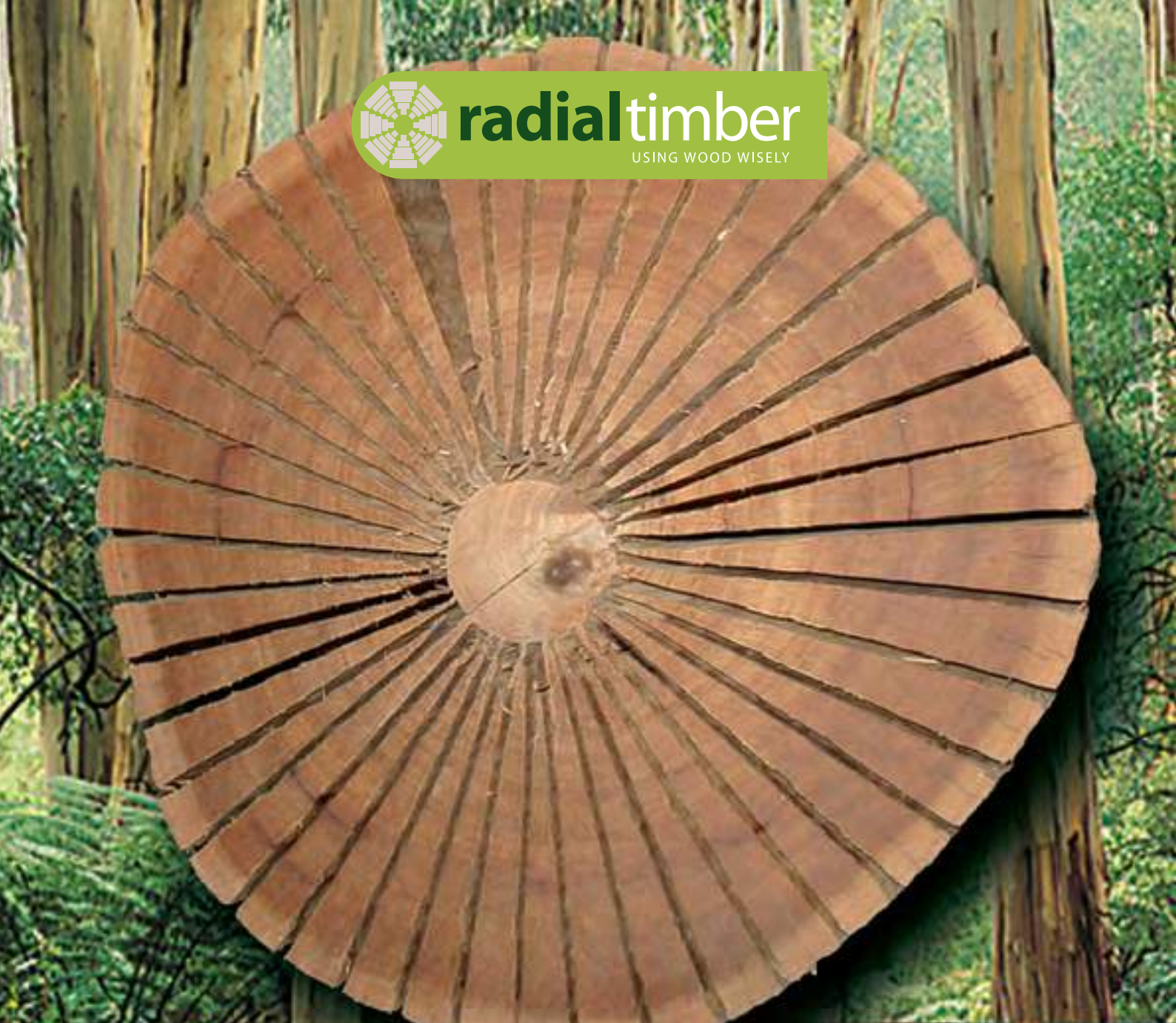




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USING WOOD WISELY



External Cladding VERTICAL BOARD & BATTEN

Board & Batten
rev May 2018

External Cladding – 25mm Vertical Board & Batten

1.0 PRODUCT

Radially sawn Board & Batten cladding is a unique alternative to traditional horizontal cladding systems. Radially sawn boards are produced by cutting logs into wedges and then are re-sawing these wedges to produce back sawn bevelled edge cladding boards. Back sawn boards can be identified by the alignment of growth rings, which are basically parallel to the broad face of the board. Board & Batten vertical cladding is unseasoned, fine sawn and generally supplied in two standard widths.

Board & Batten cladding has been used as a feature on: houses, commercial projects, fences, visitor centres, lifesaving clubs, holiday homes & sheds. For images of board and batten cladding visit: <http://www.radialtimbers.com.au/products/board-and-batten/>

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 grade description. Also see examples of board variations on our website.

The board & batten is supplied unseasoned and 'green' which means that the moisture content is initially relatively high as the timber is cut fresh from a saw log. All 'green' timber shrinks to some extent as it dries; resulting in a direct loss in volume therefore it's extremely important that the fixing and spacing/overlap recommendations are strictly followed. It should be noted that rapid shrinkage is a direct cause of the premature cracks or cupping that occur on the surface or ends of sawn timber. Where possible try to manage rapid moisture loss especially during very hot & windy summer periods. It is not recommended that installation is done during this time especially on very exposed north facing walls so planning and the timing of installation is critical. A clear water repellent sealer (like radial sealer) will also help slow drying

2.0 SPECIFICATIONS

2.1. Species:

Radially sawn Board & Batten cladding is generally sawn from naturally durable regrowth hardwoods such as Silvertop Ash (Eucalyptus Sieberi) which has a Class 2 durability rating.

NOTE: Silvertop Ash 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 BAL29 exposure rating. Yellow Stringy Bark has a Bal 19 exposure rating.

2.2. Timber Grade, Moisture Content & Shrinkage

All timber is supplied as standard and better grade (not select). Small tight knots, gum veins, splits, ambrosia and other marks are

2.3. Durability

The natural 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 Silver Top Ash has a rating of Class 2 with approx above ground durability of 25 year plus.

2.4. Sketch/Sections:

Virtual sample attached files of the profile are available on the Radial website www.radialtimbers.com.au



Figure 1
(Board & Batten in cross section)

2.5. Profiles:

Board & Batten vertical cladding is supplied as a series of nominal 25mm thick “base” and “batten” boards featuring 22.5 degree bevelled sides (see Figure 1 above). The width of each base board is typically 75mm or 100mm but a wider 125mm board may be available on request. Each batten or cap board is typically also 75mm or 100mm wide. All base boards feature a rough sawn finish and are supplied unseasoned (ie. will shrink naturally).

2.6. Lengths & Availability & Ordering:

All Board & Batten orders require a minimum of 2 - 4 week lead time from the confirmation of order and sometimes longer during the busier months so advance ordering should be planned as all timber is cut fresh at the mill. Boards are supplied in random lengths ranging from 1.5m to 5.4m (av. lengths approx. 4.0m). Board & Batten cladding should be ordered by the square metre and is supplied with an allowance for the overlap cover included.

Fixing battens or noggings should be spaced at maximum of 600mm centres.

While

fixing battens may increase the overall wall thickness, they can be quicker to install and easier to install than several levels of noggings. Typically we recommend 75x35 CCA treated pine for the horizontal batten.

The moisture vapour barrier should be fixed to the stud wall with the fixing batten installed over it.

3.2. Installation & Layout

When fixing the wider base boards, ensure gaps are set so that the cap board will cover the edge of each base board by a **minimum of 25 to 30mm** to allow for natural shrinkage. For the standard 100 & 75mm combination of boards, a gap of 25mm should be allowed between base boards. Cap boards should be fixed properly to base boards, to facilitate the boards seasoning and ‘locking’ together, and avoiding uneven movement. Minor gaps can occur during the seasoning process between the boards and this is nothing to worry about. **Boards should not be installed on hot windy days in full direct sun**, as these conditions increase the risk of boards cupping or distorting due to rapid moisture loss.

3.3. Seasoning & Storage

Some surface checking may occur during seasoning but these non structural cracks will close again as moisture content in the boards equalise (NOTE: Unprotected north or west facing walls may be subject to extreme temperature changes and therefore, timber is more likely to check or move).

Once the timber has arrived on site packs should be kept fully wrapped in the shade, weighted and off the ground on bearers in a level position before fixing to prevent uneven drying or distortion. It is not recommended that the timber be stored on site for a prolonged period of time especially over the drier summer months.

3.0 FIXING & APPLICATIONS

3.1. Fixing Recommendations:

Base boards can be gun nailed with ring shank nails or hand nailed but care should be taken close to the ends. For the cap board use 65mm stainless/gal bugle batten screws. Board and batten is supplied in freshly cut grain boards which should be installed within 4 weeks of being milled to ensure the best round quality. It is important that orders are placed so that boards are not stored on site for more than 2 - 4 weeks. They should be kept wrapped in plastic with a tarp over the pack to avoid the boards drying out before fixing.

Board & Batten cladding is typically installed in a regular pattern with base boards spaced and fixed to the frame first (wide face out). Batten or Cap boards are then fixed over the gap with the narrow face out (See Figure 1).

3.4. Timber Leaching

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.

4.0 FINISHING

4.1. Timber Oiling & Staining Or Natural Weathering

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. 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. Differential weathering between protected and exposed areas can produce colour variations. This can result in marked variations in appearance.

Native timbers should be offered some weather protection while acclimatising to local conditions. There are a variety of timber treatments, stains and coatings available and most could be applied to the base board prior to fixing the cap or batten board so the full face coverage is obtained prior to any seasoning or natural shrinkage occurring. Care must be taken to coat any end grain prior to butting vertical boards together to minimise water absorption or loss. We don't recommend a film coating as these treatments are generally not breathable and will eventually peel and bubble due to UV which also traps in moisture.

When a weathered/naturally greyed off appearance is required Radial Timber recommends the application of an oil based sealer or quality penetrating timber finish (Radial Timber Sealer) which will assist greatly in enriching the timber and allowing it too dry and weather slowly and uniformly.

4.2. Recommended Cleaning

Being an unseasoned and undressed product boards can mark during the machining process. They can also stain easily especially when they come into contact with rain or metal. Iron stain, is an unsightly blue-black or grey discoloration and can occur on almost all green timber. The discoloration is caused by a chemical reaction between extractives in the timber 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 timber 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).