NA to BS EN 1991-1-4:2005+A1:2010

Incorporating National Amendment No. 1

NATIONAL ANNEX

UK National Annex to Eurocode 1 – Actions on structures

Part 1-4: General actions – Wind actions

ICS 91.010.30



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National Annex (informative) to BS EN 1991-1-4:2005, Eurocode 1 – Actions on structures – Part 1-4: General actions – Wind actions

Introduction

This National Annex has been prepared by BSI Subcommittee B/525/1, *Actions (loadings) and basis of design.* In the UK it is to be used in conjunction with BS EN 1991-1-4:2005.

The start and finish of text introduced or altered by National Amendment No. 1 is indicated in the text by tags A_1 (A1). Minor editorial changes are not tagged.

National Amendment No. 1 has been made to reflect Amendment No. 1 to BS EN 1991-1-4:2005.

NA.1 Scope

This National Annex gives:

 a) the UK decisions for the Nationally Determined Parameters or alternative procedures in the following clauses of BS EN 1991-1-4:2005:

DS EN 1331-1-4.2003.	
– 1.1 (11) Note 1	(1) - 7.2.4(1)
- 1.5 (2)	- 7.2.4 (3)
- 4.1 (1)	- 7.2.5 (1)
- 4.2 (1)P Note 2	- 7.2.5 (3)
– 4.2 (2)P Notes 1, 2, 3 and 5	- 7.2.6 (1)
– 4.3.1 (1) Notes 1 and 2	- 7.2.6 (3)
- 4.3.2 (1)	- 7.2.7
- 4.3.2 (2)	- 7.3 (6) (A)
- 4.3.3 (1)	- 7.2.8 (1)
- 4.3.4 (1)	- 7.2.9 (2)
- 4.3.5 (1)	- 7.2.10 (3) Notes 1 and 2
- 4.4 (1) Note 2	- 7.4.1 (1)
- 4.5 (1) Note 1	- 7.4.3 (2)
- 4.5 (1) Note 2	- 7.6 (1) Note 1
- 5.3 (5)	- 7.7 (1) Note 1
- 6.1 (1)	- 7.8 (1)
- 6.3.1 (1) Note 3	A) – 7.9.2 (2)
- 6.3.2 (1)	– Table 7.14 (A1
- 7.1.2 (2)	– 7.10 (1) Note 1
- 7.1.3 (1)	- 7.11 (1) Note 2
– 7.2.1 (1) Note 2	- 7.13 (1)
- 7.2.2 (1)	- 7.13 (2)
– 7.2.2 (2) Note 1	– 8.1 (1) Notes 1 and 2
A 1 → - 7.2.3 (2)	- 8.1 (4)
- 7.2.3 (4)(A1	- 8.1 (5)

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- E.1.3.3 (1)
– E.1.5.1 (1) Notes 1 and 2
- E.1.5.1 (3)
– E.1.5.2.6 (1) Note 1
– E.1.5.3 (2) Note 1
- E.1.5.3 (4)
- E.1.5.3 (6)
- E.3 (2)

- b) the UK decision on the status of BS EN 1991-1-4:2005, informative Annexes A, B, C, D, E and F; and
- c) references to non-contradictory complementary information.

A1 Text deleted (A1

NA.2 Nationally Determined Parameters

NA.2.1 Guidance for design of torsional vibrations, bridge deck vibrations, cable supported bridges, higher order modes of vibration [BS EN 1991-1-4:2005, 1.1 (11) Note 1]

No additional guidance is given for torsional vibrations, e.g. for tall buildings with relatively low torsional frequencies and/or a significantly offset shear centre.

For bridge deck vibrations from transverse wind turbulence, the procedures given in background paper PD 6688-1-4 should be used.

For cable supported bridges, no additional guidance on wind actions and response is given in this National Annex.

For buildings and bridges where more than the fundamental transverse or lateral modes need to be considered, specialist advice should be sought.

NA.2.2 Guidance on design assisted by testing and measurements [BS EN 1991-1-4:2005, 1.5 (2)]

NA.2.2.1 Static building structures

Tests for the determination of wind loads on static structures should not be considered to have been properly conducted unless:

- a) the natural wind has been modelled to account for:
- the variation of mean wind speed with height above ground appropriate to the terrain of the site; and
- the intensity and scale of the turbulence appropriate to the terrain of the site at a determined geometric scale;
- b) the building has been modelled at a geometric scale not more than the following multiples of the geometric scale of the simulated natural wind, with appropriate corrections applied to account for any geometric scale discrepancies within this range:
- 3 for overall loads; and
- 2 for cladding loads;

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