



**BRANZ Appraised**  
Appraisal No. 1231 [2022]

**OBLIQUE™  
WEATHERBOARD  
[HORIZONTAL] CAVITY  
CLADDING**

**Appraisal No. 1231 (2022)**  
Amended 31 March 2026



**BRANZ Appraisals**

Technical Assessments of  
products for building and  
construction.



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## Product

- 1.1 Oblique™ Weatherboard [Horizontal] Cavity Cladding is a cavity-based fibre cement weatherboard wall cladding. 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.

## Scope

- 2.1 Oblique™ Weatherboard [Horizontal] Cavity Cladding has been appraised as an external wall cladding for timber-framed buildings within the following scope:
- the scope limitations of NZBC Acceptable Solution E2/AS1; and,
  - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1; and,
  - situated in NZS 3604 Wind Zones up to, and including, Extra High.
- 2.2 Oblique™ Weatherboard [Horizontal] Cavity Cladding has also been appraised for weathertightness and structural wind loading when used as an external wall cladding for buildings within the following scope:
- with a building height not exceeding 25 m; and,
  - constructed with timber framing subject to specific engineering design; and,
  - situated in specific design wind pressures up to a maximum design differential ultimate limit state [ULS] of 3.2 kPa where studs are at maximum 600 mm centres; and,
  - with inter-storey deflections designed for and up to height/180 of horizontal in-plane movement during seismic serviceable limit state [SLS] events (based on a 3 m inter-storey height); and,
  - when fixed over James Hardie RAB™ Board rigid air barrier for buildings over 10 m in height.
- 2.3 Oblique™ Weatherboard [Horizontal] Cavity Cladding must only be installed horizontally on vertical, flat surfaces.
- 2.4 Oblique™ Weatherboard [Horizontal] Cavity Cladding must only be used with window and doors that comply with NZBC Acceptable Solution E2/AS1 or that are covered by a valid BRANZ Appraisal or NZ CodeMark Certification.



## Building Regulations

### New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Oblique™ Weatherboard [Horizontal] Cavity Cladding, 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. Oblique™ Weatherboard [Horizontal] Cavity Cladding meets the requirements for loads arising from self-weight, wind, impact and creep [i.e. B1.3.3 (a), (h), (j) and (q)]. See Paragraphs 9.1-9.4.

**Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years, B2.3.1 (c) 5 years and B2.3.2. Oblique™ Weatherboard [Horizontal] Cavity Cladding meets these requirements. See Paragraphs 10.1-10.4.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. Oblique™ Weatherboard [Horizontal] Cavity Cladding meets this requirement. See Paragraphs 14.1-14.5.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Oblique™ Weatherboard [Horizontal] Cavity Cladding meets this requirement

## Technical Specification

4.1 System components and accessories for Oblique™ Weatherboard [Horizontal] Cavity Cladding which are supplied by James Hardie New Zealand Limited, are:

### Oblique™ Weatherboards

- Oblique™ Weatherboards are manufactured from a reduced density cellulose fibre cement formulation to meet the requirements of AS/NZS 2908.2. The boards are formed, cut to length and then cured by high-pressure autoclaving. After autoclaving, a rusticated profile is machined on the top edge of the front face, and a rebated lap is machined on the bottom of the back face of the weatherboard. The front edge at the bottom of the board and the board ends are finished square.
- Oblique™ Weatherboards are 14 mm thick and available 200 or 300 mm wide and 3,000 or 4,200 mm long. They are factory sealed on all sides and pre-primed with a manila white acrylic primer on the front face.

### Accessories

- **Hardie™ Axent™ Trim** - a 19 mm thick fibre cement trim pre-primed with an acrylic primer, available 70 and 89 mm wide and in 3,000 mm lengths.
- **Hardie™ 14 mm Trimline Joint Flashing** - an etch-primed aluminium extrusion used behind the cladding at vertical joints, available in 3,000 mm lengths.
- **Trimline Horizontal Jointer** - an aluminium jointer used to cover the butt joint of Hardie™ 14 mm Trimline joint flashing, available in 100 mm lengths.
- **Trimline External Corner Jointer** - 55 x 55 mm aluminium extrusion which joins Trimline joint flashings at an external corner.
- **Trimline Internal Corner Jointer** - 60 x 60 mm aluminium extrusion which joins Trimline joint flashings at an internal corner.
- **Hardie™ 14 mm Vertical Flashing Stop** - an aluminium extrusion used behind cladding at vertical joints, available in 3,000 mm lengths.
- **Hardie™ Aluminium Internal Corner 'W' Mould** - an aluminium extrusion used to create internal corners, available in 3,000 and 4,000 mm lengths.
- **Hardie™ 14 mm External Box Corner** - an anodised aluminium extrusion used to create external corners, available in 3,000 and 4,000 mm lengths.
- **Hardie™ 14 mm Aluminium Jamb Flashing** - an aluminium moulding used beside window openings to end butt the Oblique™ Weatherboard, available in 3,000 mm lengths.
- **Hardie™ 28 mm Aluminium Cavity Closer** - an aluminium moulding used as vermin proofing, available in 3,000 mm lengths.



- **uPVC vent strip** – a uPVC moulding used as vermin proofing, available in 3,000 mm lengths.
  - **Oblique™ 14 mm Plug** – a PVC plug to fill the recess in the Oblique™ Weatherboard, available in bags of 200.
  - **HomeRAB™ Pre-Cladding** – 4.5 mm thick fibre cement rigid wall underlay, 1,200 mm wide and available in 2,450 or 2,750 mm lengths.
  - **RAB™ Board** – 6 or 9 mm thick fibre cement rigid wall underlay, 1,200 mm wide and available in 2,450, 2,750 or 3,000 mm lengths.
- 4.2 Accessories specific to Oblique™ Weatherboard [Horizontal] Cavity Cladding, which are supplied by the building contractor are:
- **Vertical cavity battens** – nominal 50 mm wide by 25 mm thick [minimum finished size of 45 mm wide by 18 mm thick] timber treated to a minimum of Hazard Class H3.1.
  - **Fixings for cavity battens and flashings** – 40 x 2.8 mm or longer Hardie™ Flex flat head nails.
  - **Fixings for Oblique™ Weatherboard** – 65 x 2.87 mm or 75 x 3.06 mm D-head or RoundDrive hot-dip galvanised or stainless steel ring shank nails.
- [Note: Stainless steel fixings must be Grade 316 and hot-dip galvanising must comply with AS/NZS 4680].*
- 4.3 Accessories used with Oblique™ Weatherboard [Horizontal] Cavity Cladding to a generic specification in accordance with NZBC Acceptable Solutions E2/AS1, E2/AS4 or covered by a relevant and valid BRANZ Appraisal or NZ CodeMark Certification, which are supplied by the building contractor, are:
- Flexible wall underlay
  - Flexible wall underlay support
  - Rigid wall underlay
  - Flexible sill, head and jamb flashing tape
  - Joinery head flashings
  - Window and door trim cavity air seal
  - Flexible sealant

#### **Paint System Specification**

- 4.4 Paint systems are not supplied by James Hardie New Zealand Limited and have not been assessed, therefore they are outside the scope of this Appraisal.
- 4.5 All exposed faces, including top edges at sills and all bottom edges of Oblique™ Weatherboards, Hardie™ Axent™ Trim and accessories must be finished with a latex exterior paint system complying with any of Parts 7, 8, 9, or 10 of AS 3730 within 90 days of installation.

### **Handling and Storage**

- 5.1 Handling and storage of all materials supplied by James Hardie New Zealand Limited, whether on-site or off-site, is under the control of building contractor and shall be handled according to the requirements in the Technical Literature.
- 5.2 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 This Appraisal must be read in conjunction with:
- Oblique™ Weatherboard Horizontal Installation Technical Specification, March 2026.
- 6.2 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 framing 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 a building within the scope limitations of NZS 3604. Buildings or parts of a building 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. Studs must be at maximum 600 mm centres. Nogs/dwangs must be fitted flush between the studs at maximum 800 mm centres [for studs at 600 mm centres] or maximum 1,200 mm centres [for studs at 400 mm centres].
- 7.3 The maximum moisture content of timber framing must be in accordance with NZBC Acceptable Solution E2/AS1.

### General

- 8.1 When Oblique™ Weatherboard [Horizontal] Cavity Cladding is used for specifically designed buildings up to 3.2 kPa ULS wind pressure, only the weathertightness and structural aspects of the cladding are within the scope of this Appraisal. All other aspects of the building need to be specifically designed and are outside the scope of this Appraisal.
- 8.2 Ground clearance to finished floor levels as set out in NZS 3604 must always be adhered to.
- 8.3 The horizontal separation between the wall cladding and the adjacent ground must be maintained in accordance with NZS 3604.
- 8.4 The bottom of cladding must have separations, clearances and overlaps in accordance with NZBC Acceptable Solution E2/AS1.
- 8.5 All external walls shall have barriers to airflow in accordance with NZBC Acceptable Solution E2/AS1 and for specifically designed buildings up to a 3.2 kPa design differential ULS wind pressure a rigid underlay is required.
- 8.6 All external walls of buildings must have barriers to airflow in the form of RAB™ Board when used on buildings between 10-25 m high or situated in specific design wind pressures over a maximum differential ULS of 1.5 kPa.
- 8.7 Penetrations through Oblique™ Weatherboard [Horizontal] Cavity Cladding shall be in accordance with NZBC Acceptable Solution E2/AS1 and the Technical Literature.
- 8.8 Inter-storey junctions in claddings are required in accordance with NZBC Acceptable Solution E2/AS1 and shall be detailed in accordance with the Technical Literature.
- 8.9 Where Oblique™ Weatherboard [Horizontal] Cavity Cladding abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. The Technical Literature provides guidance for using Oblique™ Weatherboard [Horizontal] Cavity Cladding at junctions. Details not included with the Technical Literature have not been assessed and are outside the scope of this Appraisal.

### Structure

#### Mass

- 9.1 The mass of Oblique™ Weatherboard [Horizontal] Cavity Cladding is approximately 16 kg/m<sup>2</sup> and is therefore considered a light wall cladding in terms of NZS 3604.



### Impact Resistance

- 9.2 Oblique™ Weatherboard [Horizontal] Cavity Cladding has good resistance to hard and soft body impacts likely to be encountered in normal residential use. 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 Oblique™ Weatherboard [Horizontal] Cavity Cladding 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.
- 9.4 Oblique™ Weatherboard [Horizontal] Cavity Cladding is suitable for use in buildings up to 25 m high situated in specific design wind pressures up to maximum design differential ULS of 3.2 kPa where framing is specifically designed.

### Inter-storey Deflections

- 9.5 Oblique™ Weatherboard [Horizontal] Cavity Cladding, installed in conjunction with RAB™ Board, is suitable to resist inter-storey deflections. When installed in accordance with the Technical Literature, Oblique™ Weatherboard [Horizontal] Cavity Cladding, in conjunction with RAB™ Board, is capable of withstanding SLS deflections up to height/180.

### Durability

- 10.1 Oblique™ Weatherboard [Horizontal] Cavity Cladding meets the performance requirements of NZBC Clause B2.3.1 [b] 15 years for the Oblique™ Weatherboards, flashings and cavity system, and the performance requirements of NZBC Clause B2.3.1 [c] 5 years for the exterior paint system.

### Serviceable Life

- 10.2 Oblique™ Weatherboard [Horizontal] Cavity Cladding installations are expected to have a serviceable life of at least 50 years provided the paint coating system is maintained in accordance with the Technical Literature and this Appraisal to ensure the Oblique™ Weatherboards and fixings remain dry in service. Oblique™ Weatherboards must be painted within 90 days of fixing.
- 10.3 Coastal locations can be very corrosive to fasteners, especially locations within distances of up to 500 m from the sea including harbours, or 100 m from tidal estuaries and sheltered inlets, and otherwise as shown in NZS 3604. These coastal locations are defined in NZS 3604 as Zone D. To achieve a 50 year serviceable life in Zone D, Oblique™ Weatherboard [Horizontal] Cavity Cladding must be fixed with stainless steel fasteners. Fasteners outside Zone D may be hot-dip galvanised steel.
- 10.4 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 Oblique™ Weatherboard [Horizontal] Cavity Cladding in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604 and is outside the scope of this Appraisal.

### Maintenance

- 11.1 Regular maintenance in accordance with the Technical Literature is essential for Oblique™ Weatherboard [Horizontal] Cavity Cladding 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 the paint coating system, flashings and any sealed joints remain in a weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately. Sealant and paint coatings must be repaired in accordance with the sealant or paint coating manufacturer's instructions.



- 11.3 Regular cleaning [at least annually] of the paint coating surface is recommended to remove grime, dirt and organic growth and to maximise the life and appearance of the coating. Paint systems must be recoated at approximately 7-15 yearly intervals in accordance with the paint manufacturer's instructions.
- 11.4 Minimum ground clearances as set out in this Appraisal must be maintained at all times during the life of the cladding. *[Note: Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long term durability of Oblique™ Weatherboard (Horizontal) Cavity Cladding.]*

### Prevention of Fire Occurring

- 12.1 Oblique™ Weatherboards are considered a non-combustible material and need not be separated from heat sources such as fireplaces, heating appliances and chimneys. However, when used in conjunction with, or attached to heat sensitive materials, the heat sensitive material must be separated from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

### Fire Affecting Areas Beyond the Fire Source

- 13.1 Refer to NZBC Acceptable Solutions C/AS1 and C/AS2 and NZBC Verification Method C/VM2 for fire resistance rating, control of external fire spread and vertical fire spread requirements for external walls.

#### Horizontal Fire Spread

- 13.2 Where required by NZBC Acceptable Solution C/AS1 or C/AS2, the cladding system will need to be installed over a fire resistance rated [FRR] external wall with the required FRR.

#### Vertical Fire Spread - Buildings 10 m in height or less

- 13.3 When the Oblique™ Weatherboard [Horizontal] Cavity Cladding is used in buildings 10 m or less in height, NZBC Functional Requirement C3.2 identifies that external vertical fire spread to upper floors only needs be considered for buildings with a building height greater than 10 m.

#### Vertical Fire Spread - Buildings greater than 10 m in height

- 13.4 Oblique™ Weatherboard [Horizontal] Cavity Cladding can form part of an external wall cladding system designed to meet Vertical Fire Spread requirements. This has not been assessed by this Appraisal and is outside its scope.
- 13.5 Specific Fire Engineering Design is required for each building over 10 m in height to ensure the External Cladding System will meet the requirements of NZBC Acceptable Solution C/AS2 or NZBC Verification Method C/VM2.
- 13.6 The specific engineering design for the building must include the specific detailing at each floor level as provided in Figure 42 of the Oblique Weatherboard Horizontal Installation Technical Specification and meet the requirements of NZBC Acceptable Solution C/AS2 Cavity barriers.
- 13.7 The following information is provided to support the Specific Engineering Design. The components listed in Table 1 form a part of the James Hardie External Cladding System and have been tested and achieved the listed classifications.



**Table 1: Components of the Oblique™ Weatherboard (Horizontal) Cavity Cladding System**

Component	Test Method	Result
Oblique™ Weatherboards	AS/NZS 3837:1998	Pass - Type A
Hardie™ Axent™ Trim	AS/NZS 3837:1998	Pass - Type A
Joinery and joint flashings and mouldings	Aluminium as defined in C/AS2 definitions	Non-combustible
Cavity vent strip	-	-
Oblique™ Plug	-	-
Flexible wall underlay	-	-
James Hardie Rigid Air Barrier (RAB™ Board)	AS/NZS 3837:1998	Pass - Type A
Flexible sill, head and jamb flashing tape	-	-
Cavity batten	Component of NFPA 285 test	Pass
Cavity batten and Oblique™ Weatherboard fixings	Steel as defined in C/AS2 definitions	Non-combustible
Air seals and sealant	-	-

### External Moisture

- 14.1 Oblique™ Weatherboard (Horizontal) Cavity Cladding, when installed and maintained in accordance with this Appraisal and the Technical Literature, will prevent the penetration of moisture that could cause undue dampness or damage to building elements.
- 14.2 The drained cavity must be sealed off to restrict air movement between the drained cavity; and: floor, wall and roof framing; and, attic roof space; and, subfloor space as required by NZBC Acceptable Solution E2/AS1.
- 14.3 Construction moisture must be managed in accordance with NZBC Acceptable Solution E2/AS1 to ensure construction moisture is not permitted to damage building elements.
- 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.

### Internal Moisture

#### Water Vapour

- 15.1 Oblique™ Weatherboard (Horizontal) Cavity Cladding is not a barrier to the passage of water vapour, and when installed in accordance with this Appraisal and the Technical Literature, will not create or increase the risk of moisture damage resulting from condensation.
- 15.2 Buildings must be constructed with an adequate combination of thermal resistance and ventilation, and space temperature must be provided to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate.

### Installation Information

#### Installation Skill Level Requirement

- 16.1 All design and building work must be carried out in accordance with the Oblique™ Weatherboard (Horizontal) Cavity Cladding Technical Literature and this Appraisal by competent and experienced tradespeople, conversant with Oblique™ Weatherboard (Horizontal) Cavity Cladding. Where the work involves Restricted Building Work (RBW), this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.



## System Installation

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

- 17.1 The selected wall underlay and flexible flashing tape must be installed in accordance with the underlay and tape manufacturer's instructions, prior to the installation of the cavity battens and Oblique™ Weatherboard [Horizontal] Cavity Cladding. Flexible wall underlay must be installed horizontally and be continuous around corners. 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 flexible flashing tapes around window and door openings and penetrations to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.
- 17.2 Where studs are at greater than 450 mm centres and a flexible wall underlay is being used, a flexible wall underlay restraint in accordance with the Appraisal Technical specification must be installed over the underlay to prevent the insulation from bulging the building underlay into the cavity.

### RAB™ Board

- 17.3 RAB™ Board must be installed in accordance with the Technical Literature and BRANZ Appraisal No. 611 James Hardie Rigid Air Barriers.

### Timber Cavity Battens

- 17.4 Cavity battens must be installed over the wall underlay to the wall framing at maximum 600 mm centres where the studs are at 600 mm centres or at 400 mm centres when studs are at 400 mm centres. The battens must be temporarily fixed in place with 40 x 2.8 mm hot-dip galvanised flat head nails at maximum 600 mm centres.
- 17.5 Where studs are at greater than 400 mm centres and a flexible wall underlay is used, a wall underlay support must be installed over the underlay at maximum 300 mm horizontal centres.

### Joinery Installation

- 17.6 Joinery must be installed in accordance with the appraised Technical Literature and any Technical Literature of the joinery manufacturer. The joinery must be installed plumb, level and fixed in accordance with NZBC Acceptable Solution E2/AS1 or the joinery manufacturers Technical Literature.

### Oblique™ Weatherboard Installation

- 17.7 Oblique™ Weatherboards may be cut on-site by power saw. Holes and cut-outs may be formed by drilling a number of holes around the perimeter of the opening required and tapping out the centre with a hammer, or by using a hole saw.
- 17.8 Weatherboards must be dry prior to installation. Before the weatherboards are installed, cut ends exposed to the exterior, such as at aluminium box corners or internal corners must be sealed with an acrylic sealer to reduce the absorbency of the fibre cement.
- 17.9 Oblique™ Weatherboards must be installed starting at the bottom of the wall. The bottom course of weatherboards must overhang the bottom plate by a minimum of 50 mm.
- 17.10 Before the weatherboards are installed, the corner detail must be prepared to suit the selected option, e.g. external box corner. The necessary flashings, including window flashings, must be installed before commencing weatherboard fixing.
- 17.11 The first course of weatherboards must be full length and commence from an external corner. Jointing of Oblique™ Weatherboards is made over cavity battens using the vertical Trimline joint flashing or vertical joint flashing. A bead of sealant must be applied to the end of the weatherboard before butting it to the jointer.
- 17.12 Oblique™ Weatherboard laps are pre-determined by the machined joint detail. Window and door joinery should be designed so as near to a full board as possible will finish over the joinery.



17.13 Fixings for Oblique™ Weatherboards must be in accordance with the Technical Literature. Nails must be punched a maximum of 2 mm below the surface and be no closer than 12 mm to the end of the weatherboard.

#### **Finishing**

17.14 All punched fixings must be filled. The paint coating manufacturer's instructions must be followed at all times for application of the paint finish. Oblique™ Weatherboards and trim must be clean and dry before commencing painting.

#### **Inspections**

17.15 The Technical Literature must be referred to during the inspection of Oblique™ Weatherboard [Horizontal] Cavity Cladding installations.

#### **Health and Safety**

18.1 Protective equipment must be worn and used as required by the Technical Literature and the manufacturer's instructions.

### **Basis of Appraisal**

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

#### **Tests**

- 19.1 Uniform wind face load tests to simulate wind pressures on Oblique™ Weatherboards were carried out by a James Hardie Australia Pty Ltd NATA accredited laboratory. The testing determined design wind suction pressures, and by comparing these pressures with the NZS 3604 and AS/NZS 1170 pressure coefficients, the fixing requirements were determined for timber-framed walls. The test methods and results have been reviewed by BRANZ and found to be satisfactory.
- 19.2 Oblique™ Weatherboards have been tested by a James Hardie Australia Pty Ltd NATA accredited laboratory in accordance with AS/NZS 2908.2 and ISO 8336. The testing covered: soak-dry, bending strength, warm water soaking, heat/rain, freeze/thaw and apparent density. The test methods and results have been reviewed by BRANZ and found to be satisfactory.
- 19.3 Cone calorimeter testing to determine the peak rate of heat release and total heat release of Oblique™ Weatherboards was completed by BRANZ. The testing was carried out in accordance with AS/NZS 3837.
- 19.4 BRANZ expert opinion on NZBC Clause C3 code compliance for Oblique™ Weatherboard [Horizontal] Cavity Cladding was based on NFPA 285 testing by Intertek Group plc on specimens assembled containing the James Hardie External Cladding System.
- 19.5 BRANZ expert opinion on NZBC Clause E2 code compliance for Oblique™ Weatherboard [Horizontal] Cavity Cladding was based on NZBC Verification Method E2/VM2 [BRANZ EM7] testing and evaluation of all details within the scope and as stated within this Appraisal.

#### **Other Investigations**

- 20.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 20.2 A BRANZ expert opinion on NZBC Clause E2 code compliance for Oblique™ Weatherboard [Horizontal] Cavity Cladding including evaluation of all details within the scope of this Appraisal has been completed.
- 20.3 Site inspections have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 20.4 The Technical Literature for Oblique™ Weatherboard [Horizontal] Cavity Cladding has been examined by BRANZ and found to be satisfactory.



## Quality

- 21.1 The manufacture of Oblique™ Weatherboard [Horizontal] Cavity Cladding has been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 21.2 The quality of materials, components and accessories supplied by James Hardie New Zealand Limited is the responsibility of James Hardie New Zealand Limited.
- 21.3 Quality of installation on-site of components and accessories supplied by James Hardie New Zealand Limited is the responsibility of the installer.
- 21.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, wall underlays, flashing tapes, air seals and cavity battens in accordance with the instructions of James Hardie New Zealand Limited.
- 21.5 Sub-trades are responsible for installation of penetrations, flashings etc. that are relevant to their trade in accordance with the Oblique™ Weatherboard [Horizontal] Cavity Cladding Technical Literature.
- 21.6 Building owners are responsible for the maintenance of Oblique™ Weatherboard [Horizontal] Cavity Cladding in accordance with the instructions of James Hardie New Zealand Limited.

## Sources of Information

- AS 3730 Guide to the properties of paints for buildings.
- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 2908.2:2000 Cellulose-cement products - Flat sheet.
- AS/NZS 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter.
- AS/NZS 4534:1998 Zinc and zinc/aluminium-alloy coatings on steel wire.
- AS/NZS 4680:2006 Hot-dip galvanized [zinc] coatings on fabricated ferrous articles.
- BRANZ Appraisal No. 611 James Hardie Rigid Air Barriers.
- BRANZ EM7 Performance of mid-rise cladding systems.
- CodeMark Certificate CMNZ30147 Oblique Weatherboard by James Hardie Cavity Cladding System.
- ISO 5660.1:2002 Heat release rate [cone calorimeter method].
- ISO 8336:2009 Fibre-cement flat sheets - Product specification and test methods.
- NFPA 285:2012 Standard method of test for the evaluation of flammability characteristics of exterior non-loadbearing wall assemblies containing components using the intermediate scale, multi-storey test apparatus.
- NZS 3603:1993 Timber structures standard.
- NZS 3604:2011 Timber-framed buildings.
- NZS 4211:2008 Specification for performance of windows.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

## Amendments

### Amendment No. 1, dated 31 March 2026

This Appraisal has been amended to increase the stud spacing to 600 mm centres and the nog spacing to 800 mm centres and to reflect the changes made to the NZBC compliance documentation.



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26 October 2022

OBLIQUE™ WEATHERBOARD  
[HORIZONTAL] CAVITY CLADDING



In the opinion of BRANZ, **Oblique™ Weatherboard [Horizontal] Cavity Cladding** 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 **James Hardie New Zealand Limited**, 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. **James Hardie New Zealand Limited:**
  - 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 **James Hardie New Zealand Limited**.
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 **James Hardie New Zealand Limited** or any third party.

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For BRANZ

**Chelydra Percy**

Chief Executive

Date of Issue:

26 October 2022