

Australian Standard<sup>®</sup>

**Timber—Heavy structural products—  
Visually graded**

**Part 3: Piles**



This Australian Standard® was prepared by Committee TM-003, Timber Grading. It was approved on behalf of the Council of Standards Australia on 27 October 2010. This Standard was published on 15 November 2010.

---

The following are represented on Committee TM-003:

- A3P
- Australian Timber Flooring Association
- BRANZ
- CSIRO Manufacturing, and Infrastructure Technology
- Forest and Wood Products Australia
- Forests New South Wales
- Frame and Truss Manufacturers Association Australia
- Master Builders Australia
- New Zealand Timber Industry Federation
- Tasmanian Timber Promotion Board
- Timber and Building Materials Association (NSW)
- Timber Queensland
- University of Technology, Sydney
- Wood Processors Association

Additional Interests:

- Dr Geoff Boughton
- 

This Standard was issued in draft form for comment as DR AS 3818.3.

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.

---

### **Keeping Standards up-to-date**

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting [www.standards.org.au](http://www.standards.org.au)

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

Australian Standard<sup>®</sup>

**Timber—Heavy structural products—  
Visually graded**

**Part 3: Piles**

Originated as Int 365—1952.  
Previous edition AS 3818.3—2001.  
Second edition 2010.

**COPYRIGHT**

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 0 7337 9706 4

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-003, Timber Grading, to supersede AS 3818.3—2001.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide producers and users of piles with requirements for the visual grading and selection of species for timbers intended for use as piling in marine applications (salt or brackish water) or in other than marine applications (land or freshwater).

The objectives of this revision are as follows:

- (a) To complete an overview of the AS 3818 series, with regard to consistency and alignment between all Parts.
- (b) To change the basis of assessing barrel checks and end splits from a numerical rating system related to pictures to a rating system based on tables of measurements.
- (c) To move the list of species to AS 3818.1.

This Standard is Part 3 of the AS 3818 series, *Timber—Heavy structural products—Visually graded*, which is composed of the following parts:

AS

3818	Timber—Heavy structural products—Visually graded
3818.1	Part 1: General requirements
3818.2	Part 2: Railway track timbers
3818.3	Part 3: Piles (this Standard)
3818.4	Part 4: Cross-arms for overhead lines
3818.5	Part 5: Mine lift guides
3818.6	Part 6: Decking for wharves and bridges
3818.7	Part 7: Large section sawn hardwood engineering timbers
3818.8	Part 8: Stumps and sole plates
3818.9	Part 9: Natural round treated hardwood corbels, girders and stringers
3818.10	Part 10: Building poles
3818.11	Part 11: Utility poles

Appendices have been included to give advice on—

- (a) information required for purchasing orders;
- (b) treatment levels; and
- (c) design properties.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	4
1.2 APPLICATION .....	4
1.3 NORMATIVE REFERENCES .....	4
1.4 DEFINITIONS .....	4
1.5 MEASUREMENTS .....	4
1.6 MEASUREMENT OF KNOTS .....	4
1.7 TIMBER SPECIES .....	5
1.8 SIZE AND FORM OF PILE .....	6
1.9 RATINGS—END SPLITS AND BARREL CHECKS .....	7
1.10 REMOVAL OF BUMPS .....	8
1.11 COMBINATION OF CHARACTERISTICS .....	8
SECTION 2 HARDWOOD PILES INTENDED FOR USE WITHOUT FULL-LENGTH PRESERVATIVE TREATMENT	
2.1 GENERAL .....	9
2.2 GRADE REQUIREMENTS .....	9
SECTION 3 HARDWOOD PILES INTENDED FOR USE AFTER FULL-LENGTH PRESERVATIVE TREATMENT	
3.1 GENERAL .....	11
3.2 GRADE REQUIREMENTS .....	11
SECTION 4 SOFTWOOD PILES INTENDED FOR USE AFTER FULL-LENGTH PRESERVATIVE TREATMENT	
4.1 GENERAL .....	13
4.2 GRADE REQUIREMENTS .....	13
APPENDICES	
A PURCHASING GUIDELINES .....	15
B APPROPRIATE PRESERVATIVE TREATMENT LEVELS FOR PILES .....	16
C DESIGN PROPERTIES .....	17
BIBLIOGRAPHY .....	18

## STANDARDS AUSTRALIA

## Australian Standard

## Timber—Heavy structural products—Visually graded

## Part 3: Piles

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out the minimum requirements for visually graded timber piles. These minimum requirements apply at the time of grading.

## NOTES:

- 1 Purchasing guidelines are given in Appendix A.
- 2 Information on preservative treatment is given in Appendix B.
- 3 The stress grades applicable to the strength groups are given in Appendix C.
- 4 The design requirements for piling are given in AS 2159 and the timber properties in general are given in AS 1720.1.

**1.2 APPLICATION**

This Standard shall be used in conjunction with AS 3818.1 to specify hardwood piles or softwood piles.

NOTE: Appendix B gives information on factors that effect choice of species, durability, and the necessity for treatment (e.g., whether driving into soil, fresh water or salt water).

**1.3 NORMATIVE REFERENCES**

The following are the normative documents referenced in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

## AS

1604	Specification for preservative treatment
1604.1	Sawn and round timber
3818	Timber—Heavy structural products—Visually graded
3818.1	Part 1: General requirements
5604	Timber—Natural durability rating

**1.4 DEFINITIONS**

For the purpose of this Standard, the definitions given in AS 3818.1 apply.

**1.5 MEASUREMENTS**

Where the size of a characteristic is measured against the diameter or circumference of a pile, that diameter or circumference shall be measured where the characteristic occurs.

**1.6 MEASUREMENT OF KNOTS**

The size of a knot shall be measured as the distance between two lines parallel to the longitudinal axis of the pile and enclosing the knot or cluster of knots.