



JSC BevelClad

Horizontal Bevel Back Weatherboard Cladding

Version 1.0 | February 2026



PREMIUM ARCHITECTURAL
& BUILDING SOLUTIONS

Contents

Introduction	3
Building Elements	4
Product Selection	7
Installation	8
Building Consent Application	10
Appendix	11

INTRODUCTION

A classic style across New Zealand’s rural and urban landscapes, JSC Bevel Back weatherboards epitomise stability and durability, and are known for their bold shadow lines and solid aesthetic.

GENERAL

This guide covers the scope of use, selection of products, fixing, finishing, and maintenance guidelines for JSC BevelClad Bevel Back Weatherboard Cladding system.

JSC BevelClad is a cavity-based external wall cladding system comprising of:

- timber weatherboards finished with suitable coating
- H3.2 treated timber castellated cavity battens
- fascia boards, moulding profiles, and associated components.

JSC weatherboards are available in a range of timber species and profiled to JSC specifications, consistent with [NZS 3617:1979](#) and [BRANZ BU411](#).

This guide covers the design and specification of JSC BevelClad weatherboards when specified over:

- **JSC-U 45×20 Non-Structural Cavity Battens** - 20mm thick castellated cavity battens; or
- **JSC-V 45×45 and JSC 70×45 Structural Cavity Battens** - 45mm thick castellated cavity battens.

For direct fix installation of JSC weatherboards, refer to Acceptable Solution E2/AS1.

BUILDING CODE REGULATIONS

If designed and installed as per JSC technical documents, the JSC BevelClad Bevel Back Weatherboard System will meet the following provisions of the New Zealand Building Code (NZBC):

- **Clause B1 Structure:** Performance B1.3.1, B1.3.2, B1.3.4 for the relevant physical conditions of B1.3.3 (a), (f), (h), (j), and (m)
- **Clause B2 Durability:** Performance B2.3.1(b) and B2.3.2(b)
- **Clause E2 External Moisture:** Performance E2.3.2, E2.3.5 (contributes to), E2.3.6 (contributes to), and E2.3.7
- **Clause F2 Hazardous Building Materials:** Performance F2.3.1

SCOPE AND LIMITATION OF USE

It is the specifier’s responsibility to ensure that:

- the details in this specification are appropriate for the intended application, and
- additional detailing is obtained for a specific design or any areas that fall outside the scope of our BevelClad CodeMark certificate [CMNZ 30082](#).

JSC BevelClad system must be installed by a suitably qualified and experienced trade person. Where Restricted Building Work (RBW) applies, the installer shall be a Licensed Building Practitioner (LBP) or supervised by an LBP.

BUILDING ELEMENTS

STRUCTURE AND FRAMING

The performance and appearance of the cladding system rely on the substrate. JSC cladding systems are designed for timber wall framing. However, JSC 45mm Cavity Battens can also be fixed to structures outside of [NZS 3604:2011](#). 45mm Cavity Batten fixings should be determined by an engineer based on fixing tensions required on [JSC Structural Cavity Batten Fixing Guide](#).

Timber framing must be within the framing tolerances of [NZS 3604:2011](#) Section 2.2 and Table 2.1. For specific requirements relating to support for timber weatherboard cladding, refer to Sections 8 and 11 of [NZS 3604:2011](#).

In all cases, studs must be spaced at a maximum of 600mm centres.

If it is an existing building, the primary structure must be suitable for the intended building work.

WALL UNDERLAY

Wall underlay must comply with [E2/AS1 Table C.2.1.1](#) and [E2/AS1 9.1.6](#). Alternatively, a wall underlay with a Product Certificate (CodeMark) or a BRANZ Appraisal is acceptable, provided the conditions of use and scope comply.

Wall underlays (flexible or rigid) shall have a compliant and compatible flexible flashing tape applied to head and sill framing in accordance with [E2/AS1 4.2.12](#) and opening reveals as per [E2/AS1 9.1.4](#).

CAVITY BATTENS

Under E2/AS1, the use of solid cavity battens is permitted

for the installation of horizontal weatherboards within a cavity system. However, JSC's installation requirements for horizontal cladding products, such as BevelClad, specify the use of vertically installed castellated cavity battens.

Castellated battens are particularly important at corners, jambs, and other junctions, where solid cavity battens and flashings can restrict ventilation. While bevelback profiles provide some natural ventilation behind the boards, this airflow can be interrupted at these junctions. JSC recommends the use of castellated cavity battens behind flashings to maintain continuous cavity ventilation and support effective moisture management.

JSC-U 45×20 Non-Structural Cavity Battens are universal cavity battens that can be used either vertically or horizontally. However, when used as part of the JSC BevelClad installation system, these battens must only be installed vertically over the studs at a maximum of 600mm centres.

JSC-V 45×45 and JSC 70×45 Structural Cavity Battens are structural cavity battens that allow additional options to create deeper window reveals and other design elements. Refer to [JSC Structural Cavity Batten Fixing Guide](#) for more information on spacings and fixings.

JSC castellated cavity battens are made of H3.2 CCA or MCA treated Radiata Pine which aligns with the principle that the minimum durability for enclosed building elements is greater than that for accessible elements.

The front and back faces of the battens have castellations at regular intervals to allow pressures to equalise, moisture to drain, and improve air circulation which aids evaporation.

Proper ventilation is crucial to ensure airflow through the cavity, preventing moisture buildup that could cause damage to the structure like rot, mould, or decay.

INTER-STOREY JUNCTIONS

Inter-storey junctions in cladding are required for walls with a maximum of 7 metres in height or over two storeys as per [E2/AS1 Paragraph 9.1.8.4](#).

VERTICAL CONTROL JOINT

For long, uninterrupted walls in high wind zones or buildings that are two storeys or taller, control joints should be placed every 6 metres to accommodate building movement across the wall.

GROUND CLEARANCE

As per [E2/AS1 Paragraph 9.1.2](#) and [Table 9.1.2.1](#), the cladding should, at the ground level:

- Extend past the bottom plate on a concrete slab, bottom of bearer or lowest part of timber floor framing by 50mm
- Finish a minimum of 100mm above a paved surface or 175mm above unpaved surface, and
- Have a minimum 35mm clearance to roof claddings and decks.

DECKS AND DECORATIVE ELEMENTS

Ensure a gap for drainage and cleaning when attaching elements like letterboxes, pergolas, or decorative features to the cladding or close to it.

E2/AS1 requires a 12mm minimum gap between slatted timber decks, stringers and external wall cladding.

For raised surfaces like tiles, pavers, or timber on weathertight decks, a 12mm minimum gap against walls or balustrades is required.

CAVITY CLOSER/VERMIN PROOFING

Specify cavity closer/vermin proofing in compliance with [E2/AS1 9.1.7.5](#), [9.1.7.6](#), [9.1.7.7](#) and [Figure 9.1.7.4A](#) to close off the bottom of the cavity. Ensure it is placed at the base of all walls, open horizontal or raking junctions, and over openings (windows, penetrations, etc.) Size the cavity closer/vermin-proofing to fit the cavity dimensions.

FLASHINGS

As per [E2/AS1 9.2.4](#):

- Flashing materials should comply with [E2/AS1 Table C.1.1.1A](#) and meet the compatibility of [E2/AS1 Table C.1.1.1B](#) and [Table C.1.1.1C](#).
- Ensure that flashing materials are compatible with both the window frame and cladding, including their fixings. Windows to comply with [NZS 4211:2022](#).

NAIL FIXINGS

Annular grooved nails must be used to fix JSC BevelClad weatherboards. Nail length must achieve a minimum embedment of 30 mm into the framing when installed over 20 mm non-structural cavity battens. Due to the bevelback profile of the boards, longer nails are required to achieve this embedment. Where structural cavity battens are used, a minimum embedment of 35 mm into the cavity batten is required. JSC weatherboards must be pre-drilled with a slight upward slope (0-2°). The hole should be approximately 1mm smaller than the nail shank to reduce the risk of moisture entry.

In certain circumstances, screw fixing of weatherboards is acceptable. Please refer to the [JSC Screw Fixing Cladding Guide](#) for further information.

Oil/Stain Finish

For oil or stained bevelback weatherboards, where flat, pentagon, or rose head nails are typically used, JSC advises 85 mm long nails when fixing over 20 mm cavity battens.

Paint Finish

For painted bevelback weatherboards, whether in Western Red Cedar or Radiata Pine, where the nail head will be punched in, JSC recommends 90 mm jolt head nails, provided that correct pre-drilling is carried out. As an alternative, H3.2 solid 20 mm cavity battens may be structurally fixed to the framing in accordance with [BRANZ Bulletin Build 154](#), which allows for shorter weatherboard fixings with nail lengths reduced to 75 mm.

Note: As a guide, pre-drill holes approximately 0.75–1.0 mm smaller than the nail shank diameter.
For example:
– For a 75 × 3.25 mm nail, use a 2.5 mm drill.
– For an 85 × 3.25 mm nail, use a 2.5 mm drill.
– For a 90 × 4.0 mm nail, use a 3.0 mm drill.

TABLE 2 - FIXINGS INTO FRAMING		
Framing	Cavity Batten	Weatherboard Fixing
Timber Framing	45mm x 20mm (Non-Structural)	Annular grooved nail with 30mm minimum embedment into timber frame
	45mm x 45mm or 70mm x 45mm (Structural)	Annular grooved nail with 35mm minimum embedment into cavity batten

TABLE 3 - NAIL FIXINGS		
Species	Nail Material	
Western Red Cedar (<i>Thuja plicata</i>)	316 Stainless Steel or Silicon Bronze	
Alaskan Yellow Cedar (<i>Callitropsis nootkatensis</i>)		
Radiata Pine (<i>Pinus radiata</i>)		
Nordic Pine (<i>Pinus sylvestris</i>)		
JSC TMT Thermally Modified Species	Nail Material	
TMT Taiga	316 Stainless Steel or Silicon Bronze	Flat Head, Rose Head or Pentagon Head only
TMT Taxon		
TMT Amba		
TMT ThermoPine		
TMT ThermoPine - H3.2 (MicroPro® treated)		

- Notes:**
- Silicon bronze fixings may cause copper leaching. This effect is more noticeable with lighter finishes. It is aesthetic and does not compromise the durability of the fixing.
 - For the use of any alternative fixing of equivalent properties refer to [E2/AS1 Table C.3.1.1](#) and to [E2/AS1 Table C.1.1.1A](#) for alternative material selection.
 - JSC recommends fixing materials as per **Table 3 - Nail Fixings**, as they will at least match the life of the cladding. (E2/AS1 allows the use of galvanised fixings, although JSC does not endorse their use.)
 - Jolt head nails are only suitable for paint-finished weatherboards.
 - For buildings located in exposure ‘Zone D’, 316 stainless steel fixings must be used as per [NZS 3604:2011](#).

PRODUCT SELECTION

WEATHERBOARDS

JSC weatherboards are available in a wide variety of species, sizes, and profiles, providing design flexibility and innovation. When choosing a weatherboard for your project, consider:

Species

The choice of timber species is typically influenced by factors such as aesthetics, sustainability, durability, workability, dimensional stability, base colour and grain variation, cost, coating preferences, availability or other site specific requirements.

See **Table 4 - Weatherboard Species and Specification** for the list of JSC cladding species.

Weatherboard Profile

JSC manufactures weatherboards according to JSC specifications, aligning with [NZS 3617:1979](#) and [BRANZ BU411](#). Various profiles are available (see [JSC](#)

[Profile Chart](#)), and customised profiles can be crafted upon request to complement specific designs.

Surface Finishes

JSC weatherboards are available in Bandsawn finish. Dressed or Brushed finishes are also available depending on chosen species and coating.

- **Bandsawn Finish:** Accentuates the timber’s natural texture, ensuring a longer-lasting coating by increasing the surface area for stain absorption.
- **Dressed Finish:** Provides a smooth face that is preferable for painting. Dressed weatherboards will require sanding before painting or staining. Follow the coating manufacturer’s sanding specifications.
- **Brushed Finish:** Involves using wire bristles to gently scrape the timber surface. This highlights the wood grain and creates a vibrant textured appearance.

TABLE 4 - WEATHERBOARD SPECIES AND SPECIFICATION					
Species	Width	Thickness	Length Spread	Grades	Surface Finish
Western Red Cedar	Up to 300mm	18.5-39mm	Random & Select	PC1, PC2, STK,FJ, and Engineered	Bandsawn / Dressed
Alaskan Yellow Cedar	Up to 200mm	18.5mm	Random	Clears	Bandsawn / Dressed
Radiata Pine - H3.2 (MicroPro® treated)	Up to 200mm	20mm	Random	Clears 1	Bandsawn / Dressed
Nordic Pine - H3.2 (MicroPro® treated)	Up to 150mm	20mm	Random	STK	Bandsawn / Dressed
JSC TMT - Thermally Modified Timber Species					
TMT Taiga	Up to 150mm	18.5mm*	Random	STK	Bandsawn / Brushed
TMT Taxon	Up to 200mm	18.5mm*	Random	Clears	Bandsawn / Dressed / Brushed
TMT Amba	Up to 200mm	18.5mm*	Random	Clears	Bandsawn / Dressed / Brushed
TMT ThermoPine	Up to 200mm	18.5mm	Random	Clears	Bandsawn / Dressed / Brushed
TMT ThermoPine-H3.2 (MicroPro® treated)	Up to 200mm	18.5mm	Random	Clears	Bandsawn / Dressed / Brushed

Note: More species, grades, profiles, sizes, and select length options may be available on request.

*20mm available on request.

Coating

JSC weatherboards must be coated using a suitable exterior grade timber cladding coating and applied according to the manufacturer’s specifications and guidance.

Weatherboards can be supplied either pre-finished with a factory-applied base coat or raw. If supplied raw, a base coat must be applied on-site to all sides and cut ends before installation.

Note: Only weatherboards coated on all sides in suitable coating comply with JSC CodeMark certification.

Pre-coated Weatherboards

JSC highly recommends a factory-applied base coat for a premium finish on all sides. This controlled process reduces weather delays, human error, and contamination from dust and debris.

When using Radiata Pine weatherboards, the paint colour’s Light Reflectance Value (LRV) must be at least 45% to minimise dimensional movements that can cause cupping and splitting.

Note: Follow the coating manufacturer’s specifications at all times.

Note: For information on maintaining coatings refer to [JSC Maintenance Guide](#).

INSTALLATION

For installation requirements regarding wall framing, wall underlay, cutting and positioning cavity battens and flashings, refer to [BevelClad System Installation Guide](#).

BOARDS LAYOUT

Plan the layout of the weatherboards to ensure a full board is positioned above window and door heads. If this is not achievable, two boards must be joined above the head flashing.

WEATHERBOARD INSTALLATION

JSC weatherboards must be pre-drilled with a slight upward slope (0-2°). The hole should be approximately 1mm smaller than the nail shank to reduce the risk of moisture entry.

Note: For example, for a 75 × 3.25mm nail, use a 2.5mm drill bit.

Single fix each weatherboard at 30-35mm from the overlapping edge to achieve a minimum of 30mm fixing penetration into the timber framing or 35mm into the structural cavity batten.

Note: Scribes must be bedded in sealant to weatherboards for weathertightness.

Refer to **Table 2 - Fixings into Framing**.

Scribes

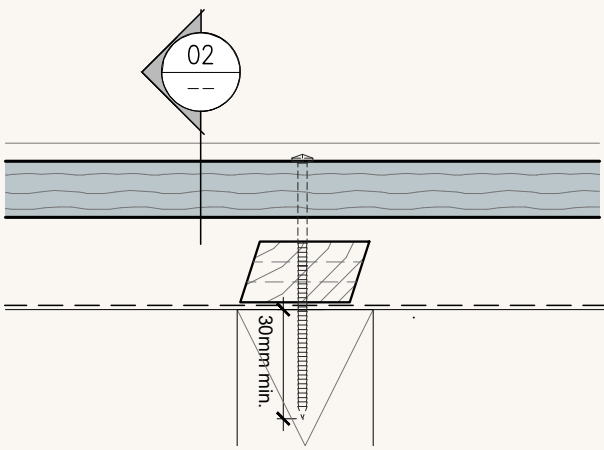
Ensure scribes extend at least 5mm past the joinery

sill and are bevelled back to the wall at an angle of 30-45°. Keep in mind that scribes and small decorative profiles are more prone to splitting and decay. They may only last 5 years in certain situations. Yearly maintenance cycles should be kept to keep integrity and to determine if re-coating, or replacement is needed.

Fix scribes and decorative trims using short screws or nails (35-50mm long) that do not penetrate the framing.

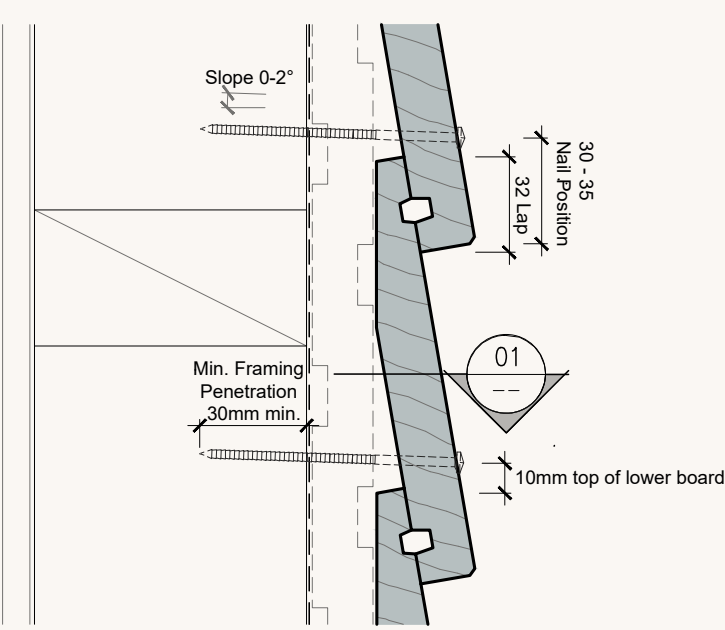
MAINTENANCE

Building owners are responsible for the maintenance of their JSC weatherboards. Annual inspections must be made to ensure that all aspects of the cladding remain in a weatherproof condition. Repair to damaged areas and maintenance where signs of deterioration are evident, must be addressed promptly. Repairs to sealants, coatings, flashings, scribes, decorative elements and weatherboards must follow the relevant manufacturer’s instructions. Weatherboards should be washed when surface dirt, pollen, or organic matter accumulates. In environments such as bush areas or locations with high seasonal pollen, cleaning may be required more frequently. For further information refer to the latest [JSC Maintenance Guide](#).

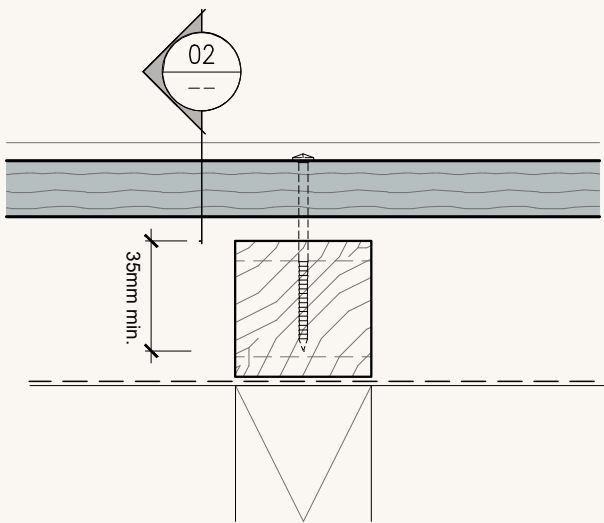


Plan Section 01

Figure 1 - Typical Bevel Back Weatherboard Installation
20mm non-structural cavity battens on Timber Framing

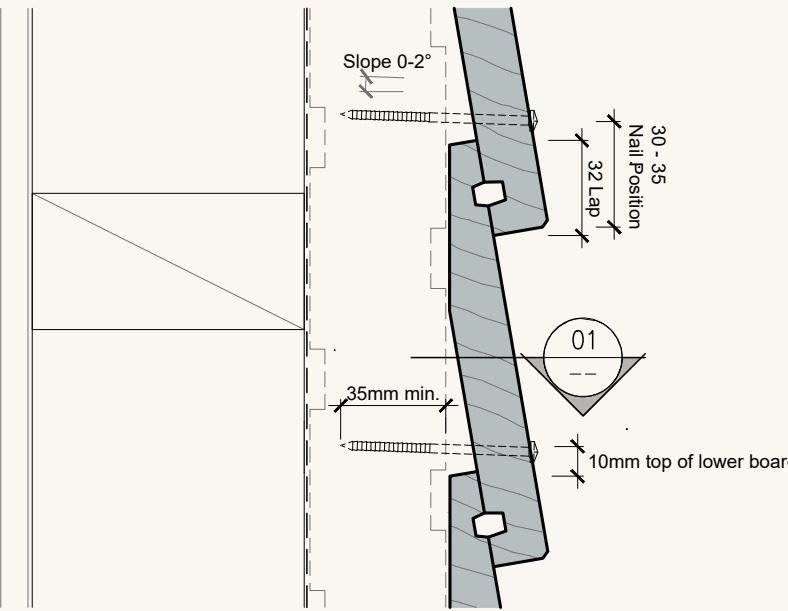


Cross Section 02



Plan Section 01

Figure 2 - Typical Bevel Back Weatherboard Installation
45mm structural cavity battens on Timber Framing



Cross Section 02

When fixing cavity battens to framing, avoid fixing them on their centre line. Stagger the cavity battens fixings to prevent interference with weatherboard fixings.

Note: Exposed Board Ends - Where weatherboards have an exposed bottom edge such as at the Bottom Plate, Inter-storey and Overhead Soffit junctions, the bottom of the boards should be cut back at 15 degrees to form a drip edge. The cut end should be coated up the back of the board. In the case of paint, sharp edges should be eased and the primer should be brushed thoroughly into the cut end, up the back and then top-coated. The areas where board ends are visually exposed must be checked as part of every coating maintenance inspection.

BUILDING CONSENT APPLICATION

When specifying BevelClad for your project, ensure the following steps are followed:

- 1. Confirm the proposed use aligns with the scope and limitations of the current CodeMark certificate.
- 2. Verify that the framing and wall underlay meet the required standards.
- 3. Specify the appropriate cavity battens for the project.
- 4. Select relevant construction details applicable to your project.
- 5. Specify the required coating for the cladding.

REQUIRED DOCUMENTATION

Include the following documents on the building consent application:

- CodeMark Certificate: CMNZ30082
- BevelClad Design Guide
- BevelClad Installation Guide
- BevelClad Checklist
- JSC Maintenance Guide
- Relevant Construction Details:
 - JSC 20CF - JSC BevelClad System_Flexible Underlay_20mm Cavity
 - JSC 20CR - JSC BevelClad System_Rigid Underlay_20mm Cavity
 - JSC 45CF - JSC BevelClad System_Flexible Underlay_45mm Cavity
 - JSC 45CR -JSC BevelClad System_Rigid Underlay_45mm Cavity

FOR TECHNICAL DRAWINGS

Visit the below link or scan the QR code for easy access.

jsc.co.nz/products/horizontal-bevelback-cladding



SCAN ME

APPENDIX 1

BEVELCLAD SYSTEM ACCESSORIES

Head Flashing

- Sizes as per [E2/AS1 Table 4.5.1.1](#)
- In accordance with [E2/AS1 Paragraph 9.1.10](#) or window manufacturer's instructions
- Usually supplied by joinery companies
- JSC do not recommend hooks or hems. Therefore, the flashing upstand dimensions must be increased by 25mm in accordance with [E2/AS1, Paragraph 4.4.3](#).
- JSC recommends a flexible cavity closer at window heads to accommodate accessory buildup and batten machining

Window Joinery

- To be installed in accordance with [E2/AS1 Paragraph 9.1.9](#) and [SNZ TS 4211:2022](#) and be compliant with [BPS Subsection 4.4.1](#)

Back Flashing

- Recommended min. 50mm coverage from any butt joint
- Materials to comply with [E2/AS1 Table C.1.1.1A](#)
- For PVC or other flexible materials, ensure flashing maintains contact with the back of cladding. If required, use extra cavity batten.

Cavity Closer

- Size to suit cavity
- Materials to comply with [E2/AS1 9.1.7.5](#), [9.1.7.6](#), [9.1.7.7](#) and [Figure 9.1.7.4A](#) or be covered by CodeMark or a BRANZ Appraisal, provided they comply with the conditions of use and scope
- Minimum vent 1000mm² / linear meter

Pipe Penetration Boot

- To comply with [E2/AS1 Paragraph 9.1.8.3](#) or be covered by CodeMark or a BRANZ Appraisal used within the scope
- To be installed as per manufacturer's specifications

Corner Flashing

- Sizes as per [E2/AS1 Table 4.5.1.1](#) and [Paragraph 4.4.3](#)
- Materials to comply with [E2/AS1 Table C.1.1.1B](#) and [Table C.1.1.1C](#)
- For PVC or other flexible materials, ensure flashing maintains contact with the back of cladding. If required, use extra cavity batten.
- When using 45mm structural cavity battens, do not use flexible corner flashings. The cavity batten positioning will not provide the necessary support for these flashings.

BEVELCLAD SYSTEM ACCESSORIES
Saddle Flashing - In accordance with E2/AS1 Figure 6.2.3.1B Cap Flashing - Must be in accordance with E2/AS1 Paragraph 7.5.5
Z Flashing - JSC do not recommend hooks or hems. Therefore, the flashing upstand dimensions must be increased by 25mm in accordance with E2/AS1, Paragraph 4.4.3. - In accordance with E2/AS1 Paragraph 9.1.8.4.
Weatherboard Fixings - Stain Finish - Materials to comply with C.1.1.1B and Table C.1.1.1C - Fastener length and position per E2/AS1 Table C.3.1.1 - Stainless steel or silicon bronze annular grooved Rose Head, Pentagon Head and Flat Head Weatherboard Fixings - Paint Finish - Materials to comply with E2/AS1 Table C.1.1.1B and Table C.1.1.1C - Fastener length and position per E2/AS1 Table C.3.1.1 - Stainless steel or silicon bronze annular grooved Jolt Head, Flat Head, Pentagon Head and Rose Head
Wall Underlay (Flexible or Rigid) - To comply with E2/AS1 Table C.2.1.1 or be covered by CodeMark or a BRANZ Appraisal used within the scope - Installed and handled per manufacturer's specification
Flashing Tape - To comply with E2/AS1 Paragraph 4.2.12 or be a product with a CodeMark or a BRANZ Appraisal used within the scope - To be compatible with wall underlay
Clouts - Materials to comply with E2/AS1 Table C.1.1.1B and Table C.1.1.1C - Nail length and position per E2/AS1 Table C.3.1.1 - Stainless steel
Other Fixings Any other fixing shall comply with NZS 3604:2011 for timber framing
Sealant - To comply with E2/AS1 Paragraph 9.1.5 - To be compatible with coating and other elements
Coating - Should be suitable to use as external cladding coating - All weatherboards are recommended to be delivered to site with a minimum of one coat of selected coating on all four sides - Coat the cut ends with two coats wet on wet - Subsequent coats are done after the installation - Follow the manufacturer's specifications at all times

APPENDIX 2

EXTERNAL REFERENCE

- MBIE NZ Building Code Clause E2 External Moisture (refer to www.building.govt.nz)
- Department of Building and Housing (DBH). Constructing Cavities for Wall Claddings (refer to www.building.govt.nz)
- BRANZ Bulletin BU468 [December 2005] Fixing Timber Weatherboards (refer to www.branz.co.nz/BU468)
- BRANZ [May 2015] Good Practice Guide: Timber Cladding (refer to www.branz.co.nz)
- BRANZ Build 154-33- Build Right Structurally Fixed Cavity Battens (refer to www.buildmagazine.org.nz)
- BRANZ Build 173-28- Build Right Coatings for Timber Weatherboards (refer to www.buildmagazine.org.nz)
- BRANZ Bulletin BU531 [February 2011] Designing for Thermal and Moisture Movement (refer to www.branz.co.nz/BU531)
- Window & Glass Association NZ (WGANZ) (refer to wganz.org.nz)
- NZS AS 1720.1:2022 (refer to www.standards.govt.nz)
- NZS 3604:2011 Timber-framed buildings (refer to www.standards.govt.nz)

Disclaimer: It is the responsibility of the designer/specifier to ensure the suitability and specification of any third-party accessories used with our cladding system. JSC is not liable for the installation of any components or accessories not supplied by us. For guidance on using specific components, please refer to our Technical Installation Details and Installation Guides. If there is any uncertainty, please seek expert advice.

The related documents mentioned above were accurate and up to date at the time of writing this guide. However, please note that information may have changed since then, and we recommend verifying any external sources for the most current information.



PREMIUM ARCHITECTURAL
& BUILDING SOLUTIONS

jsc.co.nz

TechHelp@jsc.co.nz | Sales@jsc.co.nz

FIND JSC ONLINE



AUCKLAND

(09) 412 2800
22 Sawmill Road
Riverhead

HAMILTON

0800 57 26 88
43 McKee Street
Pukete

WELLINGTON

0800 57 26 88
61 Seaview Road
Seaview

CHRISTCHURCH

(03) 348 9726
23 William Lewis Drive
Sockburn