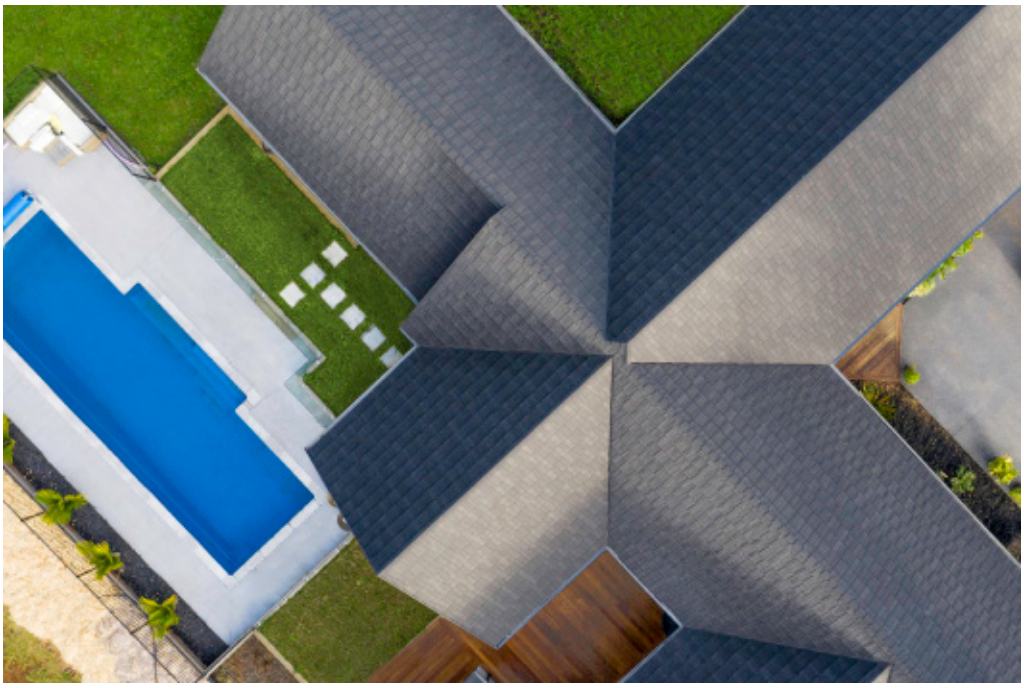
BRANZ Appraised
Appraisal No. 1089 [2025]

GERARD CONCEALED FASTENING ROOFING SYSTEMS



Appraisal No. 1089 (2025)

This Appraisal replaces BRANZ Appraisal No. 1089 (2020)

BRANZ Appraisals

Technical Assessments of products for building and construction.

RoofTG Pacific Ltd
90 Felton Matthew Ave
St Johns
Auckland 1702
Tel: 0800 100 244
Email: customerservice@gerardroofs.co.nz
Web: www.gerardroofs.co.nz

BRANZ
1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz

Product

1.1 Gerard Concealed Fastening Roofing Systems are available in four different pressed metal roofing tile profiles with a stone-coated surface and a range of finishing colours.

1.2 The pressed metal roofing tiles and flashing accessories form a roofing system installed over roofing underlay and solid plywood sheathing. CF Shingle, CF Shake and CF Slate can also be installed over roofing battens instead of plywood.

1.3 The tiles are branded with 'Ross Roof Group Ltd' on the underside of the tile.

Scope

2.1 Gerard Concealed Fastening Roofing Systems have been appraised as a roof cladding for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1, with regard to floor plan area and building height; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High; and,
- constructed with timber roof framing and timber battens specified in this Appraisal; and,
- with a minimum roof pitch of 15° and a maximum roof pitch of 60° for CF Shingle, CF Shake and CF Slate; or,
- with a minimum roof pitch of 10° and a maximum roof pitch of 60° for Calibre.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Gerard Concealed Fastening Roofing Systems, 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. Gerard Concealed Fastening Roofing Systems meet the requirements for loads arising from self-weight, gravity loads, temperature, snow, wind, impact and creep [i.e. B1.3.3 (a), (b), (c), (g), (h), (j), and (q)]. See Paragraphs 8.1-8.12.

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years. Gerard Concealed Fastening Roofing Systems meet this requirement. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1 and E2.3.2. Gerard Concealed Fastening Roofing Systems meet these requirements. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Gerard Concealed Fastening Roofing Systems meet this requirement.

Technical Specification

4.1 Gerard Concealed Fastening Roofing Systems contain the following components which are supplied by RoofTG Pacific Ltd:

- **Pressed metal tiles** - manufactured from zinc-aluminium alloy coated steel with a BMT of 0.39 mm and finished with a stone chip coating. These are available in four profiles as set out in Table 1.
- **Tile fastenings** - as set out in Table 1.
- **Batten and plywood sheathing fastenings** - as set out in Table 1.
- **Roof underlay** - underlay meeting the requirements of the NZBC, specified and supplied by RoofTG Pacific Ltd.
- **Flashings** - as specified in the Technical Literature and manufactured by RoofTG Pacific Ltd.

Table 1: Gerard Concealed Fastening Roofing Systems Specifications

<table>
<tr><th colspan="2">Profile</th><th>CF Shingle</th><th>CF Shake</th><th>CF Slate</th><th>Calibre</th></tr>
<tr><td colspan="6">Tile Properties</td></tr>
<tr><td colspan="2">Dimensions (l x w)</td><td>1,345 mm x 425 mm</td><td>1,345 mm x 425 mm</td><td>1,340 mm x 295 mm</td><td>1,340 mm x 295 mm</td></tr>
<tr><td colspan="2">Effective coverage (l x w)</td><td>1,270 mm x 368 mm</td><td>1,270 mm x 368 mm</td><td>1,250 mm x 250 mm</td><td>1,250mm x 250 mm</td></tr>
<tr><td colspan="2">Profile height</td><td>9 mm</td><td>10 mm</td><td>4 mm</td><td>0 mm</td></tr>
<tr><td colspan="2">Weight/tile</td><td>3.5 kg</td><td>3.5 kg</td><td>2 kg</td><td>2.1 kg</td></tr>
<tr><td colspan="2">Weight/m^2</td><td>7.5 kg</td><td>7.5 kg</td><td>6.4 kg</td><td>6.5 kg</td></tr>
<tr><td colspan="2">Min/max roof pitch*</td><td colspan="3">15°/60°</td><td>10°/60°</td></tr>
<tr><td colspan="6">Installation over battens</td></tr>
<tr><td rowspan="4">Tile fastenings in Wind Zone</td><td>Up to and including High</td><td rowspan="2">5 nails/tile or 5 screws/tile</td><td>8 nails/tile or 5 screws/tile</td><td rowspan="5">N/A</td></tr>
<tr><td>Up to and including Extra High</td><td>10 nails/tile or 5 screws/tile</td></tr>
<tr><td>Nail dimensions</td><td>50 mm x 2.8 mm ring shanked, ruspert-coated</td><td>25 mm x 3.05 mm ring shank galvanised</td></tr>
<tr><td>Screw dimensions</td><td colspan="2">#10 1-1/2 inch screws</td></tr>
<tr><td colspan="2">Batten dimensions (w x h)</td><td colspan="2">50 mm x 40 mm</td><td>150 mm x 25 mm</td></tr>
<tr><td rowspan="2">Batten fastenings in Wind Zone</td><td>Up to and including Very High</td><td colspan="3">90 mm x 3.15 mm D-head, bright steel</td></tr>
<tr><td>Up to and including Extra High</td><td colspan="3">10 g self-drilling 80 mm long screws</td></tr>
</table>

Installation over plywood			
Tile fastenings in Wind Zone	Up to and including High	8 nails/tile or 5 screws/tile	5 screws/tile
	Up to and including Extra High	10 nails/tile or 5 screws/tile	
	Nail dimensions	25 mm x 3.05 mm coil nails, ring galvanised	N/A
	Screw dimensions	10 g x 40 mm long, hex head needle point screw, HDG	
Plywood sheathing thickness		15 mm-21 mm	
Plywood sheathing fastenings		65 mm rink shank nails	

* Where the rafter/truss length exceeds 12 m, the minimum roof pitch shall increase by 1° per additional 0.5 m.

4.2 Accessories supplied by the roofing contractor are as follows:

- **Roofing battens** - dimensions as per Table 1, rough sawn H1.2 treated timber.
- **Plywood sheathing** - dimensions as per Table 1, grade DD or better structural plywood complying with AS/NZS 2269. The minimum requirement is untreated plywood for ventilated truss roof cavities and H3 treated plywood must be used where the plywood edge is unprotected at the eaves or when the system is used for a skillion roof. Concealed plywood edges at the eaves do not need to be protected. *(Note: When using plywood sheathing as a structural bracing element, there are additional requirements. This is outside the scope of this Appraisal.)*

Handling and Storage

5.1 Gerard Concealed Fastening Roofing Systems components must be transported and handled with care to avoid damaging the pre-finished surfaces.

5.2 Long term storage of the roofing tiles and accessories must be under dry, ventilated cover. For short term storage on-site, the tiles must be stored flat, no more than one pallet high, and off the ground.

5.3 Handling and storage of all materials supplied by RoofTG Pacific Ltd, whether on-site or off-site, is under the control of the installer. 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:

- Gerard, Installation Manual, CF Shake & CF Shingle on Battens, v3.1, 0525.
- Gerard, Installation Manual, CF Shake & CF Shingle on Ply, v4, 0525.
- Gerard, Installation Manual, CF Slate on Battens, v3.1, 0525.
- Gerard, Installation Manual, CF Slate on Ply, v2.0, 1224.
- Gerard, Installation Manual, Calibre, v3.2, 0625.

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

General

7.1 Roof framing must comply with NZS 3604, or be to a specific design in accordance with NZS 3603 and AS/NZS 1170.

7.2 Timber roof framing must be treated as required by NZS 3602 for the building design application.

7.3 Roof design must take into account any requirements for areas subject to regular snowfalls as per the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 1.3.

7.4 Calibre shall only be installed over plywood sheathing. CF Shingle, CF Shake and CF Slate can be installed over plywood sheathing or battens. For required specifications of plywood sheathing or battens please refer to Table 1.

7.5 Roof underlay must be installed as per NZBC Acceptable Solution E2/AS1, Paragraph 8.3.6 and Paragraph 8.1.5.

7.6 The minimum roof pitch is 10° for Calibre, 15° for CF Shingle, CF Shake and CF Slate. Where the rafter/truss length exceeds 12 m, the minimum roof pitch shall increase by 1° per additional 0.5 m. The maximum roof pitch is 60°.

7.7 Roof penetrations not detailed in the Technical Literature are the responsibility of the designer and are outside the scope of this Appraisal.

7.8 Tile battens must be installed in accordance with the Technical Literature.

7.9 The suitability of the Gerard Concealed Fastening Roofing Systems for the collection of potable water has not been assessed and is outside the scope of this Appraisal.

Structure

Mass

8.1 The approximate mass of Gerard Concealed Fastening Roofing Systems tiles are given in Table 1.

8.2 When used with a plywood sheathing of a thickness of 15 mm to 21 mm, or when used with battens, the total mass of the Gerard Concealed Fastening Roofing Systems is expected to not exceed 20 kg/m² and is therefore considered to be a light roof as defined in NZS 3604.

Snow

8.3 Gerard Concealed Fastening Roofing Systems are suitable for use in areas where buildings are designed for a 1 kPa open ground snow loading. Refer to RoofTG Pacific Ltd for installation details for snow-prone areas.

Wind Zones

8.4 When fixed in accordance with the manufacturer's instructions and this Appraisal, Gerard Concealed Fastening Roofing Systems are suitable for use in all NZS 3604 Wind Zones up to, and including, Extra High. Refer to Table 1 and the Technical Literature for fastening requirements in the different Wind Zones.

Plywood Sheathing

8.5 Where LOSP treated plywood is used, the solvents must be allowed to evaporate off for at least one week before installation of the roofing tile underlay.

8.6 Trusses must be at maximum 900 mm centres for plywood. Closer rafter spacings may be required depending on the spans and the different Wind Zones, and must be determined by NZS 3604, Table 10.1.

8.7 Sheet end butt joints must be installed with a gap of 2-3 mm over timber framing.

8.8 The plywood face grain must be laid at right angles to supports. The sheets must be laid with staggered joints in a brick bond pattern.

8.9 Tongue-and-groove plywood edges must be butt-jointed with no gaps between the sheet edges. Square plywood edges must have a 2-3 mm gap between the sheet edges.

8.10 Plywood sheathing must be fastened as described in the plywood manufacturers Technical Literature.

Tile Battens

8.11 Rafters or trusses must be at maximum 900 mm centres.

8.12 Tile battens and their fixings shall be as described in Table 1.

Durability

Serviceable Life

9.1 Gerard Concealed Fastening Roofing Systems are expected to have a serviceable life as detailed in Table 2, provided maintenance is carried out in accordance with this Appraisal and the Technical Literature.

Table 2: Minimum Expected Serviceable Life

Roof care	NZS 3604 Exposure Zone		
	Zone B	Zone C	Zone D
Cleaning and re-coating	min. 40 years	min. 30 years	min. 20 years

Note: In Zone D, premature failure of the coating in the areas around the fastener after a period shorter than that given in the table may occur.

9.2 In addition to exposure zones, local environmental effects, i.e. microclimates, may present in some New Zealand areas and should be considered. These can include:

- industrial contamination and corrosive atmosphere; or,
- contamination from agricultural chemicals or fertilisers; or,
- geothermal hot spots which are defined as being within 50 m of a bore, mud pool, steam vent, or other source.

Significant acceleration of material degradation can happen. RoofTG Pacific Ltd should be contacted to determine their suitability for use in these environments.

Weathering

9.3 Gerard Concealed Fastening Roofing Systems with a textured finish may lose some stone granules over a period of time.

9.4 Gerard Concealed Fastening Roofing Systems with a satin coating may fade slightly over a period of time.

Maintenance

10.1 Little maintenance should be required apart from the removal of lichen, moss and organic growth that may become established and the removal of accumulations of the stone granules in spouting.

10.2 Annual inspections must be made to ensure that all aspects of the roof cladding, including the pre-finished coating, the flashings and any joints remain in a weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately.

10.3 A water-based chemical treatment recommended by RoofTG Pacific Ltd as being suitable for use with Gerard Concealed Fastening Roofing Systems must be used for the removal of organic material. Petroleum-based solvents or cleaners must not be used.

10.4 Areas of the roof that are not washed by rain should be washed down with fresh water approximately every six months.

10.5 In marine environments, or in areas exposed to industrial pollution, washing down should be carried out every two to three months.

10.6 To avoid cracking, denting or any other damage to the tiles, walking on the roof should be avoided. If it is necessary to walk on the roof, soft-soled shoes should be worn, and loads should be placed over battens or rafters.

Prevention of Fire Occurring

11.1 Separation or protection must be provided to the combustible materials of the Gerard Concealed Fastening Roofing Systems from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

12.1 Gerard Concealed Fastening Roofing Systems, when installed in accordance with this Appraisal and the Technical Literature, will shed precipitated moisture and therefore meet the performance requirements of NZBC Clause E2.3.1. They will also prevent the penetration of water that could cause undue dampness, or damage to building elements, therefore meeting the performance requirements of NZBC Clause E2.3.2.

Construction Moisture

12.2 Gerard Concealed Fastening Roofing Systems, when installed in accordance with this Appraisal and the Technical Literature, will allow excess moisture present at the completion of construction to be dissipated without permanent damage to building elements and therefore meet the performance requirements of NZBC Clause E2.3.6. This is achieved by ensuring the construction moisture levels are no higher than 18% when the roofing tiles are laid and before the ceiling is closed-in, as well as providing an adequate level of roof cavity ventilation.

Internal Moisture

13.1 Adequate roof space ventilation is necessary to ensure roof space internal moisture levels and temperatures are controlled. Roof space ventilation requirements are given in the Technical Literature.

13.2 Air must be allowed to flow from the bottom to the top of the roof. In skillion-type roofs, a clear, uninterrupted, ventilated air gap of at least 25 mm must be present under Gerard Concealed Fastening Roofing Systems.

13.3 When sheathing is used, plywood with tongue-and-groove joints should be used on skillion roofs to minimise the restrictions caused by timber blocking. If required by the roof design or occupancy, soffits and ridge venting should be used to minimise the quantity of moisture and heat accumulating in the roof space.

13.4 RoofTG Pacific Ltd should be consulted for further advice and information on roof ventilation and moisture control, especially when the roof design is unusual.

Installation Information

Installation Skill Level Requirement

14.1 All design and building work must be carried out in accordance with the Gerard Concealed Fastening Roofing Systems Technical Literature and this Appraisal. Where the work involves Restricted Building Work (RBW), this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

14.2 The Technical Literature must be referred to during all inspections of Gerard Concealed Fastening Roofing Systems installations.

System Installation

Plywood Sheathing

15.1 Plywood and framing must have a maximum moisture content of 18% at the time of the installation of the roofing tiles.

15.2 The plywood must be installed in accordance with this Appraisal and the Technical Literature.

Roofing Battens

15.3 Roofing battens and framing must have a maximum moisture content of 18% at the time of the installation of the roofing tiles.

15.4 The roofing battens must be installed in accordance with this Appraisal and the Technical Literature.

Roof Underlay

15.5 The roof underlay must be tightly laid horizontally across the roof, and completely cover hips, ridges (except where ridge vents are used), and valleys.

15.6 When plywood sheathing is used, the roof underlay is installed to the requirements of the Technical Literature.

15.7 When battens are used, the roof underlay is installed to the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 8.3.6 and the Technical Literature.

15.8 Only sufficient fasteners to temporarily hold the underlay in place need be used.

Fastening Roofing Tiles

15.9 Roofing tiles must be fixed as described in Table 1.

15.10 The fasteners are used to secure the top of the tile to the batten or ply before locking the next tile to the fixed tile and therefore hiding the fastenings.

15.11 Fastener specifications are profile specific and are specified in Table 1. Only specified fasteners have been assessed and are covered by this Appraisal. Care must be taken to ensure the fasteners are driven in straight and are finished flush with the roofing tile surface.

System Installation

15.12 The Technical Literature must be referred to during installation of the roofing tiles and flashings.

Health and Safety

16.1 Safe use and handling procedures for the Gerard Concealed Fastening Roofing Systems are provided in the manufacturer's Technical Literature.

Basis of Appraisal

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

Tests

17.1 Weathertightness testing was carried out by BRANZ and the results were satisfactory.

17.2 Face load testing was carried out by BRANZ and the results were satisfactory.

Other Investigations

18.1 Weathertightness, structural and durability opinions have been provided by BRANZ technical experts.

18.2 The manufacturer's Technical Literature has been examined by BRANZ and found to be satisfactory.

18.3 Site inspections have been undertaken by BRANZ to assess the practicability of installation.

18.4 The long-term performance of Gerard Concealed Fastening Roofing Systems in New Zealand and many countries overseas, along with the durability and non-hazardous nature of the materials used has been reviewed by BRANZ. The domestic and international history of use of the Gerard Concealed Fastening Roofing Systems informed the durability opinion.

Quality

19.1 The manufacture of the Gerard Concealed Fastening Roofing Systems has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

19.2 The quality management system of RoofTG Pacific Ltd, has been assessed and registered as meeting the requirements of ISO 9001.

19.3 The quality of the supply of materials and accessories is the responsibility of RoofTG Pacific Ltd.

19.4 Quality on-site is the responsibility of the installer.

19.5 Designers are responsible for the building design, and the building contractor is responsible for the quality of installation of the roof framing and sheathing or roofing battens in accordance with the Technical Literature.

19.6 Building owners are responsible for the maintenance of Gerard Concealed Fastening Roofing Systems, in accordance with the instructions of RoofTG Pacific Ltd.

Sources of Information

- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 2269:2012 Plywood – Structural.
- NZS 3602:2003 Timber and wood-based products for use in building.
- NZS 3603:1993 Timber structures standard.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

BRANZ

In the opinion of BRANZ, Gerard Concealed Fastening Roofing Systems are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to RoofTG Pacific 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. RoofTG Pacific 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 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 RoofTG Pacific 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 RoofTG Pacific Ltd or any third party.

For BRANZ

Claire Falck
Chief Executive

Date of Issue:
31 July 2025