



## BRANZ Appraised

Appraisal No. 789 [2026]

## ELDORADO STONE™ VENEER AND HARD AS ROCKS APPLICATION SYSTEM

Appraisal No. 789 [2026]

This Appraisal replaces BRANZ  
Appraisal No. 789 [2020]



### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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## Product

- 1.1 The Eldorado Stone™ Veneer and Hard as Rocks Application System is a cavity-based external wall cladding system for residential and light commercial type buildings where domestic construction techniques are used.
- 1.2 The system consists of a cast stone veneer cladding designed to imitate the look of natural stone. The stone veneer elements are manufactured from lightweight aggregates, portland cement and iron oxide pigments, and are cast to mimic different types of stone. Fibre cement backing sheets are fixed over timber battens to form a 20 mm cavity. The stone veneer and mortar are mechanically anchored through to the structural wall framing by stainless steel anchor ties and screws.

## Scope

- 2.1 The Eldorado Stone™ Veneer and Hard as Rocks Application System has been appraised as an external wall cladding system for buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1; 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; and,
  - situated in NZS 3604 Wind Zones up to, and including, Extra High.
- 2.2 The Eldorado Stone™ Veneer and Hard as Rocks Application System must only be installed on vertical surfaces [except for sills, which must have a minimum 10° slope and be waterproofed in accordance with the Technical Literature].
- 2.3 The Eldorado Stone™ Veneer and Hard as Rocks Application System must only be used with window and doors that comply with NZBC Acceptable Solution E2/AS1 or that are covered by a valid BRANZ Appraisal or NZ CodeMark Certification.
- 2.4 Installation of components and accessories supplied by Hard as Rocks Ltd and their licensed applicators must be carried out only by Hard as Rocks Ltd licensed applicators.

## Building Regulations

### New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, the Eldorado Stone™ Veneer and Hard as Rocks Application 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 Eldorado Stone™ Veneer and Hard as Rocks Application System 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 10.1–10.5.

**Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years and B2.3.2. The Eldorado Stone™ Veneer and Hard as Rocks Application System meets these requirements. See Paragraphs 11.1 and 11.2.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The Eldorado Stone™ Veneer and Hard as Rocks Application System meets this requirement. See Paragraphs 15.1–15.5.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. The Eldorado Stone™ Veneer and Hard as Rocks Application System meets this requirement.

## Technical Specification

4.1 System components and accessories for the Eldorado Stone™ Veneer and Hard as Rocks Application System which are supplied by supplied by Hard as Rocks Ltd are:

### Stone

- Eldorado Stone™ Veneer elements are cast from moulds originating from natural stone and are made from portland cement, lightweight aggregates and oxide pigments forming a variety of stone styles. Styles of cast stone available are listed in the Technical Literature.

### Anchor Ties and Screws

- Anchor Ties are approximately 60 mm long by 20 mm wide, formed from Grade 304 stainless steel strip. They are pre-punched with a 5 mm diameter hole for the screw. Screws are square drive 12 g x 65 mm long Grade 304 stainless steel.

### Sealer and Mortar

- StoneTite™ Sealer is a styrene/butadiene co-polymer latex adhesive used as a slurry mix with portland cement for sealing the fibre cement substrate. It is also used as a mortar additive in StoneTite™ Mortar.
- StoneTite™ Mortar is a pre-bagged mix of fine washed sand and portland cement. It is supplied in 25 kg bags and one bag is mixed on-site with 3 L of clean drinking water mixed with 600 ml of StoneTite™ additive. It is trowel-applied to the fibre cement as the mortar coat in an 8-10 mm thick layer, followed by the embedment of the stone.

4.2 Accessories specific to the Eldorado Stone™ Veneer and Hard as Rocks Application System, which are supplied by the building contractor, are:

- Fibre cement sheet – 7.5 or 9 mm thick fibre cement sheet complying with AS/NZS 2908.2 in accordance with NZBC Acceptable Solution E2/AS1.

4.3 Accessories used with Eldorado Stone™ Veneer and Hard as Rocks Application System to a generic specification in accordance NZBC Acceptable Solutions E2/AS1 or covered by a relevant and valid BRANZ Appraisal or NZ CodeMark Certification, which are supplied by the building contractor, are:

- Flexible wall underlay
- Flexible wall underlay restraint
- Rigid wall underlay
- Flexible flashing tape
- Vertical cavity battens
- Cavity base closer/vermin strip
- Flexible air seals
- Sill support bars



- Window head flashing
- Flashings
- Sealant

## Handling and Storage

- 5.1 Handling and storage of all materials supplied by Hard as Rocks Ltd or its licensed applicators, whether on-site or off-site, is under the control of the Hard as Rocks Ltd licensed applicators. Dry storage must be provided on-site for the Eldorado Stone™ Veneer elements. Bags of StoneTite™ mortar mix and StoneTite™ sealer must be stored under cover. Liquid components must be stored in frost-free conditions.
- 5.2 Handling and storage of all materials supplied by the building contractor, whether on-site or off-site, are under the control of the building contractor. Materials must be handled and stored in accordance with the relevant manufacturer's instructions.

## Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
  - Construction Guide, Eldorado Stone™ Veneer and Hard as Rocks Application System, Version 1.3, dated July 2024, excluding the following: paragraph 1 on page 3; full pages 9, 10 and 11; detail 5h on page 15 and detail 4a on page 22.
- 6.2 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 framing must be treated as required by NZBC Acceptable Solution B2/AS1.

#### Timber Framing

- 7.2 Timber framing must comply with NZS 3604 or 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 400 mm centres. Dwargs must be fitted flush between the studs at maximum 800 mm centres.
- 7.3 For specifically designed timber-framed buildings situated in Wind Zones above NZS 3604 defined Extra High, there must be a minimum timber framing size of 90 x 45 mm, and a minimum timber grade of MSG8.
- 7.4 Timber framing must have a maximum moisture content of 24% at the time of the cladding application. *[Note: If the Eldorado™ Stone and Hard as Rocks Application System is 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 Ground clearance to finished floor levels as set out in NZS 3604 must always be adhered to.
- 8.2 The horizontal separation between the wall cladding and the adjacent ground must be maintained in accordance with NZS 3604.
- 8.3 The bottom of cladding must have separations, clearances and overlaps in accordance with NZBC Acceptable Solution E2/AS1.
- 8.4 All external walls shall have barriers to airflow in accordance with NZBC Acceptable Solution E2/AS1 and for specifically designed buildings up to a 2.5 kPa design differential ULS wind pressure a rigid underlay is required.



- 8.5 Where penetrations through the stone veneer are wider than the cavity batten spacing, allowance must be made for airflow between adjacent cavities. A minimum 10 mm gap must be left between the bottom of the vertical cavity batten and the flashing to the opening.
- 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. The Technical Literature provides some guidance. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.

### Control Joints

- 9.1 Control joints where Eldorado Stone™ Veneer and Hard as Rocks Application System is used must be constructed in accordance with the Technical Literature and be provided as follows:
- **Horizontal control joints** – at maximum 5.4 m centres and at inter-storey floor levels.
  - **Vertical control joints** – at maximum 5.4 m centres; aligned with any control joint in the structural framing, or where the system abuts different cladding types.

*[Note: 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 are outside the scope of this Appraisal and are the responsibility of the designer – refer to Paragraph 8.6.]*

### Inter-storey Junctions

- 9.2 Inter-storey drained joints must be constructed in accordance with the Technical Literature. Inter-storey joints must be provided to limit continuous cavities to the lesser of two-storeys or 7 m in height, in accordance with the requirements of NZBC Acceptable Solution E2/AS1.

### Structure

#### Mass

- 10.1 The mass of Eldorado Stone™ Veneer and Hard as Rocks Application System (including the weight of the fibre cement sheet and mortar) is, in the case of the heaviest stone veneer profile, less than 80 kg/m<sup>2</sup>, therefore it is considered a medium weight wall cladding in terms of NZS 3604.

#### Impact Resistance

- 10.2 The system has adequate 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

- 10.3 The Eldorado Stone™ Veneer and Hard as Rocks Application System is suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High where buildings are within the scope as detailed in Paragraph 2.1. Refer to Paragraph 10.5 for anchor tie spacings.

#### Earthquake Zones

- 10.4 The Eldorado Stone™ Veneer and Hard as Rocks Application System is suitable for use in all Earthquake Zones of NZS 3604.

#### Anchor Tie Spacing

- 10.5 Determine the anchor tie spacing for the relevant Wind Zone from Table 1. Determine the anchor tie spacing for the relevant Earthquake Zone from Table 2. The lowest anchor tie spacing must be used for the building design.

**Table 1: Wind Zone Vertical Anchor Tie Spacing**

Wind Zone Vertical Anchor Tie Spacing [mm]		
Wind Zone	Within 1,200 mm of building corner	More than 1,200 mm from building corner
Low	400	400
Medium	400	400
High	300	400
Very High	200	300
Extra High	180	200

*Note: The maximum horizontal anchor tie spacing to studs is 400 mm.*

**Table 2: Earthquake Zone Vertical Anchor Tie Spacing**

Earthquake Zone Vertical Anchor Tie Spacing [mm]		
Earthquake Zone	Single Storey 3 m maximum	Building Height 10 m maximum
Zone 1	400	300
Zone 2	400	225
Zone 3	250	150
Zone 4	200	120

*Note: The maximum horizontal anchor tie spacing to studs is 400 mm.*

### Durability

- 11.1 The Eldorado Stone™ Veneer and Hard as Rocks Application System meets the performance requirements of NZBC Clause B2.3.1 [b] 15 years for the stone veneer cladding system.

### Serviceable Life

- 11.2 Eldorado Stone™ Veneer and Hard as Rocks Application System is expected to have a serviceable life in excess of 35 years, provided the system is maintained in accordance with this Appraisal.

### Maintenance

- 12.1 Regular maintenance is essential to ensure the performance requirements of the NZBC are continually met, and to ensure the maximum serviceability of the system.
- 12.2 Regular cleaning [at least annually] is required to remove grime, dirt and organic growth and to maximise the life and appearance of the stone veneer finish. Grime may be removed by brushing with a soft bristle brush, warm water and detergent.
- 12.3 Annual inspections must be made to ensure that all aspects of the Eldorado Stone™ Veneer and Hard as Rocks Application System, including flashings and any sealed joints remain in a weatherproof condition. Any cracks, damaged areas or areas showing signs of deterioration, must be repaired immediately. Eldorado Stone™ Veneer and Hard as Rocks Application System must be repaired in accordance with the instructions of Hard as Rocks Ltd.
- 12.4 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. *[Note: 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 Eldorado Stone™ Veneer and Hard as Rocks Application System.]*

### Prevention of Fire Occurring

- 13.1 Separation or protection must be provided to Eldorado Stone™ Veneer and Hard as Rocks Application System from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

### Control of External Fire Spread

- 14.1 Refer to NZBC Acceptable Solutions C/AS1 and C/AS2, and NZBC Verification Method C/VM2 for fire resistance rating and control of external fire spread requirements for external walls.
- 14.2 The Eldorado Stone™ Veneer and Hard as Rocks Application System stone on fibre cement cladding panels is composed entirely of brick and fibre cement and therefore defined as non-combustible in accordance with NZBC Building Product Specification.

### Vertical Fire Spread

- 14.3 This Appraisal only covers buildings 10 m or less in height. NZBC Functional Requirement C3.2 identifies that external vertical fire spread to upper floors only needs be considered for buildings with a building height greater than 10 m. Control of external vertical fire spread is therefore outside the scope of this Appraisal.

### Horizontal Fire Spread

- 14.4 Where required by NZBC Acceptable Solution C/AS1 or C/AS2, the cladding system will need to be installed over a fire resistance rated (FRR) external wall with the required FRR.

### External Cladding Systems

- 14.5 Cladding materials must comply with the fire performance requirements of NZBC Acceptable Solution C/AS1 or C/AS2 based on the building height, distance of the external wall to the relevant boundary and if the building is sprinklered. The Eldorado Stone™ Veneer and Hard as Rocks Application System has not been assessed for use where these requirements apply.

### External Moisture

- 15.1 Eldorado Stone™ Veneer and Hard as Rocks Application System when installed in accordance with this Appraisal and the Technical Literature prevents the penetration of moisture that could cause undue dampness or damage to building elements.
- 15.2 The cavity must be sealed off from the roof and sub-floor space to meet the performance requirements of NZBC Clause E2.3.5.
- 15.3 Eldorado Stone™ Veneer and Hard as Rocks Application System allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet the performance requirements of NZBC Clause E2.3.6.
- 15.4 The details given in the Technical Literature for weather sealing are based on the design 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.
- 15.5 The use of Eldorado Stone™ Veneer and Hard as Rocks Application System where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirement for junctions, penetrations etc. to remain weather-resistant.

### Internal Moisture

- 16.1 Buildings must be constructed with an adequate combination of thermal resistance and ventilation, and space temperature must be provided to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate.

### Water Vapour

- 16.2 Eldorado Stone™ Veneer and Hard as Rocks Application System is not a barrier to the passage of water vapour, and when correctly installed will not create or increase the risk of moisture damage resulting from condensation.

## Installation Information

### Installation Skill Level Requirement

- 17.1 All design and building work must be carried out in accordance with the Eldorado Stone™ Veneer and Hard as Rocks Application System Technical Literature and this Appraisal.
- 17.2 Installation of the accessories supplied by the building contractor, including cavity battens, fibre cement board, Hard as Rocks tags and relevant flashings must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.
- 17.3 Installation and finishing of the components of the Eldorado Stone™ Veneer and Hard as Rocks Application System supplied by Hard as Rocks Ltd and its licensed applicators must be completed by Hard as Rocks licensed applicators. A Producer Statement Construction (PS3) must be supplied by the Hard as Rocks licensed applicator.

### System Installation

#### Building Underlay and Flexible Sill and Jamb Tape Installation

- 18.1 The selected wall underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions prior to the installation of the cavity battens and the rest of Eldorado Stone™ Veneer and Hard as Rocks Application System. Flexible wall underlay must be installed horizontally and be continuous around corners. Underlay must be lapped 75 mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints. Generic rigid sheathing materials must be installed in accordance with NZBC Acceptable Solution E2/AS1 and be overlaid with a flexible wall underlay. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Particular attention must be paid to the installation of the building underlay 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.

#### Joinery Installation

- 18.2 Joinery must be installed in accordance with the appraised Technical Literature and any Technical Literature of the joinery manufacturer. The joinery must be installed plumb, level and fixed in accordance with NZBC Acceptable Solution E2/AS1 or the joinery manufacturers Technical Literature.

#### Finishing

- 18.3 Hard as Rocks Ltd Technical Literature must be followed at all times for finishing of mortar work. Excess mortar must be removed carefully with a soft brush when the mortar is partially dry (after approximately 1 hour). The quality of final pointing and mortar work are pivotal to the final aesthetic look of the stone veneer.

#### Inspections

- 18.4 The Technical Literature must be referred to during the inspection of Eldorado Stone™ Veneer and Hard as Rocks Application System installations.

### Health and Safety

- 19.1 Cutting of Eldorado™ Stone elements must be carried out in well ventilated areas, and a dust mask and eye protection must be worn.
- 19.2 When power tools are used for cutting, grinding or forming holes, health and safety measures must be observed because of the amount of dust generated.
- 19.3 Safe use and handling procedures for the components that make up Eldorado Stone™ Veneer and Hard as Rocks Application 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

20.1 The following testing has been undertaken by BRANZ:

- BRANZ expert opinion on NZBC Clause E2 code compliance for Eldorado Stone™ Veneer and Hard as Rocks Application System was based on evaluation of all details within the scope and as stated within this Appraisal and testing of the Eldorado Stone™ Veneer and Hard as Rocks Application System to NZBC Verification Method E2/VM1 [as contained within NZBC Clause E2, Amendment 4]. The testing assessed the performance of the window head, jamb and sill details, meter box head, jamb and sill details, vertical and horizontal control joints, internal and external corners, and pipe penetration. In addition to the weathertightness test, 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 drained cavity claddings.
- Wind face load and fastener pull-out testing for Eldorado Stone™ Veneer and Hard as Rocks Application System. BRANZ determined design wind suction pressures, and by comparing these pressures with the NZS 3604 design wind speeds and AS/NZS 1170 pressure coefficients, the fixing requirements were determined for timber walls.
- In-plane shear testing of Eldorado Stone™ Veneer and Hard as Rocks Application System was carried out to determine the system's ability to resist self-weight.
- A racking test was completed to examine the performance of Eldorado Stone™ Veneer and Hard as Rocks Application System where the system was subjected to both serviceability level and ultimate level seismic racking deflections, taken to be  $\pm 8$  and  $\pm 36$  mm respectively. The stone veneer system did not crack or show signs of damage.

### Other Investigations

- 21.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 21.2 Site inspections of Eldorado Stone™ Veneer and Hard as Rocks Application System installations have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 21.3 The Technical Literature for Eldorado Stone™ Veneer and Hard as Rocks Application System has been examined by BRANZ and found to be satisfactory.

### Quality

- 22.1 The manufacture of the cast veneer stone elements has not been examined by BRANZ, however methods adopted for quality control, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 22.2 The quality of materials, components and accessories supplied by Hard as Rocks Ltd is the responsibility of Hard as Rocks Ltd.
- 22.3 Quality on-site is the responsibility of Hard as Rocks Ltd licensed applicators.
- 22.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, wall underlays, flashing tapes, air seals, cavity battens and fibre cement sheets in accordance with the instructions of Hard as Rocks Ltd.
- 22.5 Building owners are responsible for the maintenance of Eldorado Stone™ Veneer and Hard as Rocks Application System installations in accordance with the instructions of Hard as Rocks Ltd.



## Sources of Information

- AS/NZS 1170: 2002 Structural design actions.
- NZS 3602: 2003 Timber and wood-based products for use in building.
- NZS 3603: 1993 Timber structures standard.
- NZS 3604: 2011 Timber-framed buildings.
- NZS 4211: 2008 Specification for performance of windows.
- Ministry of Business, Innovation and Employment Record of amendments – Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



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29 April 2026

ELDORADO STONE™ VENEER  
AND HARD AS ROCKS  
APPLICATION SYSTEM



In the opinion of BRANZ, **Eldorado Stone™ Veneer and Hard as Rocks Application 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 **Hard as Rocks Ltd**, 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. **Hard as Rocks Ltd**:
  - 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 quality of work;
  - 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 **Hard as Rocks Ltd**.
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 **Hard as Rocks Ltd** or any third party.

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For BRANZ

**Claire Falck**

Chief Executive

Date of Issue:

29 April 2026