



Port Phillip Landscaping

# RADIAL INSTALLATION GUIDE

## SCREEN BOARDS

MARCH 2024



**radialtimber**  
USING WOOD WISELY

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# 1.0 INTRODUCTION



Architect: Green Sheep Collective  
Construction: Elyte Focus  
Photography: Emma Cross

Radial Timber screen boards are a versatile option providing alternatives for a wide range of applications. From a stunning facade to a privacy screen, Radial Timber has an extensive range of screen boards to suit all designs.

Screen boards are available in our unique bevelled edge and square edge profiles that feature smooth dressed or rough sawn finishes. There are a range of different profile sizes which can be supplied in random or common set lengths to suit your needs. The screen boards have been used as a feature on fences, architectural ceiling battens, soffits, high end timber for facade lining and as climate control screening in alfresco areas. They can be fixed either horizontally or vertically.

Radial Timber screen boards are sawn from selected naturally durable regrowth or plantation grown Australian hardwoods all of which have a Class 1 or 2 durability rating, which meets the required durability standard for external applications. We supply most screenboard profiles in two grades, standard and better or high feature discounted grade. The rough sawn green unseasoned screen boards are visually graded.





# 1.1 SUSTAINABILITY



## 1.2 WHERE DOES OUR TIMBER COME FROM?

Radial Timber is committed to the sustainable management of our timber resources. All Radial timber products are currently supplied through sustainable regrowth or plantation timber partners, unless specified otherwise.

Our vision is to become totally self sufficient by managing our own saw log plantations of durable hardwood in Gippsland. In 2004 we put in place a plan to establish at least 2000 hectares of native hardwood plantations, since then we have been planting and managing these plantations every year. We also acknowledge that we must work together with industries and government bodies to carefully manage our native regrowth timber resources to ensure a sustainable future for all. We truly believe you can love both timber and trees, if we work together to do so sustainably.

## 1.3 RADIAL SAWING METHOD

Radial Sawing was specifically designed to maximise the recovery of sawn timber from smaller logs. As such, Radial Sawing has a range of both environmental and technical benefits. Where conventional sawing methods require large diameter logs Radial Sawing technology helps make native hardwood plantations logs more viable by maximising the yield of high value timber products from much smaller logs.



Radial sawing works by quarter sawing a log into wedges (like a pizza) from these wedges the log is then back sawn into varying sizes of bevelled edge boards. These bevelled edged, rough sawn boards can be used unseasoned (green) for products such as Board & Batten or Screening. Alternatively the boards can be racked out for air drying, to then be kiln dried and moulded into high quality profiles such as Shiplap Cladding or Decking.

Other Radial Timber environmental endeavours include our new Bioenergy and LVL peeling plant both due to be commissioned in 2024/25.





## 2.0 PRE-PLANNING

Architect: Zen Architects  
Construction: Truewood con  
Photography: Emma Cross

### 2.1 PROPER STORAGE OF TIMBER ON A CONSTRUCTION SITE

Timber should be stored up off the ground on bearers and preferably inside in a cool dry area or protected with an additional heavy-duty tarp to prevent rain damage. When the screenboards are delivered they will be wrapped in thin plastic, this is not a waterproof barrier and care must be taken to ensure boards don't get wet as this can cause issues with movement of timber after installation. If wetting does occur, separate the timber with strips between each layer, and place in a well-ventilated area allowing a minimum 48 hours to dry before installation. Properly stored timber will reduce the risk of moisture born problems such as warping, swelling or water damage and contribute to the overall quality and performance of the construction project.





Designer: Esjay Landscapes  
Construction: Esjay Landscapes

## 2.2 MOISTURE CONTROL

Dressed kiln dried screen boards are dried to 12-14% and will exhibit some seasonal movement (especially on the west side of a structure). These changes are a result from daily humidity changes which are often small and usually of no consequence if installed correctly. Some unseasoned and 'green' screen boards can be supplied which will shrink back in situ so a higher degree of movement should be expected.

Avoid installation on inclement days of weather protect the timber from water exposure at all times, this will ensure the performance and longevity of the external cladding. This is especially the case for the green unseasoned screening as extreme conditions increase the risk of boards cupping or distorting due to unnatural moisture loss. It is advisable to have boards pre-oiled on all sides before installation to help regulate the moisture and allow the boards to acclimatise.



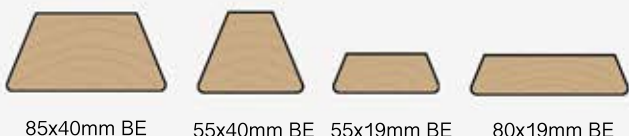
# 3.0 PROFILES



Construction: Moon Building Group

## 3.1 SCREEN BOARD PROFILES

Dressed kiln dried bevelled edged screen boards



Rough sawn unseasoned bevelled edge screen boards



Dressed kiln dried square edged screen boards



Radial Timber Screen Boards are supplied as a series of bevelled edged or square edge, kiln dried and dressed or fine sawn unseasoned (green) textured profiles.

There are several board variations available either in random (1.0m-6.0m average length 3.0m) or common set lengths such as 1.2, 1.5, 1.8, 2.1, 2.4 or 3.0m. These set lengths are not precision docked and will be slightly longer. All lengths are subject to availability. (A surcharge and additional lead times will be applicable to all set length orders).

If being used on hinged or sliding gates please check with Radial Timber for the differing weights.

A cost effective, kiln dried, discounted grade timber with higher feature is also available, subject to availability.

Recommended screw size  
3.5mm - 5.5mm x 50mm - 70mm Stainless steel.  
Radial Timber can supply these on request.



# 4.0 INSTALLATION

## 4.1 WEATHERPROOFING

Screen boards exposed to the sun and rain (north – northwest elevation) will shrink and swell more than semi protected boards, this will especially be the case for the green unseasoned boards.

Using screenboards on a facade requires installation of a good quality vapour permeable fabric wall wrap or sarking, which are additional layers of protection that shield the timber frame from water-related weather damage such as condensation, mould or rot. It also allows moisture to escape from the inside of the structure.

## 4.2 LAYOUT AND FIXING

The information provided outlines the recommended methods for fixing screen boards to ensure that your battens are installed correctly and will provide a long lasting, attractive finish for your project:

**Layout:** Radial Timbers signature bevelled edge screen boards or square edge can be installed either horizontally or vertically. With both orientations possible, the vertical orientation is often preferred with the narrower face positioned outwards.

**Gap spacing:** Boards that are exposed to the sun and rain (north-north-west elevation) will shrink and swell more than semi-protected boards. It is important to leave recommended expansion gaps to allow for natural movement.

As a general rule an expansion gap of at least 5mm is suggested on all dressed boards.

Expansion gaps can be varied depending on the level of privacy sought. Most privacy or sun screens are spaced at approximately 10-20mm. Unseasoned (green) screen boards will shrink approximately 7% across their width so this should be considered when designing a screen.

**Fencing, privacy and sun screens:** If being used for an external decorative screen or fence the screen boards should be face fixed with stainless steel screws ensuring correct installation methods to avoid unnecessary end grain splitting. For the 19mm thick board use a 50mm long fastener and for 40mm thick battens use 70mm length. (Radial Timber can supply stainless steel screws fixings if required). For internal applications the screens can be both glued and nailed or screw fixed. 45-55mm screen boards will require one fixing through the face of the board while 80mm boards will require two fixings through the face. Boards are secured onto either metal or timber rails at a spacing of 600-800mm.

**Ceiling battens:** When using screen boards on a ceiling for decorative/architectural appearance, batten spacing should be every 450mm to reduce sag. For internal and undercover applications, the screens can be both glued and nailed or screw fixed.

**Take note;** if gluing and nailing internally, do not oil the back side of the board as this may affect the performance of adhesive bonding. 45-55mm screen boards will require 1 fixing through the face of the board while 80mm boards will require 2 fixings through the face.

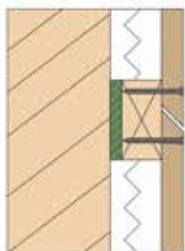
**Facade:** Screen boards being used for the façade of a building, batten spacing should be between 450-600mm. For the 19mm thick board use a min 50mm long fastener and for 40mm thick battens use min 70mm length.

If fixing to a backing board such as ply or cement sheet, for internal or undercover applications the screens can be both glued and nailed or screw fixed. If the boards are being installed externally they should be screw fixed through the sheeting into the horizontal battens behind. 45-55mm screen boards will require 1 fixing through the face of the board while 80mm boards will require 2 fixings through the face.

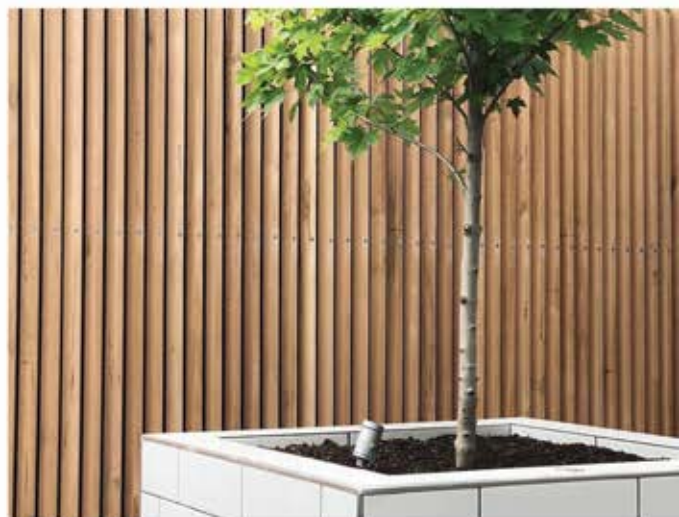
**Ground contact:** The bottom end of boards should not come into contact with the ground. Leave at least a 100-150mm gap to provide ventilation and avoid decay and staining from ground moisture.

**Coating and end seal:** Pre-oiling timber prior to installation on all four sides is recommended as it helps to create a protective barrier. All end cuts should be sealed. The top of the screen can be cut on a slight angle to allow water to run off and not pool on top of the end grains.

## 4.3 JOINS



A recommended end vertical joint or connection to make is a mitred cut which should then be fixed over a batten. A commercial flexible construction adhesive such as (SikaBond) can be applied to facilitate a good tight seal and any excess glue squeezed out should be allowed to dry before peeling off so as to avoid smudging into wood grains.





# 5.0 FINISHING & COATING

## 5.1 TIMBER OILING AND STAINING

When selecting external finishes for cladding, decking or vertical screening, it's important to strike a balance between aesthetics and durability. Hardwood timbers are best provided with some weather protection while acclimatising to local conditions and to repel and control moisture. This will minimise splitting, cracking and checking that naturally occurs in timber.

There are a variety of timber treatments, stains and coatings available and these should usually be applied on all sides of the board prior to fixing into position especially in the case of interlocking or overlapping boards such as shiplap.

Radial Timber recommends the application of a high quality oil or water based penetrating sealer which is equipped to handle the Australian elements and movement of timber caused by moisture variations. We don't recommend a film coating as this will generally not breathe adequately and be susceptible to peeling down the track.

Some points to consider:

- Care must be taken to well coat any end grain to minimise water absorption or loss.
- Narrower boards reduce the amount of stress placed on the coating system.
- Coatings on timber exposed to the north and west will deteriorate more rapidly than on south facing surfaces or in shaded areas.
- Darker stains may cause more movement due to heat.
- Timber must be sufficiently dry when coated so avoid periods of inclement weather.
- Timber partially sheltered by overhanging eaves will weather at a different rate to more exposed timber.

Radial Timber can offer a cost-effective in-house pigmented oil, clear sealer or other coloured options prior to despatch.



Construction: Tha Constructions  
Finish: Rustic Weathered Finish

Architect: Phillipspilkington  
Construction: Nicholson Construction

Architect: Figr Architects  
Construction: Grundella Con  
Photo: Tom Blachford  
Finish: Radial Timber Sealer



# 6.0 TIMBER CARE & ADVICE

## 6.1 MAINTENANCE OF FINISHES

The long-term performance of a timber finish is dependent on regular and effective maintenance. The frequency of maintenance will depend on the type of finish and the degree of exposure to the weather. Recoating and any further preparations should be carried out in accordance with the coating manufacturer's specifications.

## 6.2 SEASONING AND WEATHERING

Some minor surface checking may occur when the timber is exposed to the weather but these non-structural cracks are typical in most Australian hardwoods (NOTE: unprotected west facing walls may be subject to extreme temperature changes and therefore, timber is more likely to check or move). On these walls it's best to try and avoid any joins on the random length boards or consider another product

All exposed, externally fixed cladding will tend to fade to a silver-grey colour if left uncoated. The degree of greying will vary depending on the amount of exposure to sun, wind and rain.

## 6.3 TANNIN LEACHING FROM TIMBER

It is normal for hardwoods to leach red/brown tannins during heavy rain periods.

Tannins tend to be less prominent in lighter species but it is advisable to cover or protect walls and paving until all tannins have fully leached (can vary depending on rainfall but will generally continue for up to 6 months). If tannin staining occurs on other surfaces it can generally be cleaned back with a diluted bleach/water mix or mild oxalic acid wash.



## 6.4 IRON STAINING AND CLEANING

Iron stain, is an unsightly blue, black or grey discolouration and can occur on nearly all woods. The discolouration is caused by a chemical reaction between tannins in the wood and iron in steel products. Problems have been associated with traces of iron left on wood from cutting or slicing, or more commonly iron dust from metalworking. This often occurs after rain or dew, when water enables the tannins and iron to meet and react. Its very important that no metal work or grinding happens near timber as the filings will cause this contamination. The majority of this staining can be cleaned off by washing with a 5% solution of oxalic acid. This should revert the timber back to its near original clean timber appearance. (Radial Timber can supply oxalic acid).







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## 7.0 ADDITIONAL INFORMATION

### 7.1 ADDITIONAL INFORMATION

Additional information such as specs, blogs , videos and full construction drawings can be found on our website at [www.radialtimbers.com.au](http://www.radialtimbers.com.au)

You can also call the office on **(03) 9768 2100** or email [sales@radialtimbers.com.au](mailto:sales@radialtimbers.com.au) anytime to discuss any installation queries.