AS 1720.1—2010
(Incorporating Amendment Nos 1, 2 and 3)




# Timber structures

# Part 1: Design methods

This Australian Standard® was prepared by Committee TM-001, Timber Structures. It was approved on behalf of the Council of Standards Australia on 28 October 2009.
This Standard was published on 21 June 2010.

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The following are represented on Committee TM-001:

- A3P
- Association of Consulting Engineers Australia
- Australian Building Codes Board
- Australian Timber Importers' Federation
- Australian Wood Panels Association
- BRANZ
- CSIRO Manufacturing and Materials Technology
- Curtin University of Technology
- Department of Primary Industries and Fisheries Queensland
- Engineers Australia
- Frame and Truss Manufacturers Association Australia
- Glued Laminated Timber Association of Australia
- Master Builders Australia
- Monash University
- New Zealand Timber Industry Federation
- Scion
- Standards New Zealand
- Timber Queensland
- University of Auckland
- University of Technology, Sydney
- Wood Processors Association

Additional Interests:

- Mr Bruce Hutchings

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This Standard was issued in draft form for comment as DR 08053.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

# Timber structures

# Part 1: Design methods

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# PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-001, Timber Structures, to supersede AS 1720.1—1997.

*This Standard incorporates Amendment No. 1 (December 2010), Amendment No. 2 (August 2011) and Amendment No. 3 (August 2015). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

The decision to prepare this Standard as an Australian Standard was by consensus agreement of the Joint Committee.

The objective of this Standard is to provide a code of practice for the design and acceptance of timber structures and elements. It includes design methods and design data appropriate for commonly encountered structural elements and materials and requirements to be met for specification of the design, installation and maintenance of timber structures.

Capacity factors for the timber materials represented in this Standard have been reviewed and, in some cases, modified to better reflect the safety levels appropriate for the wide range of applications for which timber structural elements may be used.

For housing, the increasing sizes of houses and increasingly larger areas that are in some cases supported by a single structural element has resulted in a need to limit application of category 1 capacity factors according to the area likely to be affected by failure of the individual element. For structures other than houses the definition of ‘primary structural element’ has been changed to recognise that even a partial structural collapse of some structures can have severe consequences.

Conceptually, the limit state design principles of this Standard do not differ from the 1997 version. Only essential changes and editorial improvements have been made, which reflect experience with the application of the Standard over the past decade; these changes relate to layout improvements and clarification of meaning.

Differences from the 1997 edition include the following:

(a) The notation and terminology for actions have been aligned with AS/NZS 1170 series.

(b) For easier referencing, the design properties for commonly available structural sawn timber (F-grades, MGP-grades and A17-grade) are now consolidated and presented together in an appendix.

(c) The presentation of requirements for selection of capacity factors for member and joint design has been simplified and clarified.

(d) For consistency with the AS/NZS 4063 series, characteristic properties are now uniformly defined as including the effect of size.

(e) Issues associated with evaluation methods, verification procedures, monitoring and quality control in production and manufacture are not relevant to design and are not therefore directly referred to in this revised Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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