

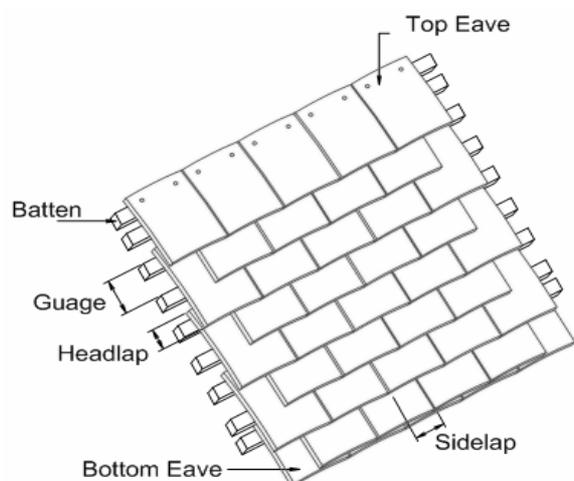
# Tudor Roof Tile Co. Limited

## Tudor Handmade Clay Roof Tiles Installation Guide

Tudor Roof Tile Co. Limited are often asked for details of our T.R.T recommended installation practices. Whilst we will always ask installers to follow the guidelines contained in the British Standard Code of Practice for Slating and Tiling BS 5534: 2014, and British Standard Code of Practice for Workmanship BS 8000-6: 2013, we offer the following synopsis of those guidelines.

### Laying Of Tiles

The bottom eave tile course plus first course, together with the top course plus final eave (top) course must be mechanically secured using nails.



All perimeter tiles should be nailed where possible, with ridge and hip tiles secured using mortar.

Each tile is laid to a gauge to give a minimum head-lap of 65mm. Each tile should have up to 3mm gap to each side to allow for expansion and movement.

On roof pitch's that are below 60 degrees then at least each tile in every fifth course is to be twice nailed. Above 60 degrees roof pitch and vertical, all tiles are to be twice nailed.

Nibbles tiles should have 2 pegs for each tile.

We always recommend always mixing tiles from three packs to ensure good colour consistency.

### Underlay

Modern lightweight underlays are now commonplace bringing the problem of 'ballooning' if not properly secured. This 'ballooning' has the potential to dislodge roof tiles. A nominal 10mm drape allows a drainage path for moisture. The underlay should provide a continuous under tile barrier, and should be fitted as described in BS 8000-6. Laps should be covered by battens, and may be additionally sealed in accordance with the manufacturer's instructions.

### Battens

A BS 5534 graded batten should be used with a minimum length of 1200mm and minimum size 38mm x 25mm (+3mm / -0mm) for rafters set at 450mm or 600mm centres. These battens to be positioned to give a minimum headlap of 65mm for roof tiling and secured with suitable nails. For vertical tiling counter battens are required and be fixed at maximum 600mm centres.

### Tiles



All eaves tiles (bottom and top) should be securely fixed with two nails in each tile. At the top of each roof, every tile in the top two courses are to be nailed twice. In vertical tiling eaves tile (with or without a lead flashing) is used under a window sill or soffit.

Any eaves ventilation system should be installed using the manufacturer's guidelines.

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## Verges

All verges are to be laid broken-bond with full tile and tile and a half in alternate courses. Where tiles are used to form the verge, they should be laid with the 165mm edge showing, face side downwards and projecting 38mm to 50mm over the gable walls or bargeboard. Bedding mortar completes the verge edge.

## Ridge

The Ridge is to be covered with either Half Round or Hogback ridge tiles. Third Rounds are not recommended.

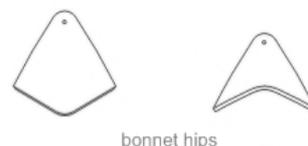


The ridge tiles are to be edge-bedded with a solid bed at butt joints. Nail holes can be supplied on request. Solid bed end ridge tiles and fill with tile slips.

Dry ridge fixing systems are increasingly used on new builds providing ventilation and mechanical fixing.

## Hips

Universal bonnet, or Kent or Sussex style hips can be used dependant on design. Hips tiles to be nailed to the hip rafters and mortar bedded. Solid bed the bottom bonnet hip tile and fill with tile slips to reduce visible impact of the mortar bedding.



## Valleys

Valleys to be formed with universal valley tiles to suit roof pitch. The adjacent tiles to be neatly cut to form a smooth intersection.

Tudor's universal valley tile is used between 40 and 50 degree pitch. A pitch above outside these values would be better suited to an alternative valley system.



## Nails

Batten nails recommended size 65mm long x 3.5mm shank.

Tile nails recommended size 40mm long x 2.65mm shank. Please note that timber treated with copper-based preservative can cause aggressive corrosion of mild steel nails when moist. Aluminium, copper, or stainless steel are therefore preferred.

Do not overdrive the nails, there is not even any need for the nail head to come in contact with the tile - overdriving the nails risk damaging the tile (from the head of the hammer hitting the surface).

## Mortar and Bedding

Tudor Roof Tile considers that the best "layman's terms" to define/order the materials required for mortar is:-

3 parts 0-2 mm building sand (for mortar) to 1 part ordinary Portland cement - (parts by volume). Note that the use of 'sharp sand' is now removed from the revised standards.

The nominal thickness of both horizontal and vertical mortar joints is dictated by the co-ordinating size of the roof tiling units and is normally taken as 10mm, exclusive of any key in the jointing surface of the units. Larger units of mortar may result where deeply profiled roof tiles are used, but the mass of mortar should be reduced using slips as packing.

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## Roof Ventilation

Ventilation of and from the roof space is to be in accordance with requirements of building regulations.

Tudor Roof Tile offer their patented 'invisible undertile' venting system which makes use of Tudor tiles cross camber. Each unit can provide 9,000 mm<sup>2</sup> venting.

Alternatively, Tudor supply a 'semi-visible' vent with 6,000 mm<sup>2</sup> venting, and is better able to be retro-fitted.

## Safety

Tudor Roof Tile clay tiles are inert, and do not present any risks to health when used as supplied.

All clay products, when cut (by hand or mechanically) produce a certain amount of dust and chippings. Persons carrying out these operations must wear suitable eye and breathing protection.

Pack should be stored on clean level ground, no more than two high. All packs are supplied on wooden pallets suitable to be handled with forks only.

## Technical Information

Tudor Handmade clay roof tiles are manufactured to comply with BS EN 1304 and are fully CE marked.

Tested and certificated by LUCIDEON - BS EN 538:1994 - Determination of Flexural Strength.

Tested and certificated by LUCIDEON - BS EN 539-2:2013 - Testing for Frost Resistance.

Tested and certificated by LUCIDEON - BS EN 539-1:2005 – Water Impermeability

Water Absorption – nominal 6.0%

Product Range - Plain Tiles, Peg Tiles, Ornamentals, Fittings

Size (nominal) - 265mm length x 165mm (Plain T), 255 x 160mm (Peg T), 300mm ridges.

Size (nominal) – 265mm length x 248mm (Plain Gable T), 205mm length x 165mm (Plain Eave T)

Tile Lap 65mm , Gauge 100mm

Coverage 60 tiles per sq metre (Plain T), 66 tiles per sq metre (Peg T)

Laid Weight at 100mm gauge, 70-75Kg per sq metre (Plain T), 72-78Kg per sq metre (Peg T)

Fittings sizes dependent upon design. Universal valley and hip tiles suitable for use between 40 and 50 degree pitch.

Edge Guards recommended over glass roofs, conservatories and areas of high risk.

Details of Durability guarantee can be obtained on [www.tudorrooftiles.co.uk/downloads.html](http://www.tudorrooftiles.co.uk/downloads.html) .

## Further Information

Tudor Roof Tiles – [www.tudorrooftiles.co.uk](http://www.tudorrooftiles.co.uk)

LUCIDEON (was CERAM) – <http://www.lucideon.com>

Roof Tile Info – [www.roofinfo.co.uk](http://www.roofinfo.co.uk)

The Clay Roof Tile Council - [www.clayroof.co.uk](http://www.clayroof.co.uk)

National Federation of Roofing Contractors - <http://www.nfrc.co.uk>

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