

Sandtoft & Keymer roof specification

Generally

The roof and all Sandtoft & Keymer products must be installed fully in accordance with this specification and in conformity with the requirements of BS 5534 and BS 5250.

All site work must be carried out adopting normal standards of good workmanship and in conformity with the requirements of BS 8000-6: the British Standard Code of Practice for workmanship on building sites.

The specification below refers to Sandtoft details and installation guides. All these, plus video guides and much more information, are available on our website at www.wienerberger.co.uk

Tile

- Traditional Handmade Clay Plain Tiles

Roof construction

- Base: **trussed rafters at 600mm centres**
- Roof pitch: **40 degrees**

Underlay (Product Ref: 2450939932)

- Lay Sandtoft VPM Super horizontally over the rafters with a drape between each rafter. Allow a minimum 150mm horizontal lap between courses and minimum 100mm vertical laps. If necessary increase the horizontal lap to coincide with a tile batten
- Ensure there are no cuts, tears or perforations generally in the underlay. Repair any that do occur using Sandtoft Multi-tape (Product Ref: 6180006) or discard and replace as necessary
- Ensure the underlay provides a watertight seal around all penetrations and junctions
(Refer to the Sandtoft installation guide for Sandtoft VPM Super)

Battens

- Timber to be sawn softwood; species, grading and preservative in conformity with BS 5534
- Fix 38 x 25mm tile battens, nailing into every rafter using 65 x 3.35mm smooth round steel nails
- Joints to be square cut; butted centrally on rafters and must not occur more than three times in any group of twelve battens on any one rafter
- Set the eaves course batten to give a 45 to 55mm overhang of the tiles into the gutter
- Set the top course batten to allow the ridges to overlap the tiles by at least 75mm
- Measure the distance from the eaves batten to the top course batten to determine the number of courses and exact tile gauge. Make sure the tile headlap is at least 65mm
(Refer to the Sandtoft installation guide for battens)

Tile fixing specification

- All tiles must be twice nailed.
- ***Alternatively, obtain a written fixing specification from Sandtoft Technical Department before starting tiling***

Tiling generally

- Headlap: minimum 65mm
- Tile: Handmade Clay Plain Tiles (Product Ref: *****+colour code)

- Tile colour: **tbc**
- Lay each course of tiles cross bonded with tails aligned. Nail tiles using 38 x 3.35mm aluminium ring shank clout head nails
- Set out as far as possible to avoid cut tiles. Where cuts are unavoidable, use tile-and-half tiles to ensure cuts are large enough to nail and to maintain minimum 55mm side lap
- (*Refer to the Sandtoft installation guide for handmade clay plain tiles*)

Ventilated eaves (Product Ref: 2452939047)

- Set the fascia height, including over fascia ventilator, so that the eaves course tiles lay at the same angle as the tiles above (*refer to Sandtoft's table of fascia heights*)
- Fix spacer trays continuously to ensure free passage of air between underlay and insulation at wall plate.
- Lay underlay support trays over the fascia, ensuring adequate fall to underlay
- Lap the underlay over the underlay support trays by at least 150mm
- Position the first tile batten so that tiles overhang the gutter by 45 to 55mm
- Position additional batten for under-eaves course tiles such that tile tails line up with eaves course tiles
- Twice nail all under-eaves course tiles
(*Refer to the Sandtoft handmade clay plain tile eaves detail*)

Bedded verge:

- Ensure that gable wall is brought up to correct level.
- Finish the underlay 50mm from the outer face of the gable wall or bargeboard
- Bed an undercloak of either 6mm x 150mm fibre cement board or Sandtoft plain tiles laid face downwards with bottom ends exposed, projecting 38 to 50 mm beyond the face of the wall or bargeboard on mortar identical to that used in gable walling, and point neatly. Do not use a plain tile undercloak on timber bargeboard construction
- Carry the tiling battens over the undercloak and finish 25 to 50 mm from the roof verge edge
- Use pre-treated batten ends at the verge or treat with a suitable preservative
- Fix standard tiles and tile-and-half tiles in alternate courses on right and left hand verges
- Bed the outer edge of the verge tiles flush with the undercloak on 75 mm wide bed of mortar, ensuring that the mortar is not displaced or cracked by mechanical fixing of tiles

Mortar bedded and mechanically fixed ridge

- Underlay from one side of the ridge should overlap the underlay on the other side by not less than 150mm.
- Fix supplementary ridge batten to ridge board or rafter apex for fixing of ridge tiles.
- Ridge tiles: Handmade Clay Ridge
- Colour: **tbc**
- Make weathertight with edges and joints of ridge tiles solidly bedded in mortar. Insert tile slips into solid bedding at butt joints.
- Cut ridge tiles to finish neatly at the ridge/hip junction.
- Mechanically fix ridges using Sandtoft mortar bedded ridge/hip fixing kit (Product Ref: 6000175)

Mortar bedded and mechanically fixed hip

- Underlay from one side of the hip should overlap the underlay on the other side by not less than 150mm.
- Fix supplementary hip batten to hip rafter for fixing of hip tiles.
- Hip tiles: Handmade clay hip/ridge
- Colour: tbc
- Cut standard tiles and tile-and-a-half tiles to fit closely at junction. Make weathertight with edges and joints of hip tiles solidly bedded in mortar as clause 290. Insert tile slips into solid bedding at butt joints. Fix hip tiles to hip batten with stainless steel drive screws and sealing washers.
- Shape first hip tile neatly to align with corner of eaves and fill end with mortar tile slips finished flush.
- Mechanically fix ridges using Sandtoft mortar bedded ridge/hip fixing kit (Product Ref: 6000175)

Bonnet hip

- Lap the underlay on one side of the hip over the underlay on the other side by at least 150mm
- Cut the tile battens to the hip, making sure the ends of the battens are fully supported, either on bearers or onto the hip batten
- Bonnet hip tiles: Handmade clay plain tile bonnet hip (Product Ref: *****+colour code)
- Colour: tbc
- Bed each bonnet hip in mortar, coursing in with general tiling and fix to hip rafter with 75 x 3.35 aluminium nails. Strike mortar back about 13mm from edge of bonnet. Fill end of first bonnet with mortar and tile slips finished flush
- Cut adjacent standard tiles and tile-and-a-half tiles to fit neatly

Arris hip

- Lap the underlay on one side of the hip over the underlay on the other side by at least 150mm
- Cut the tile battens to the hip, making sure the ends of the battens are fully supported, either on bearers or onto the hip batten
- Arris hip tiles: Handmade clay plain tile arris hip (Product Ref: *****+colour code)
- Colour: tbc
- Spot bed each arris hip on mortar, coursing in with general tiling and fix to hip rafter with 75 x 3.35 aluminium nails
- Cut adjacent standard tiles and tile-and-a-half tiles to fit neatly

Mitred hip

- Lap the underlay on one side of the hip over the underlay on the other side by at least 150mm
- Cut the tile battens to the hip, making sure the ends of the battens are fully supported, either on bearers or onto the hip batten
- Cut tile-and-a-half tiles in each course to form a straight, weathertight, close mitred junction
- Position lead soakers in each course, ensuring they extend not less than 100mm each side of hip line

Tiled valley – Max pitch 45 degrees

- Fix 19mm valley boards, supported on bearers and flush with the tops of the rafters
- Lay a continuous strip of underlay centred on the valley and lap the general underlay over this by at least 300mm

- Cut the tile battens to the valley, making sure the ends of the battens are fully supported over the valley boards
- Valley tiles: Handmade clay valley tile (Product Ref: *****+colour code)
- Position each valley tile, one per course, centrally in the valley
- Cut adjacent standard tiles and tile-and-a-half tiles to fit neatly

Bonding gutter with firebreak (Product Ref: Mortarless Bonding Gutter 70mm: 2450939943)

- Cut the tile battens to finish fully supported on the rafter and/or party wall
- Finish the underlay to turn up over the ends of the battens
- Lay mortar bed over party wall to finish flush with tops of the tile battens
- Install the Mortarless Bonding Gutter in accordance with Sandtoft's installation guide
(Refer to the Sandtoft Mortarless Bonding Gutter detail and installation guide)

Fire separating wall (ie without bonding gutter)

- Fill the space over the wall with layers of mineral fibre quilt so that when the underlay and battens are laid it is lightly compressed. Tuck the edges of quilt between edges of wall and adjoining rafters
- Lay 300 mm wide pads of mineral fibre quilt thick enough to seal all gaps and cut to fit snugly between the tile battens
- At boxed eaves, completely seal all air paths with compressed mineral fibre quilt

Side abutment with soakers

- Finish the underlay to turn up against the wall by at least 75mm
- Cut the tile battens, making sure they are fully supported on the rafter or bearer
- Finish tiling close to wall, maintaining broken bond using tiles and tile-and-half tiles
- Form lead soakers and install in each tile course with 75mm upstand against abutment and turned over the head of each tile by 10mm
- Install lead step and cover flashing, overlapping the soaker upstands by not less than 75mm

Top edge abutment

- Turn underlay at least 100mm up the abutment
- Set the tile battens so that the tiles fit closely to the abutment
- Position additional battens for top course tiles to maintain gauge
- Install lead cover flashing dressed over the tiling by not less than 150mm
(Refer to the Sandtoft Top edge abutment detail)

Top edge ventilated abutment (Product Ref: Top abutment ventilator: 2452939000)

- Lay the underlay to finish 5 to 10mm from the wall
- Set the tile battens so that the tiles fit 5 to 10mm from the wall
- Position additional battens for top course tiles to maintain gauge
- Install the top abutment ventilator in accordance with Sandtoft's installation guide
- Install KoraFlex cover flashing (Product Ref: 6010+colour code), dressed over the ventilator and tiling by not less than 150mm
- KoraFlex colour: tbc
(Refer to the Sandtoft Top edge ventilated abutment detail and installation guide)

Roof window

- Install roof window surround in accordance with manufacturer's instructions
- Turn underlay up against and tape to window surround using Sandtoft Multi-tape (Product Ref: 6180006)
- Seal underlay at each window corner using Sandtoft Multi-tape
- Where available install a window secondary underlay skirt. Alternatively, form skirt from Sandtoft VPM Super underlay
- Make a cut in the general underlay above the window to create a lap over skirt and seal with Sandtoft Multi-tape
- Seal skirt over tiling battens and general underlay using Sandtoft multi-tape
- Install roof window flashings in accordance with manufacturer's recommendations
- Install tiling over flashings. Where necessary at side flashings, carefully remove tile nibs to reduce 'kicking' over flashings. Use 38mm stainless steel screws, instead of nails, to secure tiles over window flashings

Change of pitch

- Fix timber tilting fillet and flashing support board, set to provide correct lay angle for course of tiles above the change of pitch
- Install lead flashing over tilting fillet and board, finishing in a welt under the tiling and extending at least 150mm over the course of tiles below
(Refer to the Sandtoft change of pitch detail)

Junctions

- Fix a lead saddle to provide a weathertight detail at each: -
- Junction of ridge with hip
- Junction of ridge with valley
- Junction of ridge with abutment
- Top junction of two valleys

Roof slope ventilators

- Ventilator: Invisivent (Product Ref: *****+colour code)
- Colour: tbc
- Position in second top tile course at 1.5 metre centres for high level ventilation.

Roof slope terminals

- Terminal: Invisivent with pipe adaptor (Product Ref: *****+colour code + 6070112)
- Colour: tbc
- Position and connect as required for SVP's/Mechanical Extraction