Roof Tiles
Causeway
A thin leading edge roof tile with a smooth or a riven texture finish.

Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (overall):</td>
<td>420 x 334mm</td>
</tr>
<tr>
<td>Minimum Pitch:</td>
<td>Nailed 25°</td>
</tr>
<tr>
<td></td>
<td>Clipped 22.5°</td>
</tr>
<tr>
<td>Maximum Pitch:</td>
<td>90°</td>
</tr>
<tr>
<td></td>
<td>(Over 55° subject to increased fixing)</td>
</tr>
<tr>
<td>Headlap:</td>
<td>Minimum</td>
</tr>
<tr>
<td></td>
<td>100mm</td>
</tr>
<tr>
<td>Gauge (Batten spacing):</td>
<td>Maximum</td>
</tr>
<tr>
<td></td>
<td>320mm</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
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<td></td>
<td>320mm</td>
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<tr>
<td>Linear cover of one slate:</td>
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</tr>
<tr>
<td></td>
<td>310mm</td>
</tr>
<tr>
<td>Covering capacity (nett) at 320mm gauge:</td>
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</tr>
<tr>
<td></td>
<td>10.2 slates/m²</td>
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<tr>
<td>Weight at 320mm gauge:</td>
<td>47kg/m²</td>
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<tr>
<td>Weight per 1,000:</td>
<td>4.6 tonnes</td>
</tr>
<tr>
<td>Minimum Batten Size:</td>
<td>47mm x 35mm</td>
</tr>
<tr>
<td>Battens required at 320mm gauge:</td>
<td>3.1 lin. m/m²</td>
</tr>
<tr>
<td>Positioning of first batten:</td>
<td>350mm</td>
</tr>
<tr>
<td></td>
<td>(From outside of fascia to top of batten)</td>
</tr>
<tr>
<td>Tile Nails</td>
<td>45mm x 3.35mm</td>
</tr>
<tr>
<td>Tile Clips</td>
<td>Tile, Verge and Eave</td>
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<tr>
<td>Eave</td>
<td>Standard Tile</td>
</tr>
<tr>
<td>Verge Bedded</td>
<td>Bedded on Undercloaked</td>
</tr>
<tr>
<td>Verge Dry Fix</td>
<td>Step Dry Verge or Continuous Dry Verge</td>
</tr>
<tr>
<td>Ridge Bedded</td>
<td>Universal Angle Ridge 455mm long</td>
</tr>
<tr>
<td>Ridge Dry Fix</td>
<td>Rapid Roll-Out Ridge System or Dry Vent</td>
</tr>
<tr>
<td></td>
<td>Ridge System</td>
</tr>
<tr>
<td>Hip Bedded</td>
<td>Hip Angle Ridge 455mm long</td>
</tr>
<tr>
<td>Hip Dry Fix</td>
<td>Dry Hip System</td>
</tr>
</tbody>
</table>

Fixing Guide: Recommended Nailing/Clipping as per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

Colours available

- Black Riven
- Black Smooth
- Slate Grey
Donard
A smooth finished flat leading edge roof tile.

Technical Data

- **Size (overall):** 419 x 334mm
- **Minimum Pitch:** Nailed 25°
- **Maximum Pitch:** 90°
- **Clipped 22.5°**
- **Minimum Headlap:**
  - 30° and over: 75mm
  - Less than 30°: 100mm
- **Gauge (batten spacing):**
  - 30° and over: 344mm
  - Less than 30°: 319mm
- **Linear cover of one slate:** 297mm
- **Covering capacity (nett) at 319mm gauge:** 10.4 slates/m²
- **Weight at 319mm gauge:** 55kg/m²
- **Weight per 1,000:** 5.2 tonnes
- **Minimum Batten Size:** 47mm x 35mm
- **Battens required at 319mm gauge:** 3.10 lin. m/m²
- **Positioning of first batten:** 350mm
  (From outside of fascia to top of batten)

- **Tile Nails:** 50mm x 3.35mm
- **Tile Clips:**
  - Tile, Verge
  - Eave
- **Verge Bedded:** Bedded on Undercloaked
- **Verge Dry Fix:** Step Dry Verge or Continuous Dry Verge
- **Ridge Bedded:** Universal Angle Ridge 455mm long
- **Ridge Dry Fix:** Rapid Roll-Out Ridge System or Dry Vent Ridge System
- **Hip Bedded:** Hip Angle Ridge 455mm long
- **Hip Dry Fix:** Dry Hip System

**Fixing Guide:** Recommended Nailing/Clipping as per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

* For pitches between 22.5° and 17.5° specifiers and users should contact our Sales Office for technical advice.

Colours available

- Black
- Brown
- Slate Grey
- Terracotta
- Farmhouse Red
- Amber Mix
Derrie
A traditional interlocking roof tile with a discrete roll profile.

Technical Data

Size (overall): 419 x 334mm
Minimum Pitch: Nailed 25°
Clipped 22.5°*
Maximum Pitch: 90°
(Over 55° subject to increased fixing)
Minimum Headlap:
30° and over 75mm
Less than 30° 100mm
Maximum Gauge (batten spacing):
30° and over 344mm
Less than 30° 319mm
Linear cover of one slate: 300mm
Covering capacity (nett) at 319mm gauge: 10.4 slates/m²
Weight at 319mm gauge: 54kg/m²
Weight per 1,000: 5.2 tonnes
Minimum Batten Size: 47mm x 35mm

Battens required at 319mm gauge: 3.10 lin. m/m²
Positioning of first batten: 350mm
(From outside of fascia to top of batten)
Tile Nails 70mm x 3.35mm
Tile Clips Tile, Verge
Eave Standard Tile
Verge Bedded Bedded on Undercloaked
Verge Dry Fix Step Dry Verge or Continuous Dry Verge
Ridge Bedded Half Rounded Ridge 455mm long
Ridge Dry Fix Dry Vent Ridge System
Hip Bedded Hip Angle Ridge 455mm long
Hip Dry Fix Dry Hip System

Fixing Guide: Recommended Nailing/Clipping as per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

* For pitches between 22.5° and 17.5° specifiers and users should contact our Sales Office for technical advice.

Colours available

- Black
- Brown
- Slate Grey
- Terracotta
- Farmhouse Red
- Amber Mix
SL8
The innovative large format, thin leading edge roof tile with superior coverage.

Technical Data

Size (overall): 420 x 396mm
Minimum Pitch: Nailed 25°
Maximum Pitch: 75°
(Over 55° subject to increased fixing)

Headlap:
Maximum: 100mm
Minimum: 75mm

Gauge (batten spacing): 320mm - 345mm
Linear cover of one slate: 362mm
Covering capacity (nett): 8.01m² - 8.63m²
Weight (approx): 43.24 kg/m² - 46.62 kg/m²
Weight per 1,000: 5.4 tonnes
Minimum Batten Size: 47mm x 35mm

Batten required: 2.90 lin/m per m² – 3.13 lin/m per m²
Positioning of first batten: 345mm
(From outside of fascia to top of batten)

Tile Nails: 45mm x 3.35mm
Tile Clips: Tile and Verge
Eave: Standard Tile
Verge Bedded: Bedded on Undercloaked
Verge Dry Fix: Step Dry Verge or Continuous Dry Verge
Ridge Bedded: Universal Angle Ridge 455mm long
Ridge Dry Fix: Rapid Roll-Out Ridge System
 or Dry Vent Ridge System
Hip Bedded: Hip Angle Ridge 455mm long
Hip Dry Fix: Dry Hip System

Fixing Guide: Recommended Nailing/Clipping as per requirements given in compliance with I.C.P 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical

Colours available

Slate Grey
Minislate
An interlocking tile with a natural slate appearance

Technical Data
Size (overall):
- Standard Slate: 270 x 337mm
- Slate and a half: 270 x 495mm

Minimum Pitch: 25°
Maximum Pitch: 90°
(Over 55° subject to increased fixing)

Headlap:
- Minimum: 80mm
- Maximum: 95mm

Gauge (Batten spacing):
- Minimum: 175mm
- Maximum: 190mm

Linear cover of one slate: 316mm

Covering capacity (nett) at
- 190mm gauge: 16.6 slates/m²
- 175mm gauge: 18.1 slates/m²

Weight at 175mm gauge: 51kg/m²

Weight per 1,000: 3.0 tonnes

Minimum Batten Size: 47mm x 35mm

Battens required at
- 175mm gauge: 5.70 lin. m/m²

Positioning of first batten:
(From outside of fascia to top of batten)
- 193mm

Tile Nails: 45mm x 3.35mm
Tile Clips: Tile, Verge
Eave: Standard Tile
Verge Bedded: Bedded on Undercloaked
Verge Dry Fix: Continuous Dry Verge
Ridge Bedded: Universal Angle Ridge 455mm long
Ridge Dry Fix: Rapid Roll-Out Ridge System or Dry Vent Ridge System
Hip Bedded: Hip Angle Ridge 455mm long
Hip Dry Fix: Dry Hip System

Fixing Guide: Recommended Nailing/Clipping as per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

Colours available:
- Slate Grey
- Slate Blue
Gemini
An innovative interlocking twintile

Technical Data

Size (overall):
- Standard Tile: 270 x 337mm
- Three Quarter: 270 x 260mm
- Tile and a half: 270 x 495mm

Minimum Pitch: 25°
Maximum Pitch: 90°
(Over 55° subject to increased fixing)

Headlap:
- Minimum: 80mm
- Maximum: 95mm

Gauge (Batten spacing):
- Minimum: 175mm
- Maximum: 190mm

Linear cover of one slate: 316mm

Covering capacity (nett) at
- 190mm gauge: 16.6 slates/m²
- 175mm gauge: 18.1 slates/m²

Weight at 175mm gauge: 51kg/m²
Weight per 1,000: 3.0 tonnes

Minimum Batten Size: 47mm x 35mm

Battens required at
- 175mm gauge: 5.70 lin. m/m²

Positioning of first batten:
- 193mm
(From outside of fascia to top of batten)

Tile Nails: 45mm x 3.35mm
Tile Clips: Tile, Verge
Eave: Standard Tile
Verge Bedded: Bedded on Undercloaked
Verge Dry Fix: Continuous Dry Verge
Ridge Bedded: Universal Angle Ridge 455mm long
Ridge Dry Fix: Rapid Roll-Out Ridge System or Dry Vent Ridge System
Hip Bedded: Hip Angle Ridge 455mm long
Hip Dry Fix: Dry Hip System

Minimum Fixing Guide: All tiles to be fixed according to ICP 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

Colours available

- Brown
- Slate Grey
- Terracotta
- Farmhouse Red
- Amber Mix
Centurion
A versatile concrete tile for pitches down to 12.5°

Technical Data
Size (overall): 385 x 230mm
Minimum Pitch: 12.5°*
Maximum Pitch: 44°
Headlap:
  Minimum 100mm
Gauge (batten spacing):
  Minimum 265mm
  Maximum 285mm
Linear cover of one slate: 205mm
Covering capacity (nett) at 285mm gauge: 17.5 slates/m²
Weight at 285mm gauge: 50kg/m²
Weight per 1,000: 2.8 tonnes
Minimum Batten Size: 47mm x 35mm
Battens required at 285mm gauge: 3.50 lin. m/m²
Positioning of first batten: 315mm (From outside of fascia to top of batten)

Tile Clips
  Tile, 50mm x 3.35mm nail
Eave
  Standard Tile
Verge Bedded
  Bedded on Undercloaked
Verge Dry Fix
  Continuous Dry Verge
Ridge Bedded
  Half Rounded Ridge 455mm long
Ridge Dry Fix
  Dry Vent Ridge System
Hip Bedded
  Hip Angle Ridge 455mm long

Fixing Guide: All tiles to be fixed by fitting a tile clip over the interlock and nailing with a 50mm x 3.35mm aluminium nail into the batten below.

Recommended Nailing/Clipping: As per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

* For pitches between 12.5° and 10° specifiers and users should contact our Sales Office for technical advice.

On some simple roof designs Centurion can be laid down to a 10° pitch but this should not be attempted without prior consultation with our sales office.

Colours available

Brown  Slate Grey  Terracotta
Plain tile
A traditional double lapped tile suitable for contoured roofs and vertical cladding

**Technical Data**

**Size (overall):**
- Standard Tile: 268 x 165mm
- Eave Tile: 210 x 165mm
- Tile and a half: 268 x 248mm

**Minimum Pitch:** 35°

**Maximum Pitch:** 90°
(Over 55° subject to increased fixing)

**Minimum Headlap:**
- Pitched: 65mm
- Vertical: 35mm

**Maximum Gauge (batten spacing):**
- Pitched: 100mm
- Vertical: 115mm

**Linear cover of one slate:** 165mm

**Covering capacity (nett) at:**
- 100mm gauge: 60 slates/m²
- 115mm gauge: 53 slates/m²

**Weight:**
- 100mm gauge: 75kg/m²
- 115mm gauge: 66kg/m²

**Weight per 1,000:** 1.3 tonnes

**Battens size:**
- Rafters 450 - 600mm c/c: Min. 47 x 35mm
- Rafters less than 450mm c/c: Min. 35 x 22mm

**Battens required at:**
- 100mm gauge: 10.0 lin. m/m²
- 115mm gauge: 8.8 lin. m/m²

**Positioning of first batten:**
- (From outside of fascia to top of batten)
  - For first full tile: 193mm
  - For eave tile: 135mm

**Recommended Nailing/Clipping:** As per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

---

**Technical Data**

**Size (overall):** 385 x 230mm

**Minimum Pitch:**
- Smooth: 25° Nailed
- Granular: 25° Nailed

**Maximum Pitch:**
- Smooth: 25° Nailed
- Granular: 25° Nailed
- Smooth: 17.5° Clipped
- Granular: 22.5° Clipped

**Maximum Pitch:**
(Over 55° subject to increased fixing)

**Minimum Headlap:** 75mm

**Gauge (batten spacing):**
- Maximum: 310mm

**Linear cover of one slate:** 200mm

**Covering capacity (nett) at 310mm gauge:**
- 16.1 slates/m²

**Weight at 310mm gauge:**
- 46kg/m²

**Weight per 1,000:** 2.9 tonnes

**Minimum Batten Size:**
- 47mm x 35mm

**Battens required at 310mm gauge:**
- 3.22 lin. m/m²

**Positioning of first batten:**
(From outside of fascia to top of batten)
- For first full tile: 193mm
- For eave tile: 135mm

**Recommended Nailing/Clipping:** As per requirements given in compliance with I.C.P. 2:2002. The minimum recommended pitch may be influenced by certain restrictions. Please contact our Sales Office for technical advice.

---

**Colours available**

- Black
- Amber Mix
- Terracotta
- Slate Grey
- Farmhouse Red
- Brown

**Note:** Also available with a Brown Granular Finish

**Colours available**

- Brown
- Slate Grey
- Terracotta
Accessories

Ventilation

Eave Ventilation

The Roadstone Eave Ventilation System provides continuous over-fascia roof space ventilation in a simple weatherproof system. This system eliminates the need for a tilting fillet and reduces the required height of the fascia board.

Eave Ventilation (without soffit)

- Roadstone standard tile (profile as selected)
- 47mm x 35mm tiling batten
- Roofing underlay
- Fascia grill (nailed to fascia board) with a PVC eaves support tray under roofing underlay
- PVC rafter roll out tray
- Fascia board

Ventilation

Tile Ventilation

Roadstone Vent Tiles are an unobtrusive means of incorporating ventilation within the roof slope at high or low level. They can be used for soil pipe or mechanical ventilation. When used for mechanical ventilation a condensation trap should be inserted.

Vent Tile

- Cavity tray
- Code 4 lead flashing dressed over top tile and turned into abutment
- 47mm x 35mm tiling batten
- Roadstone standard tile (profile as selected)
- Roofing underlay
- Underlay seal
- Roadstone vent tile
- Flexible pipe (when required)
Ventilation

Dry Vent Ridge

The Roadstone Dry Vent Ridge System provides a continuous weatherproof air-path from the roof void to the outside of the building. This system is mechanically fixed providing high resistance to storm damage. It is maintenance-free and does not require use of mortar bedding.

Dry Vent Ridge

- 450mm concrete ridge tile (half round or universal angle ridge)
- Stainless steel ring shank nail and seal
- Ridge to ridge collar
- Ridge batten support bracket
- Ridge batten 50mm x --* (see ridge batten height table)
- Vented profile filler unit
- Roadstone standard tile (profile as selected)
- Roof underlay cut at ridge apex
- 47mm x 35mm tiling batten

*Ridge batten height table

<table>
<thead>
<tr>
<th>Tile profile</th>
<th>Rafter pitch</th>
<th>Batten height mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derrie</td>
<td>22.5° - 35°</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>36.0° - 50°</td>
<td>50</td>
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<tr>
<td>Flat Tiles</td>
<td>22.5° - 30°</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>31.0° - 55°</td>
<td>25</td>
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</tbody>
</table>

Rapid Roll-Out Ridge

The Roadstone Rapid Roll-Out Ridge system is an innovative alternative that is quicker and easier to install than traditional mortar bedding. It provides mechanical fixing of the ridge tiles giving improved resistance against wind uplift. Rapid Roll-Out Ridge can be supplied with or without copper edging.

Rapid Roll-Out Ridge

- 455mm Concrete ridge tile (half round or universal angle ridge)
- Stainless steel ring shank nail and seal
- Ridge to ridge collar
- Metal roll weathertight membrane
- Ridge batten 50mm x --* (see ridge batten height table)
- Ridge batten fixing straps
- Roadstone standard tile (profile as selected)
- 47mm x 35mm tiling batten
- Roofing underlay overlapping ridge apex (cut short of apex when ventilation is required)

*Ridge batten height table

<table>
<thead>
<tr>
<th>Tile profile</th>
<th>Rafter pitch</th>
<th>Batten height mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derrie</td>
<td>22.5° - 35°</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>36.0° - 50°</td>
<td>50</td>
</tr>
<tr>
<td>Flat Tiles</td>
<td>22.5° - 30°</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>31.0° - 55°</td>
<td>25</td>
</tr>
</tbody>
</table>
**Dry Roofing**  
**Dry Hip System**

The Roadstone Dry Hip System provides a neat and attractive finish to the hip line without the use of mortar. The hip tiles are secured to the appropriate size hip batten, using stainless steel screwnails which give exceptional resistance to wind uplift. The system is quick and easy to install and is maintenance-free.

**Dry Hip Ridge**
- 450mm concrete hip tile (1/3 round or universal angle hip)
- Ring shank nail s/s
- Hip tile support tray
- Metal roll weathertight membrane dressed over hip onto tiles
- Hip batten 50mm x *=*(see hip batten height table)
- Hip batten fixing strap
- Underlay strip 1m wide laid down hip over main roof underlay
- Roofing underlay lapped over hip rafter
- 47mm x 35mm tiling batten
- Aluminium hip tile clip
- Hip rafter
- Roadstone standard tile (profile as selected) cut to rake of hip

<table>
<thead>
<tr>
<th><em>Ridge batten height table</em></th>
<th>Rafter pitch</th>
<th>Batten height mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derrie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.5° - 35°</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>36.0° - 50°</td>
<td>120</td>
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</tr>
<tr>
<td>Flat Tiles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.5° - 30°</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>31.0° - 55°</td>
<td>105</td>
<td></td>
</tr>
</tbody>
</table>

**Dry Roofing**  
**Stepped Dry Verge**

The Roadstone Stepped Dry Interlocking Verge System provides a neat, mortar-free verge that eliminates the need for an undercloak. Mechanical fixing provides high resistance against wind uplift for both verge tiles and stepped verge units. Stepped Dry Verge is available in two sizes to suit:
(a) Causeway
(b) Donard, and Derrie tiles tiles. All units are close fitting whilst allowing for variations in headlap.

**Stepped Dry Verge**
- Roadstone standard tile (profile as selected)
- Interlocking stepped dry verge unit
- Nail fixing (see fixing instructions)
- 47mm x 35mm tiling batten extending 38mm over gable
- Roofing underlay carried across cavity
- Rafter

Verge Unit
Blanking Plate
Starter
**Dry Roofing**

**Continuous Dry Verge**

The Roadstone Continuous Dry Verge System provides a neat, mortar-free verge that eliminates the need for undercloak. Nail fixing provides high resistance to wind uplift for both verge tiles and the verge extrusion.

Continuous Dry Verge is available in two sizes:
(a) Type R: 93mm
(b) Type D: 105mm

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**Clips**

**Function:**
The function of these clips is to bring much greater resistance to tile dislodgement than can be obtained by the traditional method of headnailing at site locations and on roof pitches where the forces tending to dislodge tiles are at their most severe. Where roofs are subjected to high wind lifting forces, the use of these specially designed tile clips is advisable as recommended and illustrated in this manual. It is also recommended that at pitches below 25°, high performance roofing underlay should be used.

**Roadstone Tile Clips**
Tile clips are used:
1. Below 25° pitch, and
2. As additional fixings for nailed tiles where determined by wind loading conditions.

**General Description**
Roadstone tile clips have been designed to give the maximum security for the various patterns of roof tiles for which they are intended.

**Batten Clips**
1. **Donard & Causeway.** These batten clips are manufactured from corrosion resistant aluminium alloy.
   **Derrie, Centurion & Vintage 15 x 9.** These batten clips are manufactured from acetal polymer. Each clip is secured with a 50mm x 10g aluminium alloy nail.
2. **MiniSlate & Gemini** tile clips are manufactured from acetal polymer.

**Verge Clips**
3. **Donard, Galloway, MiniSlate, Gemini & Vintage 15” x 9”** verge clips are manufactured from stainless steel. Each clip is secured with two 40mm aluminium alloy nails.
4. **Derrie & Centurion** verge clips are manufactured from stainless spring steel and secured with two 40mm aluminium alloy nails.

**Eave Clips**
5. **Derrie** eave clips are manufactured from acetal polymer. Each clip is secured with a 50mm x 10g aluminium alloy nail.

**Hip Irons**
6. Galvanised Hip Irons are screwed to the foot of each hip rafter as support for the hip tiles.

**Nails**
Generally at roof pitches above 25° tiles are head nailed using the appropriate size of aluminium alloy nail to I.S. 105 Part 1.

**Tile Profile Nail Size**
- **Donard** 50mm x 10g
- **Causeway** 45mm x 10g
- **Derrie** 70mm x 10g
- **SL8** 45mm x 10g
- **MiniSlate** 45mm x 10g
- **Gemini** 45mm x 10g
- **Plain Tiles** (min. pitch 35°) 40mm x 10g
- **Vintage** 50mm x 10g
- **Centurion** clip only (with 50mm x 10g nail)
**Windloading**
Under strong wind gusts the uplift of the roof tiles may be in excess of the dead mass of the tiles, hence requiring them to be securely fixed to prevent them being lifted from the building.

**Wind Loadings/Tile Fixing**
The principal factors to be considered in deciding on the necessity for additional mechanical fixings are:
1. The exposure and location of the site.
2. The height of the building.
3. The roof pitch.
4. The higher wind loadings encountered at eaves and verges.

Where a building is complex in shape, located on steep sloping ground or near to the edge of a cliff, further advice should be obtained.

**Recommended Nailing/Clipping** as per requirements given in compliance with the Irish Code of Practice for Slating and Tiling I.C.P: 2002.

- In the green area of the map every tile should be nailed or mechanically fixed.
- In the blue area each tile in every alternative course should be nailed or mechanically fixed.
- On all sites, every edge or perimeter tile should be nailed or mechanically fixed. In the case of valleys, the first full tile should be nailed or mechanically fixed.
- On exposed sites and in built up areas subject to adverse wind effects such as funnelling, every tile should be nailed or mechanically fixed within the blue area.
- On all roofs at pitches above 45°, each tile should be nailed or mechanically fixed.
- On all roofs at pitches of 55° and over, in addition to nailing each tile, the tail of each tile should be mechanically fixed.

**Exposed buildings**
For the purposes of selecting appropriate mechanical fixing, buildings in the following circumstances are considered to be exposed:
(a) any building which stands above its surroundings or has a ridge height in excess of 12 metres above adjoining ground level, or
(b) any building on a hill slope or hill top, or
(c) any building in a built up area which is subject to adverse wind effects, such as funnelling, or
(d) any building which is located in the green area of the map.

**Severely exposed buildings**
For the purposes of selecting appropriate mechanical fixing, buildings located in the green area of map which are in the following circumstances, are considered to be severely exposed:
(a) any building which stands above its surroundings or has a ridge height in excess of 12 metres above adjoining ground level, or
(b) any building on a hill slope or hill top, or
(c) any building which is subject to adverse wind effects, such as funnelling.

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**In summary, minimum fixing requirements for single lap tiles:**

<table>
<thead>
<tr>
<th>Pitch</th>
<th>Fixing requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitch ≥ 55°</td>
<td>All exposure conditions: every tile head nailed and tail clipped</td>
</tr>
<tr>
<td>Pitch &gt; 45°</td>
<td>a) Normal building: every tile head nailed or tail clipped</td>
</tr>
<tr>
<td>and &lt; 55°</td>
<td>b) Exposed or severely exposed building: every tile head nailed and tail clipped</td>
</tr>
<tr>
<td>Pitch ≤ 45°</td>
<td>a) Perimeter* area, normal building: every tile head nailed or tail clipped</td>
</tr>
<tr>
<td></td>
<td>b) Roof area excluding perimeter*, normal building: each tile in every alternative course head nailed or tail clipped</td>
</tr>
<tr>
<td></td>
<td>c) Exposed building: every tile head nailed or tail clipped</td>
</tr>
<tr>
<td></td>
<td>d) Severely exposed building: every tile head nailed and tail clipped</td>
</tr>
</tbody>
</table>

*All tiles at eaves, verges, ridges, hips and tiles adjacent to valleys, abutments, chimneys, rooflights, etc.
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