



BRANZ Appraised

Appraisal No.658 [2009]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 658 (2009)**

HERMPAC RUSTICATED AND SPLAYCUT WEATHERBOARD CAVITY SYSTEM

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Product

1.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System is a cavity-based cedar weatherboard external wall cladding system for residential and light commercial type buildings where domestic construction techniques are used.

1.2 The system consists of horizontally fixed Herman Pacific Limited Rusticated and Splaycut cedar timber weatherboards, cavity battens, flashings and accessories and is finished with a premium penetrating oil stain to Herman Pacific Ltd specifications.

1.3 The system incorporates a primary and secondary means of weather resistance (first and second line of defence) against water penetration by separating the cladding from the external wall frame with an 18 mm drained cavity.



Scope

2.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System has been appraised as an external horizontally fixed wall cladding system for buildings within the following scope:

- the scope limitations of NZBC Acceptable System E2/AS1, Paragraph 1.1; and,
- constructed with timber framing complying with the NZBC; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- situated in NZS 3604 Building Wind Zones up to, and including 'Very High'.

2.2 The Hermpac Rusticated and Splaycut Weatherboard Cavity System has also been appraised for weathertightness and structural wind loading when used for timber framed buildings subject to specific design up to a design differential ultimate limit state (ULS) wind pressure of 2.5 kPa.

2.3 The Hermpac Rusticated and Splaycut Weatherboard Cavity System must only be installed horizontally on vertical, flat surfaces.

2.4 The Hermpac Rusticated and Splaycut Weatherboard Cavity 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 Hermpac Rusticated and Splaycut Weatherboard Cavity System relies on the joinery meeting the requirements of NZS 4211 for the relevant Building Wind Zone or wind pressure.)

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, the Hermpac Rusticated and Splaycut Weatherboard Cavity System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. The Hermpac Rusticated and Splaycut Weatherboard Cavity System meets the requirement for loads arising from self-weight, wind, impact and creep [i.e. B1.3.3 (a), (h), (j) and (q)]. See Paragraphs 9.1 – 9.3.

Clause B2 DURABILITY: Performance B2.3.1(b), 15 years and B2.3.2. The Hermpac Rusticated and Splaycut Weatherboard Cavity System meets these requirements. See Paragraph 10.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The Hermpac Rusticated and Splaycut Weatherboard Cavity System meets this requirement. See Paragraphs 14.1 -14.5.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Hermpac Rusticated and Splaycut Weatherboard Cavity System meets this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an Alternative Solution in terms of New Zealand Building Code compliance.

Technical Specification

4.1 System components and accessories supplied by Herman Pacific Limited are as follows:

Hermpac Rusticated and Splaycut Weatherboards

- Hermpac Rusticated and Splaycut weatherboards are manufactured from Canadian Coastal Western Red Cedar (*Thuja plicata*) and Canadian Coastal Yellow Cedar (*Chamaecyparis nootkatensis*).
- The weatherboard lap and rebate profiles are in accordance with NZS 3617 and BRANZ Bulletin 411. The weatherboards are minimum 18.5 mm thick and are available in a range of widths and face profiles. They are supplied in 1.83 to 4.54 m lengths. Lengths outside of the general specification may be available by special contract. The weatherboards are supplied unfinished for site finishing, or prefinished using the flood coat or spraycoat application method by Machinecoat NZ Limited. The following Herman Pacific Rusticated and Splaycut weatherboard profiles are covered by this Appraisal:
 - HP67 and HP68 (Rusticated standard profiles)
 - CP556, CP832, CP835 to CP841, CP845 to CP847 and CP849 to CP854 (Rusticated custom profiles)
 - HP65 and HP66 (Splaycut standard profiles)
 - CP876 and CP877 (Splaycut custom profiles)
 - HP65 and HP66 (Multi Splay standard profiles)

Note: This Appraisal is only valid when weatherboards with profiles as listed above are supplied by Herman Pacific Limited.

Accessories

- Hermpac external corner mouldings – 40 x 40 mm and 42 x 42 mm profiled external corner moulds supplied in lengths 1.8 m and longer.
- Hermpac internal corner mould – 18.5 x 18.5 mm, supplied in 1.8 m and longer.
- Hermpac cover boards – 18 mm thick boards in widths of 69 and 90 mm. The cover boards are supplied in lengths 1.8 m and longer.

- Hermpac eaves moulding – 40 x 27 mm bevelled profile, supplied in 1.8 m and longer.
- Hermpac Rusticated plugs – 40 x 9.25 mm and 25 x 9.25 mm profiled to suit the weatherboard profile. The plugs are supplied in 10 m bundles.
- Hermpac scribes – 10 mm wide x 40 mm, 17 mm wide x 40 and 60 mm pre-cut scribes with arised edges supplied in 1.83 to 6.1 m lengths.

(Note: All timber accessories are manufactured from Canadian Coastal Western Red Cedar.)

- Hermpac weatherboard fixings – silicon bronze, Grade 304 or Grade 316 stainless steel annular grooved Hermpac Crown Head, Rose Head or Flat Head nails. The nail shank must be minimum 3.15 mm diameter and the length must allow minimum 30 mm penetration of the wall frame.
- Hermpac clinch nails - 40 x 2.0 mm Grade 316 stainless steel annular grooved nails with an off-set flat head.
- Hermpac cover board fixings – 50 x 2.8 mm silicon bronze, Grade 304 or Grade 316 stainless steel annular grooved Hermpac Crown Head, Rose Head or Flat Head nails.
- Hermpac scribe fixings - 60 x 2.8 mm stainless steel ring shank jolt head nails.

4.2 Accessories used with the Hermpac Rusticated and Splaycut Weatherboard Cavity System which are supplied by the building contractor are:

- Building wrap – building paper or wrap complying with NZBC Acceptable Solution E2/AS1 Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall wraps.
- Building wrap support – polypropylene strap, 75 mm galvanised mesh, galvanised wire, or additional vertical battens for securing the building wrap in place and preventing bulging of the bulk insulation into the drainage cavity. (Note: mesh and wire galvanising must comply with AS/NZS 4534.)
- Flexible sill 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 BRANZ Appraisal for use around window and door joinery openings.
- 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 BRANZ Appraisal suitable for use around window, door and other wall penetration openings.
- Cavity battens – Cavibat polypropylene cavity battens as covered by BRANZ Appraisal No. 524 (2007) or 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 cavity batten fixings – 40 x 2.8 mm hot-dip galvanised flat head nails.
- Cavity vent strip – uPVC, aluminium or stainless steel, punched with 3-5 mm diameter holes or slots complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3.
- Flashings – including external corner flashing, internal corner flashing, horizontal inter-storey joint flashing, balustrade and parapet saddle flashing and balustrade and parapet cap flashings. Refer to NZS 3604, Section 4 and NZBC Acceptable Solution E2/AS1, Table 20 and Table 21 for durability and material compatibility requirements.
- Aluminium joinery head flashings – as supplied by the joinery manufacturer or contractor.
- Flexible sealant – sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid BRANZ Appraisal for use as a weather sealing sealant for exterior use.

Finishing System Specification

4.3 Prior to installation, the back, face, ends and edges of the Hermpac Rusticated and Splaycut weatherboards not supplied prefinished must be sealed with an exterior grade oil-based penetrating stain. At least two coats of an exterior grade quality oil-based penetrating stain must be used over the front face of the Hermpac Rusticated and Splaycut weatherboards to protect the weatherboards and give the desired finish colour to the exterior walls. The stain must be recommended for use as a wall cladding stain by the manufacturer and must be brush applied. Proprietary stain systems have not been assessed, and are therefore outside the scope of this Appraisal. (Note: Herman Pacific Limited recommends the use of oil based stains manufactured by WoodX, Resene, Dulux and Dryden's.)

Handling and Storage

5.1 Handling and storage of all materials supplied by Herman Pacific Limited or the building contractor, whether on site or off-site, is under the control of the building contractor. Hermpac vertical Rusticated and Splaycut weatherboards must be stacked flat and true, clear of the ground by a minimum of 150 mm and supported on dry and clean timber bearers at maximum 900 mm centres. They must be kept dry at all times either by storing within an enclosed building or when stored externally an additional secondary cover to the plastic wrapping is required. Care must be taken to avoid damage to edges, ends and the weatherboard surfaces.

5.2 Accessories must be stored so they are kept clean, dry and undamaged. All accessories must be used within the maximum storage period recommended by the manufacturer.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Hermpac Rusticated and Splaycut Weatherboard Cavity System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

Framing

Timber Treatment

7.1 Timber wall framing behind the Hermpac Rusticated and Splaycut Weatherboard Cavity System must be treated as required by NZS 3602.

Timber Framing

7.2 Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604. In all cases studs must be at maximum 600 mm centres. Dwargs must be fitted flush between the studs at maximum 800 mm centres.

7.3 Additional framing may be required at soffits, internal and external corners and window and door openings for the support and fixing of cavity battens and the Hermpac Rusticated and Splaycut Weatherboard Cavity System.

7.4 Timber wall framing behind where weatherboards are joined over a cavity batten must be nominal 50 mm thickness (i.e. 45 mm minimum finished thickness).

7.5 Timber wall framing must have a maximum moisture content of 24% at the time of the cladding application. (Note: If Hermpac Rusticated and Splaycut cedar weatherboards are fixed to framing with a moisture content of greater than 24% problems may occur at a later date due to excessive timber shrinkage.)

General

8.1 When the Hermpac Rusticated and Splaycut Weatherboard Cavity System is used for specifically designed buildings up to 2.5 kPa design differential ULS wind pressure, only the weathertightness aspects of the cladding and maximum framing centres are within the scope of this Appraisal. All other aspects of the building need to be specifically designed and are outside the scope of this Appraisal.

8.2 Punchings in the cavity vent strip must provide a minimum ventilation opening area of 1000 mm² per lineal metre of wall in accordance with the requirements of NZBC Acceptable System E2/AS1, Paragraph 9.1.8.3(b). (Note: Cavibat cavity battens do not provide vermin proofing to the bottom of the drained cavity.)

8.3 The ground clearance to finished floor levels as set out in NZS 3604 must be adhered to at all times. At ground level, paved surfaces, such as footpaths, must be kept clear of the bottom edge of the cladding system by a minimum of 100 mm, and unpaved surfaces by 175 mm in accordance with the requirements of NZBC Acceptable System E2/AS1, Table 18.

8.4 At balcony, deck or roof/wall junctions, the bottom edge of the Hermpac Rusticated and Splaycut Weatherboard Cavity System must be kept above the top surface of any adjacent roof flashing by a minimum of 35 mm in accordance with NZBC Acceptable System E2/AS1, Paragraph 9.1.3.6.

8.5 All buildings must have barriers to airflow in the form of interior linings with all joints stopped, or alternatively, unlined gables and walls must incorporate a rigid sheathing or an air barrier which meets the requirements of NZBC Acceptable System E2/AS1, Table 23. Where rigid sheathings are used, the weatherboard fixing lengths must be increased by a minimum of the thickness of the sheathing.

8.6 Where the system abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.

Inter-storey Junctions

8.7 Inter-storey junctions must be constructed in accordance with the Technical Literature. Inter-storey joints must be provided for walls over 2-storeys in height in accordance with the requirements of NZBC Acceptable System E2/AS1, Paragraph 9.1.9.4(b).

Structure

Mass

9.1 The mass of the Hermpac Rusticated and Splaycut Weatherboard Cavity System is approximately 12 kg/m² at equilibrium moisture content. The system is therefore considered a lightweight cladding in terms of NZS 3604.

Impact Resistance

9.2 The Hermpac Rusticated and Splaycut Weatherboard Cavity System has good resistance to impact loads likely to be encountered in normal residential use. The likelihood of impact damage to the system when used in light commercial situations should be considered at the design stage, and appropriate protection such as the installation of bollards and barriers should be considered for vulnerable areas.

Wind Zones

9.3 The Hermpac Rusticated and Splaycut Weatherboard Cavity System is suitable for use in all Building Wind Zones of NZS 3604, up to and including 'Very High' where buildings are designed to meet the requirements of NZBC Acceptable System E2/AS1, Paragraph 1.1, or up to 2.5 kPa design differential ULS wind pressure where buildings are specifically designed.

Durability

Serviceable Life

10.1 Hermpac Rusticated and Splaycut Weatherboard Cavity System installations are expected to have a serviceable life of at least 20 years provided the system is maintained in accordance with this Appraisal and the Hermpac Rusticated and Splaycut weatherboards are continuously protected by a stain finish.

(Note: This opinion only covers serviceability with regards to structural and weathertightness performance. It does not cover appearance, which may deteriorate significantly, especially when proper and regular maintenance is not carried out.)

Maintenance

11.1 Regular maintenance is essential to ensure the performance requirements of the NZBC are continually met and to ensure the maximum serviceability of the system.

11.2 Regular cleaning (at least annually) of the stain coating is required to remove grime, dirt and organic growth and to maximise the life and appearance of the coating. Grime may be removed by brushing with a soft brush, warm water and detergent.

11.3 Recoating of the stain finish will be necessary throughout the life of the cladding system. Restaining must be carried out every 2-3 years or in accordance with the stain manufacturer's instructions. Restaining will be required more frequently on exposed northern and western facing walls. When re-staining, care must be taken to ensure bottom edges and Rusticated and Splaycut edges are well covered and penetrated with the stain.

11.4 Annual inspections must be made to ensure that all aspects of the cladding system, including flashings and joints remain in a weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately. Sealant, stain coatings, flashings or the weatherboards must be repaired in accordance with the relevant manufacturer's instructions.

11.5 Minimum ground clearances as set out in this Appraisal and the Technical Literature must be maintained at all times during the life of the system. *(Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long term durability of the Hermpac Rusticated and Splaycut Weatherboard Cavity System.)*

Control of External Fire Spread

12.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System is considered to meet the performance provisions of NZBC C3.3.5 for use as an external wall cladding system when restricted to:

- Single storey buildings 1 m or more from the boundary for all purpose groups.
- Buildings up to 7 m high, 1 m or more from the boundary, for all purpose groups other than SC and SD.
- Fully sprinklered buildings up to 10 m high, 1 m or more from the boundary for all purpose groups other than SC, SD, SA and SR.
- Buildings containing purpose group SH, with a building height less than 10 m and located 1 m or more from the boundary.

(Note: The scope of this Appraisal limits building heights to 10 m in accordance with the limitations of NZBC Acceptable System E2/AS1, Paragraph 1.1(a). The building heights referenced in Paragraph 12.1 above are as defined in the Definitions Section of the Fire Safety Clauses of the NZBC.)

Outbreak of Fire

13.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System must be separated from chimneys and flues in accordance with the requirements of Acceptable Solution C/AS1 Part 9, for the protection of combustible materials.

External Moisture

14.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System, when installed in accordance with this Appraisal and the Technical Literature will prevent the penetration of moisture that could cause undue dampness or damage to building elements.

14.2 The cavity must be sealed off from the roof and sub-floor space to meet code compliance with NZBC Clause E2.3.5.

14.3 The Hermpac Rusticated and Splaycut Weatherboard Cavity System allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet code compliance with Clause E2.3.6.

14.4 The details given in the Technical Literature for weather sealing are based on the principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing joinery and wall interfaces as shown in the Technical Literature. Weathertightness details that are developed by the designer are outside the scope of this Appraisal and are the responsibility of the designer for compliance with the NZBC.

14.5 The Hermpac Rusticated and Splaycut Weatherboard Cavity System, where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirements for junctions, penetrations, etc to remain weather resistant.

Internal Moisture

Water Vapour

15.1 The Hermpac Rusticated and Splaycut Weatherboard Cavity System is not a barrier to the passage of water vapour, and when installed in accordance with this Appraisal will not create a risk of moisture damage resulting from condensation.

Installation Information

Installation Skill Level Requirements

16.1 Installation and finishing of the Hermpac Rusticated and Splaycut Weatherboard Cavity System must be completed by competent, experienced tradespersons with an understanding of cavity installation and Rusticated and Splaycut weatherboard installation, in accordance with instructions given within the Hermpac Rusticated and Splaycut Weatherboard Cavity System Technical Literature and this Appraisal.

Hermpac Rusticated and Splaycut Weatherboard Cavity System Installation

Building Wrap and Flexible Sill and Jamb Tape Installation

17.1 The selected building wrap and flexible sill and jamb tape system 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 Hermpac Rusticated and Splaycut Weatherboard Cavity System. Building wrap must be installed horizontally and be continuous around corners. The wrap must be lapped 100 mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints. Particular attention must be paid to the installation of the building wrap and sill and jamb tapes around window and door openings to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.

Cavity Batten Installation

17.2 Cavity battens must be installed over the building wrap to the wall framing at maximum 600 mm centres where the studs are at 600 mm centres, or at 400 mm centres when studs are at 400 mm centres. Cavibat cavity battens must be fixed in place with 40 x 2.5 mm hot-dip galvanised flat head nails or galvanised or stainless steel finishing brads at 400 mm centres. Refer to BRANZ Appraisal Number 524 (2007) for further information. Timber cavity battens must be fixed in place with 40 x 2.8 mm hot-dip galvanised flat-head nails at maximum 800 mm centres.

17.3 Where studs are at greater than 400 mm centres, a building wrap support must be installed over the building wrap between the cavity battens at maximum 300 mm centres.

Hermpac Rusticated and Splaycut Weatherboard Cavity System Installation

17.4 Hermpac Rusticated and Splaycut weatherboards may be cut on site by power or hand saw. Holes and cut-outs may be formed by using a hole saw.

17.5 Hermpac Rusticated and Splaycut weatherboards must not be wet prior to installation. Prior to installation, the back face and edges of the Hermpac Rusticated and Splaycut weatherboards must be sealed with an exterior grade oil-based penetrating stain. During installation, cut ends must be sealed with an exterior grade oil-based penetrating stain.

17.6 Before the weatherboards are installed, the corner detail must be prepared to suit the selected option, e.g. external box corner, external corner moulding etc. The necessary flashings must be installed before commencing weatherboard fixing and the cavity closure must be installed continuously around the bottom of the cavity.

17.7 The first course of weatherboards must be full length, i.e. 4.54 m and commence from an external corner. The first weatherboard must be installed level to assist with the installation of subsequent weatherboards. The weatherboards must overhang the bottom plate by a minimum of 50 mm.

17.8 Immediately prior to installing the weatherboards over the internal and external corner flashings, a continuous bead of sealant must be applied to the face of the flashing along the fixing line.

17.9 Hermpac Rusticated and Splaycut weatherboards must be overlapped a minimum of 25 mm with an expansion gap of 2 mm at the overlap. The top of the weatherboard lap must be restrained using the Hermpac clinch nail at every cavity batten.

17.10 Hermpac Rusticated and Splaycut weatherboards must be pre-drilled with a hole slightly smaller than that of the nail. Fix each weatherboard with one nail per board at every cavity batten. Fixing must be carried out using silicon bronze or Grade 304 or 316 stainless steel annular grooved Hermpac Crown Head, Rose Head or Flat Head nails. The nail shank must be minimum 3.15 mm diameter and the length must allow minimum 30 mm penetration of the wall frame. The fixing must be located 30-35 mm above the bottom of the weatherboard and a minimum of 32 mm from the end of the board and must finish flush onto the surface of the weatherboard, not into or below the surface.

17.11 Fix weatherboards in full lengths where possible. Where joints are unavoidable, scarf the weatherboard at 45° over a cavity batten and fix with one fixing through the overlapping board.

Aluminium Joinery Installation

17.12 Aluminium joinery and associated head flashings must be installed by the building contractor in accordance with the Technical Literature. A 7.5 – 10 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed after the joinery has been secured in place.

17.13 After installing the window and door joinery, Hermpac Rusticated plugs or scribes must be installed in accordance with the Technical Literature to provide additional weatherproofing for the joinery/weatherboard junction.

Finishing

17.14 The stain manufacturer's instructions must be followed at all times for application of the stain finish.

Inspection

17.15 The Technical Literature must be referred to during the inspection of Hermpac Rusticated and Splaycut Weatherboard Cavity System installations.

Health and Safety

18.1 Cutting of Hermpac Rusticated and Splaycut weatherboards must be carried out in well ventilated areas and dust masks, eye and hearing protection must be worn.

18.2 Safe use and handling procedures for the components that make up the Hermpac Rusticated and Splaycut Weatherboard Cavity System are provided in the relevant manufacturer's Technical Literature.

Basis of Appraisal

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

Tests

- 19.1 The following testing has been completed by BRANZ:
- BRANZ expert opinion on NZBC E2 code compliance for Hermpac Rusticated and Splaycut Weatherboard Cavity System was based on testing and evaluation of all details within the scope and as stated within this Appraisal. The Hermpac Rusticated Weatherboard Cavity System was tested to NZBC E2/VM1. The testing assessed the performance of the foundation detail, window head, jamb and sill details, meter box head, jamb and sill details, horizontal joints, internal and external corners and balustrade to wall junction. The Hermpac Multi Splay Weatherboard Cavity System was tested to determine the weathertightness performance limits of the system. The testing assessed the performance of the foundation detail, horizontal lap joints, internal and external corners. In addition to the weathertightness tests, the details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of NZBC Acceptable Solution E2/AS1 for cavity-based weatherboard claddings.
 - Fastener pull through testing. BRANZ determined design wind suction pressures, and by comparing these pressures with AS/NZS 1170 pressure coefficients, the fixing requirements were determined for timber framed walls.

Other Investigations

- 20.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 20.2 The performance of cedar weatherboard wall cladding products in New Zealand has been considered, including the structural and durability performance, and non-hazardous nature.
- 20.3 Site visits have been carried out by BRANZ to assess the practicability of installation.
- 20.4 The Technical Literature for the Hermpac Rusticated and Splaycut Weatherboard Cavity System has been examined by BRANZ and found to be satisfactory.

Quality

- 21.1 The manufacture of Hermpac Rusticated and Splaycut weatherboards 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.
- 21.2 The quality of materials, components and accessories supplied by Herman Pacific Limited is the responsibility of Herman Pacific Limited.
- 21.3 Quality of installation on site of components and accessories supplied by Herman Pacific Limited and the building contractor is the responsibility of the installer.
- 21.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, building wraps, flashing tapes, airseals, cavity battens and the Hermpac Rusticated and Splaycut Weatherboard Cavity System in accordance with the instructions of Herman Pacific Limited.

21.5 Building owners are responsible for the maintenance of the Hermpac Rusticated and Splaycut Weatherboard Cavity System in accordance with the instructions of Herman Pacific Limited.

Sources of Information

- AS/NZS 1170: 2002 Structural design actions.
- AS/NZS 4534:2006 Zinc and zinc/aluminium-alloy coatings on steel wire.
- 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 3617:1979 Specification for profiles of weatherboards, fascia boards and flooring.
- NZS 4211:2008 Specification for performance of windows.
- BRANZ Bulletin Number 411, April 2001, Recommended Timber Cladding Profiles.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005.
- New Zealand Building Code Handbook Department of Building and Housing, Third Edition May 2007.
- The Building Regulations 1992, up to, and including August 2008 Amendment.



BRANZ

In the opinion of BRANZ, **Herpac Rusticated and Splaycut Weatherboard Cavity System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Herman Pacific 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. **Herman Pacific 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.
3. 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.
4. 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 **Herman Pacific Limited**.
5. 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.
6. BRANZ provides no certification, guarantee, indemnity or warranty, to **Herman Pacific Limited** or any third party.

For BRANZ

P Burghout
Chief Executive

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