BEAL Appraisal Certificate

APPRAISAL #: C2140

EXPIRY DATE: 30 April 2025

The Real Resource Weatherboard System

Product

1.1 The Real Resource Weatherboard System from Real Resource Ltd is a bevel-back timber weatherboard product utilising modern finger-jointing processing for the manufacture of weatherboards.

1.2 The Real Resource Weatherboard System (RRWBS) is composed of bevel-back, light organic solvent preservative (LOSP) treated timber weatherboards, box corners and fascia boards that have both a primer and water resistant undercoat coating applied at the factory.

1.3 The RRWBS must be installed by persons trained and approved by Real Resource Ltd, within the scope and limitations described in the Appraisal-holder's Technical Manual.

NZ Building Regulations

2.1 In the opinion of BEAL, the RRWBS, 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 STRUCTURAL PERFORMANCE
The RRWBS meets the requirements of Performance B1.3.2. (Refer para 6.3)
Clause B2 DURABILTY
Performance B2.3.1 (b) 15 years. The RRWBS will meet this requirement. (Refer para 6.4)
Clause E2 EXTERNAL MOISTURE
Performance E2.3.1. The RRWBS will meet this requirement. (Refer para 6.5)
Clause F2 HAZARDOUS BUILDING MATERIALS
Performance F2.3.1. The RRWBS will not present a health hazard to people. (Refer para 6.6)

2.2 The RRWBS has been appraised as an 'Alternative Solution' in terms of compliance with the New Zealand Building Code.

Scope and Limitations

3.1 The RRWBS has been appraised for use as a weatherboard wall cladding system designed to be installed over cavity battens or directly fixed over a frame protection system over treated timber framing for residential and light commercial construction, in wind zones up to and including "extra high'. Timber framing shall be constructed as per NZS3604.

3.2 The RRWBS is designed according to NZS3617:1979 Specification of Profiles of Weatherboards, Fascia Boards and Flooring.

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3.3 The owner of the building is responsible for the proper maintenance of the RRWBS as set out in the maintenance advice document that is provided by the installer along with the Real Resource Ltd. warranty.

Technical Literature

4.1 The RRWBS Technical Literature **Ver 3.1** 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 please contact Real Resource Ltd.

Technical Details

5.1 The RRWBS utilises 18mm machine manufactured, finger jointed, pre-primed, LOSP treated timber components. The weatherboard component is either fixed directly though selected underlay to framing or supported by a structural timber cavity system which is then fixed through selected underlay to timber.

The box corner components are utilized in an external corner situation, although the option for a mitre joint is permitted in both internal and external corners.

The fascia board is fixed directly to the roofing system used.

Components of the RRWBS include the following:

- 180 x 18mm weatherboards
- 187 x 18mm weatherboards
- 84 x 18mm box corners
- 100 x 18mm box corners
- 180 x 18mm fascia boards

Items supplied by the owner or builder include:

- 75 x 3.15mm stainless annular groove jolt-head nails – used for direct fix
- 90 x 3.15mm stainless annular groove jolt-head nails – used with 18mm cavity battens
- A frame protection system, including pipe penetration gaskets and the like, compliant with the New Zealand Building Code
- 100mm wide 'frame protection tape' for sealing to windows and doors to the underlay, such as SMART BAND from Rothoblaas or approved compliant and compatible tape
- 60mm wide 'frame protection tape' such as SMART BAND from Rothoblaas or approved compliant tape for sealing the underlay to top and bottom plates and underlay overlaps – thus ensuring an air-tight underlay system
- 19 x 70mm H3.2 structural timber battens with an approved uPVC cavity closer suited to the batten size
- Selected flashings required for parapets, if any, or pipe penetration face plates, if any, which shall comply with NZBC Clause E2/AS1 (Note: Powder-coated aluminium head flashings are typically supplied by window and door suppliers) – where selected.
- Timber scribers – if selected
- Timber soffit beading
- Corner soakers – either stainless steel or galvanised with compatible fixing clouts
- A protective paint system, applied over the factory applied undercoat, that meets the requirements of the New Zealand Building Code (typically a decorative top coat system).

They all form part of the Real Resource Weatherboard System.

Advice for Designers

General

6.1 The RRWBS is designed for the cladding of residential and light commercial building (timber frame only) within the scope of NZS3604.

6.2 Before any installation can be carried out, it is essential that a careful inspection of the framing and 'frame protection system' is completed as set out in the RRWBS Technical Literature.

Structure – Clause B1.3.3 (h)

6.3 The RRWBS is suited to wind zones of up to and including extra high and therefore meet the requirements of clause B1.3.3 (h).

Durability – Clause B2.3.1(a), (b) and (c)

6.4 The RRWBS when installed and maintained in accordance with this Appraisal Certificate, is expected to have a serviceable life of at least 50 years for the frame protection system and battens, 15 years for the weatherbboards, and 5 years for the decorative top-coat system.

External Moisture – Clause E2.3.2

6.5 The RRWBS, when installed and maintained in accordance with the manufacturer's instructions, will comply with the requirements of this clause.

Hazardous Building Materials – Clause F2.3.1

6.6 The RRWBS, when installed and maintained in accordance with the manufacturer's instructions, meets this requirement and will not present a health hazard to people using the building.

Installation Requirements

Installation Skill Requirement

7.1 The RRWBS must be carried out by approved and experienced persons under the supervision of an LBP who is familiar with the requirements of this product. Reference shall be made to both the technical and installation manual as well as the BPQP site quality checklists available for download using the supplied QR code located on the labelling for this appraisal.

Storage

7.2 All components, supplied by Real Resource or otherwise, shall be stored on site and kept covered and free of dampness until required. Care should be taken to limit damage to the packaging when handling.

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Basis of this Appraisal

BEAL uses 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:

Assessments

8.1 The following assessments of the RRWBS have been undertaken by BEAL:

- Review of test data and technical literature supplied by Real Resource Ltd.

Previous Assessments

BEAL has previously issued a Product Technical Statement for this product (in 2019) to verify compliance with the relevant provision of the New Zealand Building Code.

Testing

8.2 The following testing of the RRWBS has been undertaken by BEAL to verify conformance with :

- Structural performance, especially for wind gusts
- Durability by way of tensile and flexural testing
- Durability by way of testing of thermal expansion and contraction and the effect on fixings
- Water resistance of the undercoated weatherboards
- A weathertightness assessment with and without cavity battens installed over a frame protection system installed over timber framing

In-service History

8.3 The RRWBS has been in use and, when subject to the manufacturer's requirements, performed satisfactorily since 2017 in New Zealand in a wide range of conditions.

Quality

8.4 The manufacturing process for the RRWBS has been assessed by BEAL and found to be satisfactory.

8.5 The quality of materials, components and accessories supplied by Real Resource Ltd. is managed through the use of a Building Product Quality Plan.

8.6 The Real Resource Ltd. Building Product Quality Plan (BPQP), based on a Manufacturing Quality Plan (MQP), ensures continuous conformance with the quality requirements from purchase to application by experienced and approved applicators.

8.7 Real Resource Ltd.'s Building Product Quality Plan is reviewed and audited at least annually by BEAL or an appointed agent.

8.8 Designers are responsible for the design of the substructure 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.

8.9 Building owners are responsible for the maintenance of the RRWBS in accordance with the manufacturer's instructions and this Appraisal Certificate.

Sources of Information

- The Building Regulations 1992, reprinted 1 January 2017
- NZS 3604:2011 Timber-framed Buildings
- NZS3617:1979 Specification of Profiles of Weatherboards, Fascia Boards and Flooring
- BEAL Test Reports including:
  - TR-211126 -1, Measurement of the MOE & MOR Test of Finger-jointed Timber Weatherboards
  - TR-211129-2 , Tensile Strength of a Finger Jointed Join in a Timber Weatherboard
  - TR-211129-3, Fixing Pull-through Resistance through Finger Jointed Timber Weatherboards
  - TR-211130 - 1, Assessment of Temperature on the Weatherboard fixings fixed into Studs
  - TR220208-1, Tensile Strength of Finger Jointed Timer Fascia and Timber Weatherboard
  - TR-211125 - 1, Measurement of Water Absorption of a Timber Primer
  - TR220107-1, Assessment of Weathertightness of the Real Resource Finger-jointed Bevel-back Timber Weatherboard Cladding System
- Technical Manufacturer Warranty Declaration covering the use of the primer / undercoat coating, from AkzoNobel, dated 11 May, 2017
- Technical Data Sheet for VASCOL AZURE (LOSP) timber treatment, from LONZA Wood Protection
- Laboratory Report TSS-4046, from Akzo Nobel dated 6 July, 2017, covering the testing of finger-jointed Pinus Radiata (weatherboards)
- Limited Structural Guarantee from Arch Wood Protection (NZ) Ltd covering compliance with s NZS364 and AS1604 (preservative code number 64) for treatment to H3.1

Concluding statement

9.1 In the opinion of BEAL, the RRWBS is fit for purpose and will comply with the NZBC to the extent specified provided that it is designed, installed and maintained in accordance with the manufacturer's instructions and this Appraisal Certificate.
The Appraisal Certificate is issued only to Real Resource Ltd., and is valid until further notification, subject to the conditions of this Appraisal.

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Conditions of Appraisal

10.1. This appraisal Certificate:
a) Relates only to the Real Resource Weatherboard 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

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

10.3 Real Resource 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.

10.4 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.

10.5 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.

10.6 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)
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