



# Specification Manual



The worry-proof roof.

# Gerard Roofs specification manual

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# New Zealand's ingenious pressed steel roofing system

A Gerard roof is made up of individual lightweight pressed steel panels secured using a unique fixing system that effectively locks them together to form a single structural unit. The result is a roof that's stylish, copes with severe weather and lasts a very long time.

## Invented in New Zealand ...

In 1957 New Zealand innovator Lou Fisher saw an opportunity to create a new kind of roof.

Disappointed with the limitations of solid tile and the utilitarian look of long-run corrugated iron roofs, he invented the steel tile roof and established a trusted brand that would grow to become Gerard Roofs.

## ... proven all over the world

The company continues to lead through ongoing product development and relentless attention to quality standards. Over the years Gerard Roofs' products have been fine-tuned to endure in all living situations and are now used in over 120 countries.

The Gerard roof you put over your head has not only been proven throughout New Zealand, but in some of the most extreme climates and environments on the planet



## 1.1 Products

### 1.1.1. Gerard Roof profiles

#### The roof has profound effect on the look of most homes

An attractive roof is a significant architectural feature. The roof usually accounts for around a third of the overall visual appearance of a home and will have a noticeable influence on its style and street appeal.

#### Gerard Roofs' profiles complement a range of styles

For many people, choosing a roof is primarily about looks. Homes are a reflection of individuality and

their roofs a prominent feature. Unlike most other roofing types Gerard offers a system of choices that enables you to determine the right 'look' rather than having to accept a pre-defined one.

#### Applicable to traditional or contemporary architecture

Whether you're imagining traditional style or something following the latest trends, Gerard Roofs have profiles to meet the brief. Milano, for example, is reminiscent of the enduring ridged roofs of the Mediterranean; by contrast, a profile like Rockport offers a slimmer, squarer more contemporary pattern.



Gerard Rockport



Gerard Tuffcoat



Gerard Corona



Gerard Milano



Gerard Senator



Gerard Oberon



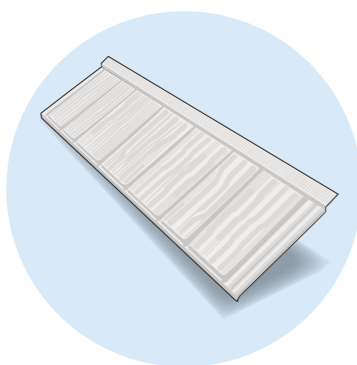
Gerard Alpine



Gerard Colortile

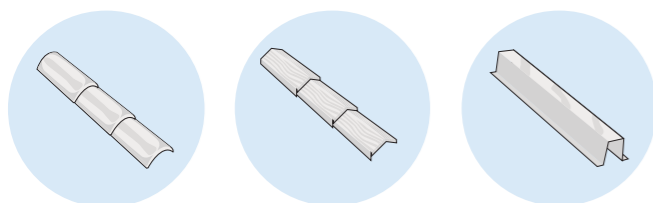
## Gerard Corona

Combining a flat plane with continuous but irregular grooves gives Gerard Corona a recurring but slightly organic pattern that works with many styles of home.



Pitch – min./max.	15-90°
Overall length	1320 mm
Length of cover	1250 mm
Width of cover	370 mm
Upstand	27 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	3.0 kg
Weight/panel Satin	2.1 kg
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	4.7 kg

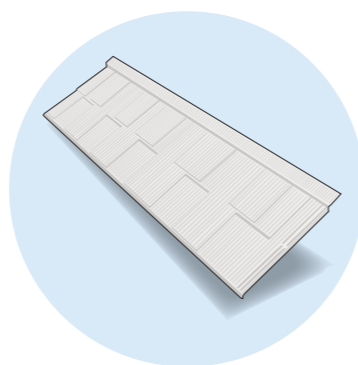
Gerard Corona is compatible with all three Gerard trims – **Barrel**, **Angle** and **Box**.



Dimensions and weights given are nominal.

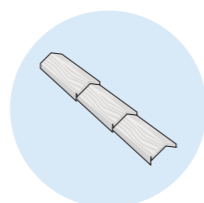
## Gerard Senator

A profile with a modern look and subtle raised detailing. Senator is known for the simplicity and uniformity it brings to contemporary and traditional homes.



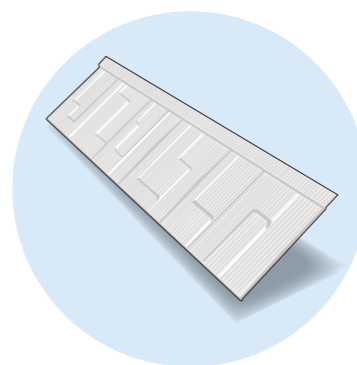
Pitch – min./max.	15-90°
Overall length	1320 mm
Length of cover	1250 mm
Width of cover	368 mm
Upstand	16 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	3.0 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	NA

Gerard Senator is compatible with **Angle** trim.



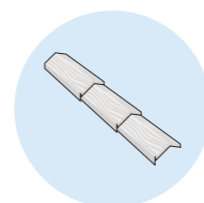
## Gerard Rockport

Among Gerard's flattest profiles, Rockport lends your roof a sleek, linear look and is often used on clean, simple architecture with a modern bias.



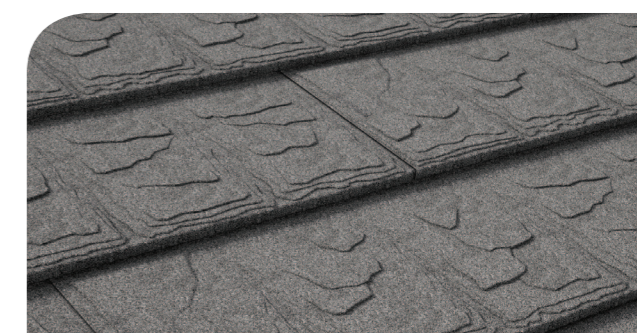
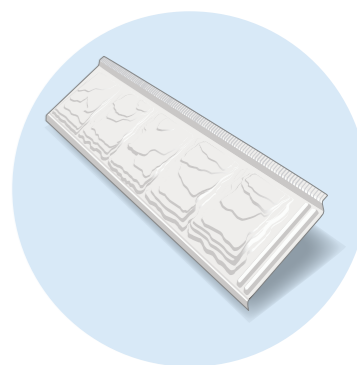
Pitch – min./max.	15-90°
Overall length	1330 mm
Length of cover	1250 mm
Width of cover	368 mm
Upstand	20 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	3.0 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	NA

Gerard Rockport is compatible with **Angle** trim.



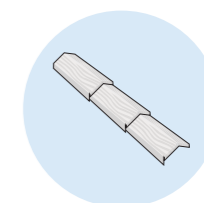
## Gerard Alpine

Inspired by the look of Welsh slate the Gerard Alpine profile lends a smooth, sleek linear look while surface detailing adds a slightly rustic overtone.



Pitch – min./max.	15-90°
Overall length	1335 mm
Length of cover	1260 mm
Width of cover	368 mm
Upstand	17 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.4 kg
Weight/m <sup>2</sup> Satin	NA

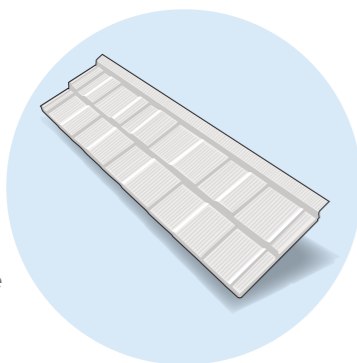
Gerard Alpine is compatible with **Angle** trim.



Dimensions and weights given are nominal.

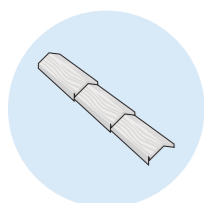
## Gerard Oberon

The depth and dimension of Oberon make it most responsive to changes in light. It is often seen on substantial homes alongside dressed stone and natural timbers.



Pitch – min./max.	20-90°
Overall length	1310 mm
Length of cover	1230 mm
Width of cover	320 mm
Upstand	20 mm
Roof cover/panel	0.39 m <sup>2</sup>
Panels/m <sup>2</sup>	2.54
Weight/panel Textured	2.8 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	7.1 kg
Weight/m <sup>2</sup> Satin	NA

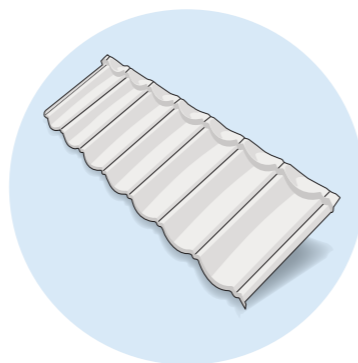
Gerard Oberon is compatible with **Angle** trim.



Dimensions and weights given are nominal.

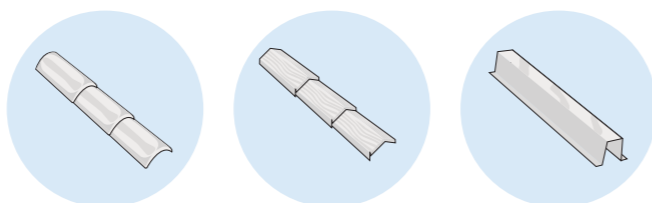
## Gerard Colortile

The scalloped shapes of this profile bring a look that's similar to heavyweight tiles. The advantages of pressed steel mean this profile is often chosen as a substitute.



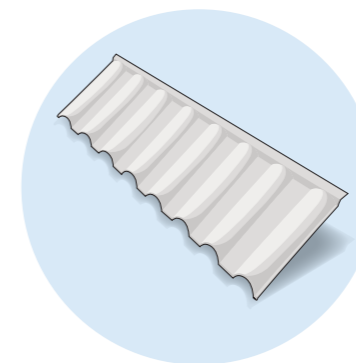
Pitch – min./max.	12-90°
Overall length	1330 mm
Length of cover	1257 mm
Width of cover	369 mm
Upstand	28 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	2.1 kg
Weight/m <sup>2</sup> Textured	6.4 kg
Weight/m <sup>2</sup> Satin	4.7 kg

Gerard Colortile is compatible with all three Gerard trims – **Barrel, Angle** and **Box**.



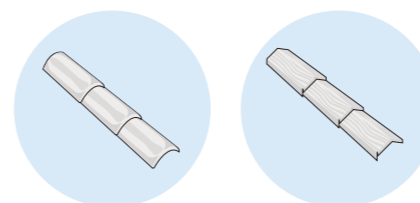
## Gerard Milano

With balanced arches and flats found in traditional design, Gerard Milano is a timeless profile that creates clean, elegant and classical looking roofs.



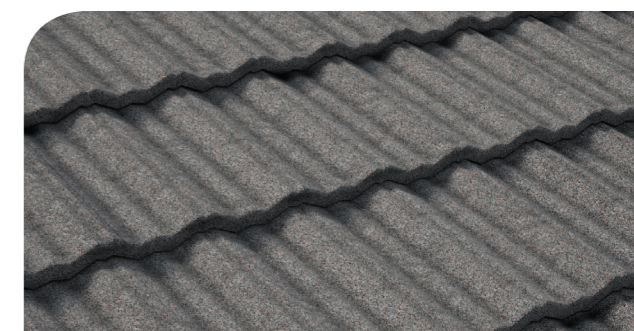
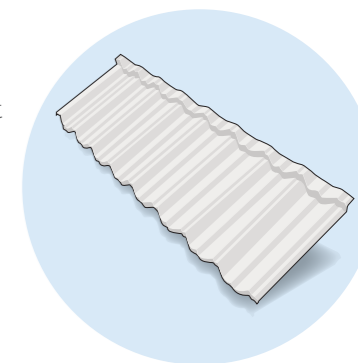
Pitch – min./max.	12-90°
Overall length	1330 mm
Length of cover	1215 mm
Width of cover	368 mm
Upstand	24 mm
Roof cover/panel	0.45 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.4 kg
Weight/m <sup>2</sup> Satin	NA

Gerard Milano is compatible with **Barrel** and **Angle** trims.



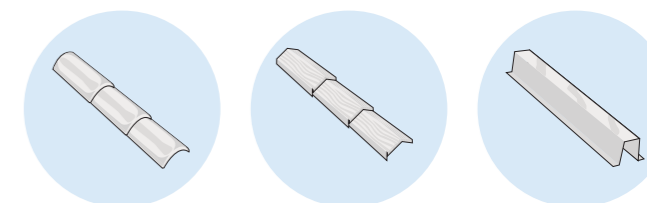
## Gerard Tuffcoat

Gerard Tuffcoat is a geometric profile with shapes and angles that accentuate light and shadow to emphasise its corrugations and create a look of strength and definition.



Pitch – min /max.	12-90°
Overall length	1320 mm
Length of cover	1257 mm
Width of cover	369 mm
Upstand	28 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	2.1 kg
Weight/m <sup>2</sup> Textured	6.4 kg
Weight/m <sup>2</sup> Satin	4.7 kg

Gerard Tuffcoat is compatible with all three Gerard trims – **Barrel, Angle** and **Box**.



Dimensions and weights given are nominal.

1.1.2. Trims

Gerard Roof trims

Trim is an essential roofing element, for performance as well as appearance; roof trims create a weatherproof seal at roof junctions and are an important part of the integrity of the roofing system.

There are three types of roof trim – Angle, Barrel and Box. Each roof profile is compatible with one or more of these as shown in the chart on the right.

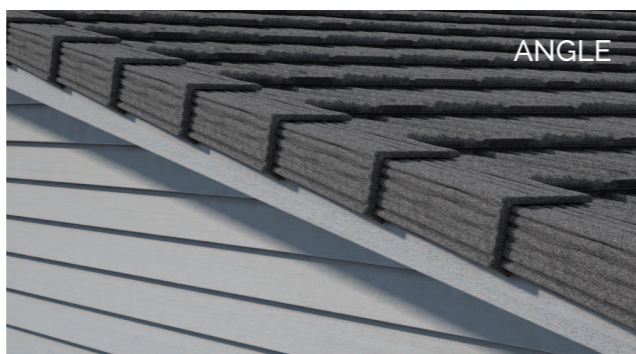
Gerard's roof trim component system is designed to be fully integrated. The finish of Gerard trims can be chosen to exactly match the finish of a Gerard roof or chosen in a contrasting colour to create a specific effect.

	Angle trim	Barrel trim	Box trim
Corona	✓	✓	✓
Senator	✓		
Rockport	✓		
Alpine	✓		
Oberon	✓		
Colortile	✓	✓	✓
Milano	✓	✓	
Tuffcoat	✓	✓	✓

Gerard Roof Profiles With Corresponding Trims



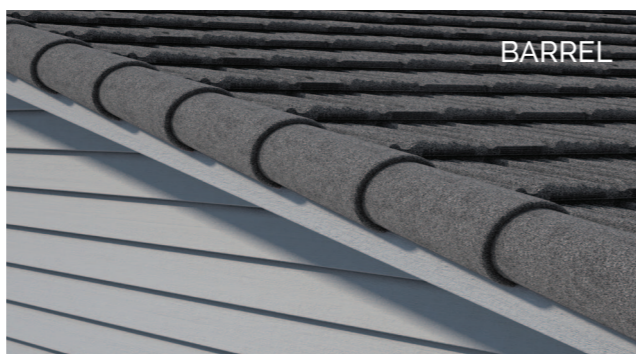
ANGLE



BARREL



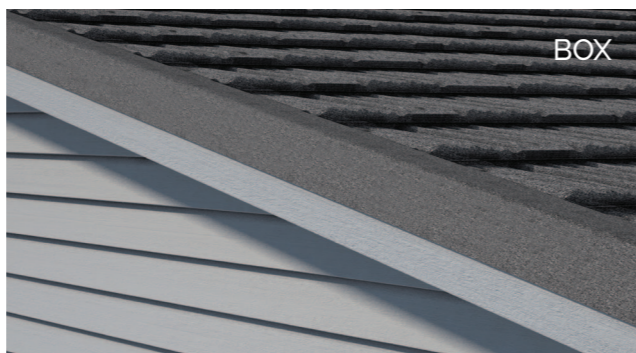
BOX



ANGLE



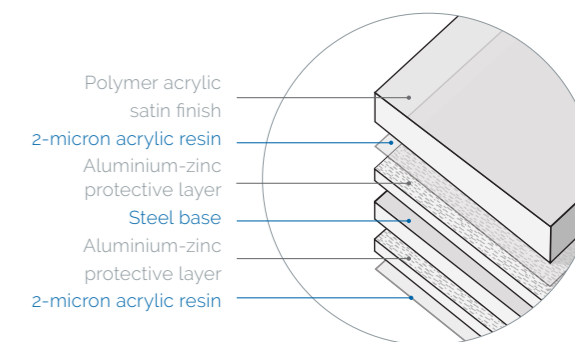
BARREL



BOX

1.2.2 Satin finishes

45-micron thick topcoat of ultra-tough polymer acrylic applied after the shape has been pressed into the aluminium-zinc steel (preventing surface micro-cracks).



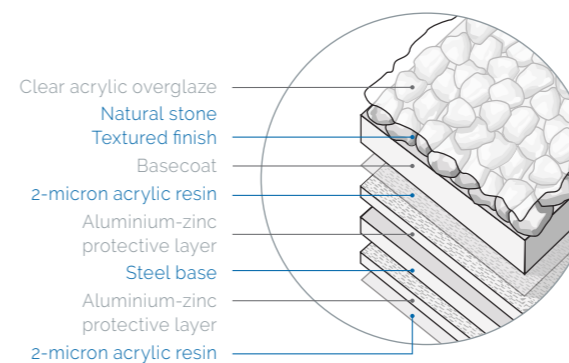
1.2 Finishes

Choice of surface finishes

Some Gerard roof profiles allow you to choose either a textured or satin finish on the surface of your roof. Both have their merits and both come in a range of contemporary colours. The decision is usually influenced most by the architectural style of the home and the intended colour scheme.

1.2.1 Textured finishes

Naturally coloured mineral fragments, or ceramic coated stone fragments, fused to aluminium-zinc steel in layers of acrylic resin and over-glaze.



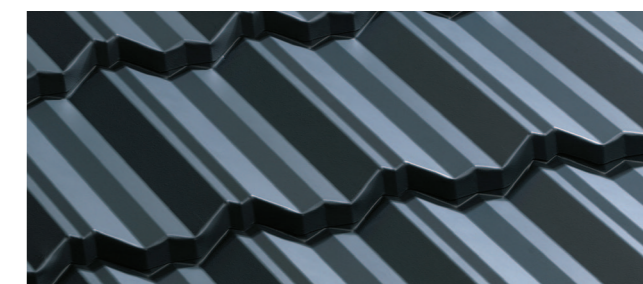
Satin finish advantages:

Less expensive than a textured finish

Smooth surface with clearer detail

Just like ordinary coloured steel but much more durable

Satin finishes tend to produce a smoother, crisper look accentuating patterns and details more.



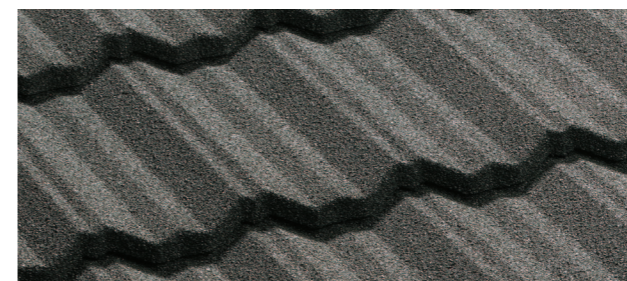
Textured finish advantages:

Additional protection from the elements

Natural stone colours are almost entirely fade-free

Gerard textured finishes have longer warranty

A textured stone finish is inclined to look a little more substantial yet visually softer than a satin finish.



1.2.3 Custom finishes to order

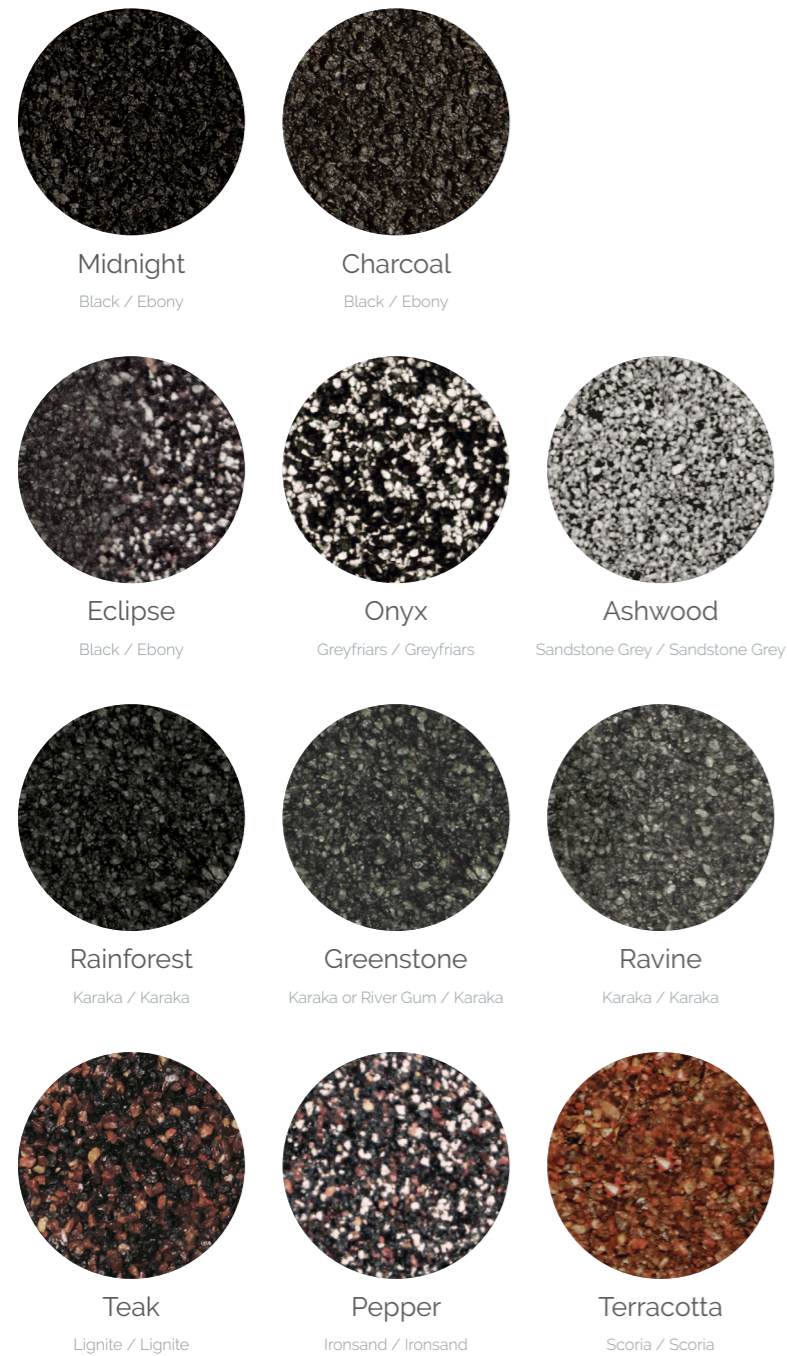
Custom finishes can be created for special projects by request.

A Gerard satin finish can be made to match any colour sample. We also have the ability to develop a custom textured finish – for example, we could work with stone that's native to your location.

To find out more contact Gerard Roofs on 0800 104 868.

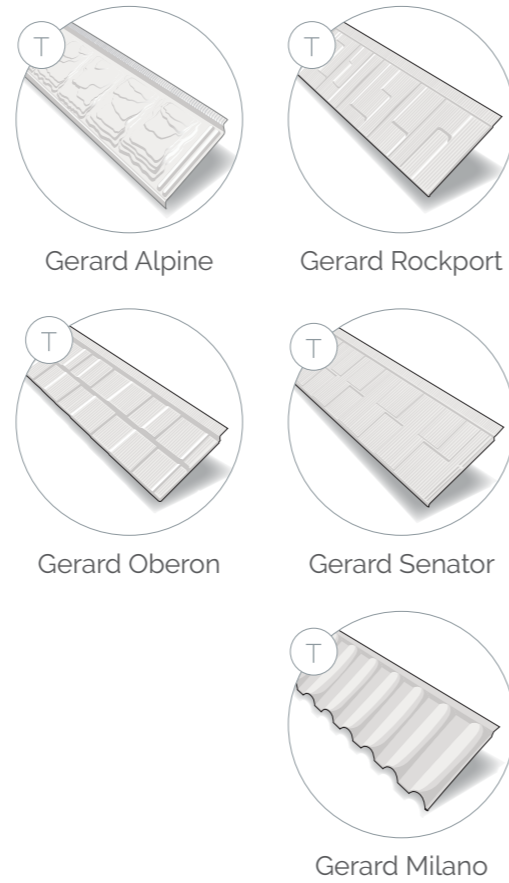
1.3 Colours & finishes

1.3.1 Textured finish colours

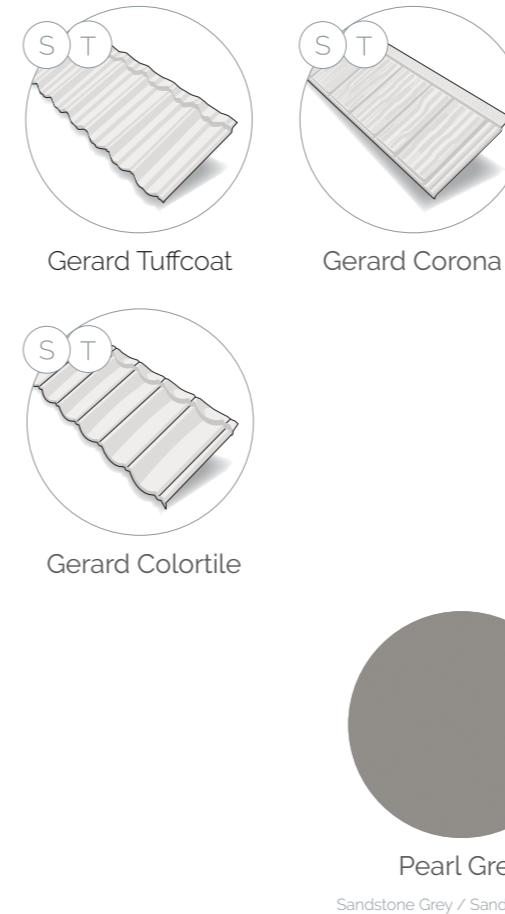


1.3.2 Types of finish by roof profile

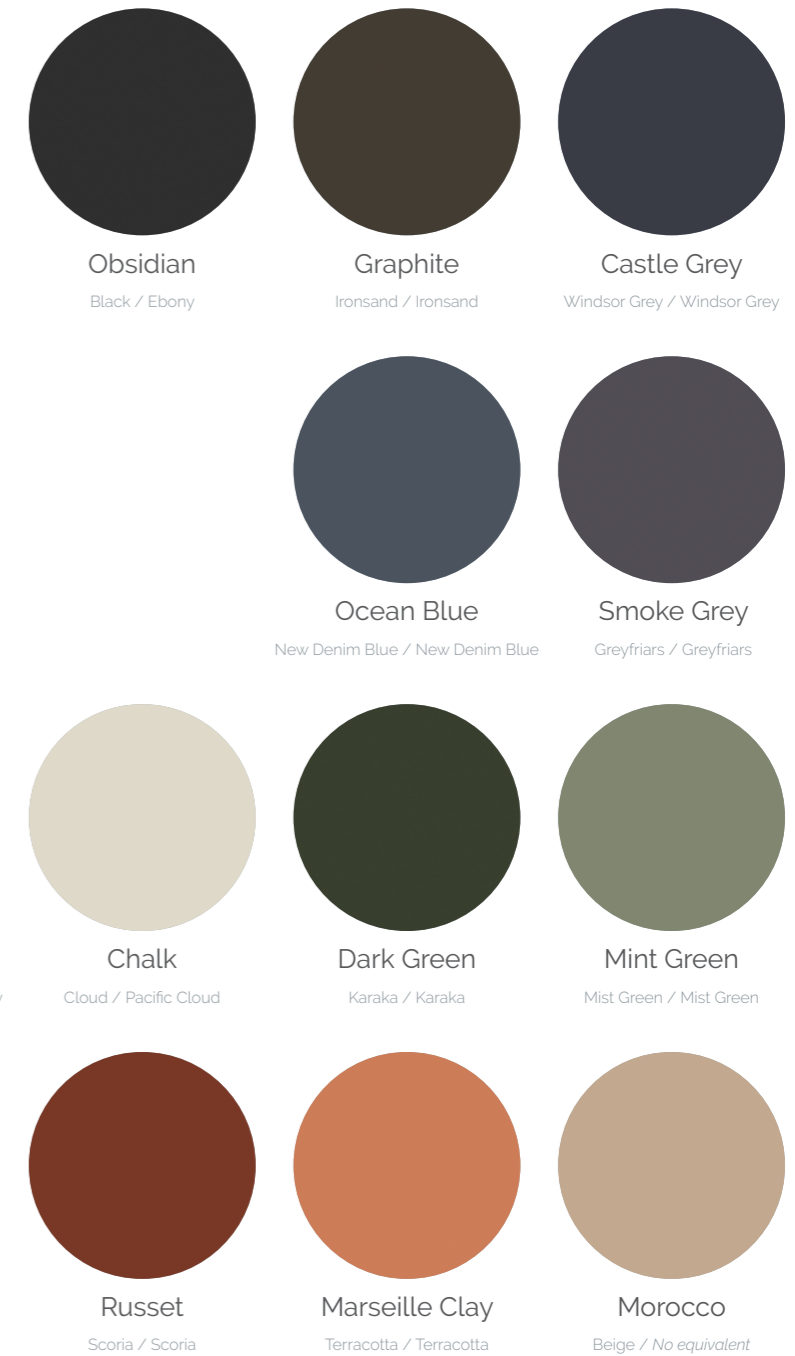
Textured finishes and colours are available for all Gerard roof profiles.



Satin finishes and colours are available for the three Gerard profiles shown below.



1.3.3 Satin finish colours



Real colour and texture samples available

To help you decide just the right colour and texture, Gerard Roofs provides 150mm diameter colour samples of the actual roofing material, with real coatings, so you can see exactly what you'll get. Visit: [gerardroofs.co.nz](http://gerardroofs.co.nz) for details.

The name below each colour swatch title is the Colorcote® / Colorsteel® equivalent. These are useful for matching accessories like fascia or aluminium joinery as the names are often referred to as a colour standard.

The name below each colour swatch title is the Colorcote® / Colorsteel® equivalent. These are useful for matching accessories like fascia or aluminium joinery as the names are often referred to as a colour standard.

## Products and specifications

### 1.4 Product warranty

Gerard's warranty addresses homeowners' two main concerns:

1. That the roof remains weatherproof
2. That the coating remains sound

#### Complicated rules simplified

Warranties are complex but we've narrowed the variables affecting Gerard Roofs' warranty cover down to two questions:

**Is the building sited in a corrosive environment?**

**Does the roof have a satin or a textured finish?**

On the right is a chart showing the terms of the warranty according to the circumstances of the individual building.

In each situation the warranty is pro-rata with cover diminishing over time.

**There are two warranty environment zones: Standard and Corrosive. Warranty cover is longer in the standard environment zone.**

A Corrosive Environment is defined as anywhere within 750m of breaking surf.

Gerard Roofs' warranty applies to all Gerard manufactured products, even if installed in extreme corrosive conditions.

#### Installation is assured

Be reassured that Gerard roofs are only installed by Gerard Certified Roofers.

Each GCR is responsible under law to make good any problems in the unlikely event they arise.

Visit [www.gerardroofs.co.nz](http://www.gerardroofs.co.nz) to download a sample of the full warranty document.

The chart shows the duration of both aspects of roof cover, according to the type of texture and the corrosiveness of the environment.

	STANDARD ENVIRONMENT MORE THAN 750m FROM BREAKING SURF	CORROSIVE ENVIRONMENT LESS THAN 750m FROM BREAKING SURF
<b>Weatherproofing</b>		
Weatherproofing cover with textured finish roof	50 years pro-rata	25 years pro-rata
Weatherproofing cover with satin finish roof	50 years pro-rata	15 years pro-rata
<b>Surface coating</b>		
Textured Coating cover	20 years pro-rata	10 years pro-rata
Satin Coating cover	15 years pro-rata	5 years pro-rata

### 1.5 Environmental responsibility

A Gerard pressed steel roof is an environmentally responsible choice.

Pressed steel roofing generates minimal manufacturing, construction site and demolition waste.

A pressed steel roof is lighter than its concrete or clay equivalent, which means transportation is more energy-efficient. It requires less framing support, which also saves resources. Steel is endlessly recyclable too.

Gerard Roofs is conscious of its environmental footprint and was New Zealand's first roofing manufacturer to be awarded ISO 14001 environmental accreditation.



### 1.6 CAD details available

CAD details for commonly encountered roof details in a number of common formats can be found at [www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech)

At the time of publication these details cover:

- Eaves
- Gables
- Ridges
- Roof-to-wall (transverse)
- Hips
- Roof-to-wall (parallel)
- Valleys

Gerard Roofs' CAD library is an expanding online resource that will be added to periodically as new details become available.

Check [www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech) to see the latest available versions.

Specific details for unusual or challenging areas can be requested by contacting Gerard Roofs on 0800 104 868.

## Products and specifications

### 1.7 Handling and storage

Gerard panels and accessories must be transported and handled with care to avoid damaging the pre-finished surfaces.

Long term storage of panels and accessories must be under dry, ventilated cover. For short term storage on site, panels and accessories must be stored flat off the ground, no more than two pallets high.

Handling and storage of all materials supplied by Gerard Roofs, whether on or off site, is under the control of the Gerard Certified Roofer.

Other materials must be handled and stored in accordance with the relevant manufacturer's instructions.

### 1.8 Product identification

Gerard Roofs print a run number, date and time of production on the reverse side of each panel. Pallets have pallet cards that show the run number, date of production and colour code markings; this allows identification of batch colours.

The steel supplier also prints a code which allows identification of the parent coil.



Reverse side of the panel.





## 2.0 Design considerations

This section contains general information you need to keep in mind when designing buildings with Gerard Roofs. The numbered sections (2.1; 2.2; etc.) correspond to the equivalent parts of the Gerard Roofs website specification area ([www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech)).

Any details and diagrams can be downloaded from there.

## 2.0 Design considerations

### 2.1 Scope

This specification covers the supply and fixing of:

- Materials
- General information
- Limitations of use
- Service of life
- Workmanship - pre-roofing requirements
- Timber battens.
- Roofing underlay
- Valleys
- Gerard Roofs - pressed metal tiles/panels
- Trim, standard, barrel and angle
- Wall flashings
- Fixings/fasteners
- Incompatible materials
- Extra high wind zone variations
- Solar panels

### 2.2 Building code

The following standard specifications should be adhered to in both materials and workmanship.

<b>NZS 2295</b>	Roofing underlays
<b>NZS 4217</b>	Standard for pressed metal tile roofs
<b>NZS 3604:2011</b>	Code of practice for light timber framed buildings, not requiring specific design
<b>AS/NZS 4680</b>	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles - galvanising of nails
<b>E2/AS1</b>	New Zealand Building Code clause E2 External moisture

**AS1397:2011** AS 1397-2011 continuous hot-dip metallic coated steel sheet and strip - coatings of zinc and zinc alloyed with aluminium and magnesium.

**AS/NZS 1530** pt. 3:1999. Fire standard  
NZ Building Code sections B1,B2,E2, G12

### 2.3 Serviceable life

#### Durability (B2)

Without recoating, the Gerard Roofs products will meet the provisions of NZBC B2.3(C) for 15 years, when used and maintained.

#### Structure (B1)

When installed according to the manufacturers recommendations the Gerard Roofs products will allow provisions of NZBC B1.3.1, B1.3.2 and B1.3.4 to be met for the relevant provisions of B1.3.3.

#### External moisture (E2)

When correctly used and installed, the Gerard products meet the requirements of the NZ Building Code E2/AS1

#### Live loads

During installation and subsequent construction process or maintenance, walking load must be positioned to the front of the panel where the panel is supported by a batten.

#### Wind zones

On new roofs when fixed to battens sized and installed according to NZS 3604:2011 Gerard Roofs systems are suitable for use in all NZS 3604:2011 building wind zones up to and including extra high.

#### Spread of fire (C3)

The coating of the roof is <1mm thickness and applied directly to a non-combustible substrate. There was no spread of flames when tested to AS/NZ 1530.pt3.

#### Water supplies (G12)

Rainwater collected from the Gerard Roofs systems will meet the provisions of NZBC G12.3.1, providing the surface coating is maintained as directed.

It is recommended that a potable water collection system is not installed until 3 good rainfalls have washed the new roof surface free of building debris and surface coating surfactants.

#### Snow

The Gerard Roofs products are suitable for use where buildings are designed for a 1kPa snow loading.

### 2.4 Other information sources

NZ MRM Code of Practice.

### 2.5 Alternatives

No alternatives or substitutions permitted.

### 2.6 Materials

#### 2.6.1 Panels and accessory materials

The roofing panels and accessories are made by Gerard Roofs.

The base material is aluminium-zinc coated steel - 0.39 mm, AZ150 of AS1397:2011.

Panels are finished in either a granulated textured or satin paint finish.

#### Submissions

An actual product sample should be sighted to confirm colour choice before material orders are placed/accepted.

## 2.0 Design considerations

### 2.6.2 Installation materials

1. Roofing underlay shall be either a bitumen impregnated Kraft or synthetic underlay. Kraft underlays are covered by NZS2295 while synthetic roofing underlays are approved by Acceptable Solution documentation from the suppliers.
2. Battens of rough sawn radiata pine type timber meeting suitable dimensions (table 02, page 22) with H1.2 protection.
3. Ridge, hip, gable and wall flashings shall be supplied as standard products from Gerard Roofs.
4. Valleys may be used as supplied pre-finished in 2.4 metre lengths by Gerard Roofs or made to order out of pre-painted 0.55 mm G300 AZ150 aluminium-zinc coated steel in a matching colour from a sheet metal fabricator. If made to order, valleys should have similar dimensions to those supplied by Gerard Roofs.
5. Valleys must be painted to the same colour as the roof panel if not pre-finished.
6. Hip end caps to be installed where necessary to stop ingress of moisture or bird-life.
7. All nails in panels should be 50 mm galvanised and coated to meet AS/NZS 4680 specification (Zn 390 g/m<sup>2</sup>). Galvanised nails are used for ridge hip caps 30 mm, all other trim or flashings 50 mm.

2.7 General information

Profile	Minimum pitch
Corona	15°
Senator	15°
Rockport	15°
Alpine	15°
Oberon	20°
Colortile	12°
Milano	12°
Tuffcoat	12°

Minimum Roof Pitches For Gerard Roof Profiles

For full specifications - refer to individual panel profile data (pages 6-9) dimensions, coverage, weights etc.

2.7.1. Dissimilar metals/materials

When two different metals are in contact and moisture is present, one metal is relatively protected while the other suffers accelerated corrosion. A similar effect often occurs with water flowing over different metals.

This form of corrosion is commonly found:

- Where water is discharged from copper or brass systems over a galvanised or aluminium-zinc coated steel roof.

- Where unpainted lead flashings are applied directly to aluminium-zinc coated steel products.
- Where fasteners are incompatible with the roofing material.
- Any electrical contact between dissimilar metals should be avoided, e.g. wet leaves making contact between copper gutters and aluminium-zinc coated steel roof panels.

**Note:** Special consideration should be given when replacing existing roofs as some roof claddings use unsuitable materials for flashing such as lead.

2.8 Limitations on use

2.8.1. Corrosive environments

The Gerard system must not be used in high alkaline environments (such as intensive animal shelters or other buildings with high ammonia concentrations); contact with fresh concrete or plaster must be avoided. The roofing must not be used in contact with permanently damp materials, nor on or near industrial buildings in which corrosive processes occur, nor over swimming pools.



# 3.0 Substrate & installation overview

Directing water-flow to minimise potential corrosion

More active metals

More noble metals



This chart lists commonly used metals in a 'Galvanic Series'. If any two of these metals are in damp contact or a run-off situation, the metal further to the left will sacrifice itself to protect the metal further to the right. Therefore the simple rule to remember is that you can run water from left to right, but not from right to left. For example zinc to copper is alright, but copper to zinc is not. Specific advice should be sought from Gerard Roofs regarding use of dissimilar metals.

Information for the design and specification of the sub-structure of a Gerard roof; rafters, battens, underlays and fixings are covered in detail. The numbered points (3.1; 3.2; etc.) correspond to the equivalent parts of the Gerard Roofs website specification area ([www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech)). Any details and diagrams can be downloaded from there.

## 3.0 Substrate & installation overview

### 3.1 Preparation of structure

#### 3.1.1 Rafters and valley boards

Rafters and valley boards are to be correctly installed by the builder before roofing can start.

Refer to Gerard Roofs Technical Note - Builder Check List, on the Gerard Roofs website.

Where an exact number of complete panel courses is not possible, the top row of panels should be trimmed to fit and then bent up beneath the ridge flashing.

### 3.2 Battens

Select batten size to suit rafter or truss spacing. Battens are to be treated to H1.2 and graded on site.

Truss spacing (mm)	Batten size (mm)	Situation
900	40 x 50	Standard
1200	50 x 50	Occasional
1500	50 x 65 on edge	Unusual
1800	50 x 75 on edge	Unusual

Table 02 Batten/Spacing

#### 3.2.1 Batten setout

Corona, Colortile, Tuffcoat, Milano, Rockport and Alpine profiles

A row of battens fixed directly behind the fascia with the second batten 330mm up the truss. Subsequent battens are spaced at 370mm (or as specified for profile and coating finish). The final, top row of panels is 365mm or less, depending on whether the top row needs cutting due to rafter length.

#### Senator

A row of battens fixed directly behind the fascia with the second batten 330mm up the truss. Subsequent battens are spaced at 368mm. A centre support

batten (40x50 mm) positioned 185 mm behind the front face of the panel batten is installed and held in place with a single batten nail. Panels are not fastened to this support batten. The final top row of panels should be 365mm or less, depending on whether the top row needs cutting due to rafter length.

**NB.** The second batten up from the fascia is left out to allow the roofing underlay to maintain an angle above horizontal.

#### Oberon

A row of battens fixed directly behind the fascia with the second batten 280 mm up the truss. Subsequent battens are spaced at 160mm. The final top row of panels is 155mm or less, depending on whether the top row needs cutting due to rafter length. Panels are not fastened to intermediate support battens.

**NB.** The second batten up from the fascia is left out to allow the roofing underlay to maintain an angle above horizontal.

#### Eaves panels at gutter fascia

Panels should extend into the gutter by 40mm. This may vary slightly depending on the rafter length and roof pitch.

Roof profile	Batten spacing	
	Textured	Satin
Corona	370mm	371mm
Senator*	368mm	
Rockport	368mm	
Alpine	368mm	
Oberon^	320mm	
Colortile	369mm	370mm
Milano	368mm	
Tuffcoat	369mm	370mm

Table 03 Batten Set-Out

\*Centre batten 185 mm, second batten from eave not installed

^Centre batten 160 mm, second batten from eave not installed

### 3.2.2 Batten/rafter fastening

Gerard Roofs require that all 40 x 50 mm battens fastened to rafters at 900 mm centres are to be fastened with 2 x 90 mm gun nails in all wind zones up to and including the very high wind zone.

In extra high wind zones a screw fastener must be used for all batten rafter junctions.

This meets or exceeds the requirements of NZS3604:2011

Wind zone	900 rafter 50x40 mm	1200 rafter 50x50 mm
Low 32m/s	S	S
Medium 37m/s	S	S
High 44m/s	S	T
Very high 50m/s	S	T
Extra high 55m/s	T	T
SED +55m/s*	Contact GR	Contact GR

Table 04 Fasteners for Panel Battens -Wind Zones - NZS3604.

\*In SED Specific design situations refer to Gerard Roofs Technical Notes on installation in SED wind areas.

### 3.3 Roofing underlay

Must comply with standard NZS 2295 - Pliable and Permeable Building Underlays. Roofing underlay is installed under the battens but over the bottom batten.

Roofing underlay should be installed horizontally with a minimum overlap of 75 mm.

All vertical laps to be taken past rafters and lap by a minimum of 150 mm.

The Roofing underlay is self-supporting up to 1200 mm and does not need mesh.

## 3.0 Substrate & installation overview

### 3.4 Valleys

Valley trays should be made from 0.55 mm AZ150 coated steel. Typically the steel will be pre-painted. Install valleys in a weatherproof workmanlike manner. Do not fix through valleys. Where more than one valley length is used in one run, have an overlap of at least 150mm. Tag valleys at the top edge of the valley join to eliminate valley creep.

### 3.5 Solar brackets

Gerard Roofs have proprietary solar brackets which can be installed at the time of roofing or later. These brackets do not require holes to be cut into the surface of the panels offering complete weather security.

Refer to Gerard Roofs for more information.

### 3.6 Panel installation

Care must be taken when handling, cutting, bending and installing to avoid damage to the surface. In particular, the paint finish must be kept clean.

Use rubber soled work shoes during installation and protective/synthetic padding on bending equipment.

Where work is still to be carried out on upper storey dormer windows or walls, panels can be left off to avoid damage or fallout from paint or plaster coatings. Alternatively, a plank embedded into 3 sand bags along its length can be used on top of the panel, with the sand bags placed over the support batten near the nose of the panel.

Where work is progressing above installed panels, dust sheets must be used held down with sand bags.

### 3.6 Panel installation continued

#### Colortile, Tuffcoat and Milano

Colortile, Tuffcoat and Milano can be installed to a minimum of 12° and may be laid left to right or right to left. All laps to be the same way on each plane.

#### Corona

Corona can be installed to a minimum of 15° and may be laid left to right or right to left. The laps must be laid facing away from prevailing winds or line of vision. All laps should be the same way on each plane. Courses must be staggered in a random pattern to avoid patterning as you progress up a hip, or gable.

#### Senator, Alpine and Rockport

Senator, Alpine and Rockport can be installed to a minimum of 15°. These profiles may only be laid in a single direction, as follows:

- Senator and Alpine – left to right only
- Rockport – right to left only

Courses of all three should be laid in a random pattern, with staggered start points.

Senator should be installed with an intermediate batten at 185mm to support roof traffic.

#### Oberon

Oberon can be installed at a minimum of 20° and should be laid right to left. Reference can be made to the individual profile fixing pattern pages at the back of this specification manual. Courses must be staggered in a random pattern for Oberon, to avoid patterning as you progress up a hip or gable.

#### Eaves

At eaves, the front rows of panels are fixed to the battens alongside the fascia by driving nails through the top face into the eave batten. These nails are positioned at points of low water run off. Eaves nails for satin finish have a synthetic washer installed under the nail head, eaves nails on textured finishes are sealed with the touch up kit basecoat and chip.

#### Nailing panels

Successive rows of panels are fixed by driving 50mm nails through the centre of the panel nose into the face of the battens. These nails are spaced as shown/ described in the individual profile fixing pattern pages at the back of this specification manual.

Only Gerard Roofs approved nails should be used in the installation of panels and accessories.

#### Valleys

Panels are cut at the same angle as the valley, at appropriate points, and bent down into the valley; they must not touch the valley tray. At the ridge, panels are cut and bent up under ridge accessories.

#### Ridge, Hip, Gable and Wall flashings

Only factory produced flashings and trim as supplied by Gerard Roofs may be installed. Panels are turned up by a minimum of 40 mm and covered by Gerard Roofs accessories to the prescribed coverage. Special flashings can be formed and coated to order.

#### Wall roof lower junctions

Gerard roofs have proprietary PVC stop end flashings that direct roof/wall run off water into the rain water gutter system.

#### Membrane areas

If flat membrane areas such as Butynol overlap onto product surfaces, these can be painted with the touch up kit or base coated and granite textured.

#### Weather sealing

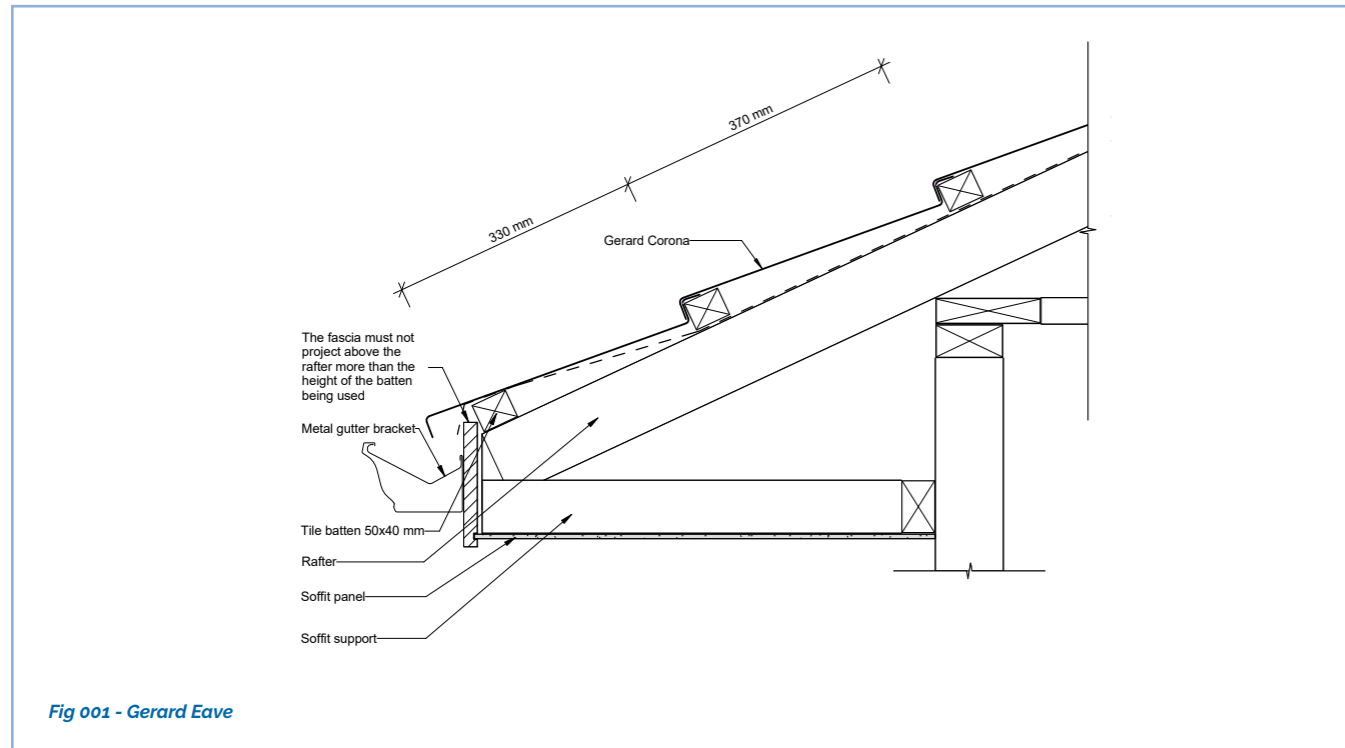
Proprietary or custom made rubber or metal flashings require neutral-cure silicone or MS sealants acceptable to Gerard Roofs to be used for weather-sealing services penetrating the roof. Sealant shall be applied between the flashing and panel surface and mechanical fasteners (rivets, Tek screws) installed to permanently fix the flashing in place.



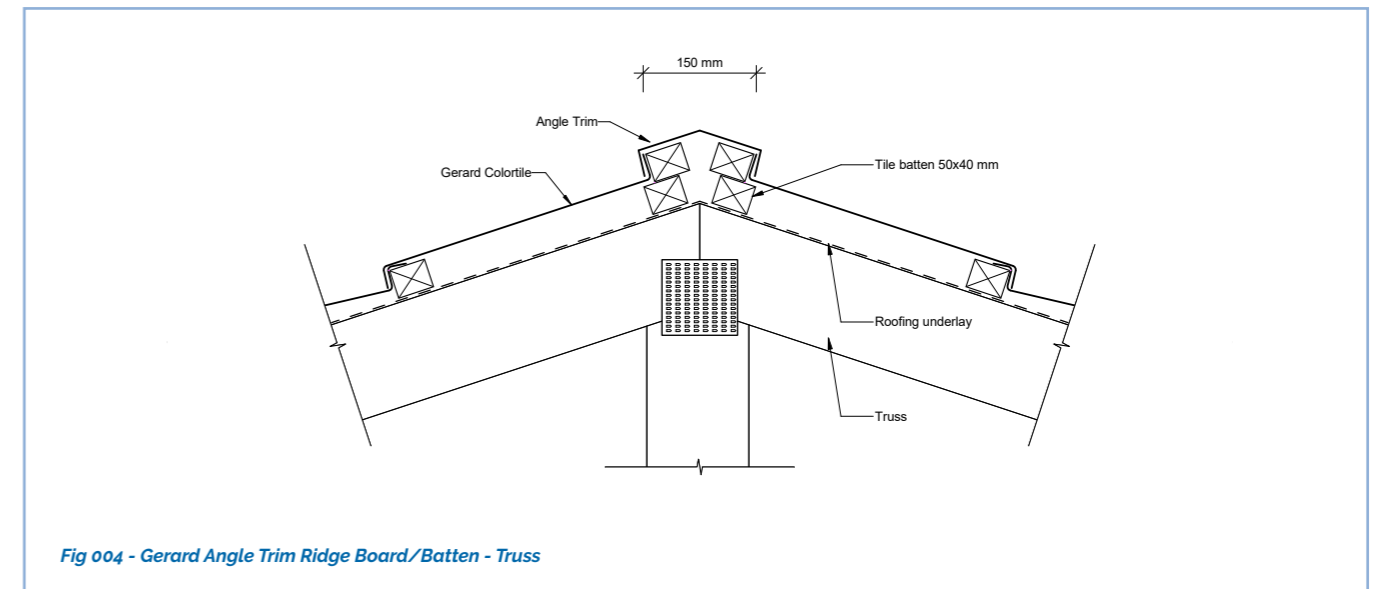
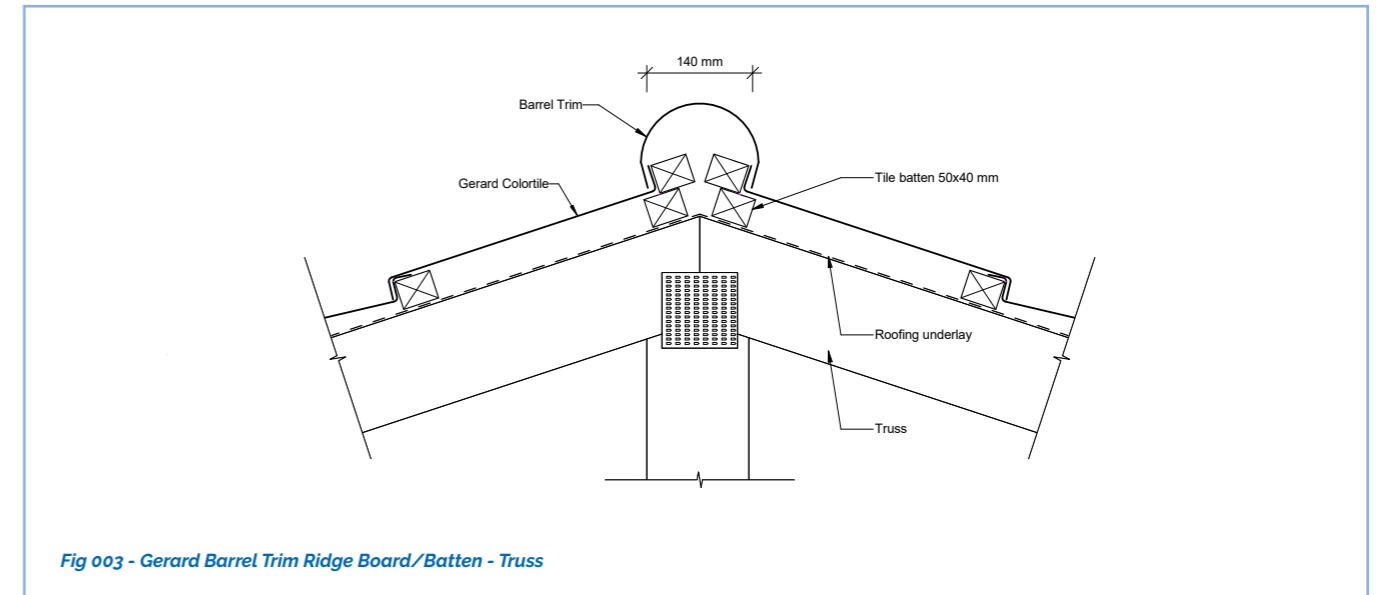
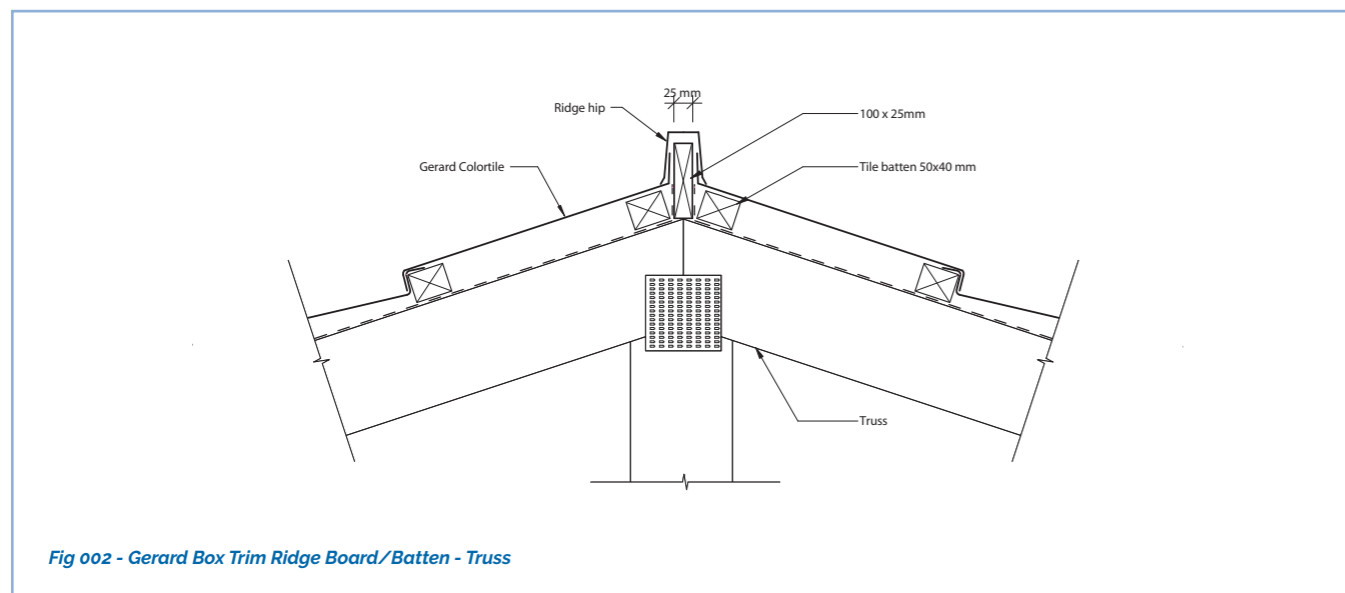
## 4.0 Standard roof details

This section contains the common junction details and information you need to design and specify buildings with Gerard Roofs. The numbered sections (4.1; 4.2; etc.) correspond to the equivalent parts of the Gerard Roofs website specification area ([www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech)). Any details and diagrams can be downloaded from there.

4.1 Batten spacing – Eave



4.2 Ridge installation



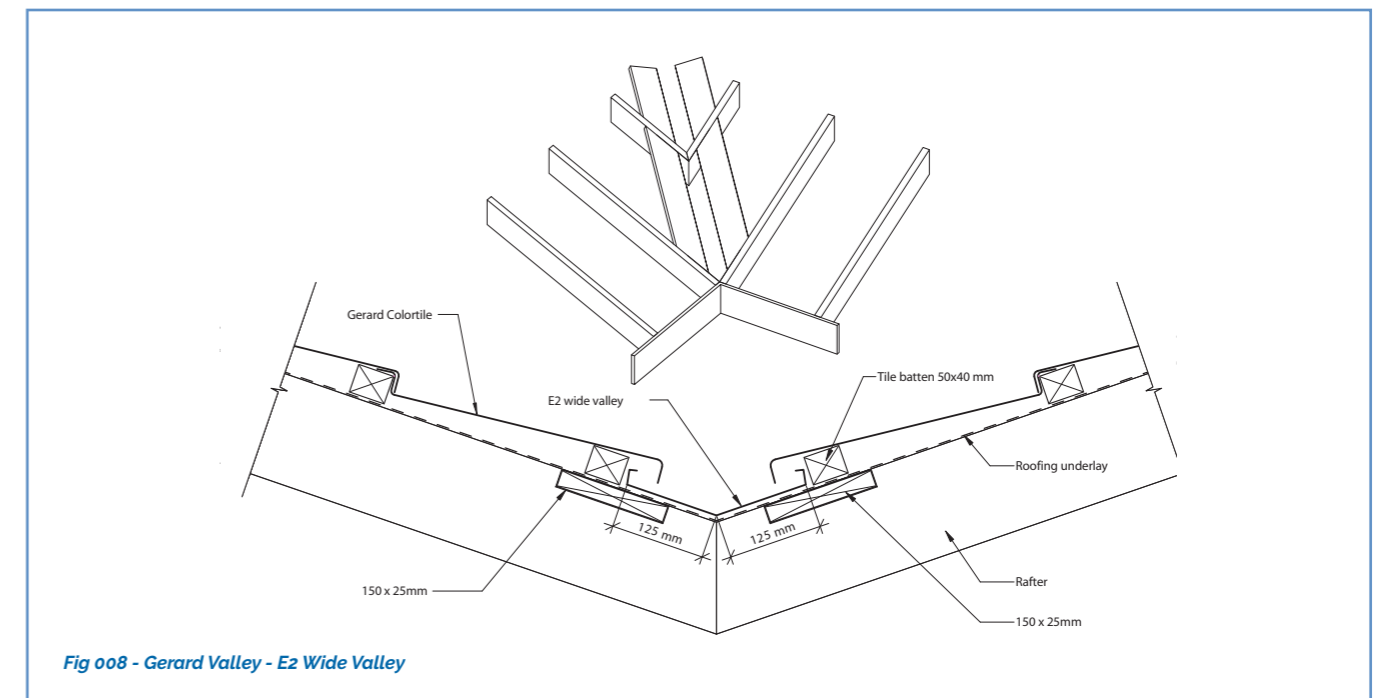
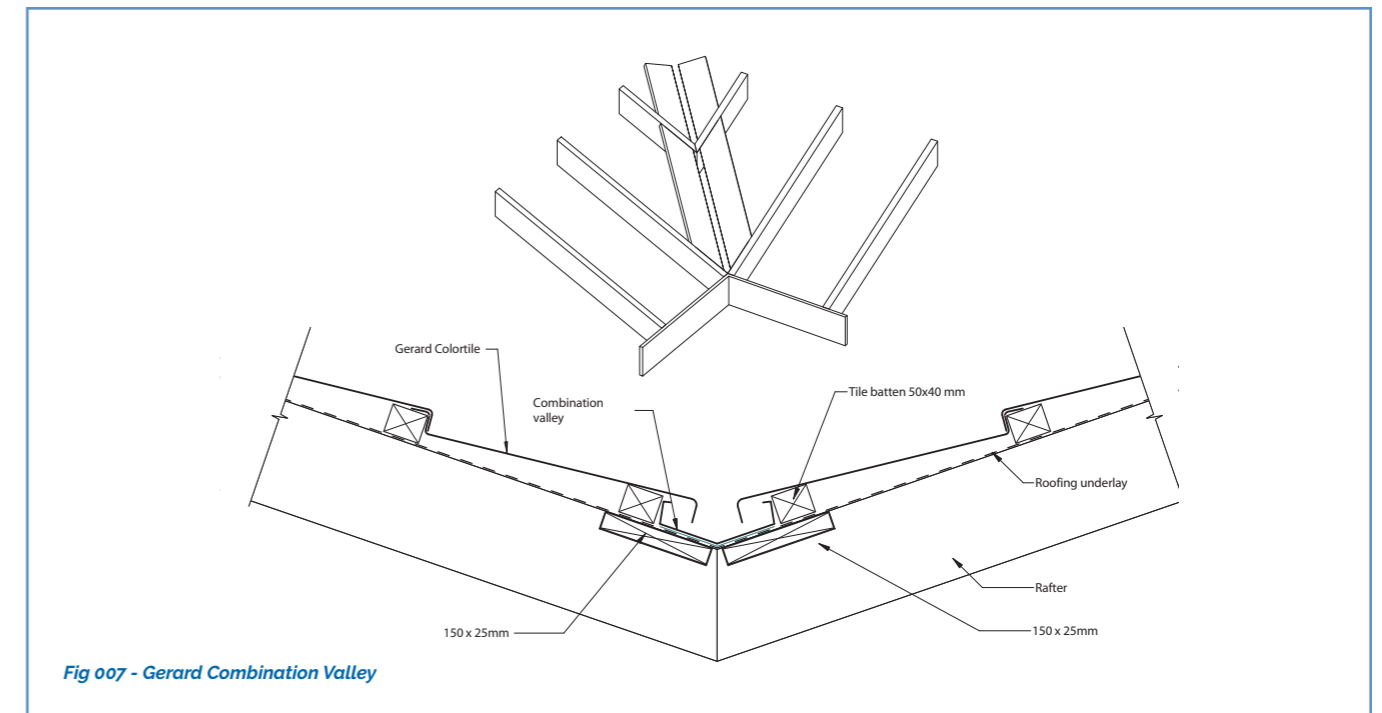
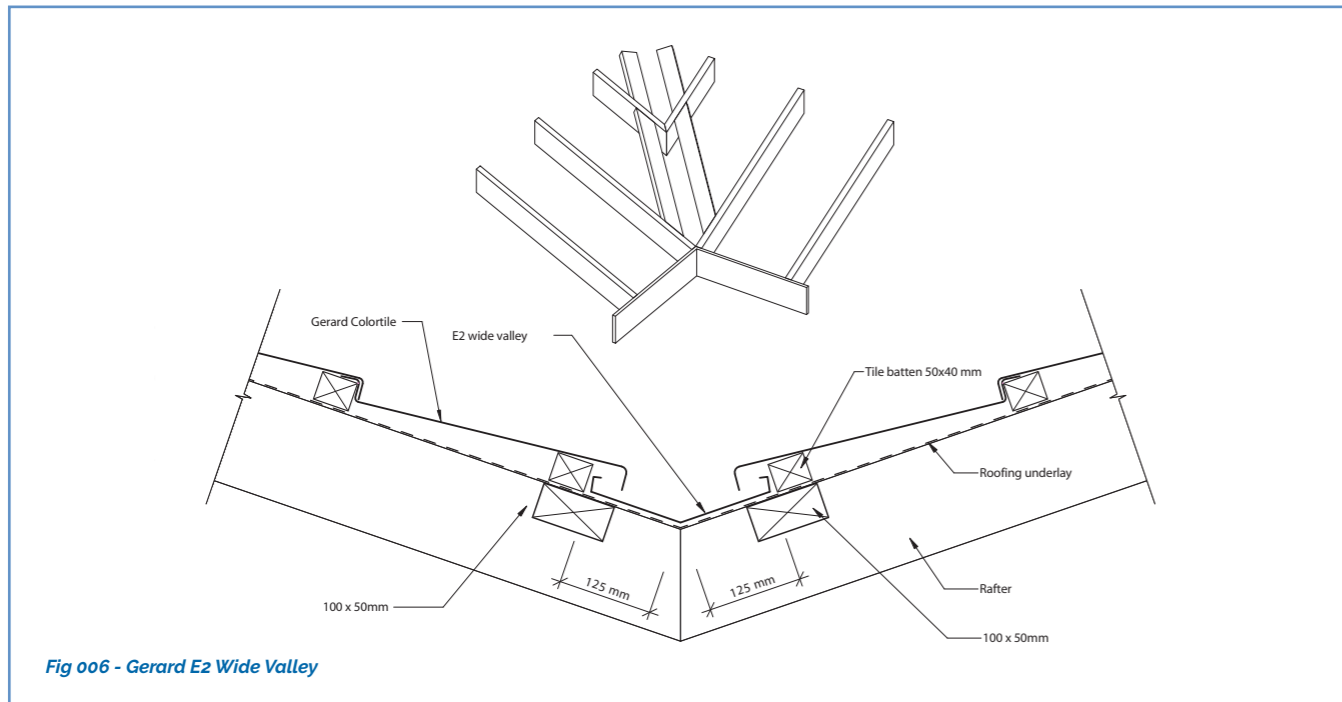
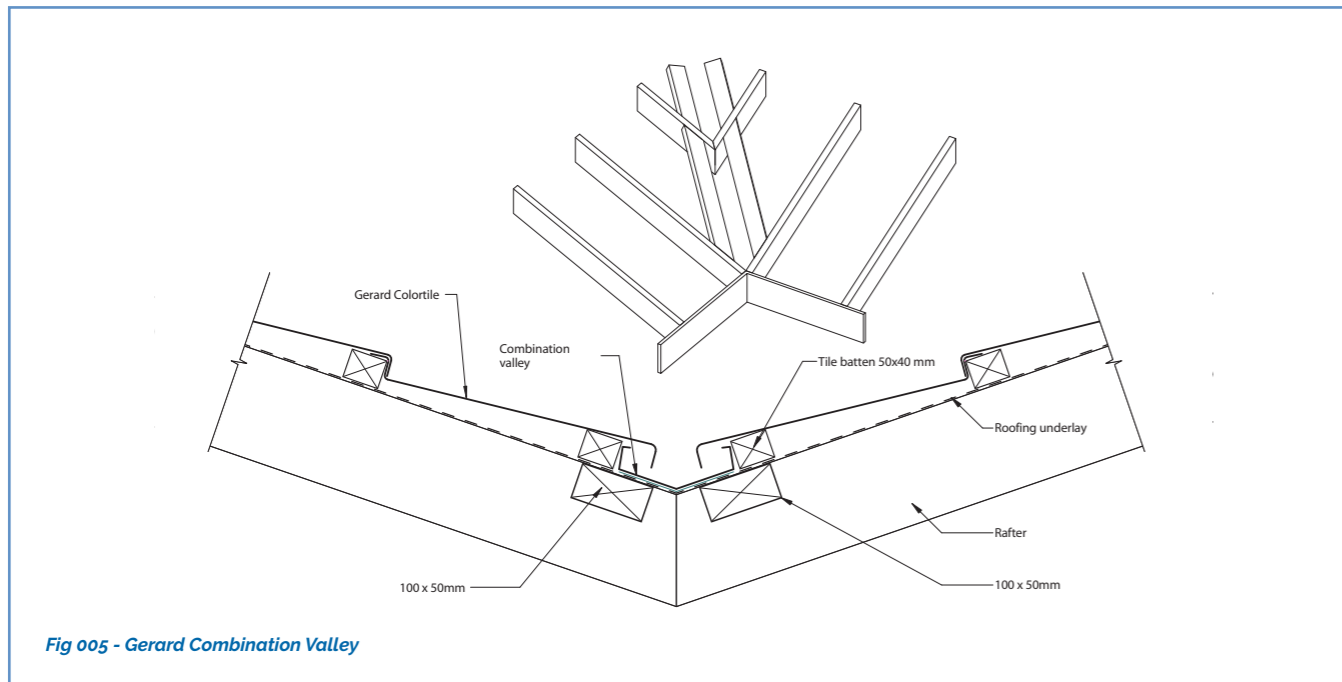
4.3 Valleys

Gerard Roofs provide valley trays in two widths, a 160mm Combination Valley and a 250mm E2 Wide Valley for use where required by specification.

Valleys must be supported by valley boards; these should be installed with nogging where necessary.

The nogging should have at least 25 mm clearance beyond where the valley sits so battens have sufficient support and nailing width.

Panels above valleys should be turned down to within 5 mm of the valley tray but must not touch the tray.

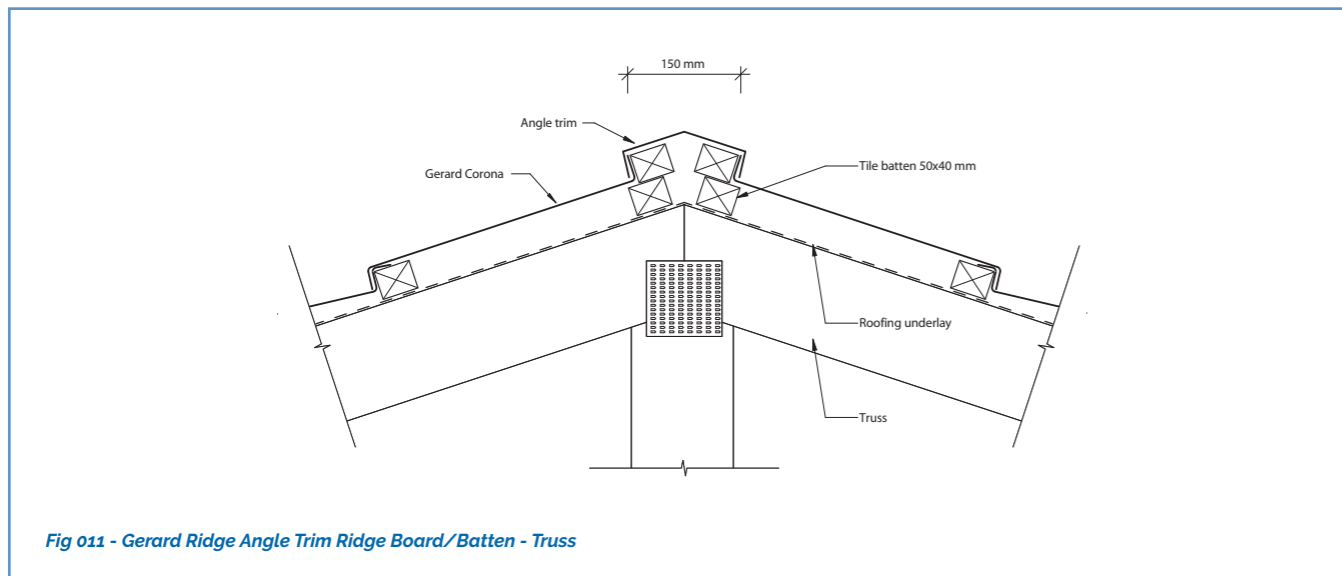
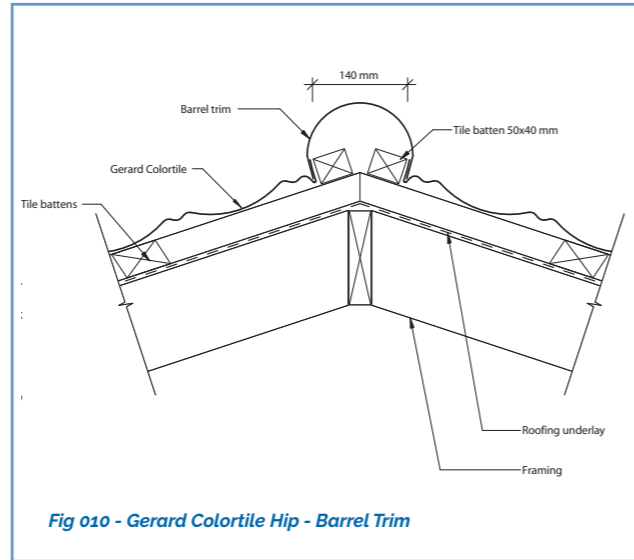
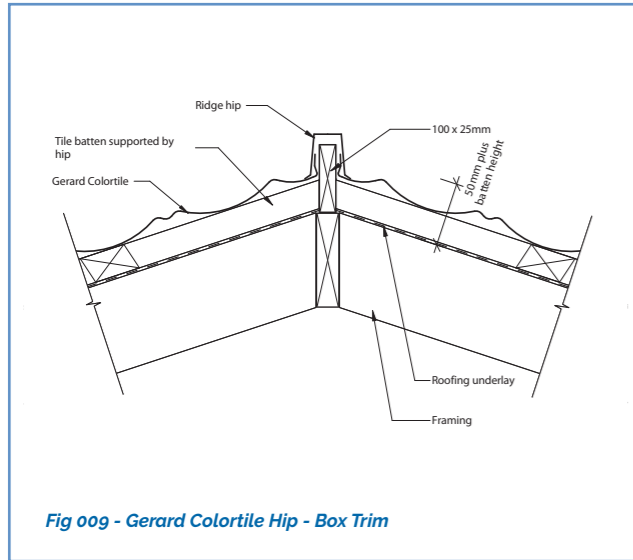


## 4.0 Standard roof details

### 4.4 Hips

#### 4.4.1 Installation of roof trim on hip junction with wooden battens

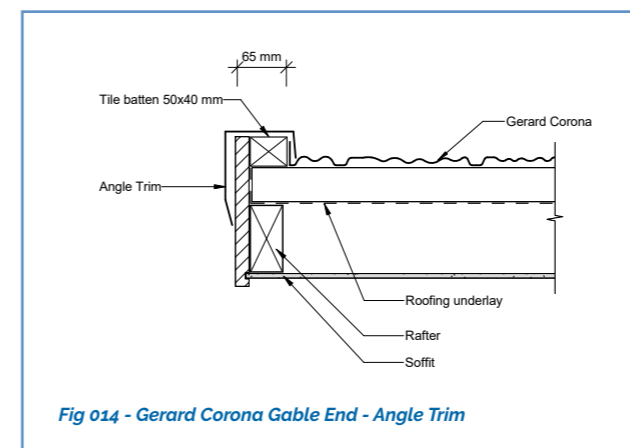
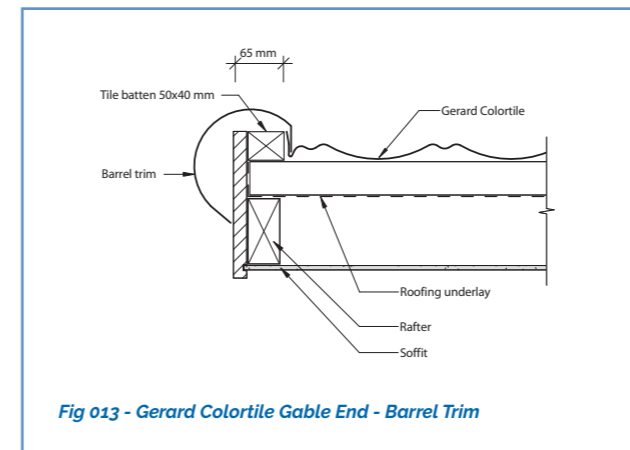
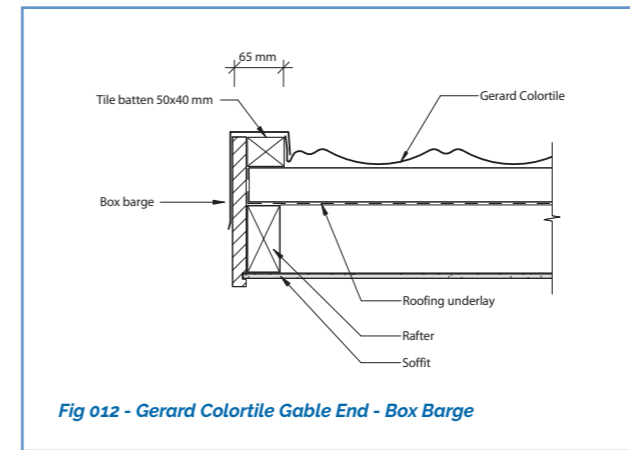
Roof panels that butt up to hip battens should be turned up by 40 mm; roof trims must cover battens and overlap panels below by a minimum of 35 mm.



### 4.5 Barge/Gable ends

#### 4.5.1 Installation of roof trim over a wooden fascia with batten

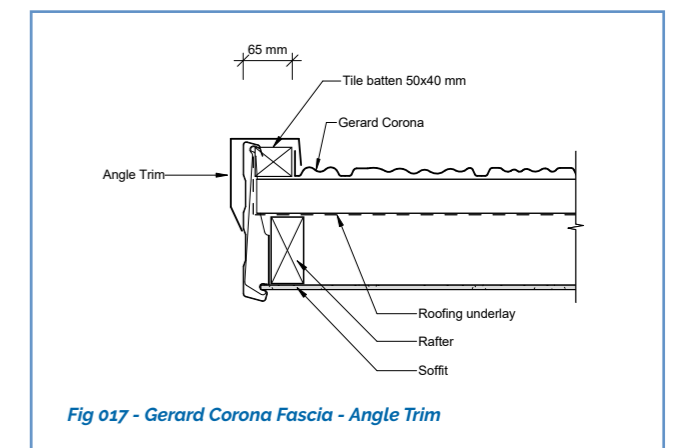
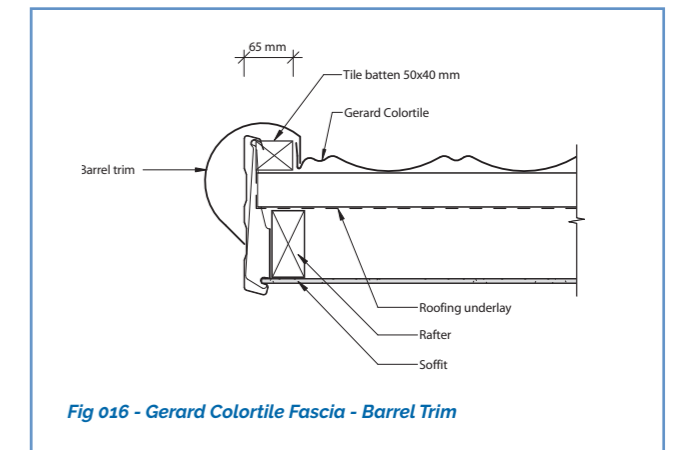
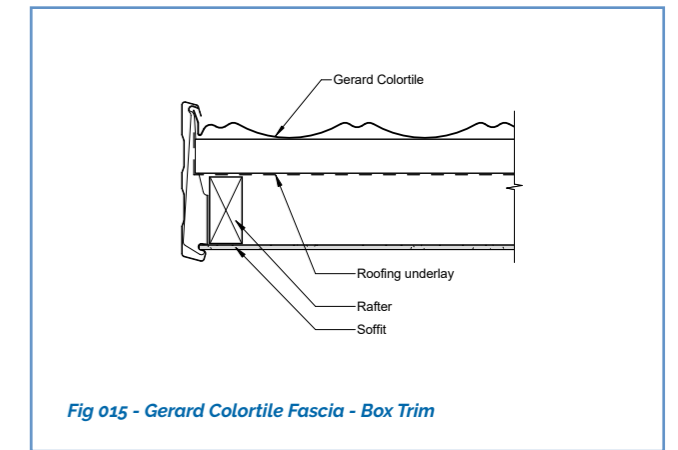
Roof panels that butt up to edge battens should be turned up by 40 mm; roof trims must cover battens and overlap panels below by a minimum of 25 mm.



#### 4.5.2 Installation of roof trim over a metal fascia with and without batten

Roof panels that butt up to edge battens should be turned up by 40 mm; roof trims must cover battens and overlap panels below by a minimum of 25 mm.

Roof trims should be riveted to the metal fascia.





## 4.0 Standard roof details

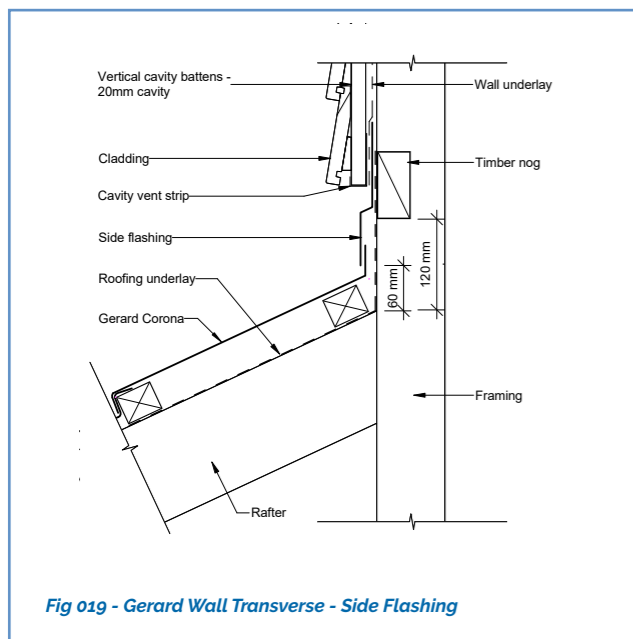
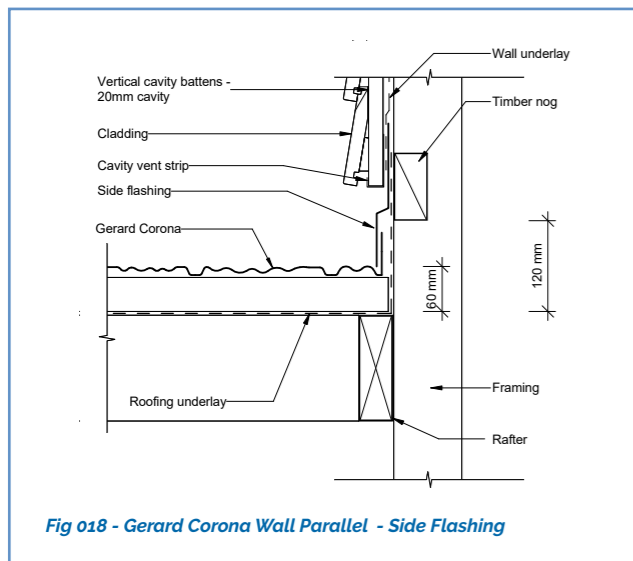
### 4.6 Wall flashings

There are several types of wall flashings that may be used with various thicknesses of wall claddings.

Gerard Roofs manufacture most of these without hooks or hems which then requires 100 mm coverage of the section hidden behind the wall cladding.

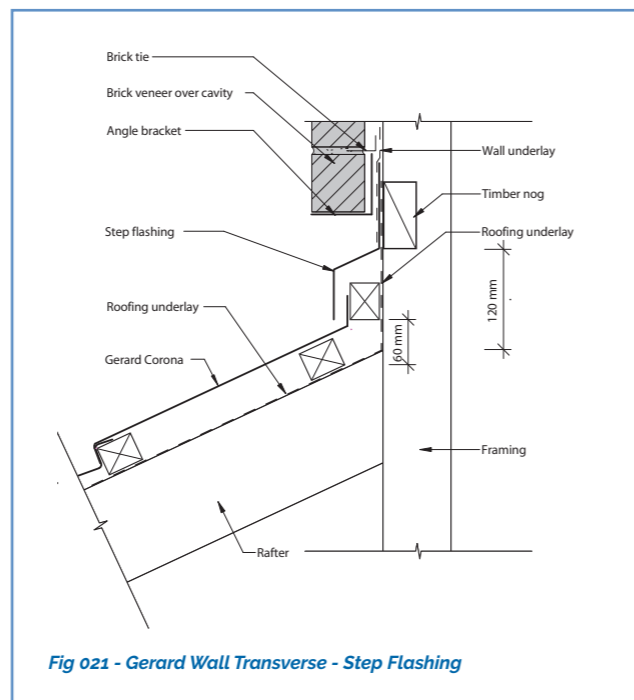
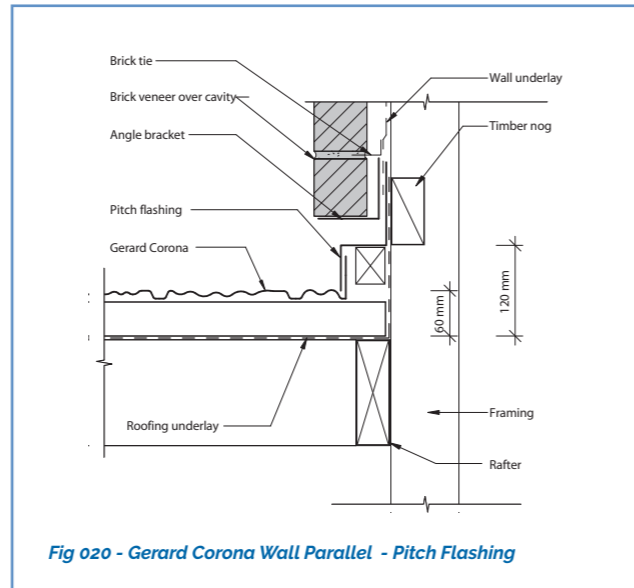
#### 4.6.1 Side flashings

Side flashings are general purpose flashings suitable for use with most wall claddings.



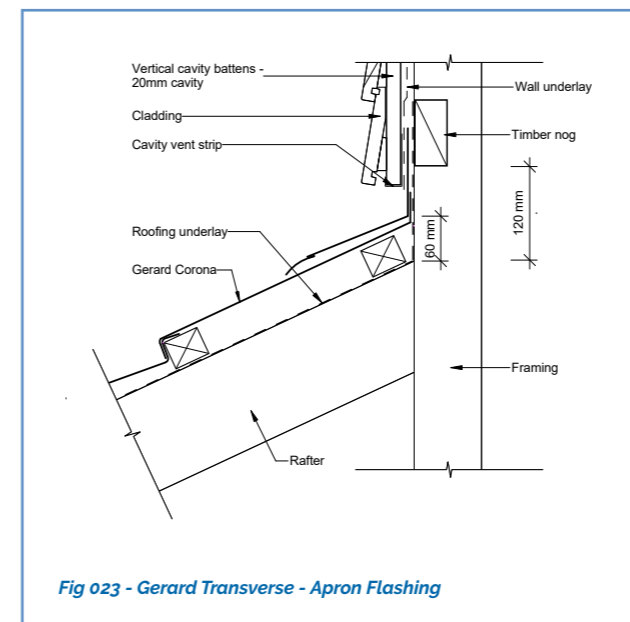
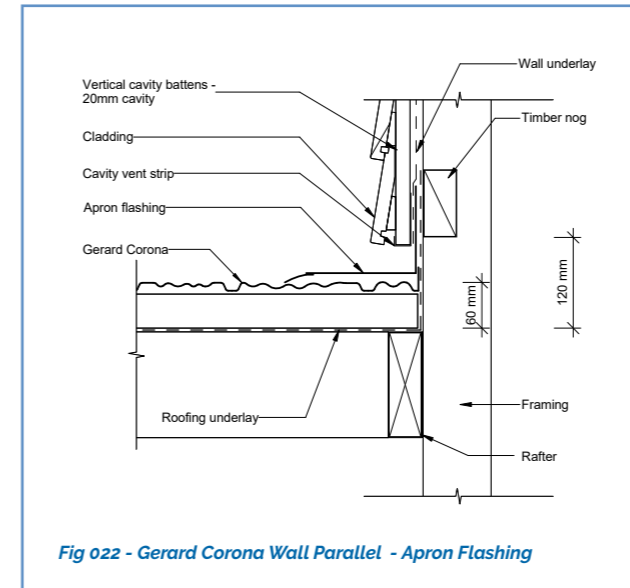
#### 4.6.2 Step - Pitch flashings

Pitch flashings are a special system for thicker wall claddings like brick veneer. The transverse wall flashing is folded to closely match the roof pitch allowing the corner junctions to mitre neatly.



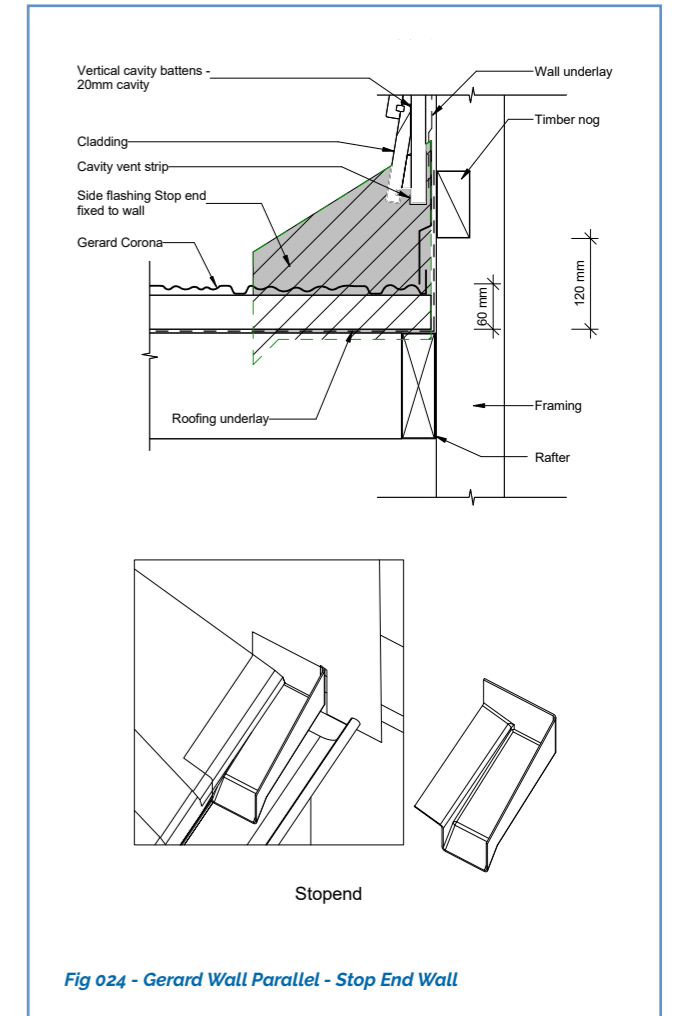
#### 4.6.3 Soft edge apron flashings

Soft edge apron flashings are general purpose flashings suitable for most wall claddings. The soft edged aluminium is moulded down to meet the surface of the panel.

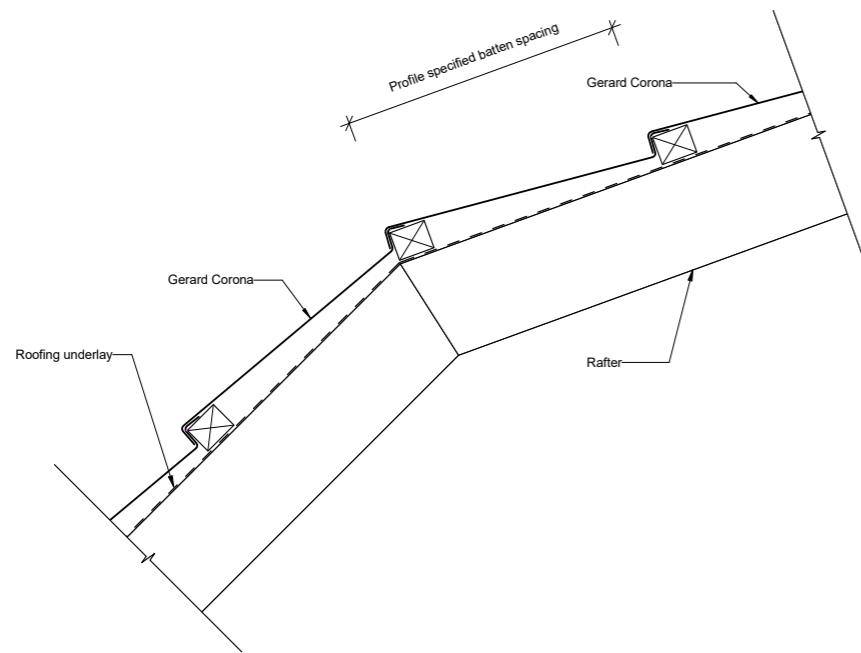


### 4.7 Wall Stop Ends

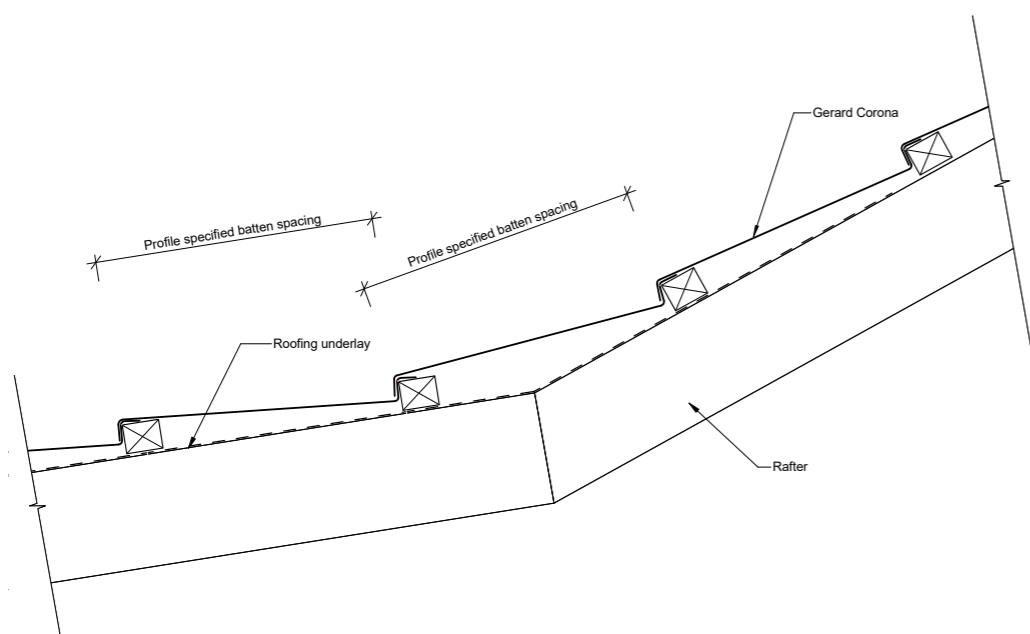
Gerard Roofs proprietary PVC Stop Ends direct water away from the roof and wall and into the rain water collection gutters. There are left and right versions.



4.8 Change in pitch



**Fig 025 - Gerard Change in Pitch - Low Pitch to High Pitch**  
 A batten is located at the point where the roof line changes pitch. If an exact number of courses of full panels is not practical a panel may be bent to suit.



**Fig 026 - Gerard Change in Pitch**  
 A batten is located at the point where the roof line changes pitch. If an exact number of courses of full panels is not practical a panel may be bent to suit.

4.9 Penetrations

4.9.1 Pipes

Pipe penetrations should be flashed using an EPDM flexible sleeve/boot or similar, such as Aquaseal. The edge of the EPDM flexible sleeve/boot should be fixed at 45° to horizontal.

4.9.2 Chimneys

Chimneys require specific flashings depending on the type and width of the chimney.

Cylindrical chimneys may be flashed with a large EPDM rubber sleeve similar to pipe flashings.

Rectangular chimneys require a back flashing. For chimneys up to 600 mm wide this may be made of flat sheet supplied by Gerard Roofs, AZ150 pre-painted steel, aluminium, or a supported butyl membrane.

Chimneys exceeding 600mm in width

For chimneys and other penetrations wider than 600mm an internal gutter should be used to create a fall to the edges of the penetration.

This requires a cricket flashing or slope to direct water to the edges using a supported butyl membrane.

Where the chimney is situated at the eave an internal gutter should be installed around the side to allow water to exit into the eave's rainwater system.

Angled internal gutters should be formed using butyl rubber or other inert material such as aluminium. These should be installed by suitably qualified Licensed Building Practitioners (LBPs).

4.9.3 Roof windows

Refer to specific roof window supplier's installation instructions. Typically this will involve cutting and bending panels up to the perimeter of the roof window in a manner that supports installation of the proprietary flashings supplied by the roof window manufacturer.

4.9.4 Solar panels

Refer to specific solar panel supplier's installation instructions. Note that these should allow for fastening directly to the rafters and not to the roof panel battens. Penetrations of the support must be appropriately flashed to ensure weather security, e.g. an EPDM flexible sleeve/boot.

### 4.10 Extra high wind zone installation

Refer to *Table 04 Fasteners for Panel Battens - Wind Zones - NZS3604*. (Page 23)

Gerard Roofs fixing patterns do not change for extra high wind zones.

Gerard Roofs can provide a wall flashing that retains the panel turn up and offers greater wind-blown rain protection. This is an extended side flashing that has a soft edge to contour the panel surface and a hem at the top section that is mandatory for roofs in extra high wind zones.

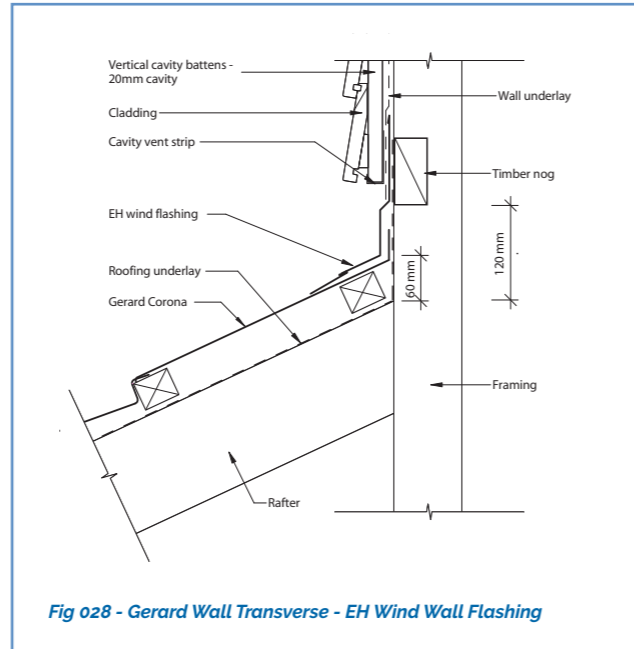


Fig 028 - Gerard Wall Transverse - EH Wind Wall Flashing

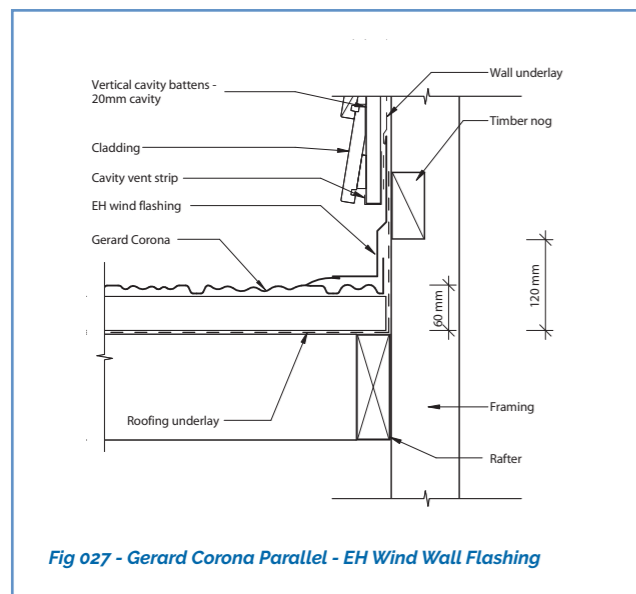


Fig 027 - Gerard Corona Parallel - EH Wind Wall Flashing



## 5.0 Components & fixing patterns

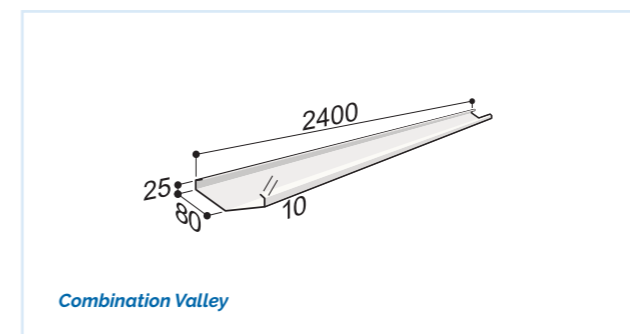
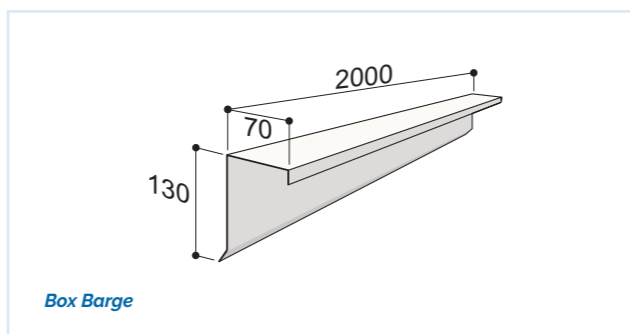
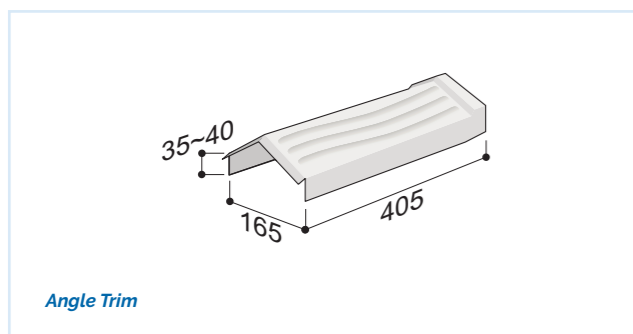
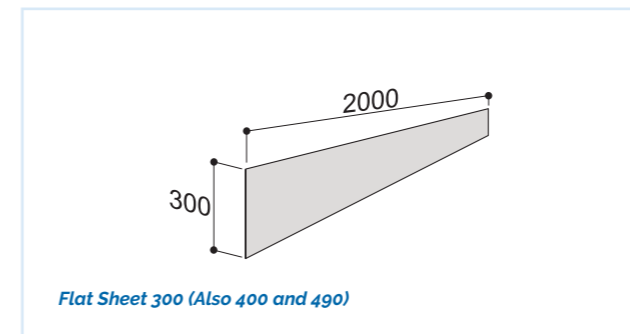
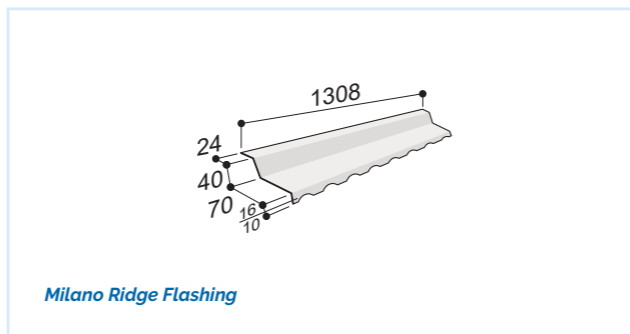
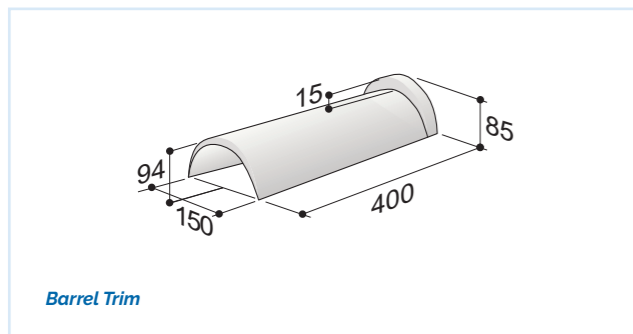
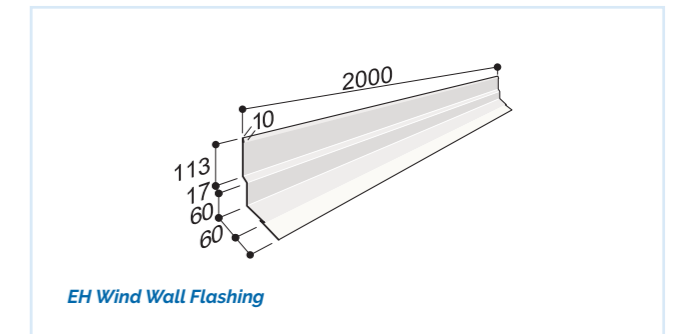
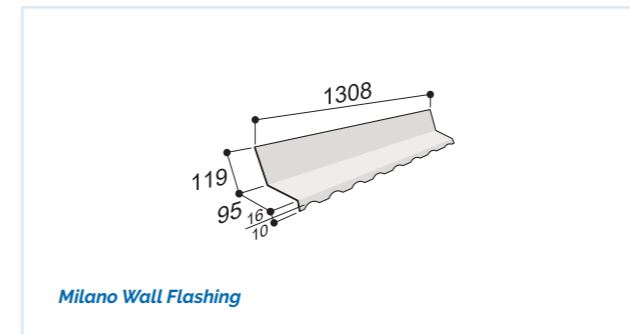
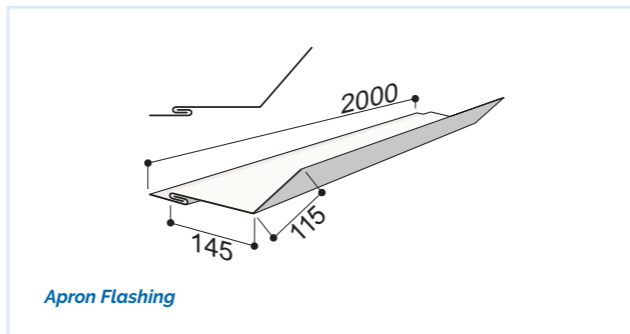
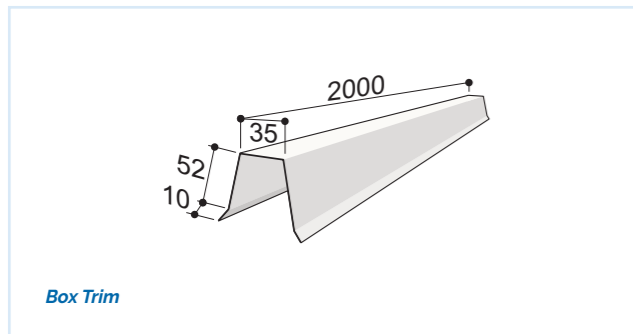
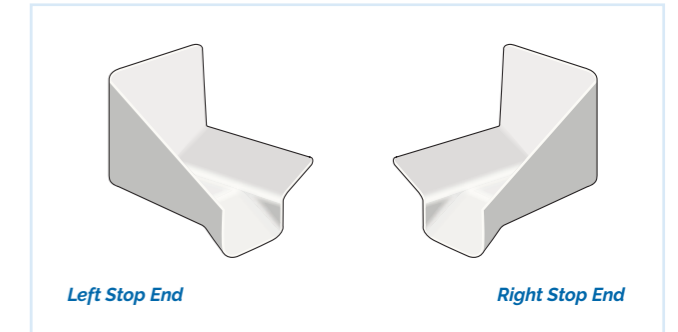
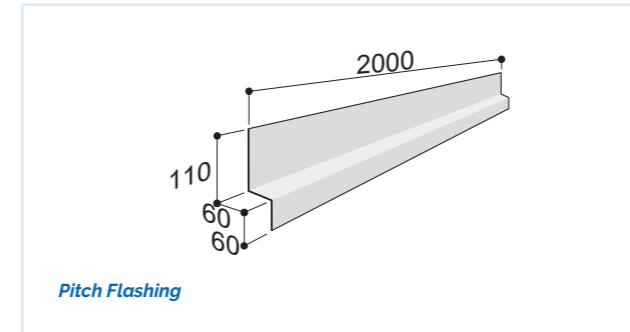
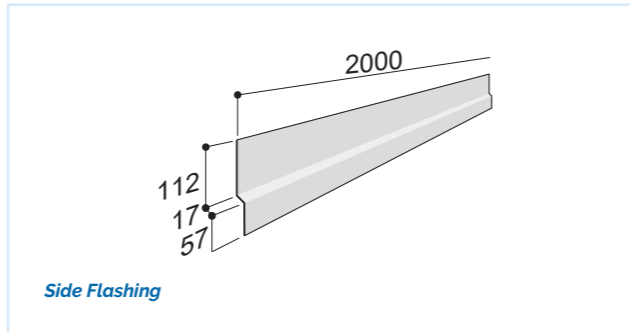
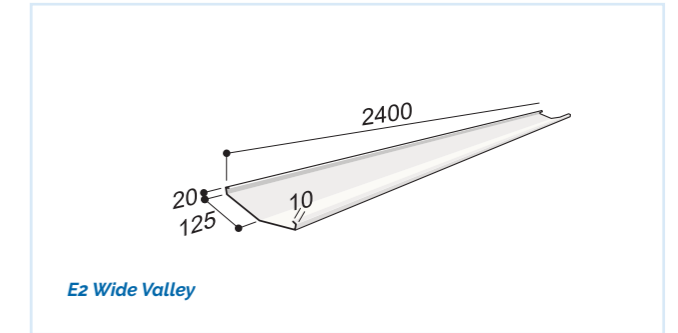
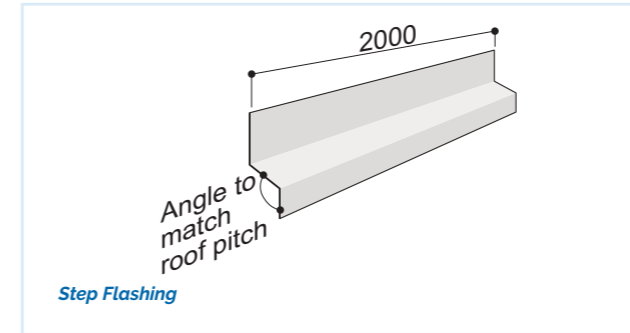
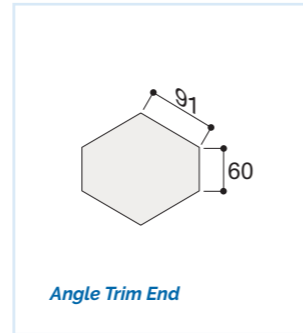
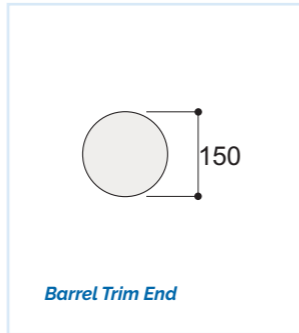
This section contains useful installation information for very detailed specification. You'll find a complete list of Gerard Roofs componentry and specific layout and fixing instructions for each of the eight Gerard Roof profiles. The information contained in this section is also contained in individual product profile sheets available for download at [www.gerardroofs.co.nz/designtech](http://www.gerardroofs.co.nz/designtech)

## 5.0 Components & fixing patterns

### 5.1 Gerard Roofs components

To accompany their eight roof profile panels – Corona, Senator, Rockport, Alpine, Oberon, Milano, Colortile and Tuffcoat – Gerard Roofs produces a full range of accessories.

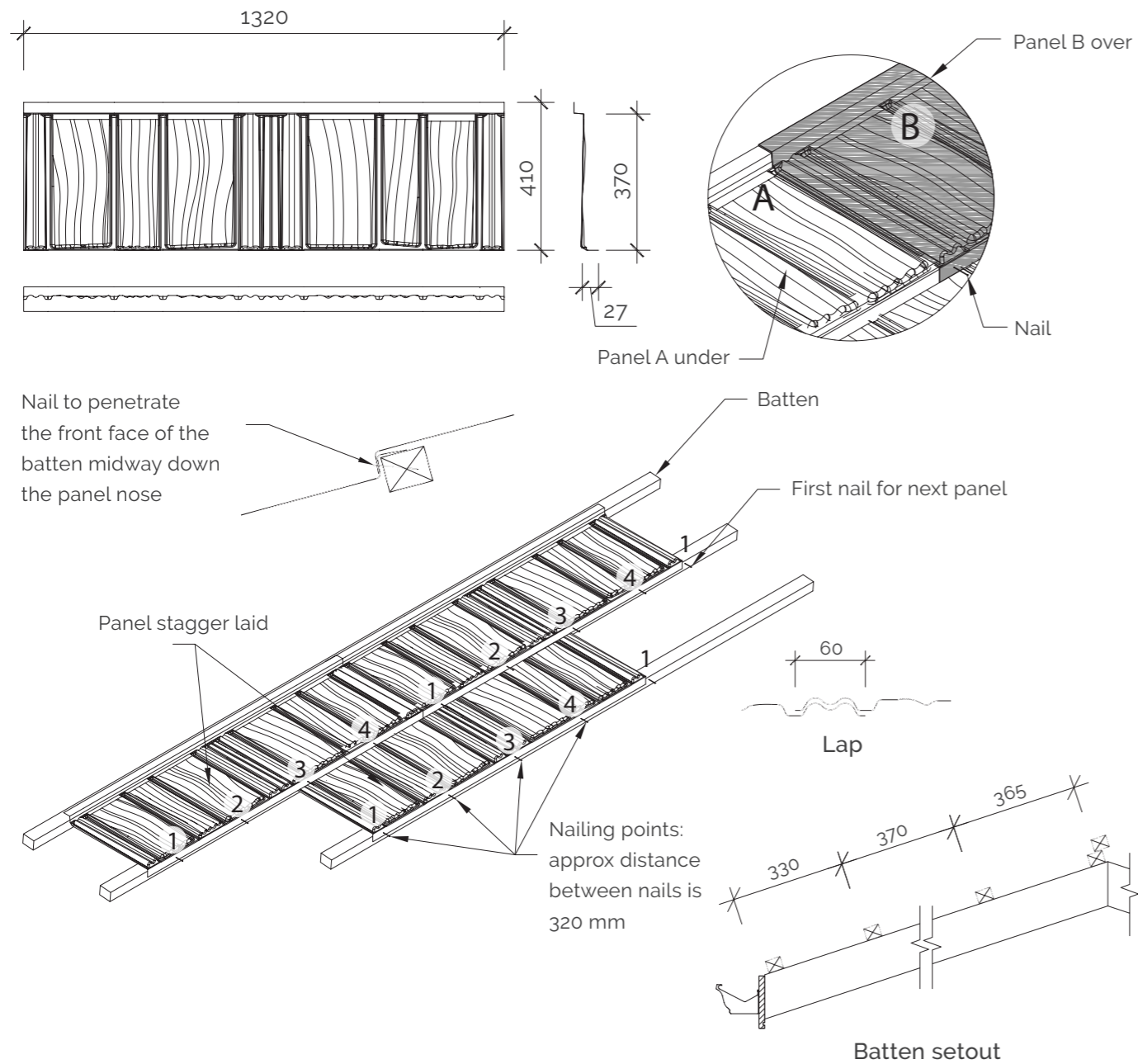
All components are produced in the same way, from the same steel and, where appropriate, coated to match the roof profile panels themselves using the same materials and techniques to ensure complete synergy for performance and aesthetics.



## 5.0 Components & fixing patterns

### 5.2 Gerard Corona installation

#### Panel installation instructions & nailing positions



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

#### Fastening Panels in Cyclone Areas

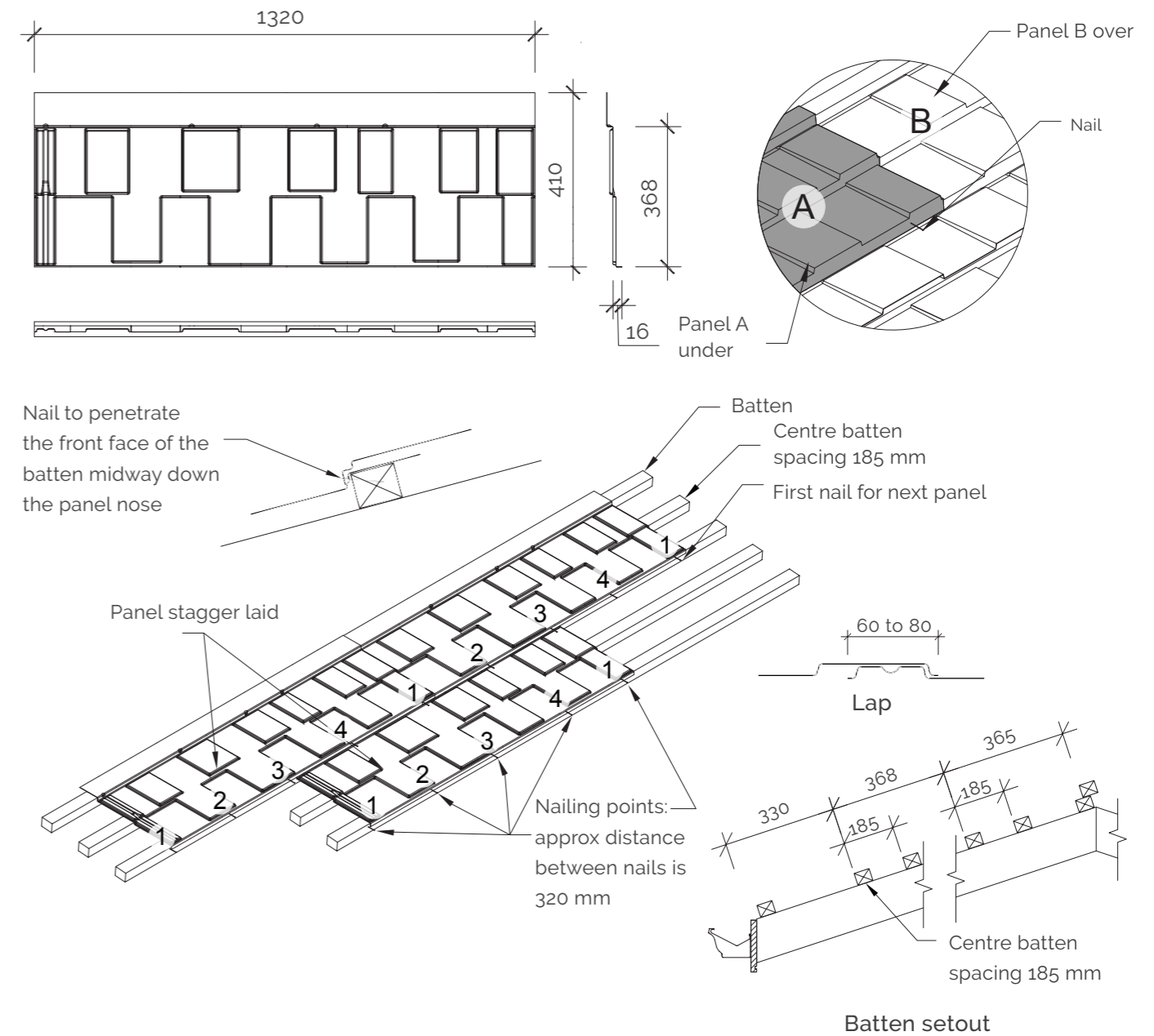
- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

## 5.0 Components & fixing patterns

### 5.3 Gerard Senator installation

#### Panel installation instructions & nailing positions



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

#### Fastening Panels in Cyclone Areas

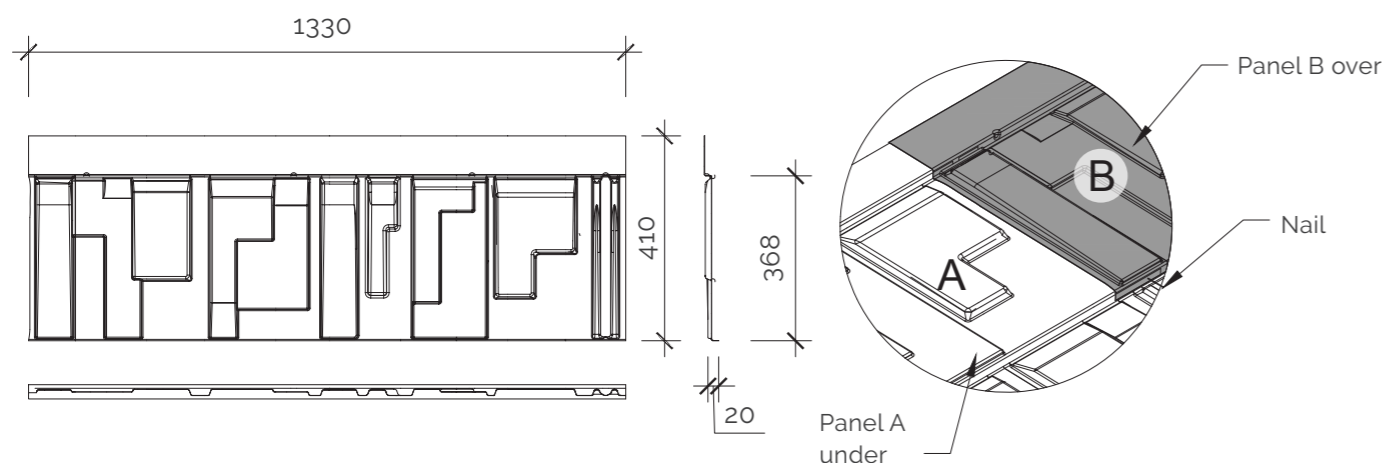
- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

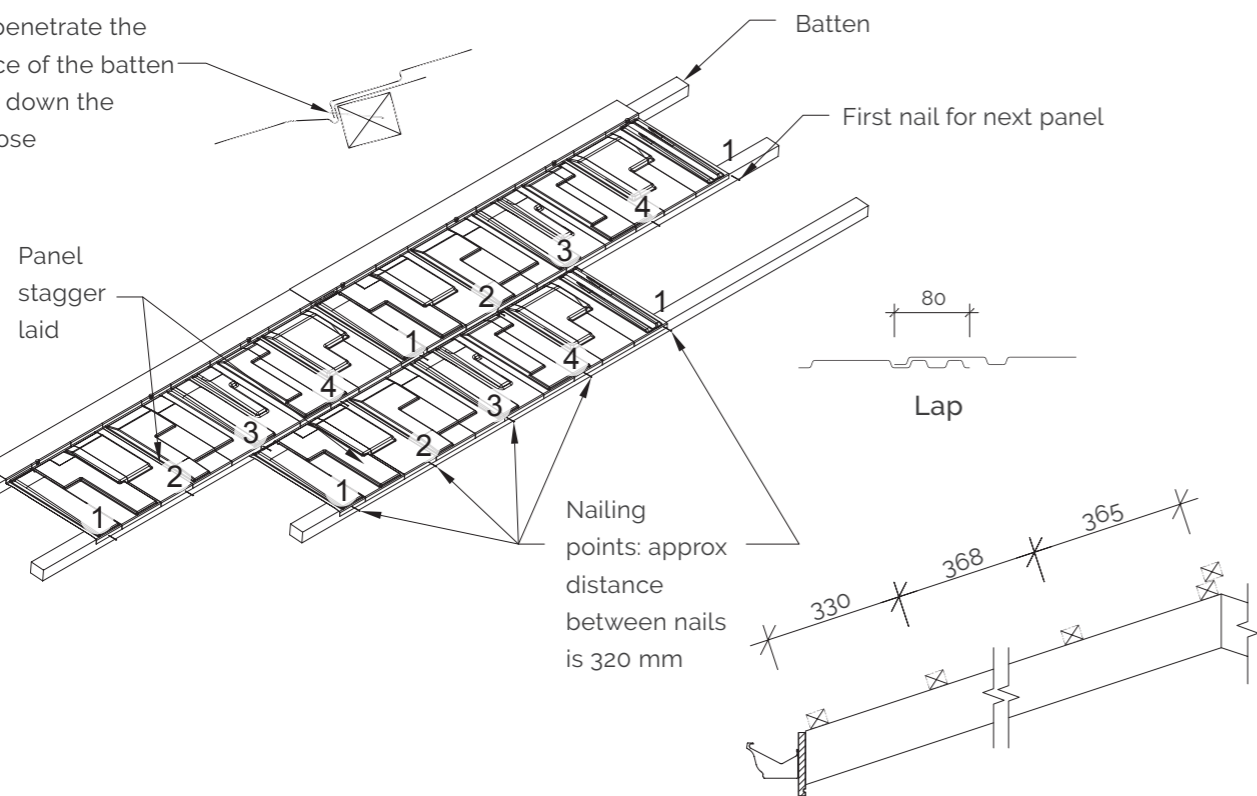
## 5.0 Components & fixing patterns

### 5.4 Gerard Rockport installation

#### Panel installation instructions & nailing positions



Nail to penetrate the front face of the batten midway down the panel nose



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

#### Fastening Panels in Cyclone Areas

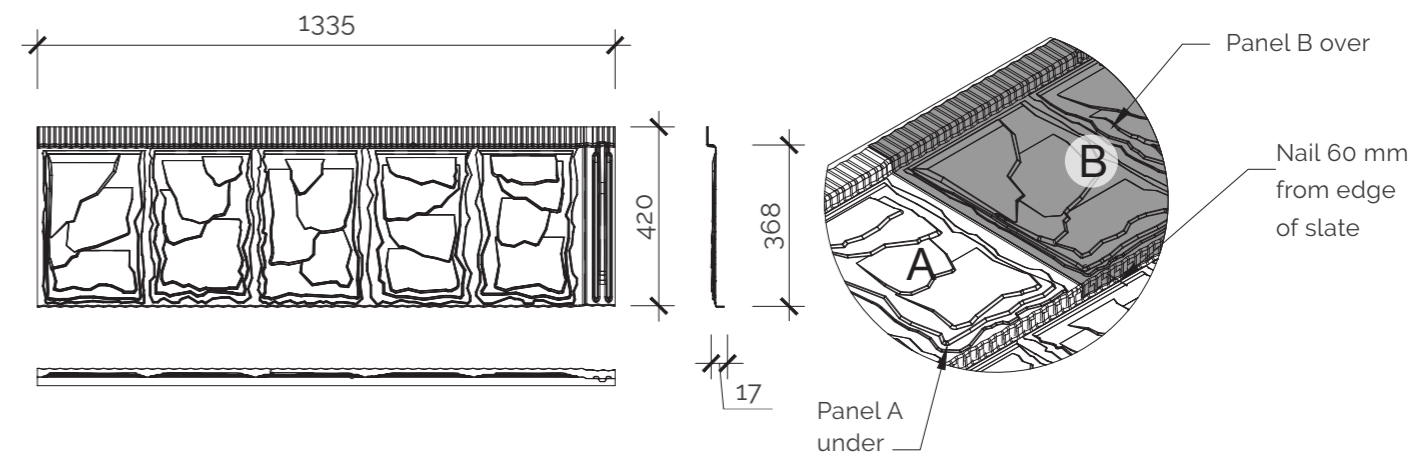
- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

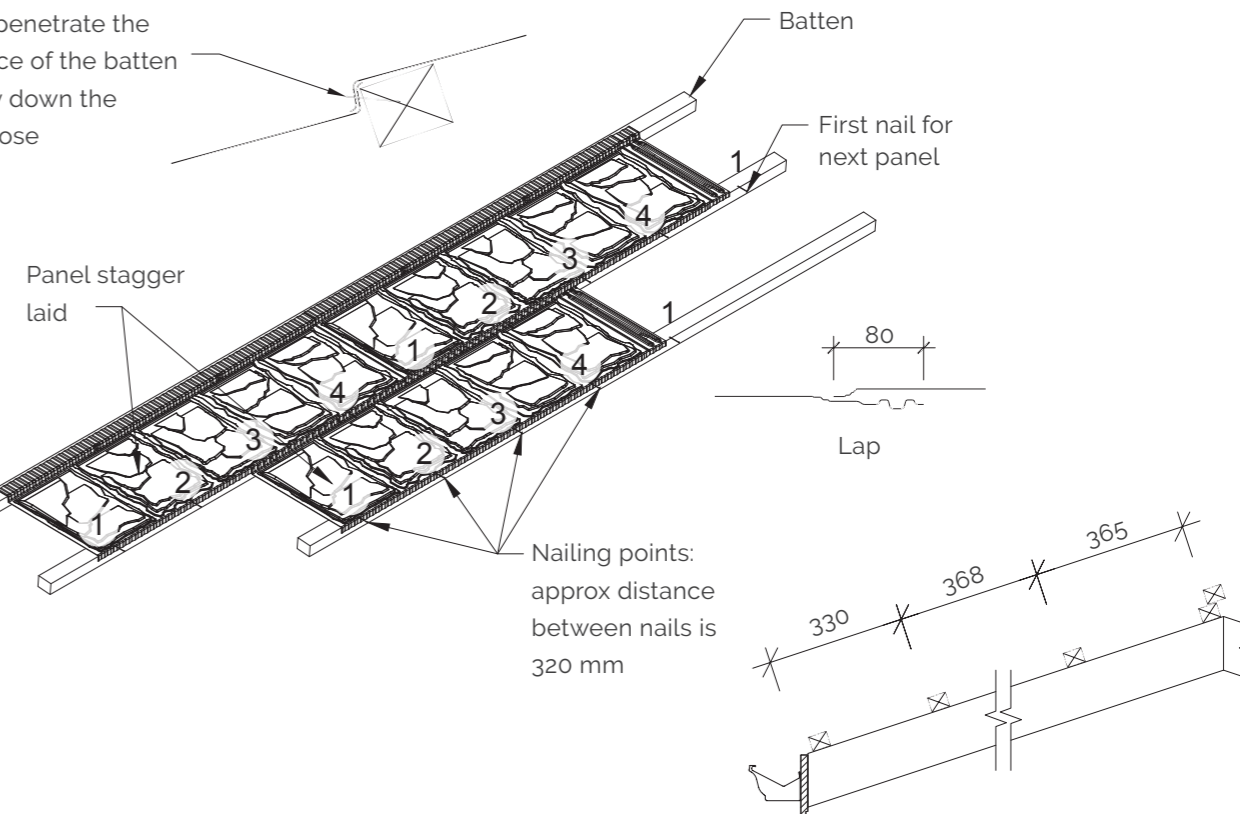
## 5.0 Components & fixing patterns

### 5.5 Gerard Alpine installation

#### Panel installation instructions & nailing positions



Nail to penetrate the front face of the batten midway down the panel nose



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

#### Fastening Panels in Cyclone Areas

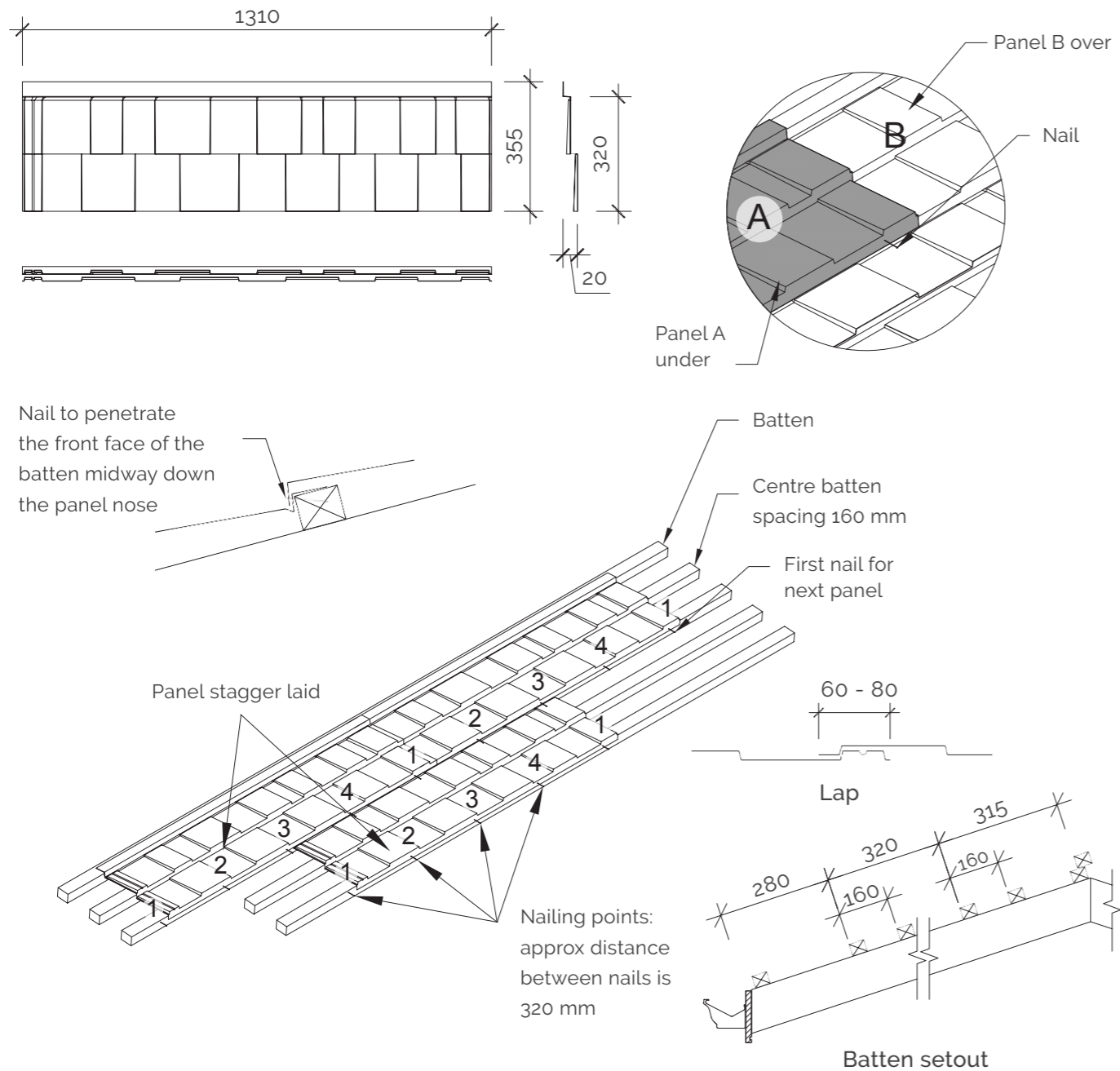
- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

## 5.0 Components & fixing patterns

### 5.6 Gerard Oberon installation

#### Panel installation instructions & nailing positions



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

#### Fastening Panels in Cyclone Areas

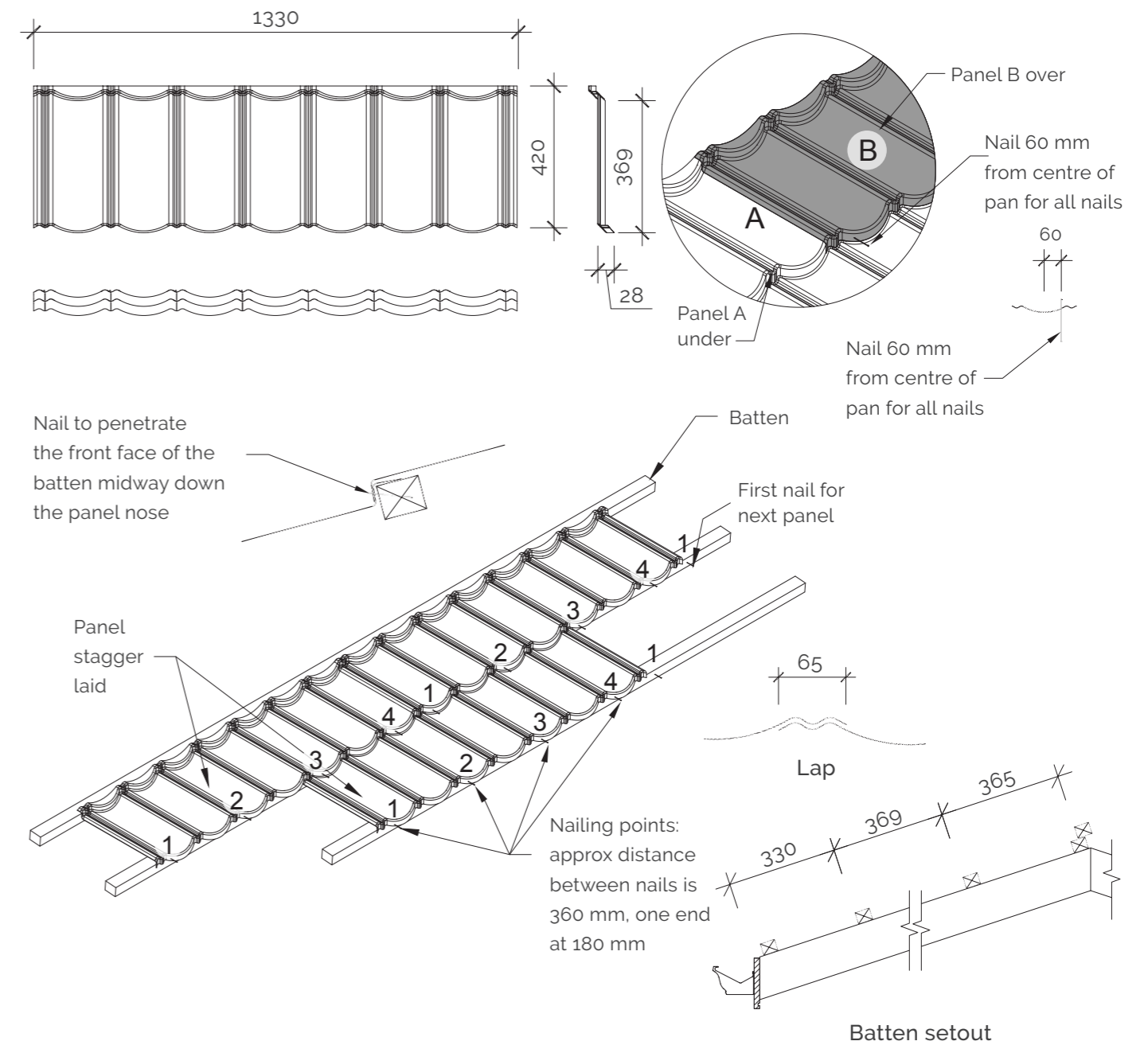
- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

## 5.0 Components & fixing patterns

### 5.7 Gerard Colortile installation

#### Panel installation instructions & nailing positions



#### Fixing

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

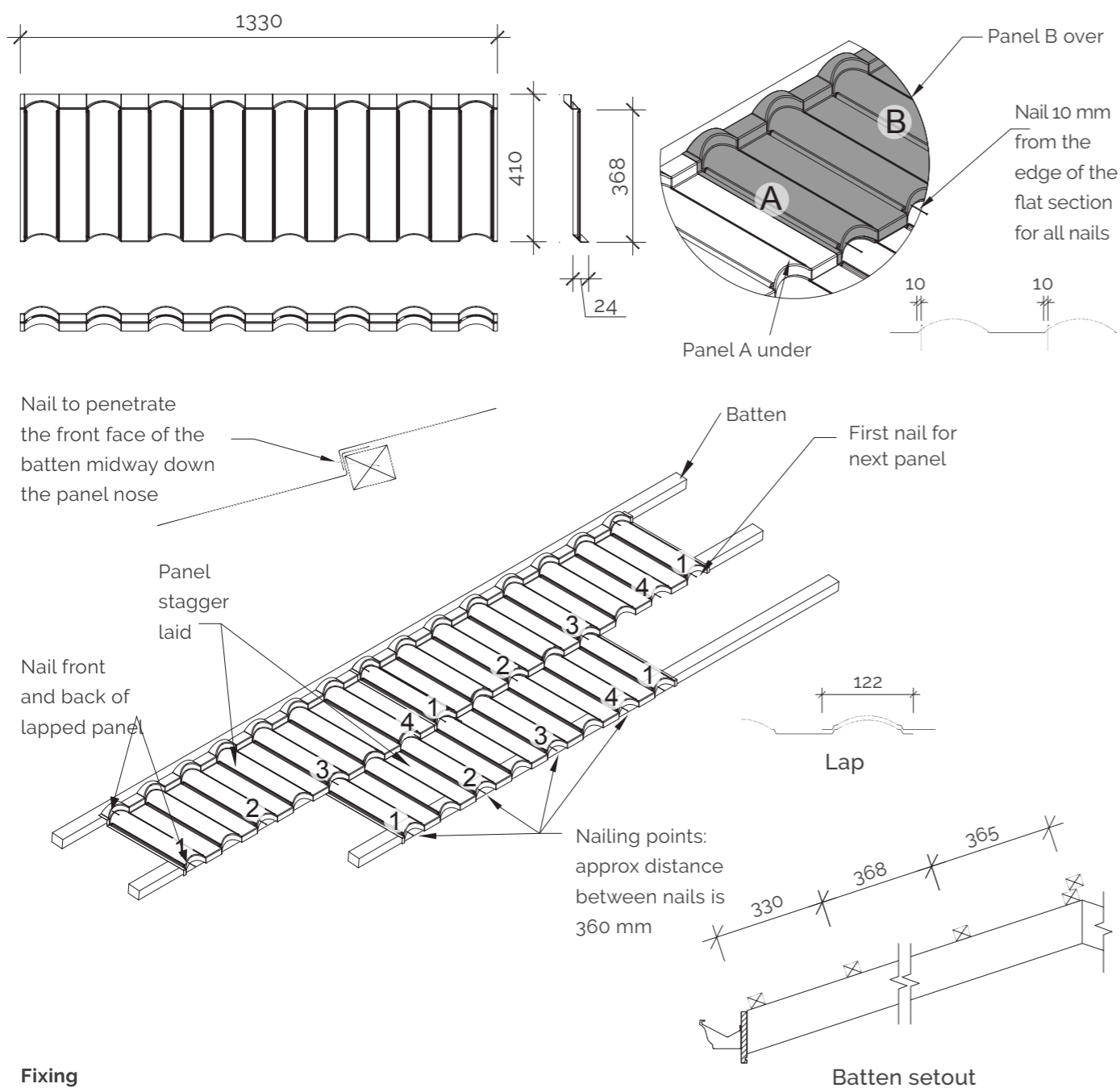
#### Fastening Panels in Cyclone Areas

- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

5.8 Gerard Milano installation

Panel installation instructions & nailing positions



**Fixing**

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.
- Nail front and back of lapped panel.

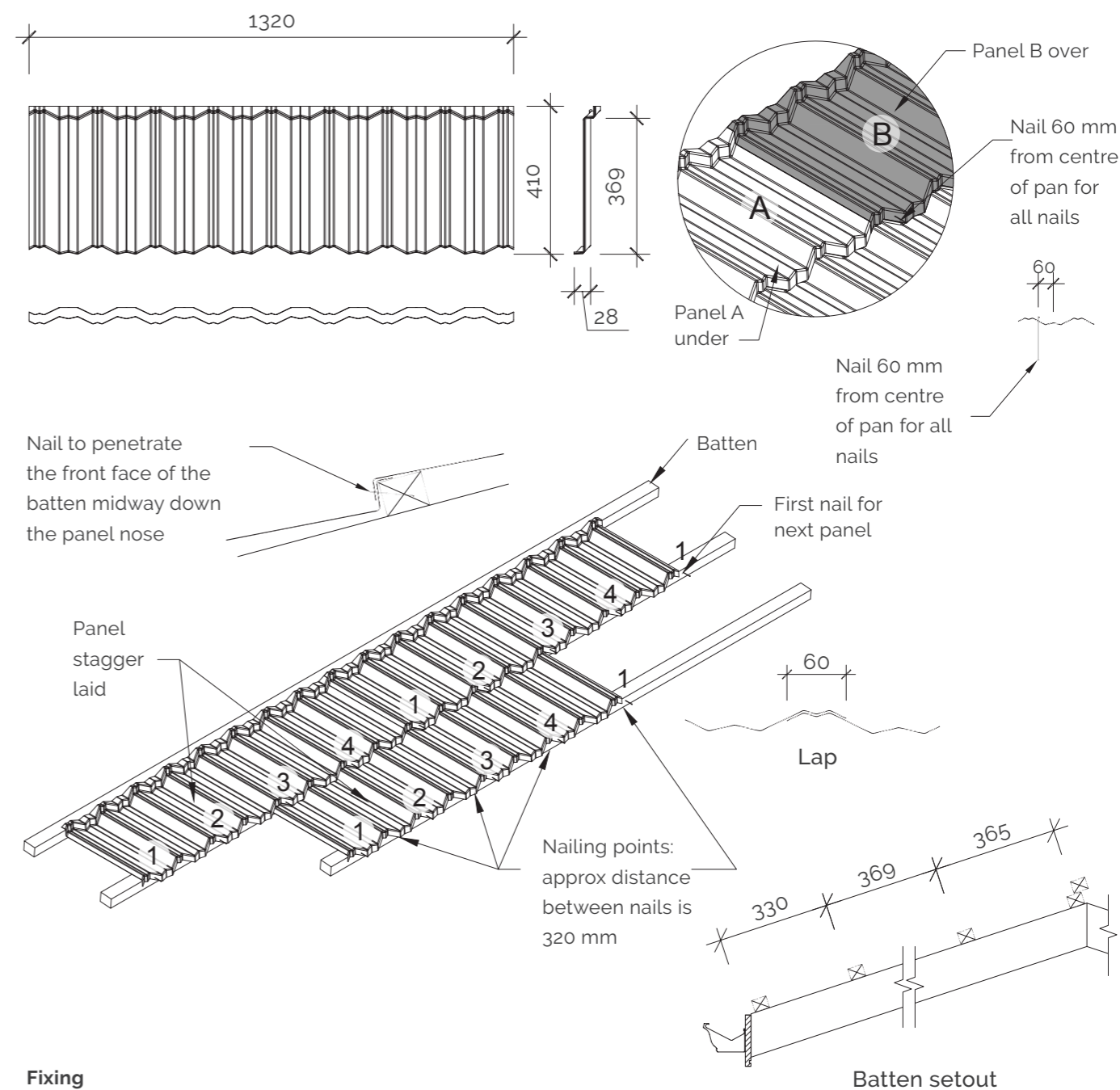
**Fastening Panels in Cyclone Areas**

- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.

5.9 Gerard Tuffcoat installation

Panel installation instructions & nailing positions



**Fixing**

- The nose of each panel is held down at 5 points.
- This comprises 4 nails as per the diagrams plus the nailed overlapping panel.

**Fastening Panels in Cyclone Areas**

- Where a building has been designed outside the scope of NZS 3604. Gerard panels (tiles) on buildings with a wind load design of above 3.8 kPa should be fastened at approx 160 mm spacing (each module).

Dimensions and weights given are nominal.



# Important information about this material

## The Gerard Roofing System

AHI Roofing Ltd accepts no liability if the Gerard roofing system is not used in accordance with instructions contained in this publication.

## Use only the current specification

This publication may be superseded by a newer publication. AHI Roofing Ltd accepts no liability for reliance upon publications that have been superseded. Before using this manual check whether this is the current version; simply call the Gerard Roofs Helpline on **0800 104 868** or visit [www.gerardroofs.co.nz](http://www.gerardroofs.co.nz)

## Substitution

AHI Roofing Ltd accepts no liability if the systems are not installed in accordance with instructions contained in this and other Gerard Roofs technical literature. Substitution of specified or recommended components with alternative brands can compromise performance dramatically. The Gerard roofing system is not generic and must be installed as specified including the use of Gerard branded components.

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