

Specification for

Stiles, bridle gates and kissing gates

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Department of the Environment (Building Research Establishment, Princes Risborough Laboratory)	Timber Trade Federation
Department of the Environment (Housing and Construction)	Wire Products Association
	Youth Hostels Association (England and Wales)

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Foreword

This British Standard, prepared at the request of interested country surveyors and amenity organizations, specifies minimum requirements for the guidance of those concerned with providing and maintaining certain types of stiles, bridle gates and kissing gates, in common use.

The standard is published under the direction of the Council for Building and Civil Engineering B/-.

It is considered that certain basic measurements can be specified for these types to enable them to function satisfactorily as a means of allowing passage for pedestrians over or through a fence, wall or hedge, whilst at the same time forming a barrier to livestock.

Stiles, bridle gates and kissing gates are small but integral elements in our landscape. Since the attraction of the British countryside lies in its infinite variety they will probably vary from one type to another according to the locality.

The appearance and position of stiles is sufficiently important to make or mar the scene. There are two outstanding needs to ensure satisfactory results:

- a) good design;
- b) suitable choice of materials, having regard to traditional practice and maintenance considerations.

The aim should be to create harmony between the stile and the environment. The best stile is the one with every structural member carefully designed, executed in materials selected for their suitability of strength, colour and texture in relation to existing features alongside them and in the landscape as a whole, and so sited that it is convenient and inviting to use.

In drawing up the requirements specified, account has been taken of the standards for stiles recommended by the Commons, Open Spaces and Footpaths Preservation Society.

The principles referred to above apply also to bridle gates and kissing gates, except that, in the case of bridle gates, passage is allowed for equestrians and cyclists. It is recognized that there are many other acceptable patterns and the types vary in different localities.

Stiles with movable parts are not covered in this standard. These may be susceptible to failure in use and may constitute a safety hazard to the unwary or elderly.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Section 1. General

1 Scope

This British Standard specifies the general design requirements for stiles (composed of posts and rails with steps), bridle gates and kissing gates.

2 References

The titles of the publications referred to in this standard are listed on the inside back cover.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1 stile

a type of climb-over device to allow passage over or through a fence, wall or hedge, for one person at a time, while forming a barrier to livestock

3.2 bridle gate

a gate on a bridle way to allow the passage of pedestrians, equestrians and cyclists

3.3 kissing gate

a gate that is intended to swing between posts without latching and which will allow a pedestrian to pass through but prevent the passage of livestock

Section 2. Stiles (post and rail with steps)

4 General

This section specifies the general design requirements for this type of climb-over stile, which may be constructed in timber, stone, steel or concrete, and gives the construction details for wooden stiles.

5 Materials

Stiles shall be constructed of either timber, stone, steel concrete or any combination of these materials according to local availability and as specified by the purchaser, provided that the overall dimensions of the stile comply with the requirements of clause 6.

Where timber is used, it shall comply with the requirements of Appendix A.

6 Dimensions and design (wooden stiles)

6.1 Stiles. Stiles shall be constructed to the following overall dimensions:

- width between uprights: 1 m (minimum);
- top rail-height above ground: 900 mm (minimum);
- spacing between rails: 300 mm (maximum);
- rail section: 87 mm × 38 mm (minimum);
- section of steps shall not be less than 175 mm × 50 mm.

One or two steps shall be provided, the number depending on the height of the top rail of the stile and any fall in ground level between the line of the stile and the ends of the bottom step.

The ends of the bottom step shall be not more than 300 mm above the ground and the rise between steps (if more than one) shall be not more than 300 mm. The height of the top of the top rail above the top of the top step shall be not more than 450 mm for a stile having more than one step and not more than 600 mm for a stile with one step only.

6.2 Steps

6.2.1 Dimensions of steps shall be not less than 900 mm × 175 mm × 50 mm.

6.2.2 A single step shall be at right angles or at an angle not less than 45° to the rails of the stile. Where two steps are provided they shall be at right angles to each other.

6.2.3 Steps shall not rest directly on rails and there shall be a clearance between them so that there is no "see-sawing" effect.

6.3 Step supports

6.3.1 Steps shall be supported at each end by vertical supports of not less than 150 mm × 75 mm section set at approximately 40 mm from the front edge of the step and embedded at least 500 mm in the ground. If the ground is unsuitable for ramming, the support shall be specified by the purchaser to be set in concrete.

6.3.2 Steps shall be drilled and skew nailed to each support with at least 2/100 mm × 4 mm galvanized nails.

6.4 Stile posts

6.4.1 The length of stile posts shall be such that the vertical height between the top step and the top of the post provides a safe and convenient hand hold. The posts shall be embedded not less than 750 mm in the ground. If the ground is unsuitable for ramming, the posts shall be specified by the purchaser to be set in concrete.

6.4.2 Posts shall be not less than 100 mm × 100 mm in section, with chamfered corners and tops weathered with edges chamfered.

6.4.3 A finger or direction post shall not form part of the stile post but shall be mounted separately so that the direction arm cannot overhang the stile.

6.4.4 If a stile is installed in a break between wire fencing the posts shall not be used as straining posts for the fencing.

6.5 Rails. The rails shall be 87 mm × 38 mm (minimum) in section and the top edges of the top rail shall be chamfered.

NOTE Rails should preferably be stub mortised full size into the posts for a depth of 50 mm.

If agreed by the purchaser, rails may be skew nailed to the posts with three 100 mm nails at each end, but mortising is strongly advised. When nailing is used, the rails should be housed into the face of each of the posts to a depth of at least 10 mm.

Section 3. Bridle gates (wooden)

7 Materials

Bridle gates shall be constructed of timber complying with the requirements of Appendix A.

8 Dimensions

Bridle gates shall be constructed to the following overall dimensions:

width between upright posts: 1.525 m (minimum);

height from the bottom of the bottom rail to the top of the top rail shall be 1.1 m (minimum).

9 Components of wooden gates

The components of wooden gates shall comply with the following requirements:

- a) hanging stiles: not less than 100 mm × 75 mm;
- b) shutting stiles: not less than 75 mm × 75 mm;
- c) top rail: not less than 100 mm × 75 mm at hanging stile with top edges chamfered and may be tapered to 75 mm × 75 mm;
- d) under rails: not less than 75 mm × 25 mm and they shall be not less than four in number;
- e) diagonal brace: not less than 75 mm × 25 mm.

The joints between the members shall be of the following form:

- f) top rail to stile: mortised and tenoned, passing through the stiles. The top rail shall be shouldered and either let into the stiles 5 mm or birdsmouthed;
- g) under rails to stiles: tenoned 40 mm into stiles except the second rail from the bottom which shall pass through the stiles. Tenons passing through the stile shall be pegged;

h) braces to top rails shall be housed or bolted with M8 bolts, washers and nuts;

i) braces, where meeting the bottom of the hanging stile shall be birdsmouthed;

j) rails to braces shall be bolted with M8 bolts, washers and nuts.

10 Posts for wooden gates

10.1 For wooden gates the hanging posts in timber shall be not less than 150 mm × 150 mm and the shutting posts in timber shall be not less than 125 mm × 125 mm in section. Reinforced concrete posts, both hanging and shutting posts, shall be not less than 125 mm × 125 mm in section.

All timber shall comply with the requirements of Appendix A. The tops of the posts shall be weathered.

Reinforced concrete posts shall comply with the requirements of Appendix B.

10.2 Posts shall be embedded not less than 750 mm in the ground and, where the ground is unsuitable for ramming, the posts shall be specified by the purchaser to be set in concrete.

10.3 Gate posts shall be independent of fencing.

11 Hinges for wooden gates

11.1 The top hinge strap shall be not less than 600 mm in length.

11.2 Hinges shall be secured to the stile and the top rail and they shall have at least one M10 cup head square shouldered bolt through the hanging stile.

11.3 Hinge pins shall be not less than 20 mm diameter and they shall be secured to the post by bolting through or, in the case of timber posts, by being riveted to a plate screwed to the post or welded to a spike driven into the post. The top pin shall be inverted.

12 Latches

12.1 The design of the latch shall be such that the gate may be opened without dismantling and that, upon the gate closing, the latch and the catch engage without manual operation and hold the gate closed.

12.2 The latch bar shall be not less than 38 mm in width × 10 mm thick.

13 Hanging of bridle gates (wooden)

13.1 Gates shall be hung on the back of the post opening one way only and shutting on the shutting post.