KINGWOOD®
COMPOSITE TIMBER SOLUTIONS

Australia National Building Material Pty Ltd

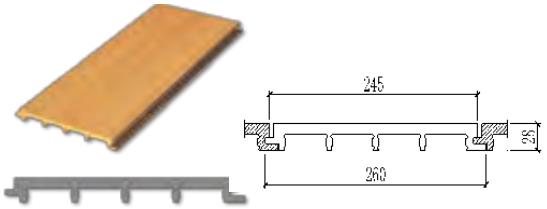
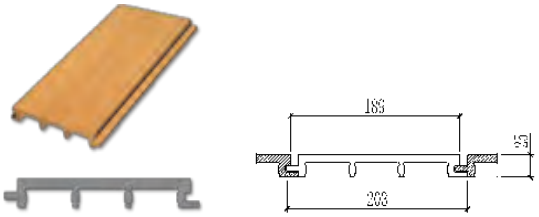
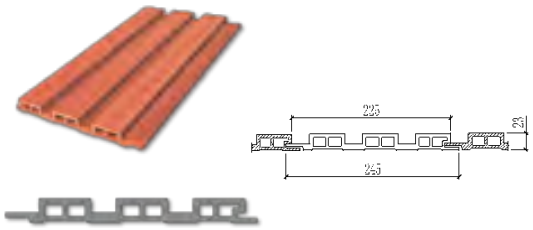
EXTERIOR CLADDING Installation Manual

JANUARY 2012

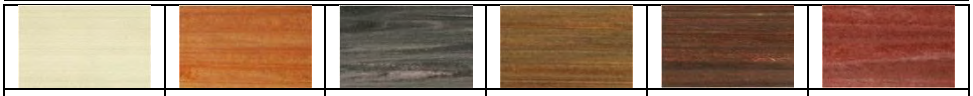
IMPORTANT NOTES

KINGWOOD Cladding panel must be installed and maintained in accordance with applicable building codes, regulations, standards and KINGWOOD written application instructions Failure to do so may lead to personal injury, affect system performance, violate local building codes, and void KINGWOOD product warranty.

KINGWOOD EXTERIOR CLADDING

PRODUCT (All boards come in a 2750mm length.)	DESCRIPTION
QBI-09  260 x 28mm	Shiplap board designed to provide a shadow line edge profile. Boards are concealed fixed, with the exception of the first and last board. The boards are held together using the KINGWOOD proprietary Clip System. Size: 2750 x 260 x 28mm Effective Cover: 1 Board = 0.674m²
QBO-16  203 x 25mm	Shiplap board designed to provide a shadow line edge profile. Boards are concealed fixed, with the exception of the first and last board. The boards are held together using the KINGWOOD proprietary Clip System. Size: 2750 x 203 x 25mm Effective Cover: 1 Board = 0.5199m²
THO-26  245 x 23mm	Shiplap board designed to provide a rebated profile. Boards are concealed fixed, with the exception of the first and last board. The boards are held together using the KINGWOOD proprietary Clip System. Size: 2750 x 245x 23mm Effective Cover: 1 Board = 0.619m²

COLOUR AVAILABLE



White Oak	CocoBolo	WeatherWood	Verawood	Hickory	Rosewood

More option and textures are available upon request. This will depend on quantity purchased and will require additional lead time. Please call KINGWOOD for further information.

NOTES:
All dimensions and masses provided are approximate only and subject to manufacturing tolerances.

WHY KINGWOOD EXTERIOR CLADDING?

KINGWOOD exterior cladding is a timber composite product made from hard wood forest-product waste-material, formed into an innovative sustainable and recyclable alternative. KINGWOOD exterior cladding has the appearance and beauty of natural timber, without the undesirable cracking, splitting or warping characteristics of timber.

- WOOD FIBRE COMPOSITE
- MADE FROM 70% PLANTATION FOREST
- INORGANIC BINDING AGENT
- 100% RECYCLABLE
- LOW VOC AND ENVIRONMENTAL IMPACT

MAJOR BENEFITS

- ☑ LOW MAINTENANCE
- ☑ EXCEPTIOAL NATURAL TIMBER FEATURES
- ☑ FIRE & WATER RESISTANT
- ☑ TERMITE RESISTANT
- ☑ WILL NOT ROT, CRACK OR SPLIT

KINGWOOD External Cladding can be used in residential and commercial application. The cladding is designed to be installed with KINGWOOD's proprietary clip system.

STORAGE AND HANDLING

1. Should not be dumped or dropped when unloading.
2. Should be unpacked, stored on a flat surface and supported at 500 mm centres.
3. Should be stored under cover out of the weather and in the shade, until ready to install.
4. Should not be stored in the rain or covered with plastic cover sheets.
5. Should be allowed to season and stabilize in the conditions where it is to be installed.
6. Should be carried on edge, for better support.

BEST SAFE WORK PRACTICES

CUTTING OUTDOORS
Position cutting station so wind will blow dust away from the user or others in working area.

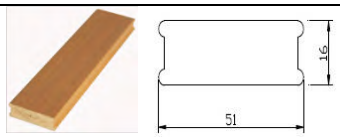
DRILLING/OTHER MACHINING
When drilling or machining you should always wear a P1 or P2 dust mask.

IMPORTANT NOTES
1. NEVER use a power saw indoors..
2. NEVER use grinders.
3. ALWAYS follow tool manufacturers' safety recommendations.

KINGWOOD External cladding is an Easy to install, good looking pre-finished ship lap profile board.

KINGWOOD EXTERIOR CLADDING ACCESSORIES

ACCESSORIES SUPPLIED BY KINGWOOD

Accessories (QBI-09 & QBO-16 & THO-26)	Code	Description
Keel 	BYI-03	The Keel is required for the fixing point of the top and bottom boards. Refer to Figure 3 of the installation manual for more details. 2750 mm lengths.
Stainless Steel Clip for Exterior Wall 	WKK-10	Used to provide a conceal fixing option for the QBO -09, QBI – 16 and THO-26 boards. Approx. 10 clips Per m2 for QBI – 16 Approx. 8 clips per m2 for QBO – 09 Approx. 8 clips Per m2 for THO – 026
#38 Aluminium Corner End Finish 	SBT-39	Used for external corners. Two part snap on corner system aluminium finish. 3000 mm length.

RECOMMEND SCREWS (NOT SUPPLIED BY KINGWOOD)

Screws	Code	Description
	Clip Fastener	Multi-purpose Button Head Screw 8 Gauge x 25mm. Used to fix the Stainless Steel clips for walls into both timber and up to 3.0mm BMT Steel. Refer to Figure 4 Buildex P: 6–241–9201–8 Pack: 1000
	Face Fix Fastner into Timber Frame	Buildex M6X58 Dec-King screw, used to face fix first and last boards. Into Timber Frame. Refer to figure 7 and Figure 10 Buildex Part Number: 6–312–0033–3 Pack of 500.
	Face Fix Fastner into Steel Frame	Buildex 10X45 WingTeks used to face fix first and last boards. Into Steel Frame, refer to figure 7 and 11. Buildex Part Number: 6–321–0040–7CC Pack of 500.

FRAMING

Kingwood Cladding can be fixed to either timber or light gauge domestic type steel framing. The framing used must comply with the relevant building regulations and standards and the requirements of this manual.

Frames must be straight and true to provide a flush face to receive the sheeting. A suggested maximum tolerance of between 3mm in any 3000mm length of frame will give best results.

Timber

'Timber used for house construction must have the level of durability appropriate for the relevant climate and expected service life and conditions including exposure to insect attacks or to moisture, which could cause decay.' Reference AS1684.2 'Residential Timber Framed Construction'.

Use only seasoned timber. Unseasoned timber must not be used as it is prone to shrinkage and can cause boards and frames to move.

Steel

The base metal thickness of a steel frame must be between 0.55 and 1.6mm (BMT).

Frame Spacing

It is recommended that all stud spacing be maximum 500 mm centres.

Figure 1 - Stud Spacing

FIXING

Fastener durability

Fasteners must have the appropriate level of durability required for the intended project. This is particularly important in coastal areas located within 1km of the shoreline or large expanses of salt water, areas subject to salt spray and other corrosive environments.

Adhesives

Adhesives must not be used to weatherboards to the frame.

INSTALLATION

Moisture management

It is the responsibility of the builders and designers to identify moisture related risks associated with any particular building design.

It is the responsibility of the builder to ensure appropriate moisture management is provided during framed wall construction through effective use of flashings, sealants and vapour permeable membranes such as vapour permeable sarking, building wraps, vapour retarders and damp-proof course. Before installing cladding, all wall openings, penetrations, intersections, connections, window sills, heads and jambs must incorporate appropriate flashing and waterproofing.

Materials, components and their installation that are used to manage moisture in framed wall construction must, at a minimum, comply with the requirements of relevant standards, building codes and the manufacturer's specifications.

Vapour permeable membrane

Vapour permeable membrane must be installed under Kingwood external cladding.

Wall construction design must effectively manage moisture, accounting for both the interior and exterior environments of the building, particularly in buildings that have a higher risk of wind driven rain penetration.

Figure 2 - Vapour Permeable Membrane

Ground clearances

Install Kingwood external cladding with a minimum 150mm clearance to the earth on the exterior of the building or in accordance with local building codes if greater than 150mm is required.

Maintain a minimum 50mm clearance between Kingwood external cladding and roofs, decks, paths, steps and driveways. Adjacent finished grade must slope away from the building in accordance with local building codes, typically a minimum slope of 50mm minimum over the first metre.

Do not install external cladding such that it may remain in contact with standing water.

NOTES:
Greater clearance may be required in order to comply with termite protection provisions

Termite protection

The BCA specifies the requirements for termite barriers and must be complied with. Where the exposed slab edge is used as part of the termite barrier system, a minimum of 75mm of the exposed slab edge must be visible to permit ready detection of termite entry.

INSTALLTION INSTRUCTIONS FOR QBI-09 AND QBO-16

Once the sarking is installed the first board is installed from the top down. The first board (at the top) has the keel inserted into the back of the board, and then a wood screw is fastened through the face and the keel back to the stud frame. As shown below:

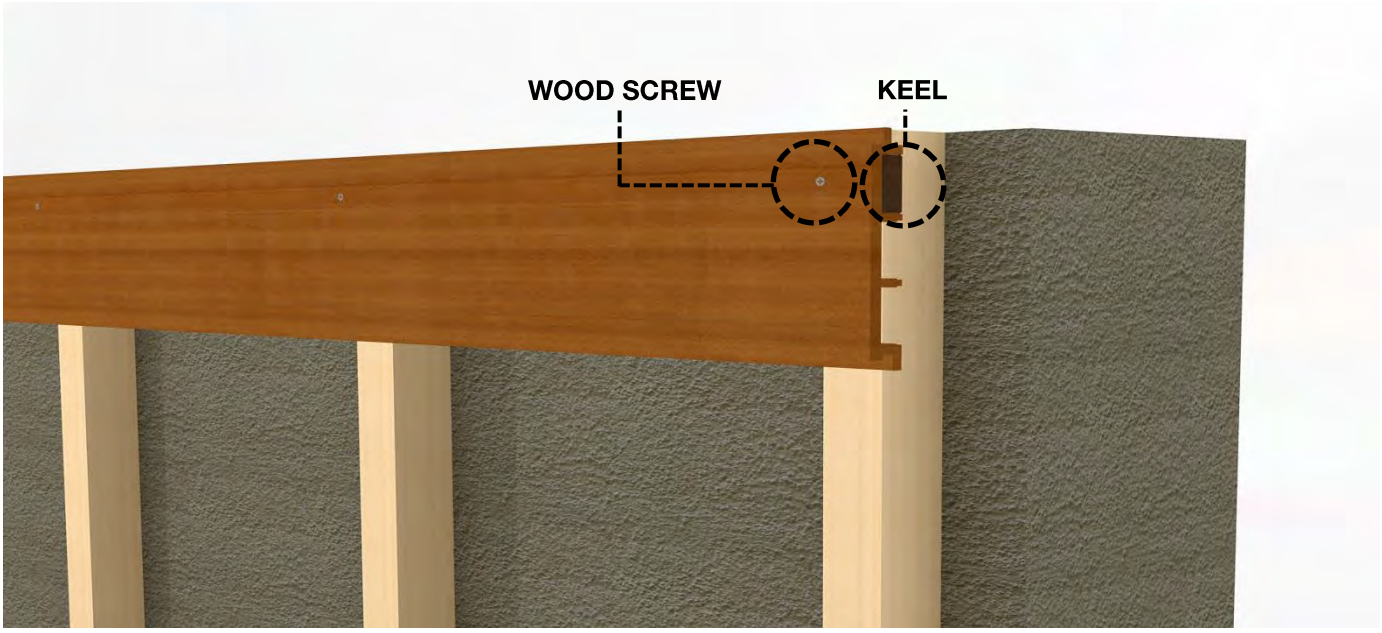


Figure 3 - QBI-09 and QBO-16 First Board Installation

Once the first board is secure the bottom edge of the board is fixed with the stud clips as supplied by kingwood. The stud clips are screwed back to the stud frame. As shown below:

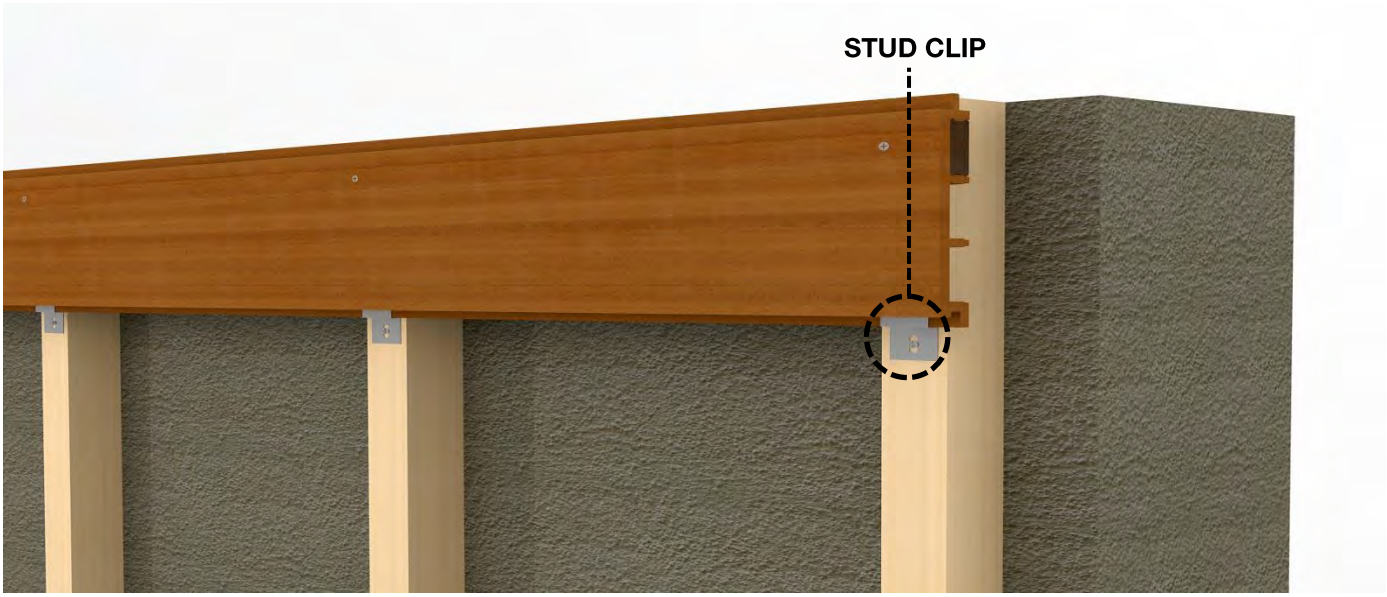


Figure 4 - QBI-09 and QBO-16 First Board Clip

Once the first board is secure the next board slots in to the groove of the top board and then fixed again with the clips. This process is repeated to completion of the wall. Please see below:

Figure 5 - QBI-09 and QBO-16 Second Board Installation

Last Board installation

The last board is installed with a fastener placed through the board back to the frame.

NOTES:
Fastener MUST have a keel behind board to provide adequate support.

Figure 6 - QBI-09 and QBO-16 Last Board Installation

INSTALLTION INSTRUCTIONS FOR THO – 26

Once the sarking is installed the first board is installed from the top down. The first board (at the top) is fixed through the top ship lap back to the stud frame; the stud clip is placed on the bottom edge of the board then fastened back to the stud frame.

Figure 7 - THO-26 First Board Installation

STEP 1:
The below image details the clip return and fastened back to the stud frame.

Figure 8 - THO-26 First Board Clip Installation

STEP 2:

Once the first board is secure the next board slots in to the groove of the top board and then fixed again with the clips. This process is repeated to completion of the wall. Please see below:

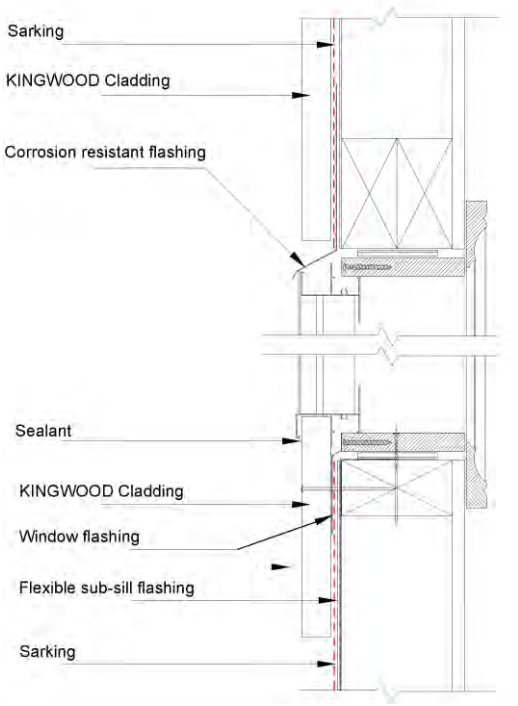
Figure 9 - THO -26 Second Board Installation

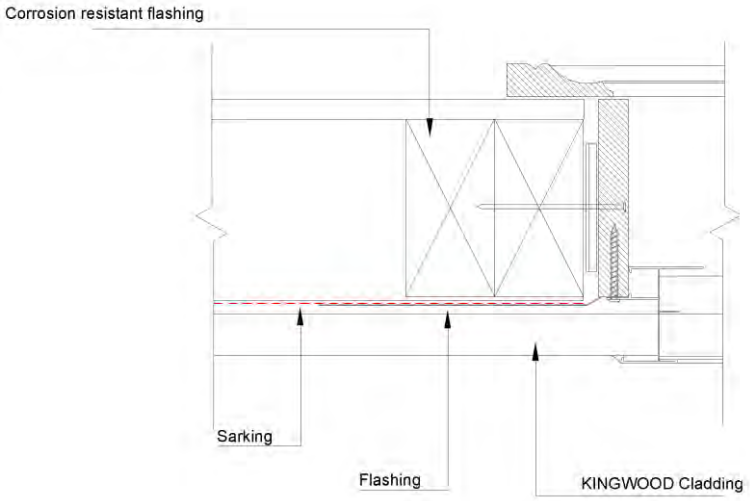
Last Board installation

The last board is installed with a screw fixed through the face of the board between raised sections and fixed back through to the stud frame.

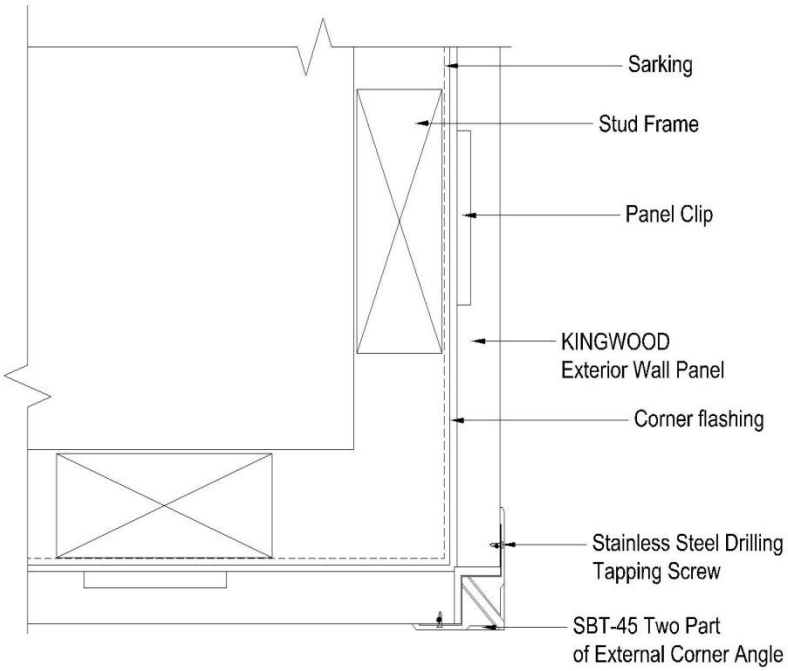
Figure 10 Last Board Installation

WINDOW DETAILS

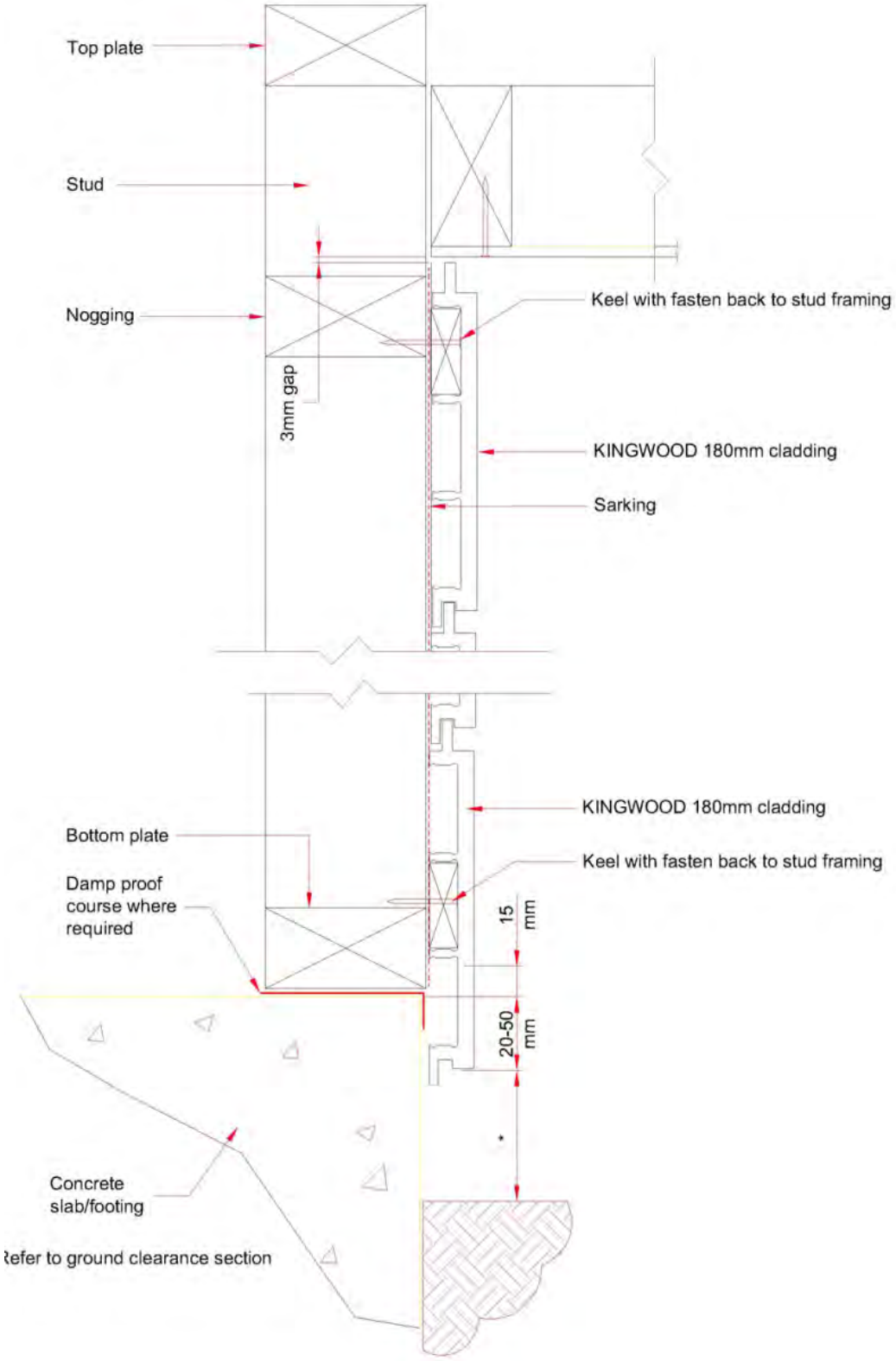




EXTERNAL CORNERS SBT-45 ALUMINIUM



SLAB EAVE JUNCTION



Thermal and Shrinkage Movement

New KINGWOOD exterior cladding will shrink along its length, and like timber, KINGWOOD exterior cladding should be allowed to season and stabilise for a time. KINGWOOD exterior cladding shrinks approximately 0.2% in the first few weeks and allowance should be made for this shrinkage when laying the boards in place.

All materials are affected by atmospheric heat, and more significantly by direct solar radiation and will, to some extent, expand when heated and contract when cooled. Although thermal movements are reversible, these movements due to temperature change may be significant during the installation process. Boards that have been exposed to the direct sun for several hours will have expanded more than those left in the shade. When installed, the hotter boards will contract more than the cooler boards that were left in the shade prior to installation. Movement control joints must be incorporated in the deck design layout and at installation.

During installation, it is important to try to maintain an average consistent temperature for all the boards as they are being installed.

Movement Control Joints

For long runs of exterior cladding, movement (expansion and contraction), control joints must be spaced at a maximum of distance 5.4m, along the length of the boards.
Leave a 2mm gap between the butt ends for boards laid early in the cooler part of the day. Boards laid during the warmer parts of the day may be loose butted with a 0.5mm to 1mm gap at the ends.

The top face of the KINGWOOD exterior cladding boards butt ends should be chamfered by 2mm to match the pencil-rounded edges of the boards. The chamfer will enhance the overall appearance of the deck and mitigate any potential risk hazard.

Avoid hard butt joints between boards laid end-to-end. Do not to glue or caulk the boards to fasten them or to seal the butt ends or gaps between the boards or any other surface, as this may affect the natural expansion and contraction of the boards in the long-term.

Physical Properties

KINGWOOD Exterior cladding is a wood-plastic-composite material, which lies within the category of Reconstituted Wood-Based Panels. KINGWOOD Exterior cladding has been tested to and complies with AS/NZS 4266: Reconstituted Wood-Base Products Methods of Tests.

Fire Resistance

KINGWOOD building products have been tested by AWTA in accordance with AS/NZS 3837 and are classified as conforming to Group 3 with an average specific extinction of 445m2/kg as referenced in Specification C1.10a of the BCA.

Termites

KINGWOOD exterior cladding is termite resistant and is suitable for outside above ground applications.
However, decks adjacent to the house or other buildings must not provide a “bridge”, whereby termites can enter the house or the other buildings. Termite barriers must comply with and be installed in compliance with AS 3660: Termite Management.

Durability

KINGWOOD exterior cladding is UV stable under normal environmental conditions and has been tested by the CSIRO for salt-water immersion and exposure to high humidity environments. KINGWOOD exterior cladding is suitable for use around salt-water swimming pools, marine intertidal zones, salt spray and high-humidity environments.

Coating & Wet-slip Resistance

When used in a swimming pool environment, it is recommended that KINGWOOD exterior cladding be coated with a slip resistant coating to a classification of W in compliance with AS/NZS 4586. Please contact your nearest KINGWOOD exterior cladding stockist or KINGWOOD for details.

Maintenance

The extent and nature of maintenance will depend on the geographical location and exposure of the building. As a guide, it is recommended that basic normal maintenance tasks shall include but not be limited to:

- Wash surface with a mild solution of pure soap or non – abrasive mild dishwashing detergent in water. Solvent type cleaners (turpentine, petrol, kerosene, paint thinners) or coarse abrasives must not be used.
- Washing should be with a medium to stiff bristle nylon brush use in a firm but gentle manner.
- For recoating advice please visit www.kingwood.com.au for recoating document.

Warranty

A warranty claim in relation to a Product used for non-commercial or non-business use is only valid if made within 8 years after the date of purchase of the Product.
A warranty claim in relation to a Product used for commercial purposes or in the course of business is only valid if the claim is made within 7 years after the date of purchase of the Product.

For complete warranty documentation please visit www.kingwood.com.au

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