

# Tiling tips: — No 8

## Plain tile side lap

Brick walls have many traditional patterns of bonding the courses to give the wall strength, with interesting names like English Garden wall, Double Flemish, Stretcher and Rat-trap. Roof tiles have only three accepted bond patterns, straight bond, half bond and quarter bond. Which tiles are used will dictate which is the most appropriate bond pattern.

### Perp joints

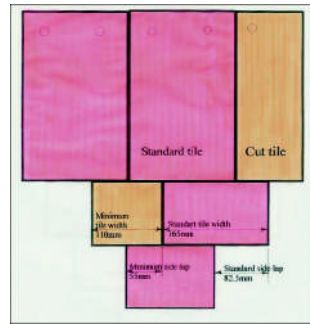
All double lap plain tiles should be set out to give a half bond appearance with the perp (perpendicular) joints aligned as straight as possible up the roof. This is easier said than done with some plain tiles, such as old handmade clay tiles, as they can vary in width by as much as 5mm. Drifting perp joints can give the roof a very attractive random look, whilst perfectly straight perp joints can look crisp and regimented.

### Side lap

The half bond pattern is measured horizontally between a perp joint of any tile to the nearest perp joint in the course of tiles below. As the nominal width of a plain tile is 165mm, the nominal half bond should be 82.5mm. However if you read clause 3.4.2.2 of BS 5534, it states that the minimum side lap for a plain tile should not be less than one third of the width of a tile, which is 55mm.

### Hip and valley tiles

The reason for the figure of 55mm is to accommodate the installation of purpose-made hip and valley tiles. The true pitch of a hip or valley is approximately 5° less than the adjacent rafter pitch. Where the rafter pitch is 35°, the true hip/valley pitch will be close to 30°. The difference in true pitch has an affect on the relationship between the tail of the hip/valley



~ The side lap for all plain tiles should never be less than 55mm without a lead soaker being used.

tile and the head of the hip/valley tile below it. The geometry results in the perp joints of the hip/valley tiles being approximately 55mm apart at 88mm batten gauge. Clause 3.4.2.1 of BS 5534 states that the head lap of a plain tile should not be less than 65mm, nor greater than one third of the length of a plain tile, which is 88mm. Therefore the minimum gauge will also be 88mm.

### Cut tiles

To ensure that a 55mm side lap is achieved, no cut tile in the body of the roof should ever be less than 110mm wide. This may present a problem where there is the need for a cut falling between a

tile and a half module of 82.5mm and the 110mm of a cut tile. In this instance the cut should be spread over two tiles, or alternatively a lead soaker could be installed. Do not forget that where any tile is cut down, two head nail fixings will still be required and a new second nail hole may be needed to replace one cut off.

### Soakers

Where a soaker is used to protect a side lap it should be approximately 250mm wide by 200mm high. Installed correctly this will protect the lower perp joint by covering the lower joint and preventing water running into the joint under the tiles. If however all the tiles on the same batten are narrower than 110mm and/or the perp joints are closer than 55mm, as with the apex of a conical roof, a series of 2m long lead soakers would be more effective.

### Conclusion

The side lap of a plain tile roof should never be less than 55mm, without a lead soaker being used.

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