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# Caring for timber weatherboards

Timber weatherboards have an excellent performance history, and almost one in four new houses is clad with them. Using a good product with the right handling, installation and finishing procedures will ensure a quality job.

**TIMBER WEATHERBOARDS** have been used in New Zealand for two centuries. The most common in use today is a finger-jointed, clear-grade, treated, preprimed product manufactured from New Zealand-grown *Pinus radiata* (pine).

Other grades of pine such as dressing grade are available, and weatherboards can also be found in other timbers such as Western red cedar, cypress (*macrocarpa*), larch and redwood.

There are timber weatherboard cladding systems available that include all the required prefabricated components. Some have a BRANZ Appraisal or CodeMark certification. Proprietary weatherboard systems made from modified timber are also available.

## **Packaged for weather protection**

Timber weatherboards should be well wrapped and strapped when transported to site. Wrapping should be a high-quality tear-resistant material to provide adequate weather protection. Strapping should not bruise or mark the boards. The product should arrive at the site in perfect condition.

## **Have delivered just before needed**

Timber cladding should be delivered to site with just enough time for it to acclimatise to site conditions – the moisture content at installation should be similar to the in-service average moisture content.

Boards that arrive on site too far ahead of schedule are at increased risk of damage through additional handling and moisture exposure.

Mechanical equipment is generally used to unload packets of timber, although very



Looked after properly, timber weatherboards will last for generations as can be seen in this Auckland villa.

small quantities may be unloaded by hand. Weatherboards should never be thrown from the truck.

Once the material is unloaded, it should be inspected. Photograph any damage and report it to the merchant immediately.

## **Store indoors and off the ground**

Timber weatherboards must be kept dry. The factory priming of pine boards does not weather-proof them. Exposure to the elements increases the risk of board swelling, primer breakdown and tannin bleed.

Boards are best stored indoors and clear of the ground. Place timber supports evenly under the boards with a minimum of 150 mm clearance

and at maximum 900 mm centres. The original delivery wrapping should be removed to allow the timber to breathe, but the boards must be kept protected from the weather.

A secondary cover and groundsheet should be used if boards have to be stored outdoors.

## **Key points for installation**

Timber weatherboards are typically used in buildings that fall within the scope of NZS 3604:2011 *Timber-framed buildings* and Acceptable Solution E2/AS1. Ensure you also receive the manufacturer's installation guidelines and specifications.

### **Board set-out**

Careful set-out is important to achieve a consistent board width across the entire wall. Ensure

minimum lap requirements are met. For accuracy, use boards from a manufacturer who provides pre-cut scribes and comprehensive set-out guides.

### Fixing

Correct fastening is essential. Use the appropriate nail – both size and nail head type are important. Details can be found in the manufacturer’s literature and in Table 24 of E2/AS1.

Only one nail should be used per board at each stud spacing. Do not double nail boards as this will impede the boards’ natural movement and may cause splitting. Do not nail through the lap of the weatherboard because this will also restrict timber movement. Nails should be sloped slightly uphill to avoid water tracking along the length of the nail into the timber.

Jolt-head nails should be punched beneath the surface of the board and filled immediately to avoid water penetration that will result in board swelling. Raised-head nails, typically a non-ferrous metal such as silicon bronze and used where a stain or natural finish is planned, sit proud of the timber surface.

### Ground clearances

At ground level, weatherboards should finish at least 100 mm above paved surfaces and 175 mm above unpaved surfaces.

### Cut ends

Seal all cut ends/end grain with a good-quality primer undercoat immediately after cutting and before installation.

### Joints

Weatherboards should be fixed in full wall lengths where possible to minimise the risk of water entry. Where a joint is necessary, it should be made over a stud or batten. Scarf the joint away from the prevailing wind at 45° and use a single fixing through the overlapping board. Prime cut ends and cover the joint with a soaker if required.

### External corners

Plain mitred external corners should be avoided because repair is difficult if the mitre opens up after construction. Boxed external corners (Figure 78 in E2/AS1) are a good option because

of the added weather protection they give to joints. Use pre-coated scribes or plugs for best performance – factory-cut scribes are available. Installing soakers is also an option with mitred bevel-back weatherboards.

### Internal corners

Corrosion-resistant flashings must be fitted behind weatherboards at all internal corners (Figure 79 in E2/AS1).

### Windows and doors

Properly detailed and constructed junctions at the interface between the cladding system and window and door openings are vital for weathertightness. E2/AS1 shows details for these with bevel-back and rusticated weatherboards direct-fixed (Figures 81 and 82) and in cavity walls (Figures 85 and 86).

BRANZ Good Practice Guide *Timber cladding* (3rd edition) is also a practical hands-on guide to installation.

### Health and safety

Always wear a mask when cutting or sanding weatherboards to avoid breathing in the dust. Use eye and ear protection with power tools.

Obtain safety data sheets from the manufacturer or supplier of the treated timber. These data sheets give specific information about the care required in storing, using and disposing of the timber.

### Painting and finishing

Depending on the timber selected, it may be painted, given a stain or clear finish or a water-repellent treatment or left unfinished. There is a wide range in the durability and maintenance requirements of the different options.

Clear finishes, stains and water repellents are more likely to discolour and require earlier recoating – this may need to be reapplied every 2–3 years. In some cases, these are not recommended as weatherboard finishes by timber or coating manufacturers.

Painting with appropriate preparation and good-quality paint has the longest durability,

with 7–10 years often achieved before repainting becomes necessary. Painting should be carried out in accordance with AS/NZS 2311:2017 *Guide to the painting of buildings*. Manufacturers’ painting instructions should also be carefully followed.

Weatherboards should only be painted when dry. When applying primer on site, the timber moisture content should be 14–18%. Use a correctly calibrated moisture meter to measure if unsure.

### Preparation

Remove all loose material from the board surface and ensure any unfilled nail holes are filled.

Lightly sand the surface where necessary to an even finish. Spot prime areas that are exposed bare and damaged, especially cut ends, with a good-quality primer, either oil-based (alkyd) or waterborne (acrylic), to ensure an effective bond between the timber and subsequent paint coats.

Some primers applied during the manufacturing process are very lightly applied and should be overprimed on site. There are also timber weatherboard products that come with a factory-applied two-coat system of primer and undercoat.

Primed weatherboards exposed for a long period may require repriming. If boards have been exposed to the weather for 4–6 weeks or longer, consult the weatherboard supplier for advice. Apply two topcoats of good-quality paint. Water-based gloss or semi-gloss is recommended.

Dark colours absorb heat from the sun and increase the risk of board damage. For best performance, select colours in a range of 45% light reflective value (LRV) or greater. This is a requirement of some board manufacturers, but also be aware that, in some locations, monthly washing may be required – for example, in exposed coastal areas. Avoid using high-pressure waterblasters, which can push water through gaps between boards.

When spot painting is required, use good-quality primer and undercoats and the original topcoat.

Quality timber weatherboards, installed and maintained appropriately, should provide weathertight cladding for generations. ◀