



BEAL Appraisal Certificate



Certificate C2235

EXPIRES 30 June 2024

The TAUCO Decorative Rainscreen System



Product

- 1.1 The TAUCO Decorative Rainscreen System (TDR system) comprises a pre-finished aluminium PU based insulated sandwich panel weatherboard in shiplap format complete with proprietary trims to provide a durable rain-screen over existing typical fibre-cement or EIFS type cladding systems that have been subjected to inspection as part of a maintenance programme. The weatherboards are available in a range of colours.
- 1.2 The TDR system is intended for use over existing installations of fibre-cement sheet or EIFS type claddings with finishing systems used in residential buildings.
- 1.3 The TDR system is to be constructed under the supervision of an LBP and by persons trained and approved by Forest Mountain NZ Ltd. or their authorised agents, in conformance with the Forest Mountain NZ Ltd. **Building Product Quality Plan** and site checklists.

NZ Building Regulations

2.1 In the opinion of BEAL, the TAUCO Decorative Rainscreen System, when designed, installed and maintained in accordance with the statements and conditions of this Appraisal Certificate, will meet the following provisions of the New Zealand Building Code:

Clause B1 STRUCTURE

The TDR system meets the requirements of Performance Clauses B1.3.2, B1.3.3 (h). Refer paragraph 6.3

Clause B2 DURABILITY

The TDR system meets the requirements of Performance Clauses B2.3.1(b) and (c). Refer paragraphs 6.4

Clause E2 EXTERNAL MOISTURE

The TDR system meets the requirements of Performance Clause E2.3.2. Refer paragraphs 6.5

Clause F2 HAZARDOUS BUILDING MATERIALS

The TDR system meets the requirements of Performance Clause F2.3.1. Refer paragraphs 6.6

Clause H1 ENERGY EFFICIENCY

The TDR System meets the requirements of Performance Clause H1.3.2E. Refer paragraphs 6.7

The TAUCO Decorative Rainscreen System has been appraised as elements using both Acceptable and Alternative Solutions in terms of New Zealand Building Code Compliance.

Applicant:



Forest Mountain NZ Ltd.

21 Myers Grove
Churton Park, Wellington, 6037
Tel: +64 9 889 1253
E-Mail info@forestmountain.tech
www.forestmountain.tech

Appraiser:

BEAL

2A Plimmerton Drive
Plimmerton, Porirua, NZ
Tel: +64 233 6661
E-Mail: bts@beal.co.nz
www.beal.co.nz

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- 3.1 The TAUCO Decorative Rainscreen system has been appraised for use as a decorative 'cladding product' for vertical walls within the following scope:
- ⇒ With building structures designed and constructed to comply with the NZBC; and,
 - ⇒ Over existing exterior wall substrates that have been shown to comply with all requirements described in the TDR system Technical and Installation Manual and subject to a pre-installation inspection and testing where applicable;
 - ⇒ Where remedial work is required to the existing building envelope, that a Remediation Plan be prepared by a suitable experienced and competent person
 - ⇒ That on completion of the remedial work, that a Record of Work be kept along with photographic records;
- 3.2 The design and construction of any new, replacement cladding substructure, including any control joints, openings or penetrations or the like, are to be specific design and therefore the responsibility of the owner/building designer and are outside the scope of this Appraisal Certificate;
- 3.3 The TDR system shall be installed only by Forest Ltd. trained and approved applicants;
- 3.4 The owner of the building is responsible for the proper maintenance of the applied system as set out in an owner's maintenance schedule.

Technical Literature

- 4.1 The TDR system Technical and Installation Manual Ver 3.3 June 2022 must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained within the Technical Manual and scope of this Appraisal Certificate must be followed.
- 4.2 For a copy of this Technical Literature and any subsequent updates please refer to www.forestmountain.tech

Technical Details

- 5.1 Materials and accessories supplied by Forest Mountain NZ Ltd. are as follows:

• TAUCO Insulated Weatherboards

are a pre-finished aluminium vertically or horizontally installed PU insulated sandwich panel weatherboard in shiplap format, complete with proprietary trims and fixing system, to provide a durable rain-screen over existing external claddings. The weatherboards are available in a range of colours.



• TAUCO Insulated Weatherboard Trims

are pre-finished metal accessories used for internal and external corners, the cavity closer and top of wall trim.



• TAUCO Insulated Weatherboard Fixing System

Includes a stainless steel fixing piece that is used to fix the weatherboard to the envelope substructure, typically over a nominal 10 to 20mm cavity battens. Low profile pan head stainless steel screw fixings are selected according to the thickness of the batten and the depth of penetration required into the envelope framing.

• Cavity Battens

Are typically nominal 10mm to 20mm thick cavity battens 50mm in width used for creating a cavity in conjunction with the TAUCO metal cavity closer.

5.2 Note that all products must be stored and kept dry, out of the weather on site.

Advice for designers

- 6.1 The TAUCO Decorative Rainscreen system is intended for the redecoration of the exterior of a residential buildings.

It can be used for single or multi-storey residences within the height requirements of NZS3604. That is, up to including 10m from the ground.

- 6.2 Before any application can be carried out, a full survey including a detailed inspection and assessment of the current condition of the external envelope shall be carried out by a suitably experienced and competent person, approved by Forest Mountain NZ Ltd.

Such a survey may find the need for remedial work.

Refer to the [TDR system Technical and Installation Manual Ver 1.0](#) for further information.

Once the survey and any remedial work has been completed, the installation work may proceed. The time to complete a typical is relatively short.

Structure

- 6.3 The TDR system has been assessed as suitable for wind zones as defined by NZS3604 up to and including extra high and therefore meets the requirements of clause B1.3.3 (h).

Durability

- 6.4 The TDR system when subjected to normal conditions of environment and use, are expected to have a serviceable life of at least 15 years and 5 years for the prefinished coating, and therefore meet the requirements of clauses B2.3.1 (b) or (c).

External Moisture

6.5 The installation of the TDR system over an existing cladding, when all aspects of design, use, installation and maintenance contained within the Technical Manual are complied with, will meet the requirements of clause E2.3.2.

Hazardous Building Materials

6.6 The TDR system has been shown to not present a health hazard to people using the building, and therefore meet the requirements of clause F2.3.1.

Energy Efficiency

6.7 The TAUCO Insulated Weatherboards contain an insulation material that contributes to a building meeting its building performance index, and therefore meet the requirements of clause H1.3.2E.

Installation Requirements

7.1 Installation of the TAUCO Decorative Rainscreen system must be completed by persons who have been trained and approved by either Forest Mountain NZ Ltd or their authorised agents.

Basis of this Appraisal

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

8.1 Tests to verify compliance

The following testing of the TDR system has been undertaken by BEAL to verify compliance:

- ⇒ Structural performance by way MOE and MOR testing
- ⇒ Structural performance of the fixing system by way of fixing pull out, pull through and fatigue testing using the specified accessories, to nominated substrates
- ⇒ Durability by way of adhesion testing of a specified waterproofing membrane before and after accelerated age conditioning
- ⇒ Assessment of 'buildability' by way of constructing a sample wall using all specified components.
- ⇒ Measurement of the thermal conductivity of the insulation component of the weatherboard.

The above testing and respective laboratory test reports were reviewed by BEAL and found satisfactory.

Other assessment work

- 9.1 An opinion has been provided by BEAL of the
 - ⇒ Expected durability of TDR system based on test data and in-service history.
- 9.2 The practical installation of the TDR system was also evaluated based on the following:
 - ⇒ Ease of installation
 - ⇒ Potential risks of non-performance when being installed
 - ⇒ Any external factors that could affect the quality of

the installed product

- ⇒ Ease of repair or maintenance

9.3 The Technical Literature has been examined by BEAL and found to be satisfactory.

Quality Control

10.1 While the manufacture of the TDR system has not been assessed by BEAL, details regarding the quality and composition of the materials used were obtained by BEAL and found to be satisfactory.

10.2 The quality of products and accessories supplied by TAUCO Ltd. is managed through the use of a **Building Product Quality Plan**. The TAUCO Ltd. Building Product Quality Plan ensures continuous conformance with the quality requirements from purchase to supply of products and accessories.

10.3 TAUCO Ltd.'s Building Product Quality Plan is reviewed and audited at least annually by BEAL or a BEAL appointed agent.

10.4 Designers are responsible for the substructure design, and building contractors are responsible for the quality of construction of the substructure or new substrate in accordance with the instructions of the substrate manufacturer and this Appraisal Certificate.

10.5 Building owners are responsible for the maintenance of the TDR system in accordance with the instructions of TAUCO Ltd. and this Appraisal Certificate.

Sources of Information

- ⇒ NZS 3604:2011 Timber framed Buildings
- ⇒ Compliance Document for New Zealand Building
- ⇒ New Zealand Building Code Handbook and
- ⇒ Approved Documents, Building Industry Authority, 1992.

Test reports from BEAL Testing Services:

- ⇒ TR170718-1 - Measurement of MOE and MOR
- ⇒ TR180404-1 - assessment of fixing pull through of Aluminium Insulated Weatherboard used for the TAUCO Decorative Rainscreen System
- ⇒ TR180510-1 - assessment of the adhesion strength of ABEP Blue Barrier Liquid Flash on EIFS Substrate used for the TaucO System .
- ⇒ TR180312-1 - measurement of the tensile adhesion strength of Bostik Alpha Grip Adhesive and Uroxsy Bondurox CA Slow Adhesive when used between two layers of Fibre Cement sheet (for battens).
- ⇒ TR180323-2 - assessment of fixing fatigue of Aluminium Insulated Weatherboard used for the TAUCO Decorative Rainscreen System.
- ⇒ TR160613-1 and others - Measurement of thermal conductivity.
- ⇒ Assessment of buildability of the Kotahi (TAUCO) Decorative Rainscreen System dated 23 September 2018.

Concluding statement

11.1 In the opinion of BEAL, the TDR system supplied by TAUCO Ltd is fit for purpose and will comply with the NZBC to the extent described in the scope of use and limitation statement provided that it is used, designed, installed and maintained as set out in this Appraisal Certificate.

11.2 The Appraisal Certificate is issued only to TAUCO Ltd. and is valid until the expiry date, subject to the conditions of this Appraisal.

Conditions of Appraisal

12.1 This appraisal Certificate:

- a) Relates only to the TAUCO Decorative Rainscreen 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

12.2 The Appraisal Certificate holder continues to meet the quality requirements of the Forest Mountain NZ Ltd. Building Product Quality Plan and has the plan audited and Appraisal certificate revalidated by BEAL on an annual basis.

12.3 Forest Mountain 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.

12.4 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.

12.5 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.

12.6 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.



C R Prouse - Director
BEAL (Building Element Assessment Laboratory Ltd)

