



# BEAL Appraisal Certificate



APPRAISAL #: C1216

EXPIRY DATE: 31 May 2024

## The CladX NZ Ltd AAC Wall Panel System



### Product

- 1.1 The CladX NZ AAC Wall Panel System (CAWPS) is a drained and ventilated masonry veneer wall cladding with a plastered then painted / textured finish. It is designed to be used as an external wall cladding system for residential and light commercial type buildings where residential construction techniques are used.
- 1.2 The system consists of 50mm thick autoclaved aerated concrete (AAC) panels fixed over polystyrene battens to form a 20mm cavity. The coating system from Wattyl consists of 5 mm thick Grano Adhesive Mortar Coarse with fibreglass mesh imbedded into it, followed by the application of a 2mm thick Grano Adhesive Mortar Coarse, followed by the application of a 1mm thick coat of Grano Sponge. A coat of Grano Prime primer/sealer is then applied followed with the application of 2 coats of Wattyl's Grano Impact coating system.
- 1.3 The system incorporates a drained and ventilated cavity by way of 40mm x 20mm EPS cavity battens .

### NZ Building Regulations

- 2.1 In the opinion of BEAL, the CAWPS, if designed, installed and maintained in accordance with the statements and conditions of this Appraisal Certificate, will meet the following provisions of the NZBC:
- 2.2 **Clause B1 STRUCTURE**  
Performance B1.3.1 and B1.3.3. The CAWPS meets the requirements for loads arising from self weight, earthquake, wind, impact and creep [ i.e. B1.3.3 (a), (f), (h), (j) and (q)]. See paragraphs 6.6 - 6.8
- 2.3 **Clause B2 DURABILITY**  
Performance B2.3.1 (b), 15 years, B2.3.1 (c), 5 years, and B2.3.2. The CAWPS meets this requirement. See paragraphs 6.9 & 6.10
- 2.4 **Clause E2 EXTERNAL MOISTURE**  
Performance E2.3.2. The CAWPS meets this requirement. See paragraph 6.12 - 6.13
- 2.5 **Clause F2 HAZARDOUS BUILDING MATERIALS**  
Performance F2.3.1. The CAWPS meets this requirement and will not present a health hazard to people.
- 2.6 The CAWPS has been appraised as an **Alternative Solution** in terms of New Zealand Building Code compliance.

Applicant:



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## Scope and Limitations

3.1 The CAWPS System has been appraised for use as an external wall cladding system for buildings within the following scope:

Scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,

Constructed with timber framing complying with the NZBC; and,

Constructed with steel framing complying with the NZBC; and,

With a risk score of 0-20, calculated in accordance with Acceptable Solution E2/AS1, Table 2; and,

Can be situated in up to and including Very High wind zones as described in NZS 3604 Building Wind Zones.

3.2 The CAWPS System must only be installed on vertical framing.

3.3 The 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 CAWPS System relies on window and door joinery meeting the requirements of the NZBC for the relevant building wind zone or being designed for use in specifically designed buildings).

3.4 Installation of components and accessories supplied by CladX NZ Ltd must be carried out only by personnel trained and certified by CladX NZ Ltd.

## Technical Literature

4.1 Refer to the Clad-X Technical Manual. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained within the Technical Literature and scope of this Appraisal Certificate must be followed.

4.2 For a copy of this Technical Literature and any updates please refer to [www.cladx.co.nz](http://www.cladx.co.nz)

## Technical Details

5.1 System components and accessories supplied by CladX NZ Ltd are as follows:

### Cavity Battens

20mm EPS Cavity Battens are manufactured from very high density (Class VH) EPS with a density of no less than 28kg/m<sup>3</sup>. The battens are 40mm wide by 20mm thick and are supplied in 1200mm lengths.

### CladX AAC Panel

The CladX AAC Panel Panels are 50mm thick, manufactured from autoclaved aerated concrete with an approximate density of 520kg/m<sup>3</sup>. The panels are supplied in lengths of 2200mm long by 600mm wide and subject to the CladX Building Product Quality Plan.

### Accessories

MCB A20 cement based panel adhesive

uPVC Components include:

- CladX PVC sill flashing
- Powder coated aluminium head flashing (installed by the owner)
- CladX PVC jamb flashing
- CladX PVC base cap flashing
- PVC base cap moulding

- PVC vent 30mm x 30mm
- Bostik Safe-Tech sealant
- Zinc-rich primer compliant with AS/NZS 2311
- 14 -10 x 100mm long AS3566 corrosion class 3 or 4 Bugle head screws for use in NZS 3604 defined corrosion zones 1,2, 3 and 4. Grade 304 stainless steel shall be used in the sea spray zone.
- Reinforcing Mesh - High quality alkali resistant fibreglass mesh with a nominal size of approx. 4mm square and a weight of 150g/m<sup>2</sup> for use in domestic and light commercial situations
- Vents
- PVC vent 30mm x 30mm
- Bostik Safe-Tech sealant
- Zinc-rich primer compliant with AS/NZS 2311
- 14 -10 x 100mm long AS3566 corrosion class 3 or 4 Bugle head screws for use in NZS 3604 defined corrosion zones 1,2, 3 and 4. Grade 304 stainless steel shall be used in the sea spray zone.
- Reinforcing Mesh - High quality alkali resistant fibreglass mesh with a nominal size of approx. 4mm square and a weight of 150g/m<sup>2</sup> for use in domestic and light commercial situations.

### Wattyl Granosite Plaster and Coating System

All Plaster components used for the protection and weatherproofing of the AAC Panels are to be supplied by Wattyl New Zealand Ltd. The Wattyl Granosite Plaster and Coating System has been assessed by BEAL.

#### 5.2 Base Coat Plasters

**Grano Adhesive Mortar Coarse** is a polymer-modified, cementitious rendering material specifically designed for thin section rendering over AAC. It is applied as a base coat, in a minimum 5mm layer followed by the embedment of high quality alkali resistant fibre glass mesh reinforcement, followed by a further 2mm layer.

**Grano Sponge** is a pre-blended polymer-modified, cement-based texturing plaster designed to be applied 1-2mm over Grano Adhesive Mortar Coarse.

#### 5.3 Finishing Coatings

**Grano Prime** is an acrylic primer sealer applied over the Grano Sponge to enhance adhesion.

Grano Prime can be applied by brush, roller, conventional or airless spray. The primer is applied over the levelling coat, and also used as a primer/adhesion promoter for flexible sealant application.

**Grano Impact** is a high performance elastomeric coating able to be applied in a variety of styles over the sealed Grano Sponge plaster.

A minimum of two coats of Wattyl Grano Impact must be used over the finishing plasters to make the system weathertight and produce the desired finish to exterior walls.

Proprietary paint systems not supplied by Wattyl New Zealand Ltd have not been assessed and are therefore outside the scope of this Appraisal Certificate.

#### 5.4 Accessories

Accessories used with the system which are supplied by CladX NZ Ltd certified installers are:

- VH grade 40mm x 20mm EPS cavity battens.
- Sika PB Nailbond adhesive to adhere the EPS battens to the Wall Wrap.
- MCB A20 AAC panel adhesive.
- Screws shall be 14-10 x 100mm Bugle head, Type 17, Class 3 or 4 galvanized screws, complying with



Compliance document E2/AS1 Table 20.

- Flexible sealant shall be Bostik SAFE-TECH complying with NZBC Acceptable Solution E2/AS1 for use as a weather sealing sealant for exterior use.
- Anti-corrosion paint for exposed steel wire shall be a zinc-rich primer compliant with AS/NZS 2311.
- A range of CladX flashings to suit the particular layout of the cladding
- The CladX Vent is a proprietary product with an opening of 30mm x 30mm and is installed when the cladding sits into a rebate in the floor slab.

#### 5.5 Accessories supplied by the Owner

These include:

- Head flashing - Head flashing complying with NZBC Acceptable Solution E2/AS1 paragraph 4.6.1.6 and table 7 with a minimum stop end of 10mm, installed in accordance with the Technical Literature
- Foam tape to be installed under the head flashing onto the top of the Aluminium window or door joinery shall be Inseal 3259 single sided foam tape 3mm wide by 3mm thick length cut to suit.
- Building wrap - paper or wrap complying with the requirements of NZBC Acceptable Solution E2/AS1 Table 23.
- Flexible flashing sill and jamb tapes - flexible flashing tapes complying with AAMA 711-07, or a flexible flashing tape covered by a valid BEAL and/or BRANZ Appraisal for use around window and door joinery openings.
- Air seals around windows and doors - air seals complying with NZBC Acceptable Solution E2/AS1 9.1.6, or low foaming self expanding, moisture cure polyurethane foam air seals covered by a valid BEAL and/or BRANZ Appraisal for use around window, door and other wall penetration openings or manufactured to comply with AAMA 812-04.
- Building wrap strapping - Polypropylene tape for securing the building wrap in place and preventing bulging of the insulation into the drain cavity where cavity battens are installed at greater than 450mm centres as per NZBC Acceptable Solution E2/AS1 9.1.8.5 (b).

#### 5.6 Handling and Storage

- Handling and storage of all the materials supplied by CladX NZ Ltd or the licensed contractor, both on and off site are under the control of CladX NZ Ltd licensed contractors.
- Dry storage must be provided on site for the AAC Cladding Panel, fibreglass mesh and bags of render with the AAC panels stored flat and protected from physical damage. EPS battens, uPVC flashing and mouldings must be protected from direct sunlight, physical damage and stored flat and under cover. All liquid components shall be stored in dry, frost free conditions.
- Handling of the AAC panels require care to prevent damage to corners or excessive flexing.
- Handling and storage of all the materials supplied by the building contractor, both on and off site is the responsibility of the building contractor. Materials must be handled and stored in accordance with the manufacturers instructions.

## Advice for Designers

### Framing

#### 6.1 Timber Framing

- Timber used in timber framing shall be treated as required by NZS 3602.
- Timber framing must comply with NZS 3604 for both buildings or parts of buildings within the scope limitations of NZS 3604. Where buildings or parts of buildings are outside the scope of NZS 3604 then they must be to specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least the equivalent stiffness to the framing provisions of NZS 3604. In all cases, studs must be at a maximum of 600mm centres.
- Timber framing must have a maximum moisture content of 18% at the time of cladding application. *(Problems could arise later on due to timber shrinkage if over 18%)*

#### 6.2 Steel Framing

- Steel framing must be to a specific design meeting the requirements of the NZBC. (NASH Standard for Residential and Low-rise Steel Framing, Parts 1 and 2).
- The minimum steel framing specification is 'C' section studs and nogs of overall section dimensions of 76mm web by 40mm flange. Steel thickness must be a minimum 0.75mm.
- For steel framed buildings situated within NZS 3604 defined wind zones up to and including Very High, studs must be at maximum 600mm centres. All other buildings studs must be at maximum 400mm centres. Dwargs must be fitted flush with the stud.

#### 6.3 AAC Panel Layout

- AAC panels are installed horizontally in a stretcher-bond pattern. Vertical panel edges may be jointed on stud or off stud.
- AAC Panels must be supported at fixing locations with vertical cavity battens or cavity spacers 100mm long maximum in accordance with the requirements of NZBC Acceptable Solution E2/AS1, paragraph 9.1.8.2(f).
- At the base of the wall the AAC Panel can be either rested on DPM on a concrete rebate (75mm below finished floor level) or hung 50mm below the finish floor level.

#### 6.4 General

- Openings in the slotted base cavity closer provide a minimum ventilation opening area of 1000mm<sup>2</sup> per lineal metre of wall as per the requirements of NZBC Acceptable Solution E2/AS1, paragraph 9.1.8.3 (b).
- The CladX Vents provide a minimum ventilation opening area of 1000mm<sup>2</sup> per lineal metre of wall, when fixed at 900mm centres respectively as per the requirements of NZBC Acceptable Solution E2/AS1 paragraph 9.1.8.3 (b).
- The ground clearance between the finished floor level and ground level as outlined in NZS 3604 must be adhered to at all times. At ground level, paved surfaces must be kept clear from the bottom edge of the CAWPS System by a minimum of 100mm, and unpaved surfaces by 175mm in accordance with the requirements of NZBC Acceptable Solutions E2/AS1, Table 18.
- At balcony, deck or roof to wall junctions, the bottom edge of the AAC panel must be kept clear of any

adjacent surface, or above the top surface of any adjacent roof flashing by a minimum of 35mm in accordance with the requirements of NZBC Acceptable Solution E2/AS1, paragraph 9.1.3.

- Where the CAWPS System abuts other cladding systems, designers must detail the junction to meet their own requirements whilst meeting performance requirements of the NZBC.
- The Technical Literature does provide some guidance.
- Details not included within the Technical Literature have not been assessed and are therefore outside the scope of this Appraisal.
- All buildings must have barriers to airflow consisting of interior linings with all joints stopped, or where walls are not lined, such as attic spaces at gable end, a rigid sheathing or air barrier, complying with Acceptable Solutions E2/AS1 Table 23, must be fixed to framing prior to fixing cladding or cavity battens in accordance with the requirements of NZBC Acceptable Solution E2/AS1, paragraph 9.1.4.
- PVC sheathed electrical cables must be prevented from direct contact with the EPS cavity battens. When cables must penetrate the EPS cavity battens for electrical connections, the cable must be directly supported by passing through an electrical conduit.

#### 6.5 Control Joints

Control joints where AAC Panels are used must be constructed in accordance with the Technical Literature and as follows;

- Horizontal control joints - To be installed when intermediate floor joists are not seasoned and/or when the height of the wall exceeds 6m.
- Vertical Control Joints - at maximum 8m centres; aligned with any control joint within the structural framing, or where the system abuts other cladding systems. Located at both internal and external corners. *(Note: Where possible control joints shall not be located in line with window and door openings. Horizontal and vertical control joints must be located over structural supports. The Technical Literature provides some guidance for the design of vertical control joints where the system abuts different cladding types. Details not included within the Technical literature or those that are marked as 'Specific Design Only' are outside the scope of this Appraisal Certificate and are the responsibility of the designer.)*

### Structure - Clause B1

#### 6.6 Mass

The mass of CAWPS System (panel and coating system) has a approximate mass of 32kg/m<sup>2</sup>, considered a medium wall cladding in terms of NZS 3604.

#### Impact Resistance

The system has adequate resistance to impact loads that the cladding system is likely to be subjected to when used in a residential situation. The likelihood of impact damage to the system when used in light commercial situations should be considered at the design stage, with appropriate protection provided such as bollards or barriers where necessary.

#### 6.7 Wind Zones

The CAWPS System is suitable for use in up to, and including 'Very High' wind zones as per NZS 3604,

where buildings are designed to meet the performance requirements of NZBC Acceptable Solution E2/AS1

#### 6.8 AAC Panel Fixing

Where a 20mm cavity is produced the respective cavity battens are fixed through to the wall framing at 600mm centres vertically. The AAC Panel must then be fixed through the cavity batten and/or cavity spacers and into the framing with a bugle head screw. (refer to 5.1) at 600mm centres.

Note: 600mm centres is applicable to both Low to Very High NZS 3604 defined building wind zones with studs at maximum 600mm centres, and;

Fixings to be positioned minimum 50mm in from the edge of the panel giving an overall layout of 500mm centres per panel.

Fixings are also required horizontally at 600mm centres. A minimum of 6 bugle head screws per full panel (2200 x 600mm) are required.

Bugle head screws must be embedded a minimum of 5mm into the AAC Panel and a maximum of 10mm.

### Durability – Clause B2

#### 6.9 General

The CAWPS System when used in accordance with this Appraisal Certificate and subjected to normal conditions of environment and use will meet the performance requirements of NZBC B2.3.1 (b), 15 years for the cladding system and plaster finish, and the performance requirements of NZBC B2.3.1 (c), 5 years for the exterior paint system (the life of the product not being less than 5 years).

#### 6.10 Maintenance

- Regular maintenance is essential to ensure the performance requirements of the NZBC are met and to ensure the maximum serviceability of the CAWPS System.
- Regular cleaning (at least annually) of the paint coating is required to remove grime, dirt and organic growth as per the Technical Literature in order to maximize the life and appearance of the acrylic paint coating.
- Paint coatings must be reapplied at a maximum of 10 years in accordance with the paint manufacturers instructions. Re-coating colours shall have an LRV (light reflectance value) of 40% or greater.
- Regular inspections (at least annually) must be made on the system to ensure that all aspects of the CAWPS System including the (textured) coating system, plasters, flashings and any sealed joints remain in a weatherproof condition. Any cracks, damaged areas or areas showing signs of deterioration that could allow water ingress, must be repaired immediately. The CAWPS System must be maintained and repaired in accordance with the instructions from CladX NZ Ltd.
- Minimum ground clearance as set out in this Appraisal and Technical Literature must be maintained at all times during the life of the system to maintain the durability and weathertightness of the system.

### Fire spread - Clause C3

#### 6.11 Fire Performance

The CAWPS System is considered to meet the performance requirements of NZBC C3.5 for use as an



external wall cladding when restricted to:

Building height  $\leq 10\text{m}$  and up to 2 levels, and;

Building importance levels 1, 2, & 3.

- The CAWPS System is also considered to meet the performance requirement NZBC C3.7 (a) as a not combustible building material for use on external walls closer than 1m to the relevant boundary.
- Clearance separations from chimneys and flues are not required for the AAC Panel. Where the panel is used with or attached to a heat sensitive material, the heat sensitive materials must be separated from chimneys and flues in accordance with the performance requirements of NZBC Acceptable solution C/AS1, part 7 for protection of combustible materials.

## External Moisture - Clause E2

### 6.12 General

- When installed in accordance with this Appraisal Certificate and Technical Literature, the CAWPS System will prevent the penetration of water that could cause undue dampness and/or damage to building elements and will therefore comply with clause E2.3.2.
- The cavity must be sealed off from the roof and subfloor space in order to meet the performance requirement of E2.3.5.
- The CAWPS System allows any excess moisture present at the completion of construction to be dissipated without causing permanent damage to the building elements to meet the performance requirement of Clause E2.3.6.
- The details provided within the Technical Literature for weather resistance are based on the design principle of employing both a first and second line of defence against moisture entry for joints, penetrations and junctions. Moisture ingress must be prevented by detailing any joinery or wall junctions as shown in the CAWPS System technical manual. Any weathertightness details developed by a designer are outside the scope of this Appraisal Certificate and are the responsibility of the designer.
- The presence of a drained cavity does not reduce the requirement to ensure the cladding wall and all the relevant junctions, penetrations etc remain weather resistant in order to comply with Clause E2.3.6.

### 6.13 Water Vapour

- The CAWPS System is not a barrier to the passage of water vapour, and when correctly installed in accordance with both this Appraisal and Technical Literature will not create or increase the risk of moisture damage resulting from condensation. When installed over steel frame please refer to Para 6.5.
- When the CAWPS System is installed over a steel frame, 10mm (VH) expanded polystyrene thermal break strips or sheeting with a R value of at least 0.3, must be installed over the steel frame (stud, nog, top and bottom plate) to provide a thermal break in accordance with the requirements of NZBC.
- Building wrap is then dressed over the top of the thermal break strips or sheeting followed by the installation of the cavity battens.

## Installation Requirements

### 7.1 Installation Skill Level Requirement

- Installation and finishing of the components and accessories supplied by CladX NZ Ltd and the licensed contractors must be completed by trained installers / applicators, certified by CladX NZ Ltd.
- Installation of the accessories supplied by the building contractor must be completed by a tradesperson who has an understanding of cavity based cladding construction, in accordance with instructions given within the CAWPS System Technical Manual and this Appraisal Certificate.

### 7.2 System Installation

- The selected building wrap and flexible flashing tape must be installed by the building contractor in accordance with the wrap and tape manufacturer's instructions, prior to the installation of the cavity battens and the rest of the CAWPS System.
- The building wrap shall be run horizontally and be continuous around corners. The wrap must be lapped and sealed with a CladX approved tape not less than 75mm at horizontal joints and not less than 100mm over studs at vertical joints.

## Basis of Appraisal

BEAL use the compliance verification procedure to demonstrate compliance with the relevant clauses of the NZBC based on a risk analysis procedure. The following is a summary of the technical investigations carried out

### 8.1 Tests

The following testing of the CAWPS System and its respective components has been undertaken by BEAL unless otherwise noted:

- Code compliance with Clause E2.3.2 was based on a BEAL opinion based on the evaluation of all details within the scope of this Appraisal and testing of the CladX AAC Wall System to E2/VM1 Amendment 4, 2008. The testing assessed the performance of the window head, jamb and sill details, meterbox head, jamb and sill details, vertical control joints, internal and external corners. BEAL have also reviewed the details contained within the technical manual, and an opinion has been given by BEAL that the system will meet the performance levels of E2/AS1 for a drained cavity system.
- Adhesion and compatibility testing of the Wattyl Granosite plaster products with the AAC panel in accordance with ASTM C297.
- The flexural ability of the Wattyl Granosite plaster products were also assessed to verify durability.
- Testing undertaken by BEAL in determining the compressive strength, dry bulk density and drying shrinkage of the AAC panel to verify the structural and durability performances of the system.

### 8.2 Other Investigations

- Wind loadings, self weight, seismic loadings, shear force, panel capacity, fastener pull through testing and calculations for the system were determined by an independent Chartered Engineer in respect to the requirements of compliance document B1 Structure. Structural and durability opinions were provided.
- Ease of application has been assessed
- The Technical Literature for the CAWPS System has been examined by BEAL and found to be satisfactory.

### 8.3 Product Quality

- The manufacture of the renders has been assessed by BEAL, including quality control measures. Details regarding the quality and composition of the materials used were obtained by BEAL and found to be satisfactory.
- The quality of materials, components and accessories supplied by CladX NZ Ltd is managed through the use of a Building Product Quality Plan.
- The CladX NZ Ltd's Building Product Quality Plan ensures continuous conformance with the quality requirements from purchase to supply of components.
- CladX NZ Ltd's Building Product Quality Plan is reviewed at least annually by BEAL.
- Quality on site is the responsibility of the CladX NZ Ltd approved contractors.
- Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems, joinery, building wrap, flashing tapes, head flashings and air seals in accordance with the instructions of CladX NZ Ltd and this Appraisal Certificate.
- For a copy of this Technical Literature and any subsequent updates please refer to [www.cladx.co.nz](http://www.cladx.co.nz).
- Building owners are responsible for maintenance of the CladX AAC Wall System in accordance with instructions of CladX NZ Ltd and this Appraisal Certificate.

## Sources of Information

AS 3566 Self drilling screws for the building and construction industries.  
 AS 3730 Guide to the properties of paints for buildings  
 AS/NZS 1170:2002 Structural design actions  
 ASTM B117 Standard practice for operating salt spray apparatus  
 ASTM C 297: Standard test method for flatwise tensile strength of sandwich constructions.  
 ASTM C 1386: Standard specification for precast autoclaved aerated concrete (AAC)  
 NASH Standard for Residential and Low-rise Steel Framing, Parts 1 & 2.  
 NZS 3602:2003 Timber and wood-based products for use in building.  
 NZS 3603:1993 Timber structures standard  
 NZS 3604:1999 Timber framed Buildings  
 NZS 4211:1985 Specification for performance of windows  
 New Zealand Building Code Handbook and Approved Documents, Building industry Authority, 1992.  
 The Building Regulations 1992, up to, and including November 2021 Amendment.

## Concluding Statement

9.1 In the opinion of BEAL, the CladX AAC Wall Panel System is fit for purpose and will comply with the NZBC to the extent specified provided that it is used, designed, installed and maintained as set out in this Appraisal Certificate.

The Appraisal Certificate is issued only to CladX NZ Ltd, and is valid until further notification, subject to the conditions of this Appraisal.

# Conditions of Appraisal

1. This appraisal Certificate:
  - a) Relates only to the CAWPS system as described herein;
  - b) Must be read, considered and used in full, together with the current version of the Technical Literature
  - c) Does not address any legislation, regulations, codes or standards, not specifically named herein;
  - d) Is copyright of BEAL
2. The Appraisal Certificate holder continues to meet the quality requirements of the CladX NZ Ltd. Building Product Quality Plan and has the plan audited and Appraisal certificate revalidated by BEAL on an annual basis.
3. CladX NZ Ltd. shall notify BEAL and obtain approval of any changes of the product specification or quality assurance prior to product being marketed including any trade literature, web site info or the like.
4. BEAL makes no representation 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 the Appraisal Certificate holder.
5. BEAL's verification of the building product or system complying with one or more of the above-mentioned criteria is given on the basis that the criteria used were those that were appropriate to demonstrate compliance with the NZBC at the date of this Appraisal Certificate. In the event that the criteria is withdrawn or amended at a later date, this Appraisal may no longer remain valid.
6. Any reference in this Appraisal Certificate to any other publication shall be read as a reference to the version of publication specified in this Appraisal Certificate.

Authorised Signatory



C R Prouse - Director

**BEAL** (Building Element Assessment Laboratory Limited)

[Reformatted and updated July 2023]

