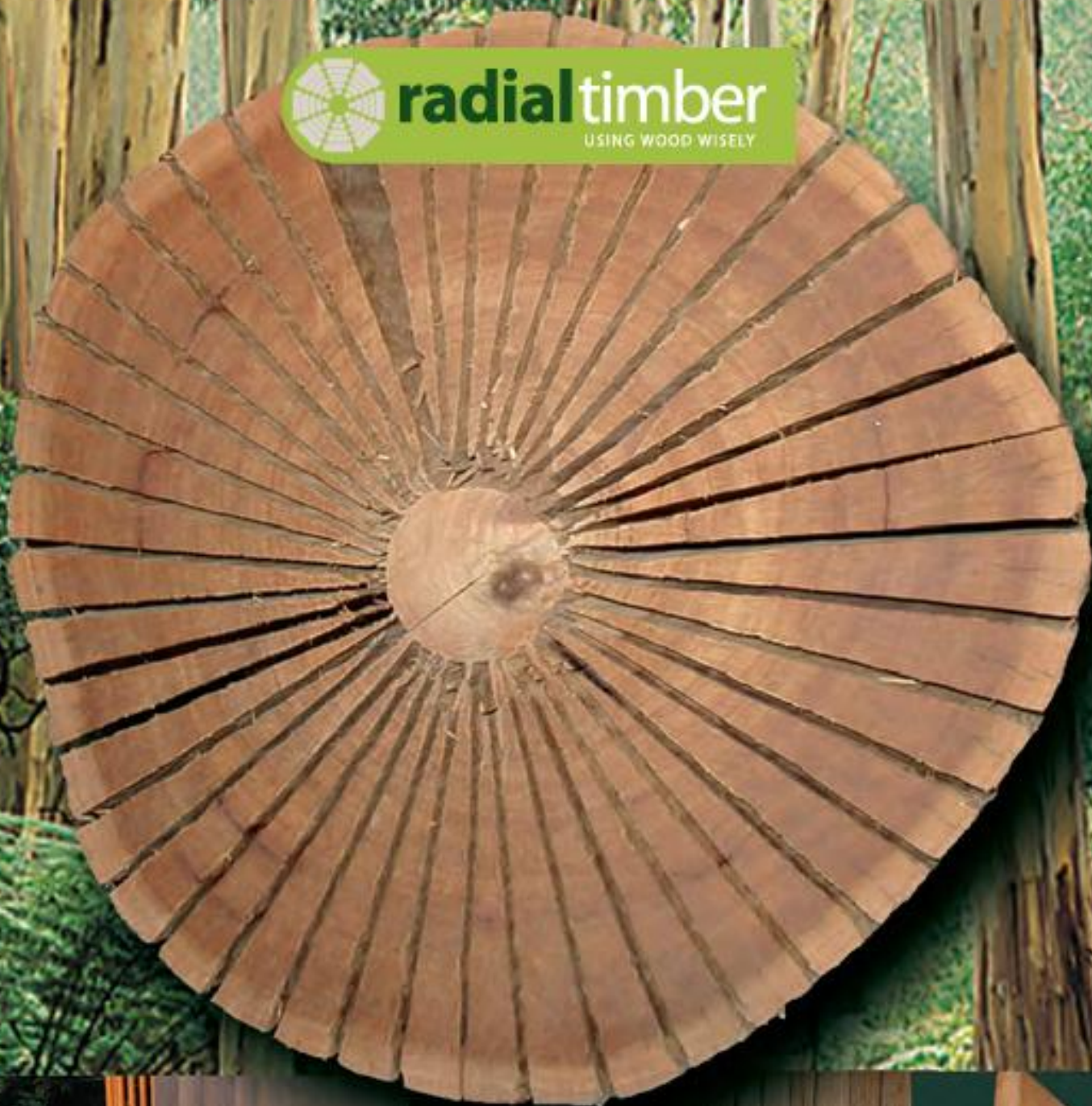




radial timber

USING WOOD WISELY



Lining

Radial Sawn Product Specifications
Lining Spec Nov.2015

Secret Fixed Lining Board

1.0 PRODUCT

Radially sawn secret fixed lining boards provide a stylish and modern alternative to traditional softwood or manufactured sheet cladding systems. The lining is profiled from back sawn boards that interlock to produce a continuous vertical or horizontal lining system. Radially back sawn boards can be identified by the alignment of growth rings, which are basically parallel to the broad face of the board.

The 13mm secret-fix lining boards are designed to match the profile of our standard 19mm Secret-Fix Shiplap boards and are typically used in the following applications: Garage door linings, internal feature lining, eaves lining and for alfresco areas.

2.0 SPECIFICATIONS

2.1. Species

The lining boards are generally sawn from naturally durable regrowth hardwoods such as Silvertop (Eucalyptus Sieberi) or sometimes Yellow Stringybark (Eucalyptus Muellerana) both of which are Class 2 durability.

NOTE: Silvertop is one of the approved species for use in “high fire danger” areas by Building Control Comm. Practice Note No. 46 (Dec. 2001) and AS3959 – Construction of buildings in bushfire-prone areas and has a BAL 29 exposure rating. Yellow Stringy Bark has a Bal 19 exposure rating.

2.2. Grade & Moisture Content

All timber is supplied as standard and better grade (not select) and dried to maximum moisture content of 14%. Small tight knots, gum veins, splits, ambrosia and other marks are acceptable features that sometimes occur in boards. Timber is graded in accordance with the Australian Standard AS 2796.2-2006 Timber Hardwood Sawn and Milled Products / Part 2.

The moisture content of the timber depends on the relative humidity of the air and also its temperature, which is influenced by the colour of

the surface coating. Dark coloured surface coatings absorb more solar energy, resulting in higher temperatures and lower moisture content. If the moisture contents are too low at the time of installation, problems can occur with rebated board profiles if sufficient expansion gaps are not left between the boards.

2.3. Durability

The durability rating of a timber species is a rating of the timber's natural resistance to attack by wood destroying fungi and wood destroying insects. The natural durability rating applies only to the heartwood of a timber species and the Silvertop has a rating of Class 2 with approx above ground durability of 25 year plus and much longer for undercover and sheltered positions

2.4. Sketch/Sections

Virtual samples and auto cad files of profiles are available on the Radial website <http://radialtimbers.com.au/products/lining/>



Figure 1

2.5. Profile

Secret fixed lining boards are supplied as a series of dressed 13mm thick boards with square shaped tongue and rebate joints (see Figure 1 above) available in two cover widths of 70 & 90mm the boards interlock and it is designed so it can have a concealed screw or nail fixing (see figure 2).

2.6. Lengths & Availability

Boards are generally supplied in random lengths of between 1.2 to 2.7m and are not end matched

3.0 FINISHING

If the lining boards are being used outside under eaves etc it should be offered some weather protection while acclimatising to local conditions and to repel and control moisture, hence minimises splitting, cracking and checking that occurs in timber.

3.1 Timber Oiling or Staining

For outside installations Radial Timber recommends the application of an oil based sealer or quality penetrating timber finish. Timber oiling, coatings or staining will not stop the weathering process, but will slow it down and acts as a sealer and assists in slowing down moisture loss or gain.

There are a variety of timber treatments, stains and coatings available and seek help from a professional paint supplier. If being used externally care must be taken to well coat any end grain to minimise water absorption or loss. A film coating such as polyurethane can be considered for an inside application.

3.2 Preventative Care To End Grains

For lining board use in outside environments all end joints of boards and end grain must be sealed to prevent moisture entry as the end grain is far more absorbent than the face grain. The end grain must be well sealed to prevent rapid moisture uptake and drying out which can cause splitting and movement of the boards.

Critical end grain locations are at mitred corners (not recommended for exposed locations) or splayed joints and the top and bottom of vertical boards. Horizontally butted boards into corner stops are also an area that needs special attention.

3.3 Finishing Points To Consider

Some of the points to consider about the coating selection and durability are: 1) Lighter coloured paint finishes generally last better. 2) Narrower boards reduce the amount of stress placed on the coating system. 3) Coatings on timber exposed to the north and west will deteriorate more rapidly than on south facing surfaces or in shaded areas. 4) Timber must be sufficiently dry when coated. 5) Timber partially sheltered by overhanging eaves will weather at a different rate to more exposed timber.

3.4 Recommended Cleaning

Iron stain, is an unsightly blue-black or grey discoloration and can occur on nearly all woods. The discoloration is caused by a chemical reaction between extractives in the wood and iron in steel products, such as nails, screws, and other

fasteners and appendages. This often occurs the first morning after rain or dew, when water enables the extractives and iron to meet and react.

Problems have been associated with traces of iron left on wood from cutting or slicing; cleaning the surface with steel wool, wire brushes. Iron dust from metalworking and even plant fertilizers can be sources of iron. To clean off the majority of all staining it's best to clean all boards down with a 5% solution of oxalic acid after installation to obtain a clear timber surface (Radial Timber can supply oxalic acid).

4.0 PERFORMANCE

4.1 Maintenance

The long term performance of lining if used in an expose environment 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 finish manufacturer's specifications.

4.2 Seasoning & 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 or garages may be subject to extreme temperature changes and therefore, timber is more likely to check or move). On these walls is best not to have any horizontal or vertical joints on the random length boards).

All exposed, externally fixed lining on garage doors etc. 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. The timber used in this above ground product has natural durability and when used in conjunction with good building practices, should generally not require additional treatment against decay.

4.3 Timber Leaching

If used outside in an exposed situation such as garage doors it is also normal for hardwoods to leach red/brown extractives (tannins) during

heavy rain periods. Extractives tend to be less prominent in lighter species but it is advisable to cover or protect walls and paving until all extractives have leached (can vary depending on rainfall but will generally continue for up to 6 months). The tannin staining can be cleaned with a diluted bleach/water mix.

5.0 STORAGE & INSTALLATION OF SECRET FIXED Lining Boards

5.1 Storage

Packs should be stored up off the ground on bearers and under cover or protected with an additional tarp to prevent swelling. When the lining is delivered wrapped in plastic, it is important to check that the wrapping is not damaged and likely to allow water to be trapped within the stack. If wetting does occur, separate the timber with strips between each layer. Place in a well-ventilated area under cover and allow a minimum of 48 hours for timber to dry before fixing. Radial Timber will not be held responsible for incorrect storing of the timber.

5.2 Setting up

The lining boards are typically installed in a regular pattern with the tongues and grooves of adjacent boards fitted together (see Figure 1). **The lining boards will exhibit minimal shrinkage and will actually swell slightly in wetter regions or exposed areas making it essential to ensure boards have an approved gap to allow this movement.** The secret fix lining has a slightly raised shadow line which will act as a guide. The neighbouring board should not be pushed beyond this point. Noggings, fixing battens or studs should be spaced at max. 600mm centres. If the lining boards are run vertically a fixing batten may make installation easier.

5.3 Installation & Layout

Preferably layout of the boards should be in a vertical position for better water runoff especially in very exposed locations such as near the coast. Boards can be fixed directly to breathable moisture vapour barrier clad walls (if applicable)

If fixed horizontally, the tongues of each lining board should face up to prevent water from being trapped inside joints but the preferred recommendation is for this board is to run it vertically. On long runs, boards may have to be butt or splayed joined over battens with the use of a flexible glue/sealer on the joined ends,

5.4 Board Spacing & Weatherproofing

Boards must be installed with a 3mm gap between them which is indicated by the shadow line which is a very slight raised section on the tongue. This spacing will allow for movement of the timber as ambient humidity and conditions change.

Boards exposed to the sun and rain (north – northwest elevation) will shrink and swell more than semi protected boards. Recommended expansion gaps are critical on these exposed elevations as is eliminating any butt joints and where possible provide some weather protection with eaves, veranda, or similar.

5.5 Fixing Recommendations

The lining boards should be fixed with small headed 50mm long 7 gauge (3.8mm) counter sunk stainless steel (304, A2 or 316 grade) decking screw or suitable nail.

If using screws care should be taken close to ends by predrilling to avoid splitting i.e (Radial can supply these self-countersinking stainless steel screws fixings). The fixings should be installed on a slight angle so that they sit flush on the tongue allowing the over lapping board to lock into place against the shadow line. Holes can either be predrilled

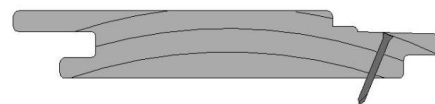
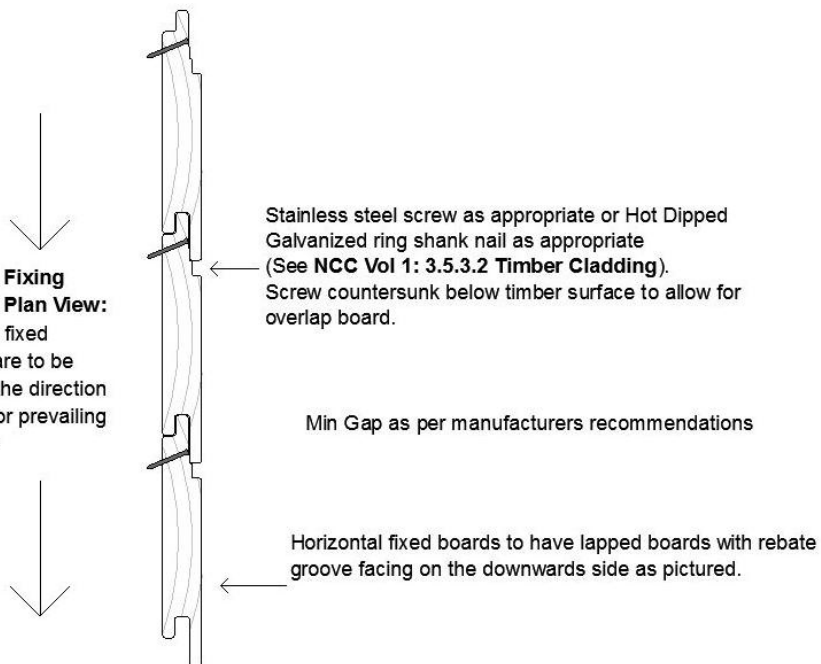


Figure 2

Secret nail shiplap boards in cross section showing proposed fixing position of the screws

**Vertical Fixing
Method Plan View:**

External fixed boards are to be fixed in the direction shown for prevailing weather



**Radial Secret Fix Lining Board (Square Edge Profile)
70x13mm, 90x13mm (Board cover)**



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