# PRODUCT CERTIFICATE

## Oblique™ Weatherboard by James Hardie Cavity Cladding System

CERTIFICATE: **CMNZ 30147**
Version No: **RevA**

### 3 DESCRIPTION OF BUILDING METHOD OR PRODUCT

Oblique™ Weatherboard Cladding is a cavity-based fibre cement weatherboard wall cladding system.
Oblique™ Weatherboard Cladding consists of Oblique™ Weatherboard, which is a 14mm profile fibre cement weatherboard, fixed horizontally or vertically over battens to form a nominal 20 mm cavity. Proprietary ventilated timber battens are used in the vertical application. The cladding is finished with a latex paint system.
The cladding system incorporates a primary and secondary means of weather resistance (first and second lines of defence) against water penetration by separating the cladding from the external wall framing with a nominal 20 mm cavity. The cavity allows for any occasional ingress of water that may get past the external skin to drain to the exterior of the building, and any remaining moisture to dry by evaporation.

### 4 INTENDED USE OF BUILDING METHOD OR PRODUCT

The system is designed to be used as part of an external cladding system on timber framed building.

### 5 NEW ZEALAND BUILDING CODE PROVISIONS

The system if designed, used, installed and maintained in accordance with this certificate will meet the following provisions of the 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 (q). |
| Clause B2 DURABILITY: | Performance B2.3.1(b) 15 years and B2.3.2. |
| Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: | Performance C3.5, C3.7 |
| Clause E2 EXTERNAL MOISTURE: | Performance E2.3.2, E2.3.5, E2.3.6 and E2.3.7 |
| Clause F2 HAZARDOUS BUILDING MATERIALS: | Performance F2.3.1. |

### 1 CERTIFICATE HOLDER DETAILS

**James Hardie New Zealand Limited**
Trading as James Hardie
1 O'Rorke Road, Penrose , Auckland
1061, New Zealand,
TechnicalTeam@jameshardie.co.nz
Tel: 0800 808 868,
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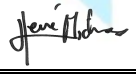
| ORIGINAL ISSUE DATE | VERSION DATE | RECERTIFICATION |
|---|---|---|
| 17/10/2022 | 17/10/2022 | 17/10/2025 |

### 8 SIGNATURE



Herve Michoux, Global Mark Managing Director

### 2 PRODUCT CERTIFICATION BODY

**Global-Mark Pty Ltd**
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The complaints process for this certificate can be found here:
https://www.global-mark.com.au/?s=complaint

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### 6 CONDITIONS AND LIMITATIONS OF USE

1. The system is certified:
   - a. as a cavity fixed external wall cladding for buildings:
     - i. within the scope limitations of the NZBC Acceptable Solution E2/AS1, 3rd Edition, amendment 10, 5 November 2020, Paragraph 1.1,
     - ii. with a risk score of up to 20, calculated in accordance with the NZBC Acceptable Solution E2/AS1, 3rd Edition, amendment 10, 5 November 2020, Table 2,
     - iii. situated in in NZS 3604:2011 Wind Zones up to, and including Extra High, and
   - b. as a cavity fixed external wall cladding for buildings specifically engineering designed (SED):
     - i. up to 25m in height, and
     - ii. with an inter-storey drift of span/180 maximum, and
     - iii. the design ultimate limit state (ULS)differential wind pressure does not exceed 3.2 kPa; and
     - iv. with the stud and batten spacing no more than 600mm centres,
   - c. located:
     - i. in all exposure zones (except microclimates) as defined in NZS3604:2011 section 4.2, and
     - ii. anywhere in relation to the relevant boundary for Importance Levels 1 to 4 buildings within the scope of:
       1. C/AS1, amendment 5, 5 November 2020 paragraph 1.1.1 or
       2. C/AS2, amendment 2, 5 November 2020 paragraph 1.1.1
2. The system shall be specified, installed, inspected and maintained in accordance with the following sets of documents collectively referenced as the Applicable Technical Specification to the extent that their scope covers that for this Certificate:
   - a. For the Horizontal applications,
     - i. Oblique™ Weatherboard 14mm Horizontal Installation – Technical specification, October 2022, and
     - ii. Fire & Acoustic Design Manual (November 2020) by James Hardie section 4:16 Control of External Fire Spread, figures No's. 1 to 8 and 12 to 20, specifically details JHETGO30h and JHETGO60h. These details have only been assessed and certified with respect to external fire spread via Oblique™ Weatherboard Cladding. For walls located within 1.0 m of a relevant boundary, Oblique™ Weatherboard Cladding may be used as an external façade/cladding attached to the exterior of fire rated wall systems as depicted within the Fire and Acoustic Design Manual (November 2020). Fire Resistance rating performance of the wall assembly falls outside the scope of this certificate
   - b. For the Vertical Application,
     - i. Oblique™ Weatherboard 14mm Vertical Installation – Technical specification, October 2022, and
     - ii. Fire & Acoustic Design Manual (November 2020) by James Hardie section 4:16 Control of External Fire Spread, figures No's. 1 to 8 and 12 to 20, specifically details JHETGO30v and JHETGO60v. These details have only been assessed and certified with respect to external fire spread via Oblique™ Weatherboard Cladding. For walls located within 1.0 m of a relevant boundary, Oblique™ Weatherboard Cladding may be used as an external façade/cladding attached to the exterior of fire rated wall systems as depicted within the Fire and Acoustic Design Manual (November 2020). Fire Resistance rating performance of the wall assembly falls outside the scope of this certificate

   (Note: Provisions within the documents above related to the use of the system with steel-frame construction are outside the scope of this certification).

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3. In wind zones greater than Very High a rigid air barrier which complies with Table 23 of E2/AS1 shall be used. In Buildings exceeding 10 m in height RAB™ Board must be used including horizontal control joints in accordance with the requirements of the Codemark certificate for RAB™ Board. (Refer to GM-CM30130 )
4. The system is certified for use:
   a. with the ancillary components as described in this certificate,
   b. with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. Only joinery compliant with the requirements of NZS 4211:2008 including amendment 1 for the relevant Wind Zone or wind pressure shall be used.
5. Oblique™ Weatherboard Cladding shall only be installed horizontally or vertically on vertical surfaces.
6. All exposed faces, including top edges at sills and all bottom edges of Oblique™ Weatherboard Cladding Weatherboards and fibre cement ancillary components shall be finished with a latex exterior paint system complying with any of Parts 7, 8, 9, or 10 of AS 3730
7. E2.3.5 and E2.3.6 compliance is limited to cavities created between the internal surface of the weatherboards and the underlay or RAB™ Board's.

### 7 HEALTH AND SAFETY INFORMATION

Standard industry safety practices and manufacturer safety requirement as detailed in the technical literature including the applicable SDS must be observed at all time. Please refer to James Hardie SDS Fibre Cement Products June 2022

### 9 BASIS FOR CERTIFICATION

The certification decision is based on independent technical review(s) of test report(s), engineering opinion(s) and other documented evidence(s), factory audit(s) and site review(s)

| Code Clause | Compliance pathway | Evidence |
|---|---|---|
| B1 STRUCTURE | Alternative solution -Expert judgement | 001, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022,, 024, 025 and 026 |
| B2 DURABILITY | Alternative solution -Expert judgement | 001, 023, 025 and 026 |
| C3 FIRE AFFECTING AREAS BEYOND THE SOURCE | Alternative solution -Expert judgement | 001, 002, 003, 004, 005, 006, 007, 008, 010, 011, 025, 026and 027 |
| E2 EXTERNAL MOISTURE | Alternative solution -Expert judgement | 001, 009, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 025 and 026 |
| F2 HAZARDOUS BUILDING MATERIALS | Alternative solution -Expert judgement | 001, 021, 025, 026 and 028 |

### 10 SUPPORTING DOCUMENTATION FOR CERTIFICATION

| Ref | Author | Title | Date and/or revision |
|---|---|---|---|
| 001 | GLOBAL-MARK | Codemark Certification GM-CM30130 HomeRAB™ Pre-Cladding and RAB™ Board by JAMES HARDIE | Rev A |
| 002 * | BRANZ | Fire Assessment Report based Cone calorimeter test. | FH3182 21 November 2002 |
| 003 * | BRANZ | Fire Assessment Report based Cone calorimeter test. | FH 2976 15 May 2001 |

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| 004 * | BRANZ | Fire Assessment Report based Cone calorimeter test (BRANZ Project No. FC10254-001). | FSR 4206 Issue2 7 November 2018 |
| 005* | BRANZ | Fire technical Opinion: Technical opinion based on NFPA 285 Compliance with NZBC C/AS2, clause 5.8.2 (b) and C/VM2 Part A (a). | FC12172-001 1 November 2019 |
| 006* | BRANZ | Fire Assessment Report Review of James Hardie Fire and Acoustic Manual | FAR 4620 – 04 November 2016 |
| 007* | BRANZ | Fire technical Opinion: Fire resistance of James Hardie Wall Systems with Service Penetrations | FC12040-004 -03 December2019 |
| 008* | BRANZ | Technical Assessment "Fire Resistance of External Wall and Soffit"_Various JH Products | FAR 2597- 5th October 2005 |
| 009* | BRANZ | E2 Weathertightness Opinion for the Appraisal of Linea Oblique Weatherboard (Vertical) Cavity Cladding | TP2355-02, dated 19 November 2015 |
| 010* | Intertek B&C | JH cavity fix wall assembly fire test as per NFPA 285 | J6706.01-121-24 - 20th August 2019 |
| 011* | Intertek B&C | JH cavity fix wall assembly fire test as per NFPA 285 | J6707.01-121-24 - 21st August 2019 |
| 012* | Clarkson Consulting Services | JH NZ_RAB_Weathertightness Assessment_200626_R2.1 | August 2022 |
| 013* | James Hardie Building Product | Weathertightness Testing of Residential Façade Fibre Cement Cladding System On Cavity Battens to the requirement of Verification Method E2/VM1 | TS061-05, dated 15 February 2006 |
| 014* | James Hardie Building Product | TESTING OF A TITAN RESIDENTIAL FIBRE CEMENT CLAD FAÇADE FOR COMPLIANCE WITH THE REQUIREMENTS OF AS/NZS 4284:1985 "TESTING OF BUILDING FACADES" | TS010-06, dated 14 November 2006 |
| 015* | James Hardie Technical Support group | Weathertightness (E2/VM1) | TS003-13, dated 4 December 2013 |
| 016* | James Hardie Technical Support group | Weathertightness (E2/VM1) | TS022-13, dated 12 November 2013 |
| 017* | James Hardie Technical Support group | Weathertightness (E2/VM1) | TS033-13, dated 8 January 2014 |
| 018* | James Hardie Technical Support group | Weathertightness & Façade System (E2/VM1) | TS009-15, dated 14 October 2015 |
| 019* | James Hardie Technical Support group | Weathertightness & Façade System (E2/VM1) | TS052-11, dated 16 December 2011 |
| 020* | Façade Testing New Zealand Limited, | Testing of James Hardie NZ ExoTec Façade Panel top hat rainscreen façade system in accordance with AS/NZS 4284:2008 | FT-R1005, dated May 2017 |
| 021* | Façade Lab Ltd | Testing of James Hardie Linea Oblique vertical weatherboard on rigid wall underlay to E2/VM2 (BRANZ EM7) using tests from AS/NZS 4284:2008 'Testing of Building Facades' | 20-16 dated 11/12/2020 |

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|---|---|---|---|
| 022* | BRANZ | BRANZ Assessment – Face Load Strength of James Hardie Linea Weatherboard Clad Walls and Variations of Sheet thickness and Nail type (reviews STO483) | STO102/SM30/SJT dated 11 November 2002 |
| 023* | BRANZ | Durability Opinion on the Linea Weatherboard System | DA 0220 dated 24/09/2017 |
| 024* | BRANZ | Face Loading Testing of Low Density Thick Weatherboard | Report ST483 dated 20 February 2001 |
| 025 | James Hardie New Zealand Limited | Oblique™ Weatherboard 14mm Horizontal Installation – Technical specification | October 2022 |
| 026 | James Hardie New Zealand Limited | Oblique™ Weatherboard 14mm Vertical Installation – Technical specification | October 2022 |
| 027 | James Hardie New Zealand Limited | James Hardie Fire & Acoustic Design Manual. Section 4:16 Control of External Fire Spread, figures No's. 1 to 9 8 and 12 to 20, specifically details JHETGO30h, JHETGO30v, JHETGO60h and JHETGO60vl | November 2020 |
| 028 | James Hardie New Zealand Limited | LQA8N - SAFETY DATA SHEET- JAMES HARDIE FIBRE CEMENT SHEETS PRODUCTS | Version No.: 2.0<br>ISSUED Date : 22/06/2022 |
| * These documents were provided commercial in confidence and are not publicly available | | | |

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### 11 SUPPORTING INFORMATION ABOUT DESCRIPTION (OPTIONAL)

The Oblique™ Weatherboard Cladding panels are pre-primed with an acrylic primer on the front face and edges. The Oblique™ Weatherboard Cladding panels are 14 mm thick and are available 200 and 300 mm wide. The boards are supplied 2750 and 4200 mm long. Oblique™ Weatherboards are manufactured from a reduced density cellulose fibre cement formulation. 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 manufactured to meet the requirements of AS/NZS 2908.2.

James Hardie supplies the following ancillary components:

- For horizontal and vertical applications
  - Rigid wall underlay – HomeRAB™ Pre-Cladding and RAB™ Board
  - Hardie™ Axent™ Trim - Hardie™ Axent™ Trim is a 19mm thick, pre-primed fibre cement product available in 3000 mm by 70 mm or 89 mm
  - Hardie™ 14mm Aluminium Trimline Joint Flashing - Aluminium extrusion used behind cladding at horizontal joints available in 3000 mm long
  - Trimline External Corner Jointer - Joins Trimline Joint Flashing at an external corner
  - Trimline Internal Corner Jointer - Joins Trimline Joint Flashing at an internal corner
  - Weatherboard Internal 'W' Corner - Anodised aluminium extrusion used to create internal corners available in 2700 mm and 4000 mm long.
  - Hardie™ 14mm Aluminium Weatherboard Internal Corner - Anodised aluminium extrusion used to create internal corners available in 3000 mm long.
  - Hardie™ 14mm Aluminium Weatherboard External Box Corner - Anodised aluminium extrusion used to create external corners available in 2700 mm and 4000 mm long.
  - Cavity vent strip – Hardie™ 28 mm aluminium cavity closure or Hardie™ uPVC vent strip, available in 3000 mm lengths.
  - Oblique 14mm Plug - To fill recess in Oblique™ Weatherboard 14mm
- For the horizontal applications
  - Trimline Horizontal Jointer - A jointer to cover the butt joint of Oblique Trimline Joint Flashing available in 100 mm long
  - Hardie™ 14mm Aluminium Trimline Joint Flashing - Aluminium extrusion used behind cladding at horizontal joints available in 3000 mm long
  - Hardie™ 14mm Aluminium Jamb Flashing 3000mm - Aluminium moulding used beside window opening to end butt the Oblique™ Weatherboard available in 3000 mm long.
- For the vertical applications
  - Hardie™ horizontal cavity battens – 45 x 20 mm thick Radiata pine batten treated to Hazard Class H3.1. The top edge is bevelled with an 18° slope. The back face is grooved with 22 mm wide x 5 mm deep rebates at 50 mm centres, and the front face is grooved with 6 mm wide x 6 mm deep rebates at 150 mm centres. The grooves are offset on each face.
  - HardieTM 14mm Aluminium Internal Corner 3000mm - Anodised aluminium extrusion used to create internal corners available in 3000 mm long.

Other components not supplied by James Hardie but meet the following requirements

- For the horizontal and vertical applications
  - Flexible wall underlay – building paper complying with NZBC Acceptable Solution E2/AS1, Table 23, or breather-type membranes covered by a valid Codemark Certification for use as wall underlays
  - Flexible wall underlay support – polypropylene strap, 75 mm galvanised mesh, galvanised wire, or additional vertical battens for securing the flexible wall 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.)

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- Flexible sill, head 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 Codemark Certification for use around window and door joinery openings
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- Flexible window opening flashing tape - A flexible self-adhesive tape used in preparation of a window. Refer to the window installation section in this manual for more information.
- Rigid air barrier vertical joint sealing tape - The tape to be used to seal HomeRAB™ Pre-Cladding/RAB™ Board vertical joints.
- Head flashing - Required over window heads to be supplied by window installer. Material must comply with Table 20 and 21 of E2/AS1.
- Exterior grade filler
- Cavity batten fixings - 40 x 2.8 mm flat head hot-dip galvanised nails.
- Oblique™ Weatherboard fixings (with flexible wall underlays) - 65 x 2.87 mm D-head or RounDrive hot-dip galvanised or stainless steel ring shank nails.
- Oblique™ Weatherboard fixings (with rigid wall underlays up to 10 mm thick) 75 x 3.06 mm D-head or RounDrive hot-dip galvanised or stainless steel ring shank nails (Note: Stainless steel fixings must be Grade 304/316 and hot-dip galvanising must comply with AS/NZS 4680).
- Joinery head flashings - extruded or folded from aluminium or galvanised steel to suit the window or door trim opening. Refer to NZS 3604, Section 4 and NZBC Acceptable Solution E2/AS1, Table 20 for durability requirements.
- Flexible sealant - sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid Codemark Certification for use as a weather sealing sealant for exterior use.

- For the horizontal applications
  - Cavity battens - 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.
  - Timber trim and moulding for use around windows and door. Timber trim and moulding must be finished in accordance with NZBC.
  - Timber trim and moulding fixings - 60 x 3.15 mm or 75 x 3.15 mm hot-dip galvanised jolt head nails and stainless steel ring shank jolt head nail.
  - Planted sill and scribers - timber treated to Hazard Class H3.1, pre-primed before installation. 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 Codemark Certification suitable for use around window, door and other wall penetration openings.
- For the vertical applications
  - 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 Codemark Certification suitable for use around window, door and other wall penetration openings.

| 12 SUPPORTING INFORMATION ABOUT INTENDED USE (OPTIONAL) |
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| Nil |
| **13 SUPPORTING INFORMATION ABOUT CONDITIONS AND LIMITATIONS OF USE (OPTIONAL)** |
| Oblique™ Weatherboard Cladding can be used to provide fire resistance rated construction, but this aspect has not been assessed and is outside the scope of this certificate. |

**End of document**