BS 8103-2:2013

Incorporating Corrigendum No. 1

BSI Standards Publication

Structural design of low-rise buildings –

Part 2: Code of practice for masonry walls for housing

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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 40, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 8103 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 September 2013. It was prepared by Subcommittee B/525/6, *Use of masonry*, under the authority of Technical Committee B/525, *Building and civil engineering structure*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 8103 supersedes BS 8103-2:2005, which is withdrawn.

Relationship with other publications

In addition to BS 8103-2, BS 8103 comprises two further parts:

- *Part 1: Structural design of low-rise buildings. Code of practice for stability, site investigation, foundations, precast concrete floors and ground floor slabs for housing;*
- *Part 3: Code of practice for timber floors and roofs for housing.*

Information about this document

This is a full revision of the standard, and introduces the following principal changes.

- The document has been updated to bring it in line with changes to BS 8103-1.
- The wind loading map has been updated and revised.
- The references have been updated to align with the Structural Eurocodes.

A large proportion of the national building programme is concerned with new house construction or development sites and alterations, specifically house extensions and additional dwelling space. This covers both the public and private sectors where traditional methods of construction are used for the majority of houses, and it is to these that this part of BS 8103 is applicable.

Low-rise buildings constructed in accordance with this part of BS 8103 do not require additional specialist advice. Extensions to low-rise housing also require no additional specialist advice if they, together with the original building, are constructed in accordance with this part of BS 8103. For any buildings, including those with extensions, outside the limitations of this part of BS 8103, as given in **4.2** and **4.4**, appropriate specialist advice is needed. The recommendations made in this part of BS 8103 are based on traditional prescriptive guidance substantiated by long experience of use.

In formulating the recommendations in this part of BS 8103, maximum load conditions and the most challenging limiting dimensions were used. In less challenging conditions it might be appropriate to consider a minor departure from the recommendations of this part of BS 8103 and show adequacy by calculation.

When using this part of BS 8103 it is important to assess that the overall stability of the building is achieved, and that the work of any specialist engaged is properly coordinated. BS 8103-1 covers the stability aspect of low-rise housing; by following this guidance, users comply with the general robustness requirements of BS EN 1991-1-7 and its UK National Annex.

The recommendations in this part of BS 8103 are intended to provide economic, safe designs without the need for calculations for loading and strength criteria.

The figures in this part of BS 8103 support the text. They do not show all constructional details and are not intended to illustrate compliance with any other requirements or recommendations.

Use of this document

As a code of practice, this part of BS 8103 takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this part of BS 8103 is expected to be able to justify any course of action that deviates from its recommendations.

The start and finish of text introduced or altered by Corrigendum No. 1 is indicated in the text by tags [C1⟩ and ⟨C1]. Minor editorial changes are not tagged.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

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

The word "should" is used to express recommendations of this standard. The word "may" is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word "can" is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

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.

Particular attention is drawn to the following:

- The Building Regulations 2010 Approved Document A (Structure).
- The Scottish Building Regulations 2004. Technical Handbooks. Section 1 Structure.
- The Building Regulations of Northern Ireland 2012. Technical Booklet B.

1 Scope

This part of BS 8103 gives recommendations on the structural design for walls above ground level damp-proof course (DPC) and walls between ground floor level and top of foundation level in the following range of buildings of traditional construction:

a) low-rise housing comprising detached, semi-detached and terraced houses and flats (with not more than four self-contained dwelling units per floor accessible from one staircase) of not more than three storeys above ground, intended for domestic occupation and within the limitations (as given in **4.2** and **4.4**) of this part of BS 8103;

b) small single storey non-residential buildings, e.g. domestic garages and annexes to residential buildings not exceeding 36 m^2 in floor area (see Annex A);

*NOTE For such buildings all clauses of this part of BS 8103 are applicable except for **4.4, 4.5**a), **6.1, 6.7.3** and **6.8**.*

c) extensions to low-rise housing conforming to **1**a) providing that the extended building conforms to **4.4** and **4.5** of this part of BS 8103. If traditional masonry wall bonding (e.g. block bonding) is not used the design junction between the original building and the extension is outside the scope of this part of BS 8103-2, as is the design of any part of the original structure that is adversely affected by additional loads, including loading to foundations. The formation of new wall openings in the original building is outside the scope of this British Standard.

This British Standard is written for those with expertise in building construction but not necessarily in structural engineering design.

For the purposes of this part of BS 8103, additional habitable accommodation in the roof space constitutes a storey of the house. This part of BS 8103 does not apply to the design of basements, but, providing the basement is of one level only and is designed to provide a firm platform at ground level, the provisions of this part of BS 8103 may apply to the superstructure above the basement.

This part of BS 8103 does not apply to thermal and sound insulation, resistance to damp penetration and durability.

Proprietary housing systems and houses of timber, steel or concrete framed constructions are not covered by this part of BS 8103.

[C1] *Text deleted.* [C1]

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 4729, *Clay and calcium silicate bricks of special shapes and sizes – Recommendations*

BS 6100 (all parts), *Building and civil engineering – Vocabulary*

BS 8103-1, *Structural design of low-rise buildings – Part 1: Code of practice for stability, site investigation, foundations, precast concrete floors and ground floor slabs for housing*

BS 8103-3, *Structural design of low-rise buildings – Part 3: Code of practice for timber floors and roofs for housing*

BS EN 771 (all parts), *Specification for masonry units*