radialtimber
USING WOOD WISELY

WEATHERBOARDS

NATURAL EDGE (NE)

Natural Edge Weatherboards

1.0 PRODUCT

Natural edge weatherboards are produced by a patented sawing method that produces perfectly quarter sawn boards. Quarter sawn boards are very stable and can be identified by the alignment of growth rings which are generally at right angles to the broad face of the board. Natural Edge Weatherboards are sawn from strong hardwood timber and are supplied **unseasoned**, shrinking with virtually no distortion and minimum checking on the exposed face.

Suggested Applications:

Natural edge weatherboards have been used as an external cladding or feature wall on: houses, apartments, visitor centres, universities, sheds, barns & fences.

For images of weatherboards visit: http://radialtimbers.com.au/gallery/weatherboards/

2.0 SPECIFICATIONS

2.1. Species

Natural edge weatherboards are generally sawn from durable regrowth hardwoods such as Silvertop (ie. Class 2 durability). Other species (inc. plantation grown timber) may also be available as a special request from *Radial Timber Sales.*

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 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.

The natural edge weatherboards are supplied unseasoned and 'green' which means that the moisture content is initially quiet 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 the 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.

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 has a rating of Class 2 with approx above ground durability of 25 year plus.

2.4 Sketch/Sections

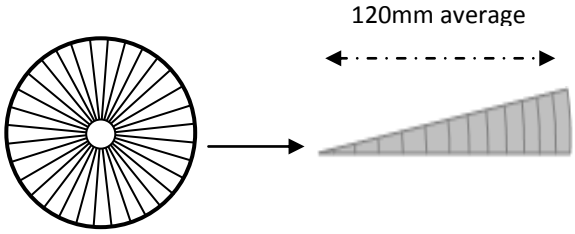

Figure 1 (Natural Edge Weatherboard log in cross section)

Figure 2 (Natural Edge Weatherboard in cross section)

2.5 Profiles

Natural edge weatherboards vary in cross section and profile depending on the diameter and profile of the log from which the boards have been cut. **On average, boards will have cover of around 110-120mm but the cover may be as little as 80mm and as much as 160mm (cover of more than 160mm is typically not**

recommended). The target width is 25mm thick at the outer or sapwood edge but this will vary along the board due to log taper, and increase as log diameter increases. Boards are unseasoned (ie. will shrink) and feature a sawn finish. Thinner weatherboards (for internal linings) are also available from *Radial Timber Sales* as a special order.

2.6 Lengths & Availability

Natural edge weatherboard logs are generally kept in stock. Logs are supplied with random board lengths ranging from 3.6 to 5.4m. Longer logs may be available from *Radial Timber Sales* as a special request and when available. Timber Radial does not recommend the cutting of the logs before being freighted however if this is unavoidable due to customer requirements a 30% surcharge will be applied and subject to longer lead times.

Set Length orders can be targeted by log length. Radial Timber Sales will endeavour to supply logs of requested length, however, availability will depend on current supply at the time and some extra allowance must be required to achieve board length requested.

Small end log diameters typically range from 380 to 420mm. Boards are ordered by the square metre with an average log containing between 14 and 25m2 of weatherboards (weight of one log is approx 750 Kg).

3.0 FIXING & APPLICATIONS

3.1 Transport to site

Natural edge weatherboards are supplied unseasoned and generally transported to site in log form with the ends uncut. It is not uncommon for logs to break open or boards to split during transport/delivery but *Radial Timber Sales* generally provides an additional 1 to 2m^2 of boards in each log at no cost. If damage occurs, it is recommended that the split boards be put aside and only used as short in-fills around windows and doors.

3.2 Setting up

The ends of each log need to be removed in order to release the boards. This is typically done by cutting in a min. of 300mm from each end of the log with a chainsaw. Once the log ends have been removed, boards spring free from the heart wood or core and have a slight but consistent curve, resulting from natural tensions in the log (see Figure 3). Studs should be spaced at max. 600mm centres.

Figure 3
(Typical NE weatherboard in profile)

3.3 Installation

Boards are generally installed in sequence by numbering the boards and following the profile of the log (NOTE: overall cover will be reduced if installing the boards in a random pattern). Before fixing the first board, the outer or sapwood edge may have to be cut square in order to remove any natural curvature. Remaining boards can then be fixed by eye (ignoring minor variations in cover) or by scribing the average cover onto weatherboard stops. **A minimum board overlap of 30mm is recommended to allow for average shrinkage of up to 7%.** First time fixing may take longer than that for conventional square edge boards.

3.4 Fixings

Boards can be hand or gun nailed but care should be taken close to ends to avoid splitting (boards may need to be pre-drilled if hand nailing). **Typically, 50mm long hot dipped galvanised or stainless steel fixings should be used but it may be necessary to use 65mm nails if boards are thicker than 25mm** (NOTE: it is advisable to use twisted shank nails when fixing boards into treated pine). Pre drilling the ends of boards prior to fixing may be required to avoid splitting. A fixing of two nail per board per stud is recommended.

3.5 Joining

When joining boards on long runs, the weatherboards should be matched for width and appearance by "book matching" or butt joining the ends of consecutive boards from a log. On long walls, it may be quicker to break up the wall into smaller panels by inserting weatherboard stops (ie. vertical timber sections). Weatherboard stops can also be used at joins on internal and external corners of the building (rough sawn 75x50mm sections and are available from *Radial Timber Sales*).

3.6 Cover

The average cover of weatherboards will vary within a single log or between logs; therefore, achieving the same cover for a whole wall may not be possible. If the effective cover appears to be less than 80mm, it is recommended that these boards be put aside and only used if narrow coverage is a desired effect.

3.7 Seasoning & Storage

Some movement may occur during seasoning but boards will generally settle as moisture content in the boards equalise (NOTE: unprotected west facing walls may be subject to extreme temperature changes and therefore, timber is more likely to move). **Leaving boards in log form is the recommended way to store timber on site for extended periods of time (ie. logs can be stored for up to 12 months but it is be advisable to cover with a tarp or plastic).**

3.8 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 in situ so the full face coverage is obtained prior to any seasoning or natural shrinkage occurring. Care must be taken to well coat any end grain prior to butting any vertical boards together to minimise water absorption or loss. We don't recommend a film coating as this will generally not be breathable and will eventually peel and bubble due to UV and will trap in moisture.

When a weathered naturally greyed off appearance is wanted Radial Timber recommends the application of an oil based sealer or quality penetrating timber finish (radial Timber Sealer) which will assist greatly in nourishing

3.2 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 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).

3.3 Lyctine Borer (Powder Post Borer)

All timbers used by Radial Timber for natural edge weatherboards are from species that are deemed as 'not susceptible' to the lyctine Borer. This pest does not cause structural damage, but can live in the sapwood of some susceptible hardwoods and leave a small hole and dust trail when it emerges. Radial Timber carefully tracks and controls all timber used to help ensure that only non susceptible species are used for our weatherboards, however, we cannot guarantee this and accept no liability related to the presence of this pest. Radial Timber recommends the application of a treatment as part of the initial application regime as noted below as added protection.

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