4.2.1 Location

Ramps to aid the escape of small animals shall be provided at a minimum to one but preferably to two corners of the pit, positioned to exit the pit on the side away from stock containment. Ramps shall be between 150 mm and 200 mm wide at a slope not exceeding 1 in 2 parallel to the transverse members. The surface of ramps shall not be smooth.

4.2.2 Access

Where the pit is divided into compartments by intermediate support walls, holes at least 150 mm diameter shall be formed to permit access to the ramps from all compartments.

5 Siting

5.1 General

Cattle grids shall not be sited within 18 m of a junction. The approach width shall be adequate for anticipated manoeuvres.

NOTE Further guidance and recommendations on siting can be found in A.4.

5.2 Gradients

Cattle grids shall be sited so that their top surface has a transverse gradient flatter than 1 in 40.

NOTE It is strongly recommended that the longitudinal gradient is flatter than 1 in 20. However, in hilly areas where a gradient below 1 in 20 is not possible, grids might still be acceptable. In such cases, their gradient should follow that road plane in which they are situated and particular consideration should be given to the skid resistance of the grid.

5.3 Visibility

Cattle grids shall be sited to be clearly visible to approaching traffic.

6 Materials

6.1 General

Materials not covered by a British Standard shall be used in accordance with the manufacturer's recommendations.

NOTE Further guidance and recommendations on materials can be found in A.5.