

4273HR HARD AS ROCKS - ELDORADO STONE™ VENEER

1. GENERAL

This section relates to the supply and installation of **Hard as Rocks Eldorado Stone™**.

- As a non-structural, decorative veneer adhered directly to various substrates including BGC fibre cement board, tilt panel, concrete block, and some brick and plaster applications.
- For interior and exterior applications
- Footings are not required
- A medium weight wall cladding for use in all wind zones

1.1 RELATED WORK

Refer to ~ for substrate

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B1/AS1	Structure
NZBC B2	Durability
NZBC E2/AS1	External moisture
NZS 3604	Timber-framed buildings

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

BRANZ Appraisal 789 - Eldorado Stone™ Veneer and Hard as Rocks Application System
Eldorado Stone™ Veneer and Hard as Rocks Application System Technical Manual,
Product Description and Installation Details Version 1.1

Eldorado Stone™ Veneer and Hard as Rocks Application System Construction Guide
Version 1.0

Manufacturer/supplier contact details

Company: Hard as Rocks Ltd
Web: www.hardasrocks.co.nz
Email: info@hardasrocks.co.nz
Telephone: 07 378 3929
0800 353 672

Warranties

1.4 WARRANTY

Provide warranty for:

50 years: Limited 50 year warranty from the date of sale installation, Eldorado Stone™ manufactured stone or brick veneer will not blister, peel, flake, delaminate or crack excessively, as a result of manufacturing defects when used on structures conforming to local building codes.

- Commence the warranty from the date of practical completion of the contract works.
- 50 year warranty applies to original purchaser; subsequent owners are limited to a 15 year warranty.
- Warranty must be issued by a Licensed Hard as Rocks Applicator.
- Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.5 QUALIFICATIONS

Installers to be experienced in the installation of Hard as Rocks Eldorado Stone™ and licensed by Hard as Rocks Ltd. If requested provide evidence of qualification / experience prior to commencing work.

1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.7 SAMPLES
Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed.

Provide the following samples for review by the Contract Administrator:

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Samples are available from local Hard as Rocks Franchisee;
Contact info@hardasrocks.co.nz.

Compliance information

1.8 INFORMATION REQUIRED FOR CODE COMPLIANCE
Provide the following compliance documentation: -
- Licenced applicators approval certificate from the manufacturer / importer / distributor
- Manufacturer's, importers or distributors warranty
- Licensed applicator's warranty
- Producer Statement - Construction from the installer
- Producer Statement - Construction Review from an acceptable suitably qualified person
- Other information required by the BCA in the Building Consent Approval documents.

Performance - Wind (design by contractor)

1.9 DESIGN PARAMETERS - NON SPECIFIC DESIGN
Design the installation to the wind zone parameters of [NZS 3604](#), table 5.4.
Refer to general section 1220 PROJECT for details.

Quality control and assurance

1.10 INSPECTIONS

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2. PRODUCTS

Materials

2.1 MANUFACTURED INDIVIDUAL STONE
To [NZBC B2.3.1\(b\)](#). Eldorado Stone™, manufactured stone, consisting of Portland Cement, light-weight natural aggregates and iron oxide pigments.
Refer to SELECTIONS for type, size and colour options.

2.2 MANUFACTURED STONE PANELS
Eldorado Stone™, manufactured stone panels (Stacked Stone only), consisting of Portland Cement, light-weight natural aggregates and iron oxide pigments.
Refer to SELECTIONS for size and colour options.

Components

2.3 STONETITE™ SEALER
Styrene/Butadiene co-polymer latex adhesive. Used in a slurry mix with Portland cement for sealing the substrate.
Also used as a mortar additive in StoneTite™ mortar.

2.4 STONETITE™ MORTAR
Pre-bagged mix of fine washed sand and Portland cement. Supplied in 25kg bags.

2.5 STAINLESS STEEL TAGS
Proprietary Hard as Rocks Ltd 60mm long x 20mm wide x 16 gauge 304 grade stainless steel fixing tag (anchor). Prepunched with a 5mm diameter hole for screw fixing. Screws 12 gauge x 65mm 304 stainless steel square drive.

Accessories

- 2.6 CORNER STONES
Preformed 90 degree corner stone. Refer to SELECTIONS.
- 2.7 SILLS
Preformed sills. Refer to SELECTIONS.
- 2.8 WALL CAPS
Preformed wall caps. Refer to SELECTIONS.

3. EXECUTION

Conditions

- 3.1 DELIVERY, STORAGE AND HANDLING
Take delivery of materials and goods, store on site and protect from damage. Provide dry under cover storage for Eldorado Stone™ veneer, StoneTite™ mortar mix and StoneTite™ sealer. Store liquids in frost free conditions. Handle all materials in accordance with Hard as Rocks Ltd instructions.
- 3.2 PRE-INSTALLATION REQUIREMENTS
Check work previously carried out and confirm it is of the required standard for this part of the work.
- 3.3 SUBSTRATE - FIBRE CEMENT, TIMBER AND STEEL FRAMED BUILDINGS
Ensure that the substrate is suitable for the veneer application, installed to the manufacturer's installation requirements, as required by [NZBC B1/AS1](#), and in accordance with Hard as Rocks Ltd Eldorado Stone™ Technical Manual and Construction Guide.
- 3.4 TAGS - INSTALLED BY CONTRACTOR
Stainless steel tags for fibre cement applications to be supplied by Hard as Rocks Ltd and installed by the Contractor in accordance with Hard as Rocks Ltd, Eldorado Stone™ Technical Manual and Construction Guide.
- 3.5 SUBSTRATE - SOLID CONSTRUCTION
When applying to tilt panel, concrete block, and some brick and plaster applications, ensure that the substrate is suitable for the veneer application, installed to the manufacturer's installation requirements, as required by [NZBC B1/AS1](#), and in accordance with Hard as Rocks Ltd Eldorado Stone™ Technical Manual and Construction Guide.

Installation/application

- 3.6 STANDARDS AND TOLERANCES
Refer to the general section 1270 CONSTRUCTION for general requirements.

Preparation

- 3.7 SURFACE PREPARATION
Ensure the substrate is dry and free of all dust, paint, oil, mould release agents or other surface contaminants before commencing the veneer installation.
- 3.8 WATERPROOFING
Wet down absorbent surfaces, such as concrete, brick and stone, making sure they are saturated, but free of water. Using a stiff brush work the waterproofing slurry mix (StoneTite™ sealer adhesive mixed with Portland cement) well into the damp surface ensuring that no pinholes are visible. If a second coat is necessary, apply after the first coat is touch dry.

Installation

- 3.9 **INSTALLATION GENERAL**
Install Hard as Rocks Ltd veneer in accordance with Hard as Rocks Eldorado Stone™ Construction Guide and Technical Manual, and to [NZBC E2/AS1](#).
- 3.10 **COLOUR MIXING - INDIVIDUAL STONES**
Check all stone delivered to site for colour variation, prior to commencing work. Ensure stones are thoroughly blended from several cartons to ensure an even colour spread throughout the work. Avoid using identical shapes next to each other, and using small stones next to large stones.
- 3.11 **APPLYING TO SUBSTRATE - INDIVIDUAL STONES**
Bond the stone veneer to the substrate using StoneTite™ mortar to in accordance with Hard as Rocks Ltd requirements.
Apply a 30mm bed of mortar to the entire back of the stone piece and press firmly to the substrate, whilst giving it a firm wiggle.
The mortar will squash up around the stone and should be left in place to ensure all gaps are filled and the entire substrate area has a minimum of 10mm mortar coverage. Brush back excess mortar after 30-60 minutes, or point to suit the required finish.
Refer to SELECTIONS.
- 3.12 **APPLYING TO SUBSTRATE - STONE PANELS**
Bond the stone veneer to the substrate using StoneTite™ mortar to in accordance with Hard as Rocks Ltd requirements.
Apply a 30mm bed of mortar to the entire back of the stone piece and press firmly to the substrate, whilst giving it a firm wiggle.
The mortar will squash up around the stone. Where no visible mortar joints are required, clean off the excess mortar, or smear up the wall to enable the next stone to have a tight fit. Refer to SELECTIONS.
- 3.13 **INSTALL CORNER PIECES**
Apply the cornerstone pieces first, alternating the short and long tails. Use horizontal chalk lines at approximately 200mm centres to act as a guide and keep the levels straight. Apply sufficient mortar to the back of the veneer piece and press firmly onto the wall.
- 3.14 **INSTALL SECOND AND SUBSEQUENT STONES**
Once corner stones are in place, fill the spaces in between with flat stone veneer. Use horizontal chalk lines to ensure straight and level placement. Start at the corners and work inwards. Work from the sides and base upwards unless applying veneer under a sill (dado line) where it may be easier to work down from the sill. Avoid continuous horizontal or vertical joints.
- 3.15 **COLUMNS**
Sort corner pieces and use four similar sized corners and flats on each course. Cut back each second course of corner stones to achieve a natural look and to achieve the fit to size.
- 3.16 **SILLS**
Ensure allowance is made for sills. Fit wedge shaped sills with a minimum 15 degree angle to [NZBC E2/AS1](#). Figure 73c. Adhere smaller 90mm sills directly to the wall.
- 3.17 **CONTROL JOINTS**
Where individual stones cross a control joint, apply mortar to the longest side only and avoid mortar crossing the joint. Finger joint the stone over the control joint. Apply this technique in layers over the height of the wall to conceal the joint.

Control Joint	Location/Dimensions
Horizontal Control Joints	Maximum 5.4m centres and at inter-storey floor levels.
Vertical Control Joints	Maximum 5.4m centres, aligned with any control joint in the structural framing (if framing is used), or where the system abuts different cladding types.

- 3.18 INTER-STOREY JUNCTIONS
Construct in accordance with Hard as Rocks Technical literature, and to [NZBC E2/AS1.9.1.9.4.\(b\)](#).
- 3.19 CUTTING VENEER
Cut with masonry/tile cutting blade attached to a hand angle grinder. Ensure any cuts are placed in different locations to avoid cut lines being obvious. Observe Health and Safety measures while cutting, grinding or forming holes. Refer to Hard as Rocks Ltd Installation Details and Construction Guide.
- 3.20 WET WEATHER
Keep stonedry at all times prior to laying. Protect the top row of uncompleted walls. Protect freshly laid veneer during interruption through rain and at completion of each day's work.
- 3.21 KEEP FACE WORK CLEAN
Keep face clean during erection and until completion of the contract works. Ensure all excess mortar adhesive is cleared off the face of the veneer regularly using a sponge or brush. Turn back scaffold boards at night and during heavy rain. Do not rub face work to remove stains.

Completion

- 3.22 ROUTINE CLEANING
Carry out routine trade cleaning of this part of the work including periodic removal of all debris, unused and temporary materials and elements from the site. Use fresh water and a light brush to clean the stone. Do not water blast or use acids or bleaches.
- 3.23 DEFECTIVE OR DAMAGED WORK
Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.
- 3.24 PROTECTION
Provide the following temporary protection of the finished work:
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Commissioning

- 3.25 FINAL INSPECTION AND TESTING
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- 3.26 HANDOVER
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4. SELECTIONS

For further details on selections go to www.hardasrocks.co.nz
Substitutions are not permitted to the following.

Materials

Manufactured Stone

- 4.1 RUSTIC LEDGE (WEST COAST, ALEXANDRA AND CAMBRIDGE)
Location: ~
Colour: ~
Size: varies
Thickness: 50mm average
Weight: 45kg/m² approx
Corner pieces: matching corner stones
- 4.2 RIVER ROCK (ALPINE)
Location: ~

- Colour: Alpine
 Size: 100mm - 380mm
 Thickness: 50mm average
 Weight: 48kg/m² approx
 Corner pieces: matching corner stones
- 4.3 COUNTRY RUBBLE (SERRANO)
 Location: ~
 Colour: Serrano
 Size: varies
 Thickness: 50mm average
 Weight: 44kg/m² approx
 Corner pieces: matching corner stones
- 4.4 HILLSTONE (MOLANO)
 Location: ~
 Colour: Molano
 Size: varies
 Thickness: 50mm average
 Weight: 53kg/m² approx
 Corner pieces: matching corner stones
- 4.5 PAHOEHOE (KONA)
 Location: ~
 Colour: Kona
 Size: varies
 Thickness: 50mm average
 Weight: 56kg/m² approx
 Corner pieces: matching corner stones
- 4.6 FIELD ROCK (MAUKA, KIHOLO)
 Location: ~
 Colour: ~
 Size: varies
 Thickness: 50mm average
 Weight: 62kg/m² approx
 Corner pieces: matching corner stones
- 4.7 LAVA ROCK (NU'U)
 Location: ~
 Colour: Nu'u
 Size: varies
 Thickness: 50mm average
 Weight: 60kg/m² approx
 Corner pieces: matching corner stones
- 4.8 SHADOW ROCK (TETON, MOUNTAIN BLEND)
 Location: ~
 Colour: ~
 Size: varies
 Thickness: 50mm average
 Weight: 48kg/m² approx
 Corner pieces: matching corner stones
- 4.9 COASTAL REEF (SANIBEL, PEARL WHITE)
 Location: ~
 Colour: ~
 Size: varies
 Thickness: 50mm average
 Weight: 45kg/m² approx
 Corner pieces: matching corner stones

Manufactured Stone Panels

- 4.10 STACKED STONE (SLATE GREY, OLD ENGLISH, CASTAWAY)
Location: ~
Colour: ~
Size: ~
Thickness: 50mm average
Weight: 42kg/m² approx
Corner pieces: matching corner stones

Components

- 4.11 WATERPROOFING/SUBSTRATE PRIMER
Location: ~
Type/Brand: StoneTite™ Sealer

- 4.12 ADHESIVE
Location: ~
Type/Brand: StoneTite™ Mortar

- 4.13 STAINLESS STEEL TAGS
Location: ~
Type/Brand: Hard as Rocks Ltd

Accessories

Manufactured Capstones

- 4.14 450 PILLAR CAP
Location: ~
Size: 450mm x 450mm x 40mm
Colour: ~

- 4.15 550 PILLAR CAP
Location: ~
Size: 550mm x 550mm x 40mm
Colour: ~

- 4.16 600 PILLAR CAP
Location: ~
Size: 600mm x 600mm x 40mm
Colour: ~

- 4.17 STANDARD WALL CAP
Location: ~
Size: 500mm x 300mm x 40mm
Colour: ~

Manufactured Sills

- 4.18 80MM SILL
Location: ~
Size: 500mm x 80mm x 60mm thick, 15° slope
Colour: ~

- 4.19 110MM SILL
Location: ~
Size: 500mm x 110mm x 40mm thick, 15° slope
Colour: ~

- 4.20 150MM SILL
Location: ~
Size: 500mm x 150mm x 40mm thick, 15° slope
Colour: ~

