

Slating & Tiling

TIPS 38

Verge Construction: Part 1

The verge construction that I am about to discuss will be a traditional mortar-bedded verge, that is at right angles to the eaves and ridge, using tiles or slates.

Let's start by getting the fundamentals right on the majority of tiled and slated verges. Part 1 will deal with the generic types, the environmental influences, and the first part of the construction up to fixing the battens. Part 2 will finish the verge construction, and Part 3 will deal with raking verges.

While proprietary dry verge systems exist and will be mentioned, they do not form part of this discussion.

There are two general types of verge, those that are directly above a gable wall, and those that are spaced away from the gable wall on a gable rafter with a barge board, commonly known as a gable ladder. Generally speaking, the constructions are similar, but not the same, and need to be appreciated.

“While it is impossible to stop rain being blown over a verge, it can be directed by forming a 38mm-50mm overhang”

Chris Thomas

Rain

Deluge rain occurs when there is no wind, and water just falls out of the sky. As the wind increases, the volume of water decreases, until there is all wind and no rain. Depending upon the force and direction of the wind, rain will either be blown against the edge of the verge, or over the verge.

No amount of slope on the edge tiles can stop the wind blowing rain over the edge of the roof when it is in the right direction. Kicking up the edge tiles on the verge may direct deluge rain away from a verge, but at the same time it will generate gaps between the tiles,

especially with tiles or slates that are laid broken bond, and therefore should be avoided.

While it is impossible to stop rain being blown over a verge, it can be directed by forming a 38mm-50mm overhang to encourage the water to drip clear of the gable wall, or run down the edge of the verge to the gutter at the eaves.

Wind

Wind blowing against a gable wall will cause air to rise up over the gable end and vortex over the verge. This will create positive pressure on the underside of the verge, and suction on the top surface of the roof covering, a short distance in from the verge. The greater the overhang of the verge the greater the vortexing that will occur.

Roofs in windy locations are rarely designed with wide overhangs at the eaves or verge. Maximum suction occurs in from the verge edge, the distance will vary with the wind force and the size of the building. Wind hitting a narrow gable will spill around the corners and go down the sides of the building rather than rise over the verge, while with a wide gable most of the wind will go over the verge and only the wind close to the corners will spill around the sides. It is for these reasons fixing all verge tiles and slates is essential.

Underlay

The underlay should extend as far as possible into the verge. With a verge directly above the gable wall the underlay should extend to within 50mm of the outer wall edge. This is to allow the under-cloak to be bedded into position on the edge of the brick or block wall.

With a gable ladder construction the underlay should extend to the outer edge of the barge board to give maximum protection. In both situations the underlay should always remain under the under-cloak, never above. The reason being that some water will get through the



~ The black line running through the mortar is the edge of the underlay, which was soaking up rain water and transferring it into the loft. The underlay should be under the undercloak, not above it. Also these Delta tiles can not be nailed so they should be clipped using verge clips. Where are they?

mortar bedding and can run off the inner edge of the undercloak. If this happens it will be above the underlay and safe.

If the underlay is above the under-cloak this water will be below the underlay and can run along the underside of the underlay inside the roof void; something that should be avoided.

Where the underlay meets the bottom of an open valley the underlay should lap onto the edge of the lead sheet or trough. With mitred valleys or valley tiles it should remain under all the tiles and slates.

Battens

Tile or slate battens should finish as close to the verge without being exposed or embedded in mortar as possible.

Generally with a verge directly above the gable wall the battens should be cut square approx 50mm from the face of the wall. This will ensure that a 150mm wide under-cloak can lap under the ends of the battens by 50mm and overhang the wall face up to 50mm. The end of the batten should not be further than 300mm from the last rafter to which the batten is nailed. If the position of the last rafter is further away, perhaps due to the thickness of the external wall and cavity construction, a timber wall plate may need to be installed above the inner wall skin. This will allow the battens to be nailed to it, keeping within the 300mm requirement (BS5534 clause 6.3.1.3).

With a gable ladder construc

tion the battens should finish on the outer face of the gable ladder frame, in line with the inner face of the barge board. They should be nailed to the gable rafter once the under-cloak has been installed to the correct line. If the battens extend to the outer face of the barge board there is a risk that the battens will come into contact with the mortar.

Tips

- Keep the ends of the battens clear of the mortar bedding.
- Never let the batten finish further than 300mm from the last batten fixing.
- Always keep the underlay under the under-cloak.
- All verge tiles and slates must be mechanically fixed.
- The edge of the verge should be 38mm-50mm clear of the wall or barge board.

Next month: Part 2

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