

# ULLTRACLAD® PROFILED METAL CLADDING

## 1.0 General

This section relates to the supply and fixing of UlltraClad® profiled metal cladding complete with accessories, to new construction and renovation of residential or commercial buildings, fixed horizontally and vertically on a cavity

- onto timber framing
- over steel framing and other substrates, including over-cladding
- including extruded flashing sections and components

### 1.1 Related Work

Refer to ~ for ~

### 1.2 Abbreviations

The following abbreviations are used throughout this part of the specification:

MDPE (medium density polyethylene)

### 1.3 Documents

The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
NZBC E2/AS1	External Moisture
AS/NZS 1170.2	Structural design actions - Wind actions
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber Structures Standard
NZS 3604	Timber-framed buildings
AS/NZS 4534	Zinc and zinc/aluminium-alloy coatings on steel wire
BRANZ Appraisal 487	UlltraClad® Aluminium Cladding Cavity System
BRANZ Appraisal 796	Vertical Aluminium Cladding Cavity System

## 1.4 Manufacturer's Documents

Manufacturer's documents relating to work in this section are:

- UlltraClad® Aluminium Cladding - General information
- UlltraClad® Aluminium Cladding - Specifier Reference
- UlltraClad® Aluminium Cladding - Installation Reference
- UlltraClad® Aluminium Cladding - Specification Drawings
- UlltraClad® Aluminium Cladding - Profiles

Manufacturer / Supplier contact details:



**ULLRICH ALUMINIUM COMPANY LTD**

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Email: [alkalum@uacl.co.nz](mailto:alkalum@uacl.co.nz)

[www.ullrich.co.nz](http://www.ullrich.co.nz)

## 1.5 Warranty - Manufacturer / Supplier

Provide a material manufacturer/supplier warranty:

- 10/15/20/25 years            For film and colour integrity of powder coat finishes.
- 10 years                      For integrity of the aluminium weatherboard substrate.
- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of practical completion of the contract works.

## 1.6 Requirements - No Substitutions

Substitutions are not permitted to UlltraClad® specified system, or associated components and products.

## 1.7 Requirements - Qualifications

UlltraClad® Cladding is to be installed by a competent builder who is familiar with the product, following procedures contained in the document 'UlltraClad® Aluminium Cladding - Installation'.

## 1.8 Maintenance Instructions

Provide a copy of maintenance information on completion of the work.

## 1.9 Performance - Fixings, Wind

Design and use the fixings appropriate for the project wind design.

# ULLTRACLAD® PROFILED METAL CLADDING

## 2.0 Components/Accessories

UltraClad® weatherboards manufactured from 6060 T5 aluminium alloy are extruded and can be supplied in lengths affording best economy to the project. Profiles are supplied pre-finished with powdercoating.

### 2.1 Horizontal Board Starter

Extruded aluminium profile used where the weatherboards are installed horizontally to locate and secure the bottom of the first course of weatherboards, available in 5 m lengths.

### 2.2 Vertical Board Starter

Extruded aluminium profile to locate and secure the bottom of the boards when vertical installation is used, having punched holes for drainage.

### 2.3 Corner Moulding - External/Internal

Extruded aluminium 90° two-piece (inner & outer) corner flashing. Positions of the two extruded sections are interchanged depending upon whether the application is for an external or internal corner. Sections are powder coated available in 5.1 & 6.1m lengths.

### 2.4 Two Piece Jointer

Extruded aluminium two-piece vertical jointer for jointing lengths of UltraClad® weatherboard. Jointer is powder coated and available in 5.1m lengths.

### 2.5 Locator Clip

Extruded aluminium locator clip installed at maximum of 600 centres engages with the edge of individual weatherboard courses and enables fixing to structural framing/cavity battening. Locator clips are 60mm long and are pre-drilled to accept an 8g CSK screw.

### 2.6 Two Piece Jamb / Sill Flashing

Extruded aluminium two-piece flashing to conceal the ends of the weatherboards at jambs and sill of window and door trim openings; also, at extremities of the UltraClad® cladding where it terminates and/or interfaces with other material. The jamb flashing is powder coated and available in 5m lengths.

### 2.7 Fixings for Timber Frame

50mm long, 8-gauge, Grade 304 stainless steel wood screws (for installation over 20mm cavity).  
65mm long screws if using RAB board.

## 2.8 Foam Tapes

Closed-cell PVC foam tapes, adhesive on one side. Various sizes of tapes are used for specific applications. Refer to construction details version 10.

## 2.9 Cavity Batten Barrier Strip

Barrier to be used on timber battening.

## 2.10 Flexible Sill and Jamb Flashing Tape

Flexible flashing tapes complying with NZBC E2/AS1, 4.3.11, for use around window and door joinery openings.

## 2.11 Cavity Vent Strip

PVC or aluminium punched with 3-5mm holes or slots to NZBC E2/AS1, 9.1.8.3.

## 2.12 Cavity Battens

Minimum 45mm wide x 18mm thick H3.1 cavity batten system behind wall claddings. Horizontally installed battens to have castellated profile and minimum 15° slope to top edge.

## 2.13 Flashings - Parapet / Inter-storey

Extruded or folded from aluminium to the same standards as the UlltraClad® cladding profiles.

## 2.14 Headstarter / Flashings - Window and Door

Extruded from aluminium to suit the window or door joinery opening.

## 2.15 Flexible Sealant

To NZBC E2/AS1 for use as a weather sealant for exterior use.

# ULLTRACLAD® PROFILED METAL CLADDING

## 3.0 Execution & Application

### 3.1 Inspection

Inspect the wall framing and supporting structure including cavity battens to ensure that it is complete and fully braced ready for cladding and free from any misalignments or protrusions that could damage the cladding.

### 3.2 Storage

Take delivery of and accept packs of cladding dry and undamaged on delivery. Reject all damaged material. Store on a level firm base clear of the ground with packs well ventilated and completely protected from weather and damage. Do not allow moisture to build up between sheets. Use all accessories within the maximum storage period recommended by the manufacturer.

### 3.3 Handling

Avoid distortion and contact with damaging substances, including cement. Do not drag sheets across each other or other materials. Protect edges and surface finishes from damage. Always carry weatherboards on edge. Take care when cutting the material to ensure the finish is not damaged by swarf, always cut boards with the visible surface

### 3.4 Separation

Isolate dissimilar materials in close proximity as necessary by fitting separator strips of compatible materials. Place isolators between metals and treated timber and cement-based materials.

#### APPLICATION - GENERAL

### 3.5 Timber Treatment

Timber wall framing behind the UltraClad® aluminium cladding cavity system must be treated to NZBCB2/AS1 and NZS 3602.

### 3.6 Timber Framing

Timber framing to NZS 3604 for buildings or part of buildings within the scope limitations of NZS3604. Ensure studs at maximum 600mm centres. Fit dwangs/nogs flush between the studs at maximum 800mm centres. For UltraClad® weatherboards installed in a vertical orientation the dwangs/nogs must be installed at a maximum 600mm centres. Buildings or parts of buildings outside the scope of NZS 3604 must be a specific design in accordance with NZS 3603 and AS/NZS1170.2.

Additional framing will be required at soffits, internal and external corners, vertical joints and window and door openings for the support and fixing of UltraClad® weatherboards.

### 3.7 Timber Framing - Moisture Content

Ensure timber framing and cavity battens have a maximum moisture content of 24% at the time of the cladding application.

When continuous metal cladding etc. runs along a long continuous timber member and is directly fixed to it, the timbers equilibrium moisture content is to be 18% or less. For flashings in this situation (sometimes called transverse flashings) the framing equilibrium moisture content to be maximum 16%, and preferably as low as 12%. Transverse flashings can be temporarily tacked in place and final fixing done when moisture content is acceptable.

### 3.8 Steel Framing

Ensure specific design for steel framing will meet the requirements of the NZBC B1, Structure. Minimum framing specification is 'C' section studs and nogs of overall section size of 75mm web and 32mm flange. Steel thickness must be minimum 0.55mm. Studs to be at maximum 600mm centres. Dwangs/nogs must be fitted flush between the studs at maximum 800mm centres. For UlltraClad® weatherboards installed in a vertical orientation the dwangs/nogs must be installed at a maximum 600mm centres. Install thermal break to UlltraClad® recommendations.

### 3.9 Inter-storey Junctions

Provide inter-storey drained joints for walls over two storeys in height in accordance with NZBC 2/AS1 9.1.9.4(b).

#### APPLICATION - HORIZONTAL OVER CAVITY

NOTE: Refer to UlltraClad® Aluminium Cladding - Installation Reference, for recommended fixing sequence. Refer to BRANZ Appraisal 487.

### 3.10 Cavity - General

Form a drained and vented cavity to NZBC E2/AS1, 9.1.8.

### 3.11 Install Cavity Battens

Install over wall underlay to the wall framing at a maximum 600mm centres where the studs are maximum 600mm centres or at 400mm centres where the studs are at 400mm centres. Fix using 40mm x 2.5mm hot dipped galvanised flat head nails at maximum 800mm centres.

Support the wall underlay between the battens, when cavity battens are installed at greater than 450mm centres and bulk insulation is installed in the wall frame cavity, to prevent the underlay bulging into the cavity space.

### 3.12 Vent Strip

Install if required a PVC or aluminium vent strip, punched with 3-5mm holes or slots to NZBC E2/AS1, 9.1.8.3, to provide a minimum ventilation opening area of 1000mm<sup>2</sup> per lineal metre of wall. Install vent strip (cavity/vermin-proofing) at base of wall, open horizontal (or raking) junctions and over openings (windows, door, meters etc).

### 3.13 Aluminium Joinery

Install aluminium joinery head flashing to UlltraClad® Aluminium Cladding - Technical Literature, standard details H09 to H15 Leave a 7.5 nominal gap between joinery reveal and wall framing, to allow a P.E.F. rod and air seal to be installed after joinery installation.

### 3.14 Cavity Batten Barrier Strip

Tack the barrier strip to the face of the timber cavity battens, using staples or similar, to isolate the treated batten and the aluminium weatherboard and accessories. Use MDPE or similar barrier strip to form an impervious barrier (not required where Cavibat batten is present).

### 3.15 Horizontal Set-Out

Refer to UltraClad® standard details H00 to H08 to establish the lowest point from which the cladding is to start and ensure that the Starter Strip can extend below the bottom plate by the minimum 50mm required to NZBC E2/AS1, 9. The Starter Strip will permit this dimension to be increased up to a maximum of 105mm and at this stage it may be possible to set the starting position to facilitate alignment of a full board width with window sill or head levels. Mark out the position of the Starter Strip to a precise level line that can extend right around the structure. There is no subsequent adjustment available between boards.

When there is more than one starting level, work from the lowest point up to the next level and try to ensure a joint in the boards coincides with the higher starting level. If this is not achievable and it is necessary to start with a longitudinally ripped board, then the UltraClad® vertical starter should be employed.

### 3.16 Fit Initial Fixing Sections

Identify the initial fixing sections required by referring to UltraClad® standard details H01 to H011. In the absence of any guidance regarding placement of vertical joints, these should be positioned to give the best aesthetic result while making good use of boards to minimise waste. Where necessary introduce more dawning/nogging to fully support the joint.

### 3.17 Corners and Vertical Joints

Fix the base section of the corner mouldings in place and allow continuous length from the underside of the first weatherboard course to the soffit, top of the wall or inter-storey joint.

Where the wall is longer than the length of the weatherboard, the base section of the board jointer must be fixed in place over a double width cavity batten directly over a double stud. Fix jointer plumb and continuous from the underside of the first weatherboard course to the soffit, top of the wall or inter-storey joint.

### 3.18 Install Starter Strip

Fix horizontal starter strip through the cavity battens to the wall framing behind the first course of weatherboards. Fix level and maintain a gap between each end of the Starter Strip and the corner moulds or board jointer. Ensure the starter strip can extend below the bottom plate by the minimum 50mm required to NZBC E2/AS1, 9.1.3. Extend battens below bottom plate to support starter strip where necessary.

### 3.19 Install Base Channel

Where it is necessary to start with a longitudinally ripped board use the UltraClad® vertical starter to Start.

## 3.20 Install UlltraClad® Weatherboards

Cut UlltraClad® weatherboards to length allowing for a 5mm gap each end of board for expansion. Lock first course of weatherboards into starter strip. Secure top of board with locator clips fixed through the cavity battens to the stud at maximum 600mm centres. Ensure fixing clip engages correctly with fixing channel of the board and that the board is held firmly with no excessive downward pressure, as this may result in distortion or cupping of the weatherboard.

Lock subsequent courses of weatherboards into the channel at the bottom of the next board. Secure the top of the board with locator clips fixed through the cavity batten to the stud at maximum 600mm centres. Continue to check that the boards are clipped into the locator clips and for level as boards are fitted.

## 3.21 Fixing Into Timber Framing

Use 50mm long, 8 gauge stainless steel screws, 65mm long if RAB is installed.

## 3.22 Fixing Into Steel Framing

Use Stainless steel 12 gauge x 65 CSK SQ self-drilling screw.

### APPLICATION - VERTICAL OVER CAVITY

NOTE: Refer to UlltraClad® Aluminium Cladding - Installation Reference, for recommended fixing sequence. Refer to BRANZ Appraisal 796.

## 3.23 Wall Underlay / Flexible Sill and Jamb Tape Installation

Install selected wall underlay and flexible sill and jamb tape system, to the underlay and tape manufacturer's instructions, prior to the installation the rest of the UlltraClad® Aluminium Cladding system. Ensure a continuous seal is achieved around window and door openings and all exposed wall framing in the opening is protected.

Install wall underlay horizontally and continuous around corners. Lap the underlay 75mm minimum at horizontal joints and 150mm minimum over studs at vertical joints.

## 3.24 Install Flashings

Flash around wall openings to UlltraClad® approved details. Fit supplementary flashings required, such as at junctions with other cladding materials. Flash at joints in cladding to UlltraClad® approved details.

## 3.25 Cavity - General

Form a drained and vented cavity to NZBC E2/AS1, 9.1.8.

## 3.26 Install Cavity Battens

Install over wall underlay to the wall framing at a maximum 600mm centres where the dwangs/nogs are maximum 600mm centres. Fix using 40mm x 2.5mm hot dipped galvanised flat head nails at maximum 800mm centres.

Support the wall underlay between the battens, when cavity battens are installed at greater than 450mm centres and bulk insulation is installed in the wall frame cavity, to prevent the underlay bulging into the cavity space.

## 3.27 Vent Strip

Install a PVC or aluminium vent strip, punched with 3-5mm holes or slots to NZBC E2/AS1, 9.1.8.3, to provide a minimum ventilation opening area of 1000mm<sup>2</sup>; per lineal metre of wall. Install vent strip (cavity/vermin-proofing at base of wall, open horizontal (or raking) junctions and over openings (windows, doors, meters etc).



## 3.28 Aluminium Joinery

Install aluminium joinery and associated head flashing to UlltraClad® Aluminium Cladding - Technical Literature, standard details V08 to V14. Leave a 7.5mm nominal gap between joinery reveal and wall framing to allow a P.E.F. rod and air seal to be installed after joinery installation.

## 3.29 Cavity Batten Barrier Strip

Tack the barrier strip to the face of the timber cavity battens, using staples or similar, to isolate the treated batten and the aluminium weatherboard and accessories. Use MDPE or similar barrier strip to form an impervious barrier (not required where Cavibat batten is present).

## 3.30 Vertical Set-Out

Refer to UlltraClad® standard details V00 to V07. Establish the lowest point from which the cladding is to start and ensure that the base channel can extend below the bottom plate by the minimum 50mm required by NZBC. Mark out the position of the base channel to a precise level line that can extend right around the structure.

## 3.31 Fit Initial Fixing Sections

Identify the initial fixing sections required and Refer to UlltraClad® standard details V01 to V10.

## 3.32 Corners

Fix the base section of the corner mouldings in place and allow continuous length from the lowest point of cladding to the soffit, top of the wall or inter-storey joint.

## 3.33 Install Base Channel

Fix the base channel between corner clips, ensure the base channel can extend below the bottom plate by the minimum 50mm required to NZBC E2/AS1, 9.1.3.

## 3.34 Install UlltraClad® Weatherboards

Set out each wall or span to be clad before commencing to cut or fix boards. Plan wherever possible for the maximum thickness of cladding to occur whenever there is a vertical break, such as a corner, window, door jam or junction with another cladding material.

Commence cladding using the vertical board starter fixed at 600mm centres to locate the first weatherboard. Lock subsequent courses of weatherboards into the channel at the bottom of the next board. Secure the top of the board with the locator clips fixed to the dwangs/nogs at a maximum of 600mm centres. Fix the board with locator clips fixed to the dwangs/nogs at a maximum of horizontal 600mm centres.

Ensure fixing bracket engages correctly with fixing channel of the board and that the board is held firmly with no excessive lateral pressure as this may result in distortion or cupping of the weatherboard.

## 3.35 Fixing Into Timber Framing

Use 50mm long, 8 gauge stainless steel screws, and 65mm long 8 gauge stainless steel screws if RAB is installed.

### 3.36 Completion - Finishing

The pre-finished UltraClad® aluminium cladding system does not require painting at the completion of installation. Touch up of scratches to be completed in accordance with instructions of UltraClad® Aluminium Cladding Limited.

### 3.37 Replace

Replace any elements which have damage or marks which are beyond rectification.

### 3.38 Leave

Leave this work complete with all necessary flashings and capping's all properly installed as the work proceeds, so the finished cladding is completely weathertight.

### 3.39 Remove

Remove all debris, unused materials and elements from the site.

# ULLTRACLAD® PROFILED METAL CLADDING

## 4.0 Selections

For further details on selections go to [www.ulltraclad.co.nz](http://www.ulltraclad.co.nz)

Substitutions are not permitted to the following, unless stated otherwise.

### 4.1 Building Underlay

Brand: ~

Flashing tape: ~

### 4.2 Cavity Battens

Timber species: ~

Grade: ~

Treatment: H3.1

### 4.3 UltraClad® Weatherboards - Horizontal Over Cavity

Location: ~

Manufacturer: Ullrich Aluminium Company Limited

Fixing system: Horizontally over a drained and ventillated cavity

Profile: ~

Finish: ~

Colour: ~

Length: ~

Foam tapes: 19mm thick x 10mm wide, for Jamb Openings

### 4.4 UltraClad® Weatherboards - Vertical Over Cavity

Location: ~

Manufacturer: Ullrich Aluminium Company Limited

Fixing system: Vertically over a drained and ventillated cavity

Profile: ~

Finish: ~

Colour: ~

Length: ~

Foam tapes: 19mm thick x 10mm wide, for Jamb Openings