



Vulcan® Cladding – Vertical Grain

○ Architectural Series



○ Overview

Vulcan Cladding – Vertical Grain is created from thermally modified New Zealand plantation timber and engineered with a patented vertical grain construction for superior weathering characteristics. A fine sawn face allows a depth of grain, and optimal coating performance.

The thermal modification process and vertical grain structure means Vulcan Cladding – Vertical Grain has enhanced stability, reduced resin content, is a beautiful homogeneous brown colour, and is naturally durable so does not require any chemical preservatives.

Vulcan is a Durability Class 1 timber cladding manufactured to meet CE EN14915 Grade A.

Vulcan Cladding – Vertical Grain is available in a range of architectural profiles and can be supplied factory coated in Abodo Protector coating – Abodo's high performance pigmented exterior oil.

○ Wood Species

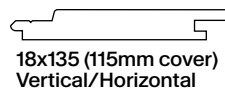
Thermally Modified Radiata Pine (Pinus Radiata).

○ Standard Profiles (mm)

○ WB18

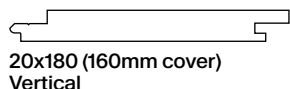


18x180 (160mm cover)
Vertical/Horizontal

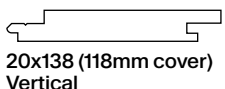


18x135 (115mm cover)
Vertical/Horizontal

○ WB12

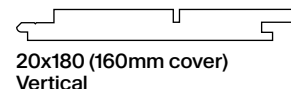


20x180 (160mm cover)
Vertical

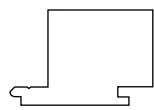


20x138 (118mm cover)
Vertical

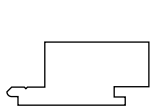
○ Fineline WB12F



20x180 (160mm cover)
Vertical



60x90 (70mm cover)
Vertical



40x90 (70mm cover)
Vertical



20x90 (70mm cover)
Vertical

Other profiles available on request.

All cladding profiles are manufactured in accordance with BS8605-1:2014 External Timber Cladding. Timber used equivalent to BS EN942 Grade J5/CE EN14915 Grade A.



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○ Lengths Solid lengths from 2.4-4.8m.

*Product is supplied as standard in 'random length' or otherwise lengths at Abodo's option. Specified fixed lengths may be available but are subject to conditions including minimum quantity, price premium and availability. Please check with Abodo prior to placement of order.

○ Colours Colours presented are in Abodo's Protector coating and are indicative only.
Colour may change/fade as a part of the natural weathering process.

Coating performance on brushed finish may be lower compared with bandsawn finish. Smooth dressed finish will have a lower performance compared with brushed and bandsawn.



Some colours may not be stocked in the UK, please enquire for availability and lead time prior to specification.
Refer to the Technical Data Sheet – Protector for more information.

○ Finishes





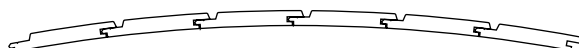
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Product Specifications

- Name Abodo Vulcan Cladding – Vertical Grain Architectural Series.
- Quality **Select Grade/Equal to CE EN14915 GRADE A for use as claddings and BS1186:3 1990 Grade CSH and BS EN942 Grade J5 for use in joinery. Front face and edges virtually free of any defects but with one edge knot and one small face defect allowed per piece in 20% of boards only. Back side with some defects allowed.**
- Finish Fine bandsawn face (some variation in the visual appearance of the bandsawn finish can be expected). Smooth sanded or other textured finishes may be available on request.
- Durability Durability Class 1 (EN350-1).
- Serviceable Life 30 years or more when maintained according to manufacturer's recommendations.
- Warranty 25 years against fungal decay (subject to terms and conditions).
- Moisture Content Approx. 7% MC (+/-2%) at time of dispatch. Moisture content may vary depending on environment.
- Construction Laminated with vertical grain orientation.
- Glue Exterior polyurethane adhesive – VOC, solvent and formaldehyde free. Complies with EN 15425.
- Expected Dimensional Change in Structure

Width expansion	approx 2%
Thickness expansion	approx 3%
Length expansion	approx 0.25%

(From 7%MC to fibre saturation – variation will occur between boards.)
- Average Density ~420 kg/m³.
- Fire Euroclass D-s1-d0. Can be fire treated to Euroclass B-s2-d0 (s2 Smoke Production – d0 Flaming Droplets). BS EN 13823 & BS EN 11925-2 Single Burning Item Equivalent to UK "Class O" BS 476: Part 6 & BS 476: Part 7. (Fire classification is subject to installation details in accordance with test certificates and EN14915).
- Hardness Low (2.5kN Janka).
- Weight Dry ~7.5 kg/m²; Wet ~11 kg/m².
(Values are approximate only and subject to variation).
- Thermal Properties ~0.095 W/(mK) (Thermal conductivity is reduced by 20-25% compared with Radiata Pine).
- pH (Indicative) 3.9.
- Curved Walls (Min Radius) WB18 135x18mm – 2300mm, WB12 90x40mm – 800mm.





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Product Specifications

- **Compatibility** Vulcan has little corrosiveness on most metals and can be placed in contact with most building materials. In general cross linking PVA, PU, MUF epoxy glues and RF resins can be used, however a specific adhesive specification may be required considering the low moisture content and unique characteristics of the timber. Must be separated from zinc. Stainless steel fasteners are recommended in exterior applications.
- **Coating** Vulcan will take most stains, penetrating oils and paints well, though up-take of coating is generally higher than normal. If the cladding is coated, at least one coat must be applied all sides including back face, edges and ends before fixing. At least two coats must be applied to the front face and edges with Abodo Protector or other approved proprietary wood coating. Smooth dressed timber must be sanded with 120 grit sandpaper prior to coating.

Available factory pre-coated with 1 or 2 coats.
- **Patent** NZ Pat. 601245.
- **Certification** Forest Stewardship Council® (FSC®) Certified FSC MIX, FSC-C010962, SGS-COC-004944.

- **Product Handling**
 - Cladding and accessories must be kept clean, dry well ventilated, under cover and out of the weather prior to installation.
 - Timber must be stored horizontally on bearers at least 100mm off the ground in a well ventilated area.
 - Extra care must be taken during installation so as not to damage the factory finish of the boards.
 - Wear cotton gloves during install to avoid leaving hand marks on the timber.
 - Wear dust mask, eye protection when cutting timber.

Installation Overview

- **Substrate**
 - Timber framing must be to TDCA, NHBC requirements and comply with building regulations.
 - Fix cladding over a waterproof, breathable membrane, or other suitable waterproof substrate such as masonry or concrete. A membrane is not required for concrete or masonry substrate.
 - Waterproof membranes must have minimum permeability of 0.5 g/m² h.mm Hg with minimum overlaps of 5cm on horizontal joins and 10cm on vertical joins. A UV resistant membrane shall be used for open joint louvre type installation.
 - To achieve Class D fire classification for the wall system a substrate of A1 or A2-s1 d0 must be used.
- **Cavity Battens**
 - Structurally fix minimum 38mm x 50mm. Use Class 3 pressure treated kiln dried structurally graded timber cavity battens with stainless steel flat head nails or 10g screws or masonry anchors (for concrete walls) staggered along the batten at maximum 600mm centres and with minimum 40mm fixing penetration into substrate.
 - For vertical cladding, fix cavity battens horizontally over the top of minimum 18mm thick pressure treated timber counter-battens at maximum 600mm centres to match fixing points. This allows free movement of moisture and airflow up the back of the cavity.



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- Fixing
 - Fix boards either vertically (WB18, WB12, Rhombus Clip profiles) or horizontally (WB18 and Rhombus Clip profiles) as appropriate to the profile type specified with cavity batten spacings at maximum 600mm centres.
- Fixing Overview
 - Stainless steel 316 (A4) fixings must be used in areas near the sea.
 - For WB18 or WB12 profiles, secret fix using self-drilling self-countersinking head screws so as to achieve minimum 30mm penetration into the cavity batten and positioned 12mm from the tongue edge. Drive fixings so they are flush with the timber surface.
 - A face fixing alternative is allowed with one flat, rose or pentagon head annular ring shank nail per batten (pre-drilled and hand or trim head self drilling screw) to achieve minimum 30mm penetration into cavity batten and positioned approximately 10mm beyond the over-lap.
 - Fixings at ends of boards must be at least 12mm from end, and must be pre-drilled before applying fastener. Ensure minimum 2mm expansion gap to back of boards.
 - For Rhombus Clip louver profiles use secret clip and screw supplied to secure boards. Vertical installations shall have a screw fixing applied at top and bottom of board edge to prevent slipping.
 - All end grains and notches must be sealed using Abodo's Protector – End Seal or equivalent water repellent end grain preservative.
- Joins
 - Joins between cladding board ends must be made over battens only, using a 35 degree mitre, and application of sealant at the join e.g. Sikaflex 11FC. Joins on louvre profiles shall be square cut with a minimum 2mm gap. Off set joins by minimum 400mm.
- Windows and Doors
 - Window and door openings must be detailed and flashed appropriately to divert water away from the interior walls and allow adequate space for drainage and drying in service.
- Corners
 - External and internal corners shall be made over back-flashings using appropriate mouldings in accordance with Abodo details. Mitred corners are not recommended.
- Base of Wall
 - Cladding must finish minimum 100mm above paved surface or 175mm above un-paved surfaces. Base of cladding must not sit directly into flashings or other cladding materials such as masonry. Minimum 5mm gap must be left to flashings allowing fall to shed water away from the wall cavity.
 - For vertical cladding, at base of wall cut ends at a 15 degree angle to provide a drip line.
 - Use perforated cavity base closer flashing with minimum 50 cm² of air inlet per metre to allow drainage, air flow and keep out vermin.
 - Use Abodo mouldings finish to seal top of wall and for corners.
- Finishing
 - We recommend at least one coat of Protector or proprietary specified wood stain to be applied to all sides prior to installation and then a further one or two coats applied once boards are fixed in place according to manufacturer's instructions. Thoroughly seal all exposed ends.



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Fixing Details:

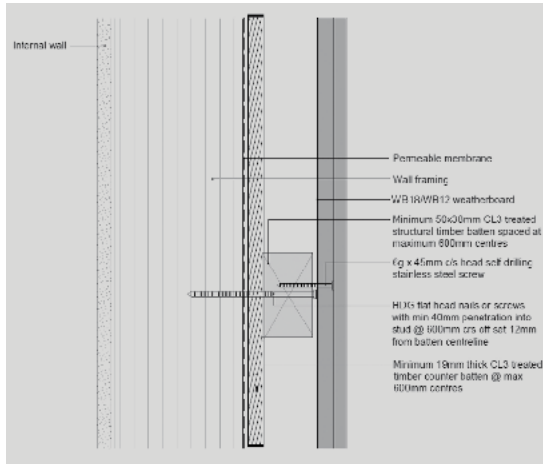


Fig 1: WB18/WB12 Vertical Fixing Detail

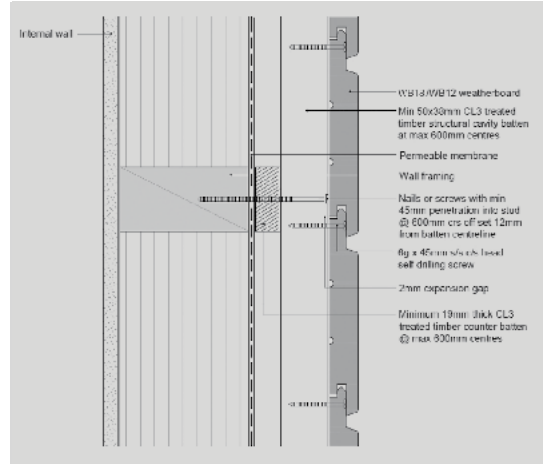


Fig 2: WB18/WB12 Vertical Fixing Detail – Birds Eye

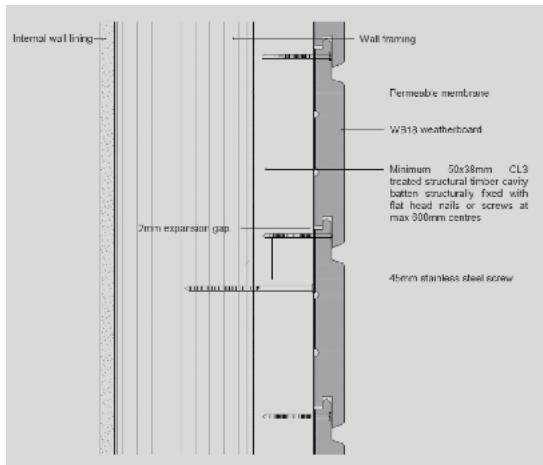


Fig 3: WB18 Horizontal Fixing Detail

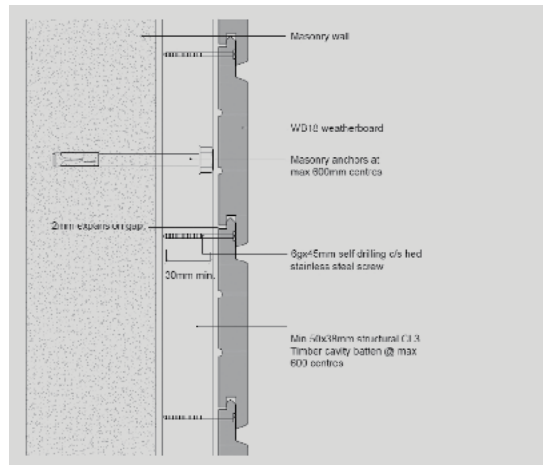
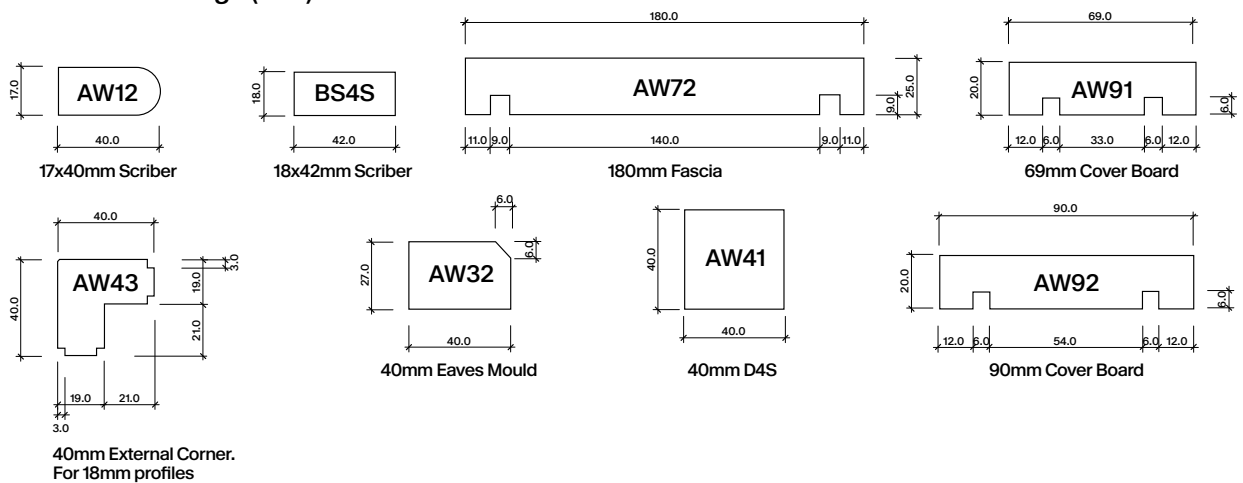


Fig 4: WB18 Horizontal Fixing Detail – Masonry

The above is an overview only. Refer to our Vulcan Cladding Design and Installation Guide for further detailing and installation guidance.

Exterior Mouldings (mm):



Note: Other profiles are available.

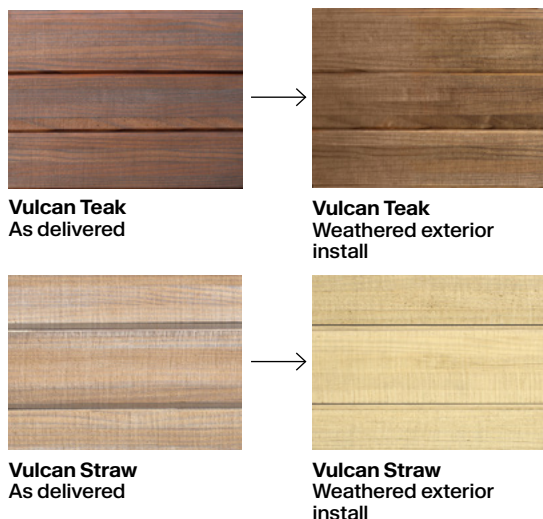


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Maintenance

- Wash down every 12 months with gentle detergent, warm water and soft brush. Do not power wash.
- If possible it is recommended to apply a further coat of oil after approx 12 months of weathering. When timber is dry.
- Re-coat every 3-5 years or as required to maintain colour and integrity of coating when timber is dry. Re-coat period may be longer or shorter depending on climatic conditions and/or positioning of cladding to the sun. Preparation with an oxalic timber cleaner is recommended prior to coating. Follow recommendations given on the Protector Technical Data Sheet.
- For other specialty finishes please refer to specific manufacturer's literature.

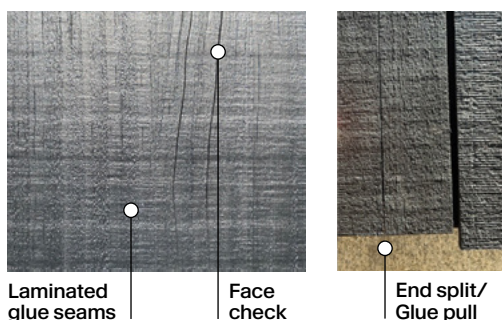
○ Lightening of the Timber



We cannot guarantee against wear or color changes to any products which result from weather, sun, wind and/or the natural aging process of the wood.

○ Surface Checking

- Checking (cracks) may be observed on the face and ends of Vulcan timber. Checks are acceptable to install. Checking may become more apparent as the material weathers naturally in place. Fibre pull at laminated glue lines is also possible. These are not defects and are considered a natural part of this wood product. Maintenance with a coating and thorough sealing of end grains with wax sealer will improve long term weathering characteristics.





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Accessories

Abodo Protector, 4L, 10L:



Abodo Protector – End Seal, 1L:

