

Australian Standard<sup>®</sup>

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

**Part 6: Decking for wharves and  
bridges**



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 3818.6.

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Standards may also be withdrawn.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 6: Decking for wharves and  
bridges**

Originated as part of AS (E)O54—1942 and Int 361—1952.  
Previous edition AS 3818.6—2003.  
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 9709 5

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-003, Timber Grading, to supersede AS 3818.6—2003.

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 decking for wharves and bridges with requirements for the visual grading, selection of species and design of timbers.

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 format of this Part of the Standard series from single section to multiple sections.

This Standard is Part 6 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
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 (this Standard)
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; and
- (b) 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 PURPOSE AND CONTEXT OF USE.....	4
1.4 NORMATIVE REFERENCE .....	5
1.5 DEFINITIONS .....	5
1.6 TIMBER SPECIES.....	5
SECTION 2 PRODUCT REQUIREMENTS	
2.1 GENERAL .....	7
2.2 DIMENSIONS, SIZES, TOLERANCES AND SQUARENESS.....	7
2.3 BOW AND SPRING .....	7
2.4 TWIST.....	7
2.5 COMBINATION OF CHARACTERISTICS.....	7
SECTION 3 GRADE 1 DECKING	
3.1 GENERAL .....	8
3.2 GRADE REQUIREMENTS .....	8
SECTION 4 GRADE 2 DECKING	
4.1 GENERAL .....	10
4.2 GRADE REQUIREMENTS .....	10
APPENDICES	
A PURCHASING GUIDELINES.....	12
B DESIGN PROPERTIES .....	13
BIBLIOGRAPHY .....	14

## STANDARDS AUSTRALIA

## Australian Standard

## Timber—Heavy structural products—Visually graded

## Part 6: Decking for wharves and bridges

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out the minimum requirements for visual grading of decking intended for use as decking for wharves and bridges where the nominal thickness of the decking is 70 mm or greater. These requirements apply at the time of grading.

## NOTES:

- 1 This Standard is intended to cover timbers for commercial, industrial and marine decking subject to vehicular traffic, such as for road bridges and shipping wharves.
- 2 Purchasing guidelines are given in Appendix A.
- 3 Stress grades applicable to strength groups for decking for wharves and bridges are given in Appendix B.
- 4 In order to maximize the working life of decking for wharves and bridges, timbers should be fixed in position with the heart side down.
- 5 Commercial, industrial and marine decking of less than nominal 70 mm thickness may be graded to AS 2082 or AS 2858 with additional limitations for open features on the top surface such as knot holes, loose or unsound knots, gum pockets, loose gum veins, shakes, termite galleries, want, wane and untreated sapwood which might otherwise lessen serviceability. For pedestrian traffic, these features are usually not permitted on the top surface.
- 6 The requirements for light decking (domestic decking) are set out in the AS 2796 series and the AS 4785 series for hardwood and softwood, respectively.

**1.2 APPLICATION**

This Standard shall be used in conjunction with AS 3818.1 to specify timber decking for wharves and bridges.

**1.3 PURPOSE AND CONTEXT OF USE****1.3.1 Function**

Decking forms the trafficable surface of wharves and bridges.

NOTE: The top surface of the timber deck is sometimes covered with bitumen or other sacrificial surfacing.

**1.3.2 Action**

Decking is subjected to—

- (a) wear and forces from the action of vehicles travelling and braking, crowds of people or stacking of materials;
- (b) forces occurring at connections;
- (c) the effects of exposure, such as ultraviolet radiation, temperature and moisture change; and