



## BRANZ Appraised

Appraisal No. 796 [2013]

## ULLTRACLAD® VERTICAL WEATHERBOARD CAVITY SYSTEM

Appraisal No. 796 [2013]



### BRANZ Appraisals

Technical Assessments of products for building and construction.



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## Product

- 1.1 The Ulltraclad® Vertical Weatherboard Cavity System is a cavity-based, inter-locking powder coated aluminium weatherboard system. It is designed to be used as an external wall cladding system for residential and light commercial type buildings where domestic construction techniques are used.
- 1.2 The system includes vertically fixed Ulltraclad® Shadoline weatherboards, cavity battens, internal and external corner mouldings, starter strips, board jointers, board locators, joinery flashings and accessories.
- 1.3 The system incorporates a primary and secondary means of weather resistance [first and second line of defence] against water penetration by separating the cladding from the external wall framing with a nominal 20 mm cavity.

## Scope

- 2.1 The Ulltraclad® Vertical Weatherboard Cavity System has been appraised as an external wall cladding for buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
  - constructed with timber framing complying with the NZBC; and,
  - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
  - situated in NZS 3604 Wind Zones up to, and including Extra High.
- 2.2 The Ulltraclad® Vertical Weatherboard Cavity System has also been appraised for weathertightness and structural wind loading when used as an external wall cladding system for buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
  - constructed with timber framing complying with the NZBC; and,
  - situated in specific design wind pressures up to a maximum design differential ultimate limit state [ULS] of 2.5 kPa.
- 2.3 The Ulltraclad® Vertical Weatherboard Cavity System must only be installed vertically on vertical, flat surfaces.
- 2.4 The Ulltraclad® Vertical Weatherboard Cavity System is appraised for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. *[The Appraisal of the Ulltraclad® Vertical Weatherboard Cavity System relies on the joinery meeting the requirements of NZS 4211 for the relevant Wind Zone or design wind pressure.]*

## Building Regulations

### New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, the Ulltraclad® Vertical Weatherboard Cavity System if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:**

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. The Ulltraclad® Vertical Weatherboard Cavity System meets the requirements for loads arising from self-weight, wind and impact [i.e. B1.3.3 (a), (h) and (j)]. See Paragraphs 9.1 - 9.3.

**Clause B2 DURABILITY:** Performance B2.3.1 (b), 15 years and B2.3.2. The Ulltraclad® Vertical Weatherboard Cavity System meets these requirements. See Paragraphs 10.1 - 10.3.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The Ulltraclad® Vertical Weatherboard Cavity System meets this requirement. See Paragraphs 14.1 - 14.5.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. The Ulltraclad® Vertical Weatherboard Cavity System meets this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance.

## Technical Specification

4.1 System components and accessories for the Ulltraclad® Vertical Weatherboard Cavity System, which are supplied by Ullrich Aluminium Co Ltd, are:

### Ulltraclad® Weatherboards

- **Vertically fixed Shadoline weatherboards** are produced with a flat face and a negative joint detail. When installed, the cladding is effectively 15 mm thick. Shadoline weatherboards are available 205 mm wide. The weatherboards are supplied in 5 m and 6 m lengths.
- **Ulltraclad® weatherboards** are manufactured from 6060 T5 grade aluminium alloy. The boards are extruded, cut to length and are then finished on the exposed surfaces with a 100% polyester powder coating.

### Accessories

- **Cavity vent strip** – a folded aluminium profile punched with 5 mm square holes in the bottom face to provide ventilation for the wall cavity and prevent the ingress of vermin. The cavity vent strip is available in 2.4 m lengths.
- **Vertical starter strip** – extruded aluminium profile used to locate and secure the bottom of the weatherboards. The starter strip is powder coated and is available in 5 m lengths.
- **External and internal corner moulding** – extruded aluminium 90° two-piece internal corner mould and 90° two-piece external corner mould. The mouldings are powder coated and are available in 5 m lengths.
- **Board locator** – an extruded aluminium locator used to locate one side and secure the other side of individual weatherboard rows. The board locators are 50 mm long and are predrilled for fixing.
- **Ulltraclad® head and jamb flashings** – extruded aluminium to suit the window or door trim opening. The flashings are powder coated and are available in 5 m lengths.
- **Inter-storey joint flashing** – extruded aluminium. The flashing is powder coated and is available in 5 m lengths.
- **Ulltraclad® weatherboard fixings** – 50 x 3.3 mm AISI-302Cu stainless steel screws.

- 4.2 Accessories used with the Ulltraclad® Vertical Weatherboard Cavity System, which are supplied by the building contractor, are:
- **Flexible wall underlay** – building paper complying with NZBC Acceptable Solution E2/AS1, Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall underlays.
  - **Flexible wall underlay support** – polypropylene strap, 75 mm galvanised mesh, galvanised wire, or additional horizontal battens for securing the flexible building underlay in place and preventing bulging of the bulk insulation into the drainage cavity. *[Note: mesh and wire galvanising must comply with AS/NZS 4534.]*
  - **Rigid wall underlay** – Plywood or fibre cement sheet complying with NZBC Acceptable Solution E2/AS1, Table 23, or rigid sheathing covered by a valid BRANZ Appraisal for use as rigid air barrier systems.
  - **Flexible sill and jamb flashing tape** – flexible flashing tapes complying with NZBC Acceptable Solution E2/AS1, Paragraph 4.3.11, or flexible flashing tapes covered by a valid BRANZ Appraisal for use around window and door joinery openings.
  - **Horizontal cavity battens** – Cavibat cavity battens, manufactured from extruded polypropylene. The battens are cut after extruding to a finished size of approximately 45 mm wide by 18 mm thick. The battens are coloured green and are supplied in 1200 mm long lengths. Cavibat cavity battens are covered by BRANZ Appraisal No. 524 [2012].
  - **Cavibat Cavity batten fixings** – 40 x 2.5 mm flat head hot-dipped galvanised nails or stainless steel finishing brads used to temporarily fix the battens in place until the cladding is installed.
  - **Vertical cavity battens [used at external and internal corners only]** – nominal 50 mm wide by 25 mm thick [minimum finished size of 45 mm wide by 18 mm thick] timber treated to Hazard Class H3.1.
  - **Vertical timber cavity batten fixings** – 32 x 3.3 mm AISI-302Cu stainless steel screws.
  - **Timber cavity batten separation strip** – 50 mm wide strip of roof underlay complying with NZBC Acceptable Solution, Table 23.
  - **Parapet flashing** – folded from aluminium.
  - **Head flashing** – folded or extruded from aluminium to suit the window or door joinery opening.
  - **Inseal® 3109 tape** – black, compressible, low density PVC foam. The foam is coated on one side with pressure sensitive acrylic adhesive and the other face is covered by a silicone release paper. The tape is 19 mm thick and is supplied in rolls 10 mm wide and 12 m long.
  - **Window and door trim cavity air seal** – air seals complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.6, or self-expanding, moisture cure polyurethane foam air seals covered by a valid BRANZ Appraisal for use around window, door and other wall penetrations.
  - **Flexible sealant** – sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid BRANZ Appraisal for use as a weather sealing sealant for exterior use.

## Handling and Storage

- 5.1 Handling and storage of all materials supplied by Ullrich Aluminium Co Ltd or the building contractor, whether on site or off site, is under the control of the building contractor. Ulltraclad® weatherboards must be stacked flat, off the ground and supported on a level platform. They must be kept dry either by storing under cover or providing waterproof covers to the stack. Care must be taken to avoid damage to powder coated surfaces. Weatherboards must always be carried on edge.
- 5.2 Other accessories must be stored so they are kept clean, dry and undamaged. All accessories must be used within the maximum storage period recommended by the manufacturer.

## Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Ulltraclad® Vertical Weatherboard Cavity System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### Framing

#### Timber Treatment

- 7.1 Timber wall framing behind the Ulltraclad® Vertical Weatherboard Cavity System must be treated as required by NZBC Acceptable Solution B2/AS1.

#### Timber Framing

- 7.2 Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604. In all cases studs must be at maximum 600 mm centres. Dwangs must be fitted flush between the studs at maximum 600 mm centres for fixing of the weatherboards.
- 7.3 Timber wall framing must have a maximum moisture content of 24% at the time of the cladding application.
- 7.4 Additional framing will be required at soffits, internal and external corners and window and door openings for the support and fixing of Ulltraclad® weatherboards.

### General

- 8.1 Punchings in the cavity vent strip provide a minimum ventilation opening area of 1000 mm<sup>2</sup> per lineal metre of wall in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3 [b].
- 8.2 The ground clearance to finished floor levels as set out in NZS 3604 must be adhered to at all times. At ground level paved surfaces, such as footpaths, must be kept clear of the bottom edge of the cladding system by a minimum of 100 mm, and unpaved surfaces by 175 mm in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Table 18.
- 8.3 At deck or low pitch roof/wall junctions, the bottom edge of the Ulltraclad® weatherboards must be kept clear of any adjacent surface, or above the top surface of any adjacent roof flashing by a minimum of 35 mm in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.3.
- 8.4 All external walls of buildings must have barriers to airflow in the form of interior linings with all joints stopped for wind zones up to and including Very High and rigid underlays for buildings in the Extra High wind zone. Unlined gables and walls must incorporate a rigid sheathing or an air barrier which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. For attached garages, wall underlays must be selected in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.3.4. Where rigid underlays are used, the fixing lengths must be increased by a minimum of the thickness of the underlay.
- 8.5 Inter-storey drained joints must be constructed in accordance with the Technical Literature. Inter-storey drained joints must be provided to limit continuous cavities to the lesser of 2-storeys or 7 metres in height, in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.4 [b].
- 8.6 Where the Ulltraclad® Vertical Weatherboard Cavity System abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.

## Structure

- 9.1 The mass of the Ulltraclad® Vertical Weatherboard Cavity System when installed on the wall is approximately 5 kg/m<sup>2</sup>. The Ulltraclad® Vertical Weatherboard Cavity System is therefore considered a light wall cladding in terms of NZS 3604.

## Impact Resistance

- 9.2 The Ulltraclad® Vertical Weatherboard Cavity System has good resistance to hard and soft body impacts likely to be encountered in normal residential use, although some chipping of the finish could occur. The likelihood of impact damage to the system when used in light commercial situations should be considered at the design stage, and appropriate protection such as the installation of bollards and barriers should be considered for vulnerable areas.

## Wind Zones

- 9.3 The Ulltraclad® Vertical Weatherboard Cavity System is suitable for use in all Wind Zones of NZS 3604, up to, and including Extra High where buildings are designed to meet the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 1.1, or up to design differential 2.5 kPa ULS wind pressure when the buildings are specifically designed.

## Durability

### Serviceable Life

- 10.1 The Ulltraclad® Vertical Weatherboard Cavity System is expected to have a serviceable life of at least 15 years provided the system is maintained in accordance with this Appraisal.
- 10.2 On exposure to the environment, the powder coating will gradually lose gloss and coloured coatings will slowly fade. A faster reduction in appearance and a reduction in serviceable life can be anticipated in severe industrial, geothermal, and marine exposures.
- 10.3 Microclimatic conditions, including geothermal hot spots, industrial contamination and corrosive atmospheres, and contamination from agricultural chemicals or fertilisers can convert mildly corrosive atmosphere into aggressive environments. The use of Ulltraclad® weatherboards and accessories in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604, Paragraph 4.2.4, and is outside the scope of this Appraisal.

## Maintenance

- 11.1 Regular maintenance is essential for Ulltraclad® Vertical Weatherboard Cavity System installations to continue to meet the NZBC durability performance provision and to maximise their serviceable life.
- 11.2 Annual inspections must be made to ensure that all aspects of the cladding system, including flashings and any sealed joints remain in a weathertight condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately. Sealant and the like must be repaired in accordance with the sealant manufacturer's instructions. Regular cleaning [at least every 6 months] of the powder coating with water and a mild detergent is required to remove grime, dirt and organic growth, to maximise the life and appearance of the cladding. Repainting of the powder coating may be considered necessary at some stage during the life of the cladding in order to restore the appearance of the cladding. Repainting must be carried out in accordance with the paint manufacturer's instructions for treatment of aged powder coated aluminium.
- 11.3 Minimum ground clearances as set out in this Appraisal must be maintained at all times during the life of the cladding. *[Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long term durability of the Ulltraclad® Vertical Weatherboard Cavity System.]*

### Control of External Fire Spread

- 12.1 Ulltraclad® Weatherboard is suitable for use where a non-combustible material is specified. Ulltraclad® Weatherboard is finished with a paint coating of not more than 1.0 mm in thickness, therefore the exterior surface finishes requirements of NZBC Acceptable Solutions C/AS2 – C/AS6, Paragraph 5.8.1 do not apply in accordance with NZBC Acceptable Solutions C/AS2 – C/AS6, Paragraph 5.8.2 a).

### Prevention of Fire Occurring

- 13.1 Ulltraclad® Weatherboard is considered a non-combustible material and need not be separated from flues and chimneys. However, when used in conjunction with, or attached to heat sensitive materials, the heat sensitive material must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of NZBC Acceptable Solutions C/AS1 to C/AS6, Paragraph 7.5.9 for the protection of combustible materials.

### External Moisture

- 14.1 The Ulltraclad® Vertical Weatherboard Cavity System, when installed in accordance with this Appraisal and the Technical Literature prevents the penetration of moisture that could cause undue dampness or damage to building elements.
- 14.2 The cavity formed by the weatherboards must be sealed off from the roof and sub-floor space to meet compliance with NZBC Clause E2.3.5.
- 14.3 The Ulltraclad® Vertical Weatherboard Cavity System allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet compliance with NZBC Clause E2.3.6.
- 14.4 The details given in the Technical Literature for weather sealing are based on the design principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing joinery and wall interfaces as shown in the Technical Literature. Weathertightness details that are developed by the designer are outside the scope of this Appraisal and are the responsibility of the designer for compliance with the NZBC.
- 14.5 The use of the Ulltraclad® Vertical Weatherboard Cavity System where there is a designed drainage path for moisture that penetrates the cladding, does not reduce the requirement for junctions and penetrations to remain weather resistant.

## Installation Information

### Installation Skill Level Requirements

- 15.1 Installation of Ulltraclad® weatherboards and accessories supplied by Ullrich Aluminium Co Ltd and the building contractor must be completed in accordance with instructions given within the Ulltraclad® Vertical Weatherboard Cavity System Technical Literature and this Appraisal by tradespersons who have been trained by Ullrich Aluminium Co Ltd and have an understanding of cavity construction.

## System Installation

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

- 16.1 The selected wall underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions prior to the installation of the cavity battens and the rest of the Ulltraclad® Vertical Weatherboard Cavity System. Flexible wall underlay must be installed horizontally and be continuous around corners. The underlay must be lapped 75 mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints. Generic rigid sheathing materials must be installed in accordance with NZBC Acceptable Solution E2/AS1 and be overlaid with a flexible wall underlay. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Particular attention must be paid to the installation of the wall underlay and sill and jamb tapes around window and door openings to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.
- 16.2 Where studs are at greater than 450 mm centres and a flexible wall underlay is being used, a wall underlay support must be installed over the underlay at maximum 300 mm centres horizontally to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity.

### Cavity Battens

- 16.3 Cavibat cavity battens must be installed horizontally over the wall underlay to the framing [dwangs] at maximum 600 mm centres. The battens must be fixed in place with 40 x 2.5 mm flat head hot-dipped galvanised nails or stainless steel finishing brads at maximum 800 mm centres along the batten. Timber cavity battens at external and internal corners must be installed vertically over the wall underlay behind the Ulltraclad® corner moulding. The battens must be fixed in place with 32 x 3.3 mm stainless steel screws at 800 mm centres.

### Aluminium Joinery Installation

- 16.4 Aluminium joinery and associated head flashings must be installed by the building contractor in accordance with the Technical Literature. A 7.5–10 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed after the joinery has been secured in place.

### Ulltraclad® Weatherboard Installation

- 16.5 Ulltraclad® weatherboards may be cut on site by power saw fitted with an aluminium cutting blade. Holes and cut-outs may be formed by drilling a number of holes around the perimeter of the opening required, or by using a holesaw suitable for cutting aluminium.
- 16.6 Fix the base section of the corner mouldings in place. The corner mouldings must be continuous in length from the underside of the vertical starter strip to the soffit, top of the wall or inter-storey joint.
- 16.7 Establish the lowest point where the cladding is to start and ensure that the vertical starter strip can extend minimum 50 mm below the bottom plate. The vertical starter strip must be installed level around the building perimeter and must be fixed through the channel upstand and cavity battens to the wall framing. The vertical starter strip must have 5 mm diameter holes drilled in the base of the channel at 300 mm centres to allow for drainage. A 20 mm gap must be maintained between each end of the vertical starter strip and the corner moulds to allow the corner mould to finish flush with the bottom of the channel.
- 16.8 Ulltraclad® Shadoline weatherboards must be installed starting at a corner. Where possible, the full thickness of the weatherboard profile should occur wherever there is a vertical break. The weatherboards must overhang the bottom plate by a minimum of 50 mm.
- 16.9 When the wall being clad is higher than two storeys, an inter-storey drained joint must be installed at the floor joist level.

- 16.10 Ulltraclad® Shadoline weatherboards are cut to length allowing a 1 mm gap per metre of board for expansion. The first course of weatherboards must be slotted into the vertical starter strip and must then be secured at the side of the board with a board locator fixed through the cavity battens to the dwangs at maximum 600 mm centres. Ensure that the board locator engages correctly with the fixing fin of the board and that the board is held firmly with no sideways pressure on it. This should eliminate distortion or cupping of the weatherboard.
- 16.11 Subsequent courses of Ulltraclad® Shadoline weatherboards must be installed over the tongue of the board locator from the previous weatherboard, and must be secured at the side of the board with locators fixed through the cavity batten to the dwangs.
- 16.12 Weatherboard fixing is carried out using 50 x 3.3 mm stainless steel screws.
- 16.13 Window and door joinery flashings must be installed in accordance with the Technical Literature.

#### **Aluminium Joinery Installation**

- 16.14 Aluminium joinery and associated head flashings must be installed by the building contractor in accordance with the Technical Literature. A 7.5-10 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed after the joinery has been secured in place.

#### **Finishing**

- 16.15 The Ulltraclad® Vertical Weatherboard Cavity System is pre-finished and does not require painting at the completion of installation. Touch up of scratches and the like must be completed in accordance with the instructions of Ullrich Aluminium Co Ltd.

#### **Health and Safety**

- 17.1 Hearing and eye protection must be worn while cutting Ulltraclad® weatherboards and accessories.

### **Basis of Appraisal**

The following is a summary of the technical investigations carried out:

#### **Tests**

- 18.1 The following testing on the Ulltraclad® Vertical Weatherboard Cavity System has been completed by BRANZ:
- The Ulltraclad® Vertical Weatherboard Cavity System has been tested to the version of E2/VM1 as contained within NZBC Clause E2, Amendment 5, August 2011. BRANZ expert opinion on NZBC E2 code compliance for the Ulltraclad® Vertical Weatherboard Cavity System was based on testing and evaluation of all details within the scope and as stated within this Appraisal. The testing assessed the performance of the foundation detail, window head, jamb and sill details, meter box head, jamb and sill details, vertical board joints, internal and external corners. In addition to the weathertightness test, the details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of Acceptable Solution E2/AS1 for drained cavity claddings.
  - Uniform wind face load tests to simulate wind pressures on Ulltraclad® Standard weatherboard were carried out by BRANZ, and the results were used in assessing the Ulltraclad® Vertical Weatherboard Cavity System.

#### **Other Investigations**

- 19.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 19.2 Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 19.3 The Technical Literature for the Ulltraclad® Vertical Weatherboard Cavity System has been examined by BRANZ and found to be satisfactory.



### Quality

- 20.1 The manufacture of Ulltraclad® weatherboards has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 20.2 The quality of materials, components and accessories supplied by Ullrich Aluminium Co Ltd is the responsibility of Ullrich Aluminium Co Ltd. The quality control system of Ullexco [a division of Ullrich Aluminium Co Ltd] has been assessed and registered as meeting the requirements of ISO 9001: 2008.
- 20.3 Quality of installation on site of components and accessories supplied by Ullrich Aluminium Co Ltd and the building contractor is the responsibility of the installer.
- 20.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, building underlays, flashing tapes, airseals, joinery head flashings and cavity battens in accordance with the instructions of Ullrich Aluminium Co Ltd.
- 20.5 Sub-trades are responsible for installation of penetrations, flashings etc that are relevant to their trade in accordance with the Ulltraclad® Vertical Weatherboard Cavity System Technical Literature.
- 20.6 Building owners are responsible for the maintenance of the Ulltraclad® Vertical Weatherboard Cavity System in accordance with the instructions of Ullrich Aluminium Co Ltd.

### Sources of Information

- AS/NZS 1170: 2002 Structural design actions.
- NZS 3603: 1993 Timber Structures Standard.
- NZS 3604: 2011 Timber-framed buildings.
- NZS 4211: 2008 Specification for performance of windows.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 [Amendment 5, 1 August 2011].
- New Zealand Building Code Handbook Department of Building and Housing, Third Edition [Amendment 12, 10 October 2011].
- The Building Regulations 1992.



In the opinion of BRANZ, **Ulltraclad® Vertical Weatherboard Cavity System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Ullrich Aluminium Co Ltd**, and is valid until further notice, subject to the Conditions of Appraisal.

### Conditions of Appraisal

1. This Appraisal:
  - a) relates only to the product as described herein;
  - b) must be read, considered and used in full together with the Technical Literature;
  - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
  - d) is copyright of BRANZ.
2. **Ullrich Aluminium Co Ltd:**
  - a) continues to have the product reviewed by BRANZ;
  - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
  - c) abides by the BRANZ Appraisals Services Terms and Conditions.
  - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
  - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
  - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
  - c) any guarantee or warranty offered by **Ullrich Aluminium Co Ltd**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Ullrich Aluminium Co Ltd** or any third party.

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**For BRANZ**



**Pieter Burghout**

Chief Executive

Date of Issue:

25 March 2013