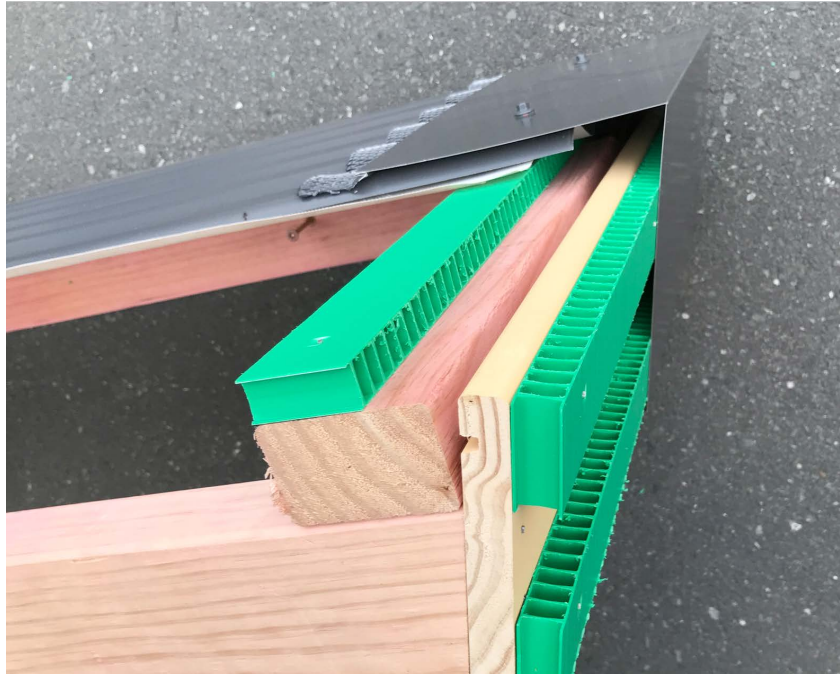




**BRANZ Appraised**  
Appraisal No. 992 [2017]

## CAVIBAT ROOF BATTENS



*Please Note: Roof underlay not shown under flashing for clarity.*

**Appraisal No. 992 [2017]**

### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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**BRANZ**

### BRANZ

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## Product

- 1.1 Cavibat Roof Battens are fluted non-structural ventilated battens designed to create air flow ventilation to the roof space. The battens are extruded polypropylene to a finished size of approximately 45 mm wide by 18 mm thick.

## Scope

- 2.1 Cavibat Roof Battens have been appraised for use as non-structural roof battens for use with pitched and skillion roof construction on buildings within the following scope:
  - the scope of limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
  - with profile metal roof cladding; and,
  - with the batten installed between the purlin and the roof underlay; or,
  - with the batten installed between the roof underlay and the roof cladding; and,
  - situated in NZS 3604 Wind Zones up to, and including Extra High.
- 2.2 The design of the Cavibat Roof Battens are subject to specific design and building designers are responsible for incorporation of Cavibat Roof Battens into their design for weathertightness and detailing of junctions.

## Building Regulations

### New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Cavibat Roof Battens if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Cavibat Roof Battens meet the requirements for loads arising from gravity loads, wind and impact [i.e. B1.3.3 (b), (h) and (j)]. See Paragraphs 8.1 to 8.3.

**Clause B2 DURABILITY:** Performance B2.3.1 (b), 15 years and B2.3.2. Cavibat Roof Battens meet these requirements. See Paragraphs 9.1 and 9.2.

**Clause E3 INTERNAL MOISTURE:** Functional Requirement E3.2 (c). Cavibat Roof Battens will contribute to meeting this requirement. See Paragraph 13.1.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Cavibat Roof Battens meets this requirement and will not present a health hazard to people.

## Technical Specification

- 4.1 System components and accessories supplied by Cavity Batten Systems Limited are:
- **Cavibat Roof Battens** – manufactured from extruded polypropylene. The battens are cut after extruding to a finished size of approximately 45 mm wide by 18 mm thick and provide a ventilation opening area of approximately 13,000 mm<sup>2</sup> per lineal metre. The battens are coloured green and are supplied in 1,200 mm long lengths.

## Handling and Storage

- 5.1 Handling and storage of Cavibat Roof Battens, whether on or off site, is under the control of the building contractor. Cavibat Roof Battens must be protected from direct sunlight and physical damage, and should be stored flat and under cover.

## Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Cavibat Roof Battens. The Technical Literature must be read in conjunction with this Appraisal. All aspect of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### General

- 7.1 Cavibat Roof Battens can be used to provide passive ventilation in the roof space. The design of the roof ventilation system is subject to specific design and is the responsibility of the designer.
- 7.2 Cavibat Roof Battens are for use with profile metal roof claddings in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 8.4 or to a specific design. Roof fixings must take into account the thickness of the battens for roof fixing penetration into the supporting structure.
- 7.3 Cavibat Roof Battens provides a path for passive air flow over the top of structural battens and purlins.
- 7.4 For further design guidance, refer to roof ventilation articles in BRANZ Publications: BUILD 148, BUILD 151, BUILD 152, BUILD 155, and BUILD 158.

### Structure

- 8.1 Cavibat Roof Battens must be considered as non-structural roof battens (ventilation spacers) only.

### Impact Resistance

- 8.2 Cavibat Roof Battens have adequate resistance to impact loads likely to be encountered in normal residential and commercial use. The battens also have adequate resistance to compressive loads likely to be encountered during fixing of the claddings. They will withstand normal foot traffic and the function of the product will not be impaired by such traffic.

### Wind Zone

- 8.3 Cavibat Roof Battens are suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High.

### Durability

- 9.1 Cavibat Roof Battens are required to meet the performance requirements of NZBC Clause B2.3.1 [b] 15 years.

### Serviceable Life

- 9.2 Cavibat Roof Battens will have a durability equivalent to that of the roof cladding to meet code compliance with NZBC Clause B2.3.2 provided the cladding system is maintained in accordance with the Appraisal and the Cavibat Roof Battens are continually protected from UV light.

### Maintenance

- 10.1 No maintenance is required for Cavibat Roof Battens. Regular checks, at least annually, must be made to the roof cladding, flashings and penetrations to ensure they are maintained weathertight and continue to perform their function, to ensure that water will not penetrate the cladding.

### Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to the Cavibat Roof Battens from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 to C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

### External Moisture

- 12.1 The Cavibat Roof Battens must only be used under long run metal roof claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1. All flashing details must comply with NZBC Acceptable Solution E2/AS1 or to a specific design.
- 12.2 Cavibat Roof Battens, when installed in accordance with the Technical Literature and this Appraisal, will not adversely affect the total roof cladding system's compliance with NZBC Acceptable Solution E2/AS1.
- 12.3 The detailing of the roof cladding system including junctions, is the responsibility of the building designer. These details have not been assessed as part of this Appraisal.

### Internal Moisture

- 13.1 Cavibat Roof Battens will contribute to the control of internal moisture by providing passive air flow. The building designer is responsible for the design of roof space ventilation.

## Installation Information

### Installation Skill Level Requirements

- 14.1 Installation must always be carried out in accordance with the Cavibat Roof Battens Technical Literature and this Appraisal by, or under the supervision of, a License Building Practitioner (LBP) with the relevant Licence Class.

### System Installation

#### Roof Underlay Installation

- 15.1 The selected building underlay must be installed in accordance with the underlay manufacturer's instruction.

#### Roof Cladding

- 15.2 Profile metal roof cladding, including flashings and stop ends are in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 8.4 or to a specific design.

#### Cavibat Roof Battens

- 15.3 The battens may be cut on site with a knife, hand saw or drop saw.
- 15.4 The battens can be installed between the building underlay and the purlin. The battens can also be installed between the roof cladding and the underlay to isolate the roof underlay from the roof cladding.
- 15.5 The battens must be temporarily fixed in place until the roof cladding is installed with 30 mm minimum hot-dip galvanised or stainless-steel finishing brads at approximately 400 mm centres.

#### Inspections

- 15.6 The Technical Literature must be referred to during the inspection of Cavibat Roof Battens installations.

## Health and Safety

- 16.1 There are no specific health and safety requirements for Cavibat Roof Battens, however, safe use and handling procedures for the components that make up the cladding system must be followed in accordance with the requirements of the relevant manufacturer's Technical Literature.

## Basis of Appraisal

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

### Tests

- 17.1 The Cavibat Roof Battens were heat aged and compressed by BRANZ to assess the durability performance of the product.
- 17.2 Concentrated load testing of the Cavibat Roof Battens was completed by NZ Metal Roofing Manufacturers Inc. to confirm that the use of this product will not compromise the ability of the roof to withstand foot traffic and also that the product's ability to allow passage of ventilating air will not be reduced significantly by such traffic.

### Other Investigations

- 18.1 A durability opinion has been given by BRANZ technical experts.
- 18.2 The practicability of installation of the Cavibat Roof Battens have been assessed by BRANZ and found to be satisfactory.
- 18.3 The Technical Literature, including installation instructions for Cavibat Roof Battens have been examined by BRANZ and found to be satisfactory.

### Quality

- 19.1 The manufacture of the Cavibat Roof Battens 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.
- 19.2 The quality of supply to the market is the responsibility of Cavity Batten Systems Limited.
- 19.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems, building underlays, flashing tapes, airseals and cladding system in accordance with the instructions of the designer.
- 19.4 The quality of the installation, handling and storage on site of Cavity Batten Systems Limited is the responsibility of the installer.

## Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 7, 01 January 2017].
- BUILD 148 June/July 2015 Ventilation dries attic space.
- BUILD 151 December 2015/January 2016 Roof space moisture.
- BUILD 152 February/March 2016 Passive roof ventilation.
- BUILD 155 August/September 2016 Vents in skillion roofs.
- BUILD 158 February/March 2017 Airflow through ceilings.
- Ministry of Business, Innovation and Employment Record of Amendments - Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.



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20 December 2017

CAVIBAT ROOF BATTENS



In the opinion of BRANZ, **Cavibat Roof Battens** are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Cavity Batten Systems 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. **Cavity Batten Systems 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 **Cavity Batten Systems 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 **Cavity Batten Systems Limited** or any third party.

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For BRANZ

**Chelydra Percy**

Chief Executive

Date of Issue:

20 December 2017