

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Amendment No. 1**  
to  
**AS/NZS 1170.3:2003**  
**Structural design actions**  
**Part 3: Snow and ice actions**

**CORRECTION**

The 2003 edition of AS/NZS 1170.3 is amended as follows; the amendment should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to the Preface, Clauses 1.1, 1.2, 1.3, 1.4, 2.2(c), 5.1, 5.2, Table 5.1, Figures 5.1 to 5.7 and Appendix A.

Published on 2 April 2007.

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 19 January 2007.

**Preface**

- 1 *Delete* the third paragraph
- 2 *Delete* the fifth paragraph and *replace* with the following:

This Standard is Part 3 of the AS/NZS 1170 series, *Structural design actions*, which comprises the following parts, each of which has an accompanying Commentary published as a Supplement:

## AS/NZS

- |        |         |                                      |
|--------|---------|--------------------------------------|
| 1170.0 | Part 0: | General principles                   |
| 1170.1 | Part 1: | Permanent, imposed and other actions |
| 1170.2 | Part 2: | Wind actions                         |
| 1170.3 | Part 3: | Snow and ice actions                 |

## AS

- |        |         |                    |
|--------|---------|--------------------|
| 1170.4 | Part 4: | Earthquake actions |
|--------|---------|--------------------|

## NZS

- |        |         |                                |
|--------|---------|--------------------------------|
| 1170.5 | Part 5: | Earthquake actions—New Zealand |
|--------|---------|--------------------------------|

- 2 In the sixth paragraph *delete* ‘2002’ and *replace* with ‘2003’.
- 3 Add the following at the end of the Preface:

*AS/NZS 1170.3 is independent of the design requirement specified—thus becoming a purely technical document. It may be used to calculate snow depths and roof loads given any annual probability of exceedance. The annual probability of exceedance (P) defines the snow or ice event (in which pressures and forces occur). Thus a high accumulation of snow with an annual probability of exceedance in the range of 1/200 to 1/2000 is used for ultimate limit states, while a much more frequent event (say of 1/20 or 1/25) might be used for serviceability limit states.*

*In AS/NZS 1170.3, Section 5 gives the ground snow loads factored for selected annual probabilities of exceedance using the probability factor  $k_P$  and Section 4 sets out the determination of the snow actions (roof loads) that are appropriate for the annual probability specified.*

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*The annual probability of exceedance is not defined in AS/NZS 1170.3, but is set out in AS/NZS 1170.0 [and by further reference for ultimate limit states in the BCA (Table of annual probabilities of exceedance) and in the Guide to the BCA (examples of structures for importance levels)]. AS/NZS 1170.0 gives requirements for New Zealand structures and for Australian structures not covered by the BCA. Guidance for serviceability events and associated limits is given in an informative Appendix of AS/NZS 1170.0 for loads associated with an appropriate annual probability of exceedance ( $P$ ) for serviceability.*

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**Clause 1.1**

*Add the following Note:*

NOTE: In this document, the words ‘this Standard’ indicate AS/NZS 1170.3, which is regarded as Part 3 of the AS/NZS 1170 series of Standards (see Preface).

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**Clause 1.2**

*Add the following Note:*

NOTE: Use of methods or information not given in this Standard should be justified by a special study (see AS/NZS 1170.0).

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**Clause 1.3**

*Make the following changes to Clause 1.3:*

- 1 *Delete* title ‘REFERENCED DOCUMENTS’ and *replace* with ‘NORMATIVE REFERENCES’
- 2 *Delete* reference to ISO 12494
- 3 *Add* note as follows:  
NOTE: Informative documents referred to in this Standard are listed in Appendix A.

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**Clause 1.4**

*Add the following:*

NOTE: Snow and ice actions may be determined for either ultimate or serviceability purposes. Such values calculated using the applicable annual probability of exceedance ( $P$ ) would be used in the combinations given in AS/NZS 1170.0 as  $S_u$  or  $S_s$  as appropriate. Information on serviceability conditions and criteria can be found in AS/NZS 1170.0.

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**Clause 2.2 (c)**

*Delete* ‘AS (Southern Tablelands, New South Wales)’ and *replace* with ‘AS (Southern Tablelands, New South Wales and Victoria)’.

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**Page 16 Clause 5.1**

- 1 *Delete* the first paragraph and *replace* with the following:

Values for the site ground snow load appropriate for regions in Australia and New Zealand where snow action occurs shall be as given for Australia and New Zealand in Clause 5.3 for alpine regions and Clause 5.4 for sub-alpine regions.

- 2 *Delete* the ‘4’ from second line of second paragraph.
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## Clause 5.2

*Delete* second sentence from first paragraph.

## Table 5.1

*Delete* Table 5.1 and *replace* with the following:

**TABLE 5.1**  
**PROBABILITY FACTOR ( $k_p$ )**

| Annual probability of<br>exceedance of the action<br><br>( $P$ ) | Probability factor ( $k_p$ ) |             |
|------------------------------------------------------------------|------------------------------|-------------|
|                                                                  | Australia                    | New Zealand |
| 1/2500                                                           | 2.35                         | 1.85        |
| 1/2000                                                           | 2.25                         | 1.8         |
| 1/1000                                                           | 2.05                         | 1.65        |
| 1/500                                                            | 1.85                         | 1.5         |
| 1/250                                                            | 1.65                         | 1.35        |
| 1/200                                                            | 1.6                          | 1.3         |
| 1/150                                                            | 1.5                          | 1.25        |
| 1/100                                                            | 1.4                          | 1.15        |
| 1/50                                                             | 1.2                          | 1.0         |
| 1/25                                                             | 1.05                         | 0.85        |
| 1/20                                                             | 1.0                          | 0.8         |

NOTE:

- 1 The values given for Australia are calculated from the following equation with appropriate rounding:  
 $k_p = 0.26 \ln(1/P) + 0.22$ .
- 2 The values given for New Zealand are calculated from the following equation rounded to the nearest 0.05:  
 $k_p = 0.215 \ln(1/P) + 0.18$ .

## Figures 5.1 to 5.7

*Delete* Figures 5.1 to 5.7 and *replace* with the following: