

Australian Standard<sup>®</sup>

---

**Protection of buildings from  
subterranean termites**

**Part 1: New buildings**

---

This Australian Standard was prepared by Committee BD/74, Termite Control. It was approved on behalf of the Council of Standards Australia on 30 June 1995 and published on 5 July 1995.

---

The following interests are represented on Committee BD/74:

Australian Building Codes Board  
Australian Consumers Association  
Australian Environmental Pest Managers Association  
Australian Institute of Building  
Australian Local Government Association  
Australian Pest Controllers Association  
Avcare (National Association for Crop Protection and Animal Health)  
Cement and Concrete Association of Australia  
Chamber of Commerce and Industry of Western Australia  
Division of Entomology, CSIRO  
Division of Forest Products, CSIRO  
Housing Industry Association  
Insurance Council of Australia  
Master Builders Australia  
National Association of Forest Industries  
National Association of Steel Framed Housing  
National Health and Medical Research Council  
National Registration Authority for Agricultural and Veterinary Chemicals  
Physical Termite Barriers Association of Australia  
Queensland Department of Primary Industries Forest Service  
Reticulation Systems Association  
South Australia Health Commission  
State Forests of N.S.W.  
Total Environment Centre

---

**Review of Australian Standards.** To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

---

This Standard was issued in draft form for comment as DR 94439.

Australian Standard<sup>®</sup>

---

**Protection of buildings from  
subterranean termites**

**Part 1: New buildings**

---

PUBLISHED BY STANDARDS AUSTRALIA  
(STANDARDS ASSOCIATION OF AUSTRALIA)  
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 9935 9

## PREFACE

This Standard was prepared by the Standards Australia Committee BD/74—Termite Control. This Standard is intended to be called up by the Building Code of Australia to meet the requirements relating to termite control, contracts and the like which relate to new building construction.

This document is a revision, in part, of AS 3660—1993. It is intended that the revised Standard will be in two parts:

AS 3660 Protection of buildings from subterranean termites

Part 1: New buildings (this Standard)

Part 2: Prevention, detection and treatment of infestation. It is also intended that Part 2 will include information and guidance on the maintenance of barriers, inspection regimes and the use of termite-resistant materials.

This document represents a consensus as to practical building details for termite management in new buildings.

It is important to realise that there is no system that provides total protection against termite ingress. This Standard is therefore concerned with minimizing, not totally eliminating, the risk of subterranean termite attack.

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. Compliance with a normative appendix is a requirement of the Standard whereas compliance with an informative appendix is not.

This Standard utilizes notes to some of the clauses. They are designated Note 1, Note 2, and so on, and are located in smaller point size, immediately following the clause. These notes are for information and guidance only and compliance with them is not a requirement of the Standard.

However, in some instances, notes that are written in a mandatory form (i.e. ‘shall’ is used) are added to specific figures or tables. Compliance with these notes is a requirement of the Standard.

Standards Australia draws attention to the fact that it is claimed that compliance with this Australian Standard may involve the use of patents concerning stainless steel mesh and graded stone termite barriers.

Standards Australia takes no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured Standards Australia that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout Australia. In this respect, the statement of the holders of these patent rights are registered with Standards Australia.

Attention is drawn to the possibility that some of the elements of this Australian Standard may be subject to patent rights other than those identified above. Standards Australia shall not be held responsible for identifying any or all such patent rights.

### © Copyright – STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

## CONTENTS

	<i>Page</i>
FOREWORD .....	5
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	6
1.2 APPLICATION .....	6
1.3 REFERENCED DOCUMENTS .....	7
1.4 DEFINITIONS .....	7
SECTION 2 GENERAL REQUIREMENTS FOR TERMITE PROTECTION	
2.1 GENERAL .....	9
2.2 BUILDING SITE MANAGEMENT .....	9
2.3 DRAINAGE .....	10
2.4 STRUCTURAL MATERIALS IN CONTACT WITH THE GROUND .....	10
2.5 PROTECTION FOR POSTS AND STUMPS .....	10
2.6 ATTACHMENTS TO BUILDINGS .....	10
2.7 BRIDGING AND BREACHING .....	11
2.8 SPECIFIC REQUIREMENTS FOR TERMITE PROTECTION .....	11
2.9 PERFORMANCE CRITERIA FOR SHEET MATERIAL BARRIER SYSTEMS	15
SECTION 3 CONCRETE SLAB AS A PHYSICAL BARRIER	
3.1 GENERAL .....	17
3.2 SLAB CONSTRUCTION .....	17
3.3 PENETRATIONS .....	17
3.4 SLAB EDGE EXPOSURE .....	17
SECTION 4 TERMITE SHIELDING FOR SUSPENDED FLOORS	
4.1 GENERAL .....	19
4.2 INSTALLATION .....	19
4.3 STAINLESS STEEL MESH SHIELDING .....	23
SECTION 5 STAINLESS STEEL MESH BARRIERS	
5.1 GENERAL .....	25
5.2 MATERIAL REQUIREMENTS .....	25
5.3 JOINTING .....	25
5.4 PERIMETER INSTALLATION .....	26
5.5 PENETRATION INSTALLATION .....	29
5.6 CONSTRUCTION AND CONTROL JOINTS .....	30
5.7 FULL INSTALLATION .....	31
5.8 TIMBER POLES OR POSTS .....	32
SECTION 6 GRADED STONE BARRIERS	
6.1 GENERAL .....	37
6.2 MATERIAL REQUIREMENTS .....	37
6.3 FULL INSTALLATION—PROTECTION FROM BENEATH A SLAB .....	38
6.4 PROTECTION FROM BENEATH A SUSPENDED FLOOR .....	38
6.5 PERIMETER INSTALLATION .....	41
6.6 PENETRATION INSTALLATION .....	41
6.7 CONSTRUCTION AND CONTROL JOINTS .....	45
6.8 TIMBER POLES OR POSTS .....	45

SECTION 7 CHEMICAL SOIL BARRIERS

7.1 GENERAL . . . . . 47

7.2 REQUIREMENTS . . . . . 47

7.3 RATES OF APPLICATION . . . . . 47

7.4 SITE PREPARATION . . . . . 47

7.5 TYPES OF CHEMICAL SOIL BARRIER . . . . . 48

7.6 STAGES OF TREATMENT . . . . . 49

7.7 METHOD OF APPLICATION . . . . . 49

7.8 INSTALLATION OF CHEMICAL SOIL BARRIERS . . . . . 49

7.9 RESTRICTIONS . . . . . 49

7.10 RETICULATION SYSTEMS . . . . . 50

APPENDICES

A NATURALLY TERMITE-RESISTANT TIMBERS . . . . . 52

B PRESERVATIVE-TREATED TIMBER . . . . . 55

C INEFFECTIVE BARRIERS . . . . . 56

D TESTING THE PERFORMANCE OF RETICULATION SYSTEMS . . . . . 57

This is a free 8 page sample. Access the full version online.

Originated as AS CA43—1966.  
 Previous edition AS 3660—1993.  
 Revised and redesignated in part as AS 3660.1—1995.

Incorporating:  
 Amdt 1—1996

## FOREWORD

This Standard details termite barriers and construction techniques to be used in new buildings. The purpose of termite barriers is to impede and discourage termite entry into a building. Termites can build around barriers but their workings or evidence thereof are then in the open where they can be detected more readily during regular inspections. The Standard purposely contains no information on durability, maintenance and inspection issues, which fall outside the building regulations. Information on these issues and others such as the detection of termite infestation, certification, termite protection notices, and the necessity for regular, competent inspections can be found in AS 3660—1993. It is stressed that installation of a termite barrier system does not negate the need for regular competent inspections.

More than 350 species of termites have been recorded in Australia, about 30 of which achieve economic importance as pests of timber-in-service. With the exception of the drywood termites, all species of economic importance are soil-dwelling (subterranean) and have similar habits. Several of them have a wide geographic distribution.

It is important to realize that subterranean termites may eat timber and timber products or any material containing cellulose—their principal food—and this could include the building contents such as furniture, printed materials, fabrics, clothing, footwear, packing cases and tools. Termites can also damage some non-cellulose materials, for example, soft metal, inferior concrete and plastics such as polyethylene piping, building sealants and rigid foam insulation.

Typically, they form nests in the soil, near ground level in a stump, the trunk of a living tree or other suitable piece of wood. Sometimes the nest takes the form of a conical or dome-shaped mound. A colony may persist for many years and, as it matures, have a population running into millions. Attack by subterranean termites originates from the nest. Wood or timber lying on or buried in the ground may be reached by underground foraging galleries but attack may occur well above ground level either inside the wood or by way of mud-walled shelter-tubes ‘plastered’ on the outside. Timber resting on an impenetrable substructure may be reached by means of these shelter-tubes or through independent, freestanding columns built by the termites. In rare cases, where a source of permanent moisture, e.g. leaking plumbing, is available to the termites within the building, subterranean termites can form a nest inside a building without soil contact.

In rare instances scantling timbers delivered to a building site may contain small pockets of termites. However, these termites are highly unlikely to pose a hazard to the building as they are the remnants of feeding parties of the main colony. Once isolated from the nest, the termites are unable to survive as the moisture content of the timber diminishes. It should also be noted that termites most commonly encountered in both unseasoned scantling timbers and ‘green’ firewood are species which are incapable of damaging dry (seasoned) timbers. The presence of larvae (grubs) of wood-boring insects in firewood constitutes little threat to either structural or decorative building timbers.

Where barrier systems for termite protection of a building are to be installed, the designer should complete all construction details before works commence. The requirements for an effective termite barrier can then be established for the particular site conditions and any building features necessary to ensure the desired level of protection detailed.

‘Drywood termites’ are economically important only in restricted coastal, tropical, subtropical and adjacent tableland areas of Australia. Unlike subterranean termites they do not construct galleries or tunnels connecting the infested timber with the soil but form their nest inside the wood upon which they feed and so may attack any piece of susceptible timber, regardless of its position in a building. The evidence of infestation by these species is the presence of dry granular faecal pellets which may be stored in disused galleries or ejected through small openings in the surface of the wood. Barrier systems will not give protection against infestation by drywood termites, which may occur in the same areas as subterranean termites. Similarly they will not give protection where the nest is established inside the building and has no contact with the soil.

## STANDARDS AUSTRALIA

## Australian Standard

## Protection of buildings from subterranean termites

## Part 1: New buildings

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE** This Standard sets minimum requirements for detailing fabrication and installation methods of protection against termite infestation for implementation during new building work and for minimizing the risk to new buildings from damage by subterranean termites.

This Standard also provides a series of details to achieve the performance requirement for evidence of termites to be forced into visible locations when gaining entry to a building. These details may be amended provided the integrity of any barrier is not compromised and the specific dimensions and written requirements are not changed. It includes procedures and details for providing both physical barriers and chemical soil barriers. This Standard provides a range of options. Barriers may be used singly or in combination to provide an integrated system for the protection of buildings. The provisions of this Standard will provide protection against concealed entry by subterranean termites above the termite barrier for the whole of the building.

**1.2 APPLICATION** This Standard is intended for use in any part of Australia where subterranean termites are a risk. The risk should be regarded as high in most parts of the country with only some parts of Victoria and other limited areas being relatively free from termites. Tasmania is the only state or territory in Australia where this risk is negligible. The subterranean termite *Mastotermes darwiniensis*, which is generally found north of the Tropic of Capricorn, is particularly destructive. Protection from this species can be difficult and requires special attention.



This is a free preview. Purchase the entire publication at the link below:

## **AS 3660.1 : 1995 : EN : COMBINED PDF**

- ⏪ Looking for additional Standards? Visit SAI Global Infostore
- ⏪ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation

Need to speak with a Customer Service Representative - Contact Us