

Slating & Tiling

TIPS 29

Interlocking tiles – side abutment

Side abutments, where the left or right-hand edge of a roof meets a vertical wall, look very similar to a verge, and in many ways they are. But, for a watertight junction, the construction is very different.

If the side abutment is not at right angles to the line of the battens then water running down the roof could either run into, or away from, the side abutment; these are called raking abutments and are outside of the scope of this article. Provided that the side abutment is at right angles to the line of the battens then the following comments will apply.

Battens

In many instances the tile battens at a side abutment will finish hard against the abutment wall. This is acceptable with profiled interlocking tiles where a full cover flashing is used correctly, or with proprietary abutment flashing units. But for all other situations a secret gutter and cover flashing is the recognised best practice solution. This will require each batten to finish 38 to 50mm away from the abutment to allow the drainage channel in the lead or GRP secret gutter, to be formed in the depth of the batten, against the abutment wall. Provided the last rafter is located 50mm away from the abutment wall, fixing the end of the batten will be easy, but if the rafter is hard against the abutment wall an additional 50 by 50mm batten will need to be fixed to the side of the last rafter to support the end of the batten that stops 50mm short of the wall. With a lead secret gutter and cover flashing detail the lead drainage channel will not support its own weight and will need to be supported with a 50 by 50mm batten fixed down between the wall and the last rafter and screwed into position.

Eaves

At the bottom of an abutment where a secret gutter is installed there must be a clear path for any water in the secret gutter to drain out into an eaves gutter. This can be achieved by finishing the underlay support board and over fascia ventilation grill short of the

abutment, or to cut a notch in the fascia board, to allow the secret gutter channel to run through and finish into the guttering. However there is a potential clash with the underlay that will be installed below the GRP secret gutter and have to rise up onto the top of the underlay support tray. There is not an issue with a lead secret gutter as bitumen underlay should not be laid under a lead flashing or gutter in the first place. An alternative solution is to reduce the pitch of the secret gutter channel approaching the eaves and install a lead fantail to allow the water to flow over the fascia board into the gutter. Where the bottom of a side abutment meets lower tiling a lead fantail is essential to bring any water out onto the head of the lower tile.

Bond

When setting out the tiles the bond pattern of the tiles is an important consideration. The tiles are likely to be either straight bond or half bond (broken bond), but occasionally with a mock bond appearance the true bond is achieved using a quarter or three quarter tile. Depending upon which bond you have will depend on the module that you have to use to finish at a side abutment with the minimum number of uncut tiles. The traditional method of finishing on a whole tile is to shunt the tiles in or out along the row. There are always occasions when it is impossible to finish on a whole tile and therefore tiles will need to be cut to fit. With any piece of tile that is smaller than half the width of the original tile there is a risk that fixing the small section of tile will be difficult, especially if a secret gutter is being used.

Fixings

A continuous lead cover flashing is in effect a continuous clip that helps to hold down the edge row of tiles, therefore if the fixing specification requires the edge tiles to be clipped, the lead will suffice on a left hand abutment. Where all perimeter tiles are required to be mechanically fixed using nails there may be a problem



- How not to construct a side abutment. The battens under the GRP secret gutter extend to the face of the wall, kicking it up. This has kicked up the edge tiles making them unstable and difficult to nail into the batten. Note the debris blocking the drainage channel, and the absence of lead cover flashing over the surface of the tiles.

achieving the nail fixing for a flat cut, or half tile, as the nib is often cut off to prevent it clashing with the secret gutter and the nail hole coincides with the secret gutter material, or misses the end of the batten. In these instances it is better to finish the side abutment 20 to 40mm away from the side abutment and extend the lead cover flashing over the top surface of the tile to achieve the required minimum side lap cover. The side lap dimension is not measured from the face of the wall but from the edge of the tiles.

Flashings

With interlocking tiles, soakers must never be used. Therefore a lead cover flashing will be required. With flat interlocking tiles the minimum side lap distance should be 150mm. However with profiled interlocking tiles side lap cover is not so easy to determine. Many profiled interlocking tiles have a trough that is flush with the side interlock, such that unless the flashing goes over a full roll water creeping in between the flashing and the tiles will run onto the trough of the tile and could run off the edge. The recommendation of the Lead Sheet Association is that the flashing covers a full roll. Depending upon the location of the roll at the side abutment will determine the actual side lap cover distance.

Tiles like a single pantile can present a problem as the bulk of the profile is a trough and the nail hole is situated at the bottom of the trough. Therefore to cover a complete roll requires one and a half tile width to be covered with flashing or the edge tile to finish as a cut half tile, making it impossible to nail fix into position. Provided the rafter pitch is steep, finishing the flashing in the trough of the first tile appears to be adequate but will only have a cover of 110mm rather than the minimum

150mm. However at rafter pitches close to the minimum pitch for the tiles water leakage problems will occur. As a rule of thumb rafter pitches less than 45° should have the wider flashing, but there is no definitive ruling or test data for this.

Soffit

At the head of a side abutment there is often a diminishing space where the side abutment meets a soffit. This space is often left unfinished and can allow birds to enter the roof and nest. Where the roof and the soffit meet it is impossible to nail the top tile and almost impossible to install a flashing. In these instances it is better to install a vertical board on a timber framing between the soffit and the tiling, to allow the top tile to be installed correctly and a lead flashing to dress down over the head of the top course of tiles. While this may form an additional section of side abutment between the soffit and the base of a valley, it is better than leaving it open for birds nest in the roof.

Tips

- Where possible the tiles should be set out to finish at an abutment with a whole tile.
- Soakers should never be used at a side abutment with interlocking tiles.
- The end tiles at a side abutment should be set so that they do not kick up and the nail fixings do not puncture the secret gutter.
- The construction of the top and bottom of a side abutment are as important as the middle.

Compiled by Chris Thomas, The Tiled Roofing Consultancy, 2 Ridlands Grove, Limpsfield Chart, Oxted, Surrey, RH8 0ST, tel 01883 724774,

Email:

chris.thomas@thetiledroofingconsultancy.com

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