



# BEAL Appraisal Certificate



APPRAISAL #: C807

EXPIRY DATE: 30 April 2024

## BGC Stonesheet™ and BGC Render Tape for use with Manufactured or Natural Stone Slip Veneers



### Product

1.1 BCG Stonesheet™ and BGC Render Tape is a system made up of fibre cement sheet and butyl based jointing tape incorporating a non-woven PE backing that allows stone adhesives to be applied over it.

1.2 The system enables cement based adhesives which are used with manufactured or natural stone slip veneers to be applied over a joint between sheets of the BCG Stonesheet™ without the need for a traditional flush filled jointing system.

1.3 This form of jointing is deemed to be an alternative solution as defined by the NZ Building Act 2004. The use of the BGC Render Tape provides a more reliable and time saving method for the weatherproofing of joints between sheets.

### NZ Building Regulations

2.1 In the opinion of BEAL, the BGC Render Tape and BCG Stonesheet™ System, if designed, installed and maintained in accordance with the statements and conditions of this Appraisal Certificate, will meet the following provisions of the NZ Building Code;

#### Clause B1 STRUCTURE

The Render Tape and BCG Stonesheet™ System meets the requirements for loads arising from self weight and wind loads. B1.3.3 (a),(h). Refer Para 8.1

#### Clause B2 DURABILITY

The Render Tape and BCG Stonesheet™ System will meet Performance Clause B2.3.1(b); 15 years durability. Refer Para 8.2

#### Clause E2 EXTERNAL MOISTURE

The Render Tape and BCG Stonesheet™ System will meet Performance Clause E2.3.2. of the NZ Building Code. Refer tp Para 8.3

**Clause F2 HAZARDOUS BUILDING MATERIALS** Performance F2.3.1. The Render Tape and BCG Stonesheet™ System meets this requirement and will not present a health hazard to people. Refer Para 8.4

2.2 The Render Tape and BCG Stonesheet™ System has been appraised as an Alternative Solution in terms of New Zealand Building Code compliance.

Applicant:



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## Scope and Limitations

3.1 BGC Render Tape must be used in conjunction with BCG Stonesheet™ which has been installed strictly according to the manufactures instructions.

- The BCG Stonesheet™ is a non structural substrate suited to slip veneer weights of no more than 60kg/m<sup>2</sup>.
- For weights greater than this obtain technical advice from the slip veneer manufacturer.

## Technical Literature

4.1 The application of the BGC Render Tape to the BCG Stonesheet™ is described in BCG Stonesheet™ Technical Specification - July 2018.

4.2 For a copy of this Technical Literature and any subsequent updates please refer to

[www.bcginnovadesign.com.au](http://www.bcginnovadesign.com.au)

## Technical Details

5.1 BCG Stonesheet™ is a 7.5mm or 9.0mm thick fibre-cement sheet manufactured to AS2908.2:2008 Cellulose-Cement Products, to Type A - Category 3. The Stonesheet™ sheets must be installed using 10g x 65mm stainless steel screws and M6 x 19mm x 1.6mm stainless steel washers compliant with AS3566.2 at 200mm spacings with a 2 to 3mm gap between sheets.

- The BGC Render Tape is a single-faced self adhesive tape comprising a non-woven polyester fabric adhered to a film of butyl-rubber, which has high initial tack and adhesion properties.

- The tape has been evaluated on a clean dust-free surface of the Stonesheet™ without the need for sealers or primers. The tape is installed over the joint with the joint in the centre of the tape.

- The tape must be well adhered to the Stonesheet™ sheets by pressing down on both sides of the adhered tape.

- In the situation where the tape is applied to both a vertical and a horizontal joint, the tape is to be installed so that it overlaps the tape already applied.

**Note** that the render tape has not been appraised for sheets of Stonesheet™ which have become damp. Should installed sheets of Stonesheet™ become damp or contaminated, technical advice from the BGC Stonesheet™ manufacturer must be sought before application of the Render Tape.

### 5.2 Handling and Storage

Render Tape and BCG Stonesheet™ sheets can be stored indefinitely when kept in a cool dry location and out of the weather.

It is recommended that care be taken when using sharp knives or the like to cut Render Tape to the required length.

### 5.3 Safety

An MSDS sheet can be downloaded from the BGC Fibre Cement (NZ) web site - see the last page of this appraisal document for details.

## Advice for Designers

### 6.1 General

The BGC Render Tape and BCG Stonesheet™ system is for use on new and existing timber framing to provide a substrate for slip veneer cladding weighing no more than 60kg/m<sup>2</sup>.

6.2 The system is designed to comply with performance clause B2.3.1(b) providing a minimum 15 years durability.

6.3 Before an installation can be carried out, it is essential that a survey of the framing be carried out to ensure compliance with NZS3604:2011 for timber framing and that the stud and dwang centres meet the requirements set out in the BGC Render Tape and BCG Stonesheet™ Technical Manual.

### 6.4 Penetrations

Installation of the BGC Render Tape and BCG Stonesheet™ System is reliant on all openings and penetrations meeting the requirements of the New Zealand Building Code.

### 6.5 Structural performance - Clause B1

The BGC Render Tape and BCG Stonesheet™ System when used in accordance with this Appraisal Certificate and subjected to normal conditions of environment and use, will meet clause 1.3.3 (A), (h).

### 6.6 Durability - Clause B2

The BGC Render Tape and BCG Stonesheet™ System when used in accordance with this Appraisal Certificate and subjected to normal conditions of environment and use, is expected to have a serviceable life of at least 15 years according to the design option selected.

### 6.7 External Moisture - Clause E2

The installation of the BGC Render Tape and BCG Stonesheet™ System is reliant on the correct application of the tape over all joins to meet the requirements of clause E2.

- The design of details not included within the Technical Manual are subject to specific design and are outside the scope of this Appraisal Certificate.

### 6.8 Hazardous Building Materials - Clause F2

Performance F2.3.1. The Render Tape and BCG Stonesheet™ system when installed according to the requirements of this appraisal meets this requirement.

# Installation Requirements

## 7.1 Installation Skill Requirement

The BGC Stonesheet™ sheets are designed to be installed in the vertical position on wall framing with a construction joint gap of 2 to 3mm on each side of each sheet except where a control joint is required for seismic movement. The Render Tape shall be installed immediately before the manufactured or natural stone slip veneers is installed.

The Render Tape is installed over the joint so that the joint is in the middle of the tape. Where two joints intersect the tape is applied over the tape already applied.

**Note** that the manufactured or natural stone slip veneers shall be installed within three months of the installation of the BGC Stonesheet™.

## 7.2 Preparation of Timber Framing

The moisture content of any new timber framing must be no higher than 18%.

## 7.3 Render Tape Application

The application of the Thermakraft tape system must not be undertaken when the substrate temperature is below 10°C.

## 7.4 Health and Safety

The safe use and handling of the BGC Stonesheet™ Board and Thermakraft tape system products are described in the Technical Literature. The products must be used in conjunction with the relevant materials safety data sheet for each product.

# Basis of this Appraisal

[Use has been made of the Compliance Verification Procedure to verify compliance with the relevant clauses of the NZ Building Code based on a risk-analysis procedure.]

## 8.1 Clause B1 - Structure

The ability of the Stonesheet™ to maintain its strength using the nominated fixings under both dry and wet conditions, was evaluated by BEAL taking into account years of in-service history.

## 8.2 Clause B2 - Durability

For assessing the durability of the BGC Stonesheet™, being not less than fifteen years, an assessment of the in-service history of the BGC Stonesheet™ installed in both Australia and New Zealand and overseas was made.

- For assessing the durability of the Render Tape a series of adhesion tests before and after accelerated ageing was carried out. Refer to BEAL Test Reports.

## 8.3 E2 External Moisture

For assessing the performance of the BGC Render Tape adhered to a sample wall using the BGC Stonesheet™ system, fixed onto timber framing in conformance with NZS3604, a weathertightness test based on the methods described generally in AS/NZS4284, was carried out.

## 8.4 F2 Non-hazardous Materials

In the opinion of BEAL, the BGC Render Tape and BGC Stonesheet™ System presents no hazard to users and occupants of buildings using this system.

## Product QA Information

Render Tape is manufactured to the Japanese Standard JIS Z 0237:2000 and abides to strict in-house QA criteria.

The New Zealand importer has its own QA System which has been reviewed by BEAL and found satisfactory.

Each carton of product is uniquely identified in compliance with AS/NZS 4859.1.

## Maintenance

Render Tape and BGC Stonesheet™ require no maintenance provided they have been installed correctly.

## Design Considerations

The correct thickness of BGC Stonesheet™ shall be chosen according to the requirements set out in the BGC Stonesheet™ Technical Specification - July 2018.

## Further Advice

For further information about the most appropriate product for a particular situation please contact the New Zealand distributor, BGC Fibre Cement (NZ) whose contact details are shown on the front page of this BEAL Appraisal certificate.

# Sources of Information

For information about AS/NZS Test Methods, refer to [www.standards.co.nz](http://www.standards.co.nz)

For information about ASTM Test Methods, refer to [www.astm.com](http://www.astm.com)

- ♦ New Zealand Building Act 2004
- ♦ AS2908.2:2008 Cellulose-Cement Products
- ♦ AS3566.2 :2002 Self-drilling screws for the building and construction industries—Corrosion resistance requirements
- ♦ NASH Standard for Residential and Low-rise Steel Framing
- ♦ NZS 3604 - Timber Framed Buildings
- ♦ BGC Stonesheet™™ Technical Specification - dated July 2018
- ♦ Render Tape technical literature
- ♦ BEAL Test Report 080222
- ♦ BEAL Test Report 080602
- ♦ BEAL Test Report 080604
- ♦ Note: Test Results may be requested from BGC Fibre Cement (NZ)

# Verification of Performance

## Methods Used Include -

A technical opinion from a laboratory or testing facility - BEAL Testing Services

In service history - over 19 years in Australia, 18 years in New Zealand

Test Report from a laboratory or testing facility - BEAL Testing Services

[Methods suggested by the Department of Building and Housing]



## Concluding Statement

9.1 In the opinion of BEAL, the BGC Render Tape and BGC Stonesheet™ System is fit for purpose and will comply with the NZBC to the extent specified provided that it is used, designed, installed and maintained as set out in this Appraisal Certificate.

- The Appraisal Certificate is issued only to BGC Ltd., and is valid until the date of expiry described on the front of this appraisal, subject to the conditions of this Appraisal.

## Conditions of Appraisal

10.1. This appraisal Certificate:

- a) Relates only to the BGC Stonesheet™ and BGC Render Tape 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 BGC Fibre Cement Building Product Quality Plan and has the plan audited and Appraisal certificate revalidated by BEAL on an annual basis.

10.3 BGC Fibre Cement 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.

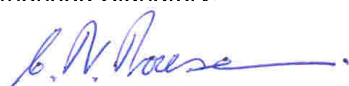
10.4 BEAL makes no representation as to:

- 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  
Building Element Assessment Laboratory Limited  
[Updated July 2023]

