

BS 85500:2015



BSI Standards Publication

# Flood resistant and resilient construction – Guide to improving the flood performance of buildings

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Published by BSI Standards Limited 2015

ISBN 978 0 580 86313 4

ICS 91.120.30; 91.120.99

The following BSI references relate to the work on this document:

Committee reference CB/501

Draft for comment 15/30299685 DC

**Publication history**

First published November 2015

**Amendments issued since publication**

<b>Date</b>	<b>Text affected</b>
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## Foreword

### Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 November 2015. It was prepared by Technical Committee CB/501, *Flood risk and watercourses*. A list of organizations represented on this committee can be obtained on request to its secretary.

### Relationship with other documents

This British Standard is based upon the guide *Improving the flood performance of new buildings - flood resilient construction* published by the Department for Communities and Local Government in May 2007. It takes account of additional research into the reaction of modern materials and construction methods to flooding and has been extended to apply to retrofitting of flood resistance/resilience to existing buildings, as well as to new buildings. It provides greater detail than the core document of the same title that can be freely downloaded from <http://shop.bsigroup.com/BS85500>

### Information about this document

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### Presentational conventions

The guidance in this standard is presented in roman (i.e. upright) type. Any 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.*

### 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.**

## Introduction

This British Standard is intended to help identify when flood resilient and resistant construction is appropriate and to give guidance on achieving these. This standard is applicable to new buildings, extensions and the retrofitting of existing properties.

National and local planning policies discourage inappropriate development in areas at risk of flooding. This standard does not promote development in flood risk areas, but provides guidance on reducing the potential consequences where buildings are located in an area at risk of flooding.

This standard is intended to help manage residual risk after other measures or approaches, such as avoiding risk, locating development in an area of low risk or raising floor levels (see 6.2), have been implemented.

## 1 Scope

This British Standard gives recommendations and guidance on how to improve the resistance and resilience of buildings to reduce the impacts of flooding from all sources, by the use of suitable materials and construction details. Specifically, it provides:

- a) recommendations for the adoption of flood resistant and resilient construction measures, including when to apply resistance and when to apply resilience; and
- b) guidance on the design and specification of flood resistance and resilience for new buildings, extensions and retrofits.

The guidance covers masonry, light-weight steel-frame and timber-frame buildings.

It is not applicable to:

- 1) the structural design or layout of buildings;
- 2) the selection, fixing and deployment of flood protection products which are covered by other standards, such as PAS 1188 and *Delivering benefits through evidence: Temporary and Demountable Flood Protection Guide* [1];
- 3) the design of watertight concrete, which is specified in BS EN 1992-3;
- 4) the construction of amphibious or floating properties;
- 5) the construction of properties on stilts; or
- 6) detailed avoidance measures outside the perimeter (footprint) of the building, such as local land raising above the predicted flood level.

## 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 8102, *Code of practice for protection of below ground structures against water from the ground*

BS 8533, *Assessing and managing flood risk in development – Code of practice*