



BY TREVOR PRINGLE,
ANZIA, BRANZ PRINCIPAL
WRITER

Timber weatherboards

While the use of timber weatherboard cladding varies with changing trends, it remains perennially popular and its design and installation is well documented.

TIMBER HORIZONTAL WEATHERBOARDS, originally native timbers, have been in common usage since the early 1800s. Currently, timber weatherboards have around 25% market share for residential wall claddings.

Timber has lots of appeal

Timber is:

- readily available, although the readily available species has changed
- a natural renewable resource when sustainably sourced, for example, radiata pine
- biodegradable
- hygroscopic – it will take up and release moisture
- readily treatable for species used for weatherboards
- naturally variable
- machinable
- easily finished.

Relevant Code clauses and standards

Building Code clauses applicable to timber weatherboards are:

- B1 *Structure* – to resist deflection and wind-induced suction
- B2 *Durability* – a durability of not less than 15 years for weatherboards as they are moderately difficult to detect and replace
- E2 *External moisture* – ‘to ensure buildings shall be constructed to provide adequate resistance to penetration by, and the accumulation of, moisture from the outside’.

Cited standards and documents are:

- NZS 3602:2003 *Timber and wood-based products for use in building*



Modern interpretation of timber weatherboards.

- NZS 3604:2011 *Timber-framed buildings*
- NZS 3617:1979 *Specification for profiles of weatherboards, fascia boards, and flooring*
- NZS 3631:1988 *New Zealand timber grading rules*
- NZS 3640:2003 *Chemical preservation of round and sawn timber* (including Amendment 5)
- BRANZ Bulletin 411 *Recommended timber cladding profiles*.

Selecting the timber and profile

Most timber weatherboard used in New Zealand is machined from either imported western red cedar or finger-jointed treated pine.

There is limited use of:

- clear or dressing grade (tight knot) treated radiata pine
- imported redwood
- heart macrocarpa.

Radiata pine requires treatment for durability, while other more durable species such as imported redwood, imported western red cedar and heart macrocarpa can be left untreated.

Bevel-back profile weatherboards tend to be less vulnerable to water penetration than rusticated boards as they are thicker at the lap and therefore distort less. They also offer a void at the back face of the lap that facilitates

some air circulation for drying and some drainage.

Because timber weatherboards are subject to movement, they may allow occasional water penetration through the board laps. However, this distortion also allows some air circulation and drainage, and this tends to dry or remove water that has penetrated the assembly.

Getting the design right

Key elements of horizontal timber weatherboard design include:

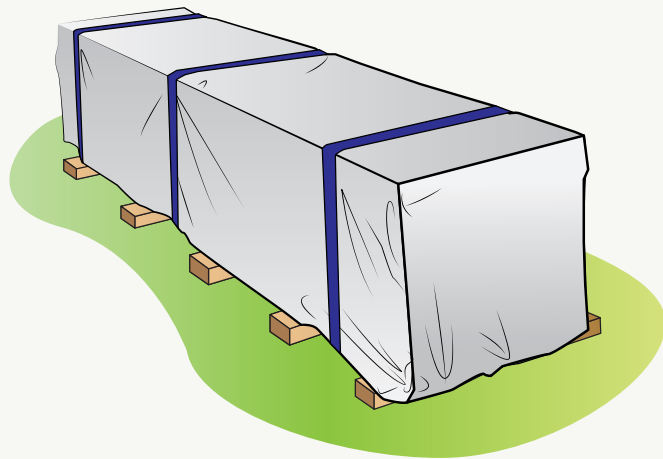
- identifying the species and treatment profiles in accordance with NZS 3617:1979 or BRANZ Bulletin 411 to meet the requirements of E2/AS1 – other profiles must be submitted for consent as an alternative method
- under E2/AS1, a drainage cavity is required where the risk score exceeds 12 for bevel-back and 6 for rusticated
- set out the window head heights to suit the weatherboard dimensions
- a 175 mm minimum clearance to finished ground or 100 mm to permanent paving
- specifying narrower rather than wider boards
- specifying single nailing to each board
- specifying the finish. Naturally durable or H3.2 treated timber can be clear coated, stained or left uncoated, while H3.1 treated radiata pine must be painted on all surfaces including all ends, notches and holes.

Store level and covered

Store boards on a level surface packed clear of the ground. Reject any damaged boards. Cover to ➤



Windows aligned with the board set-out.



Cover boards between delivery and installation.

keep as dry as possible. Recover at the end of each day's work or when rain threatens.

Get the installation correct

Follow these simple rules when installing on site:

- Have a minimum lap of 32 mm for bevel-back boards – 25 mm for rusticated profile boards.
- Do not nail through the board lap.
- Do not apply sealant to laps.
- For rusticated boards, ensure boards are not tightly butted at the overlap as this will restrict movement – a 2 mm gap is required.
- Seal all cuts immediately.
- Seal all cut ends and notches where boards have an applied finish.
- Install soakers, cover boards or backflashings to all corner junctions.
- Paint H3.1 treated boards.
- Avoid dark finishes as this will increase distortion in timber weatherboards. Choose paint colours with an LRV of 40% or more.
- Maintain specified ground clearances at completion of all work including landscaping. ◀



Poor storage and handling is commonly observed on site.