

AD 484:

Snow design situations

This advisory note aims to offer clarity when considering snow loading – in particular the drifted snow design situations. Snow loads are covered by BS EN 1991-1-3 and the associated [National Annex](#). The most important advice is that NA.2.2 clarifies that the design situations to be considered in the UK are given in Case B2 of Table A.1 of BS EN 1991-1-3. Clause NA.2.3 specifies that Annex B of the core [Eurocode](#) should be used to determine the exceptional snow drift loads. If this advice is followed, it should stop designers even considering several design situations in the core Eurocode, as these are not relevant for structures constructed in the UK.

Case B2 of Table A.1 identifies two persistent [design](#) situations and one accidental design situation. The accidental design situation covers drifted snow, which is considered in valleys, behind parapets, behind obstructions and on lower roofs abutting taller structures. As noted above, Annex B is used to determine the loading in these accidental design situations. As an [accidental case](#), the design combination of actions should be calculated in accordance with expression 6.11b of BS EN 1990.

Perhaps somewhat confusingly, the second persistent case is also

described as a drifted snow design situation – although it is treated as a persistent case and attracts the normal partial factors used in expressions 6.10, 6.10a and 6.10b of BS EN 1990. This second drifted case is the removal of all the snow from one roof slope, so it might be better described as an asymmetric case. In the core Eurocode, clause 5.3.3 and Figure 5.2 indicate that half the snow is removed from one roof slope, but this is amended by clauses NA.2.13, NA.2.18 and Figure NA.3 of the UK National Annex to specify that all the snow is removed from one roof slope.

Some designers appear to ignore this second persistent case. Designers may recall snow loads determined from BS 6399-3 which had exactly the same asymmetric load with no snow on one slope, but this situation only needed to be considered for roof slopes greater than 15°. There is no limiting roof slope in the Eurocode, so designers are reminded of this design situation.

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New and revised codes and standards

From BSI Updates April 2022

BS EN PUBLICATIONS

BS EN ISO 3834-2:2021

Quality requirements for fusion welding of metallic materials. Comprehensive quality requirements
supersedes BS EN ISO 3834-2:2005

BS EN ISO 3834-3:2021

Quality requirements for fusion welding of metallic materials. Standard quality requirements
supersedes BS EN ISO 3834-3:2005

BS EN ISO 3834-4:2021

Quality requirements for fusion welding of metallic materials. Elementary quality requirements
supersedes BS EN ISO 3834-4:2005

BS EN ISO 12671:2021

Thermal spraying. Thermally sprayed coatings. Symbolic representation on drawings
supersedes BS EN ISO 12671:2014

BS EN ISO 10140-2:2021

Acoustics. Laboratory measurement of sound insulation of building elements. Measurement of airborne sound insulation
supersedes BS EN ISO 10140-2:2010

BS EN ISO 10140-3:2021

Acoustics. Laboratory measurement of sound insulation of building elements. Measurement of impact sound insulation
supersedes BS EN ISO 10140-3:2010+A1:2015

BS EN ISO 10140-4:2021

Acoustics. Laboratory measurement of sound insulation of building elements. Measurement procedures and requirements
supersedes BS EN ISO 10140-4:2010

BRITISH STANDARDS REVIEWED AND CONFIRMED

BS EN ISO 17635:2016

Non-destructive testing of welds. General rules for metallic materials

PD ISO/TR 13392:2014

Health and safety in welding and allied processes. Arc welding fume components

PD ISO/TR 24679-3:2015

Fire safety engineering. Performance of structure in fire. Example of an open car park

PD ISO/TR 16732-2:2012

Fire Safety Engineering. Fire risk assessment. Example of an office building

PD ISO/TR 16732-3:2013

Fire safety engineering. Fire risk assessment. Example of an industrial property

PD ISO/TR 18786:2014

Health and safety in welding. Guidelines for risk assessment of welding fabrication activities

DRAFT BRITISH STANDARDS FOR PUBLIC COMMENT – ADOPTIONS

22/30397897 DC

BS EN 1993-1-5 Eurocode 3. Design of steel structures. Plated structural elements
Comments for the above document are required by 24 May, 2022

22/30397903 DC

BS EN 1993-1-2 Eurocode 3. Design of steel structures. General rules. Structural fire design
Comments for the above document are required by 24 May, 2022

22/30397906 DC

BS EN 1993-1-3 Eurocode 3. Design of steel structures. General rules. Supplementary rules for cold-formed members and sheeting
Comments for the above document are required by 24 May, 2022