

TIMBER DECKING

info sheet

Meyer
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This information sheet is supplied by Meyer Timber to provide advice which may benefit in the selection, installation and maintenance of timber decks. As such it is not intended as a complete reference and clarification or more detailed advice should be sought from a suitably qualified building professional.

Decking Selection:

The species chosen for decking boards should take into account factors such as exposure, maintenance costs, and initial outlay. Often by spending a little more at the beginning you can save both time and effort over the long term keeping up the appearance of the deck. Radiata Pine (softwood) and Merbau (hardwood) are the most common species found but other hardwoods include Blackbutt, Spotted Gum, Balau, Pelawan and Cypress. The stability and durability of decking boards is roughly based on density as denser timber takes longer to absorb/expel the moisture which makes it expand and contract. Average densities of common species are shown below.

Species	Radiata Pine	Cypress Pine	Merbau (Kwila)	Blackbutt	Balau	Pelawan (Northern Box)	Spotted Gum
Density (kg/m ³)	550	700	850	900	900	1000	1100

Pencil round or Reeded are the typical decking profiles available as shown below. Reeded profiles can be laid with the ribs up or down although it is general practice to have the ribs facing down. This keeps the board to joist interface dry and also stops moisture retention that can occur between the ribs. Common board widths range from 70mm to 140mm. Narrower boards allow for better drainage and have less expansion and contraction with moisture changes so are less prone to cupping. Timber decking boards are normally laid on joists at 450crs. For this spacing a thickness of 19mm is required for hardwood and 22mm for softwood decking boards.

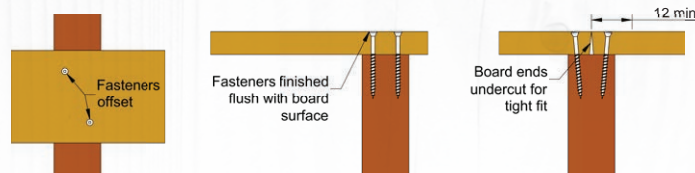
Pencil Round Profile

Reeded Profile

Decking Installation:

BEFORE INSTALLING When decking boards are delivered to site they must be stored on a flat surface, off the ground and kept dry. Prior to installation the decking boards should have an initial coating application on all four sides. This helps seal the timber to minimise moisture ingress and reduce the incidence of tannin/resin bleed.

INSTALLATION Timber decking is a natural material that will expand and contract. Make sure you keep a gap between decking boards to let water drain away and allow for movement. A gap of 10mm between deck boards and external walls of adjacent buildings is recommended for drainage. Board spacing depends on the width of the board but a guide is 3-4mm for 90mm boards and 5-6mm for 140mm boards. Note that if wet decking boards are laid, when they dry out the gaps between them will increase. Similarly if very dry boards are laid when they get wet the gaps could close up and even force the boards to start cupping in extreme cases. Joints should be staggered across the run of boards. End butt joints should be undercut and pressed together to prevent any gaps opening up if contraction occurs. There are many different fasteners for decking boards, including proprietary hidden fixing systems, and individual manufacturers should be consulted on suitability. Fastener specification depends on the joist material the decking boards are being secured to, with some examples shown below.

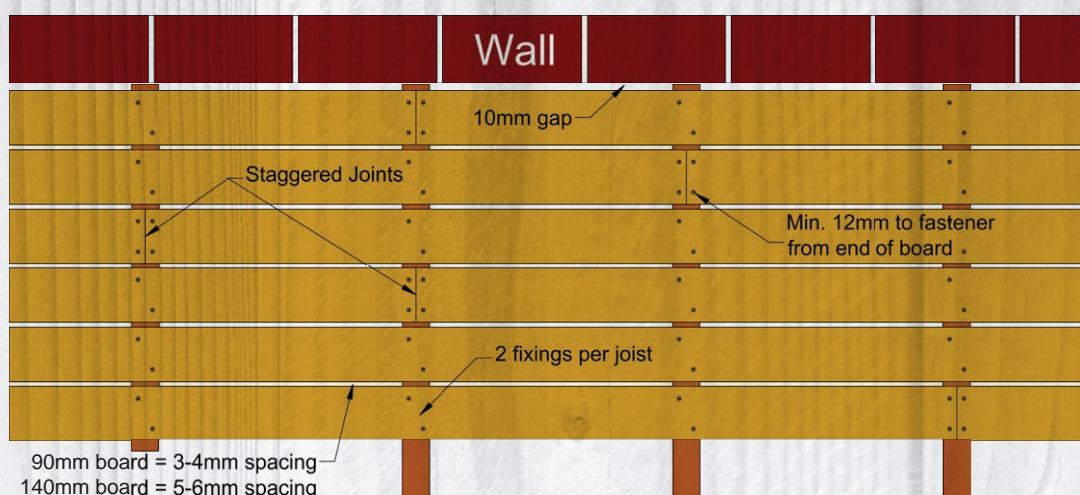


Decking should be fixed at every joist with at least two fasteners. Screws or nails at butt joints should be at least 12mm from the end of the board and pre-drilling is recommended to prevent splitting.

	Nails	Screws
Softwood Joists	65mm long x 2.5Ø galvanised flat head ring shank nails	10g x 60mm long galvanised timber deck screw (Type 17)
Hardwood Joists	50mm long x 2.5Ø galvanised flat head ring shank nails	10g x 50mm long galvanised timber deck screw (Type 17)
Steel Joist	N/A	10g x 40mm long countersunk winged self-drilling screw

HOW LOW CAN YOU GO?

Special precautions should be taken if the decking is less than 400mm off the ground to ensure adequate ventilation and drainage of the subfloor space. Consult a qualified professional for advice.



Maintenance:

IMMEDIATELY FOLLOWING INSTALLATION Once the decking boards have been installed a coating should be placed on the boards as soon as possible. This is the initial maintenance regime to maintain UV stability and weather resistance. There are many different coatings and the individual manufacturer should be consulted to obtain the right product. For fully exposed areas it is recommended that an oil based coating (rather than water based) be used. The more care taken with the initial coating the better the long term performance of the deck. This should be considered when deciding how many coats of oil or paint to apply directly after installation.

MAINTENANCE Timber decking will provide years of service if maintained regularly. Maintenance intervals are dependent on many factors including exposure levels and amount of traffic. When the deck shows signs of wear such as excessive surface checking, drying out, bleaching, or the like an additional coating should be applied. Follow all manufacturers' recommendations on maintenance including removal of debris and discolouration with a decking cleaner. If maintained properly and regularly in the initial period the coating will soak into the board and tend to build up within the timber. This will protect the board better and lead to an increased maintenance period over time. It is important to continue to maintain the deck throughout its life to prevent degradation.

LONG TERM APPEARANCE AND EXPECTATIONS A timber deck is a natural product which contains varying levels of imperfections. This is part of the beauty of the material. From the day it is laid the timber will continually change in moisture content and be exposed to UV from natural sunlight. Weathering of timber decking boards over time can result in visual changes such as opening or closing of gaps between boards, possible opening up of butt joints, and varying degrees of face checking. Weathering is reduced with increased maintenance but it is unlikely that it will not happen at all, and it becomes more prominent with increased exposure to sunlight and weather.

ADDITIONAL RESOURCES FWPA Design Guide #21 – Domestic Timber Deck Design (www.woodsolutions.com.au)



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