Expert commentary

BS 5250:2021 — *Management of moisture in buildings – Code of practice*

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Summary of pages
This document comprises a front cover, an inside front cover, pages I to II, pages 1 to 6, an inside back cover and a back cover.

1 Overview

1.1 Reasons for change

This revision of BS 5250 comes at a time when climate change is putting buildings under increasing stress from moisture for two complementary reasons:

- Directly, owing to increased driving rain, more frequent, deeper and longer lasting flooding, and increased atmospheric humidities.
- Indirectly, through risks associated with energy conservation measures, including reduced ventilation (which, unless carefully managed, will increase internal humidity levels), and extra thermal insulation (which will make the outer layers of the fabric colder in winter). Energy saving retrofits of traditional buildings may also disturb their established equilibria with the ambient climate, and allow moisture problems to develop in the structure.

The 2017 BSI White Paper 'Moisture in buildings: an integrated approach to risk assessment and guidance', emphasised the need for holistic thinking about the factors that affect the environment and structure of a building, and the important differences between a building as designed and one that is actually built and in use. This publication has stimulated new ways of diagnosing moisture problems, and development of more robust solutions for new building design and construction, as well tackling existing or potential problems in older buildings.

The introduction of more complex analysis techniques, notably the widely used German software WUFI, has allowed moisture effects on the fabric to be simulated more realistically. However, this approach brings significant challenges in terms of the level of understanding required from its users, and in its need for climate data and material properties that can be difficult to obtain.

1.2 Summary

The important changes to BS 5250 under this revision are:

- Broadening the scope to cover all moisture problems in buildings and not just condensation, incorporating the holistic thinking from the BSI White Paper.
- A complete restructuring, bringing the most important material into four sections of the main text, with only background information now in Annexes.
- Covering a larger number of different floor, wall and roof types in greater detail, adding some recent construction techniques, and including a wider range of sources of moisture, especially from ground water and flooding.
- Covering more advanced calculation techniques, while emphasising the need for material properties relevant to the actual materials present, while also recognising that there are also instances where calculations are not necessary.
- Including greatly improved diagrams and drawings to clarify complex building details.

2 Main commentary

2.1 General

Since its introduction in 1975 as the 27-page 'Code of basic data for the design of buildings: the control of condensation in dwellings', BS 5250 has undergone a series of revisions. The most recent 2016 amendment to the 2011 edition brought the standard to 106 pages, entitled 'Code of practice for control of condensation in buildings'. The current revision was informed by the 2017 BSI White Paper 'Moisture in buildings: an integrated approach to risk assessment and guidance'. This suggested

