

## Hook vs Nail Fixing

Historically, roofing slates were fixed with wooden pegs, a practice that evolved into two radically different methods: in the UK the pegs were replaced by nails; on the continent they were replaced by S-shaped metal hooks or 'tingles'.

Designing a successful slate roof must take into consideration a number of related factors and this includes the method of fixing to be used. The site's exposure level, the roof's pitch, the type and size of the slate being used and the roof's shape and aesthetics all play a part in determining which method of fixing will be the most appropriate for the design.

As the two methods have advantages and disadvantages that influence the design and affect the roof's success, it's important to be aware of them.

### Site exposure

Hook fixing offers greater resistance to wind lift as the hook secures the tail of the slate and locks them together more securely. As a result, the method is commonly used in those parts of the UK where the site's exposure level is considered 'severe', eg: Devon and Cornwall, Wales, Cumbria and Scotland.

### Design flexibility

The design of the roof influences the shape and size of the slates to be used and successfully incorporating some features, such as curves, swept valleys, cones and domes, relies on being able to use narrow slates.

Slates to be fixed by nail need a 25mm margin between the hole and the longitudinal edge and this restricts their width to a minimum of 150mm – hook fixing allows slates with a width of just 100mm to be used.

### Aesthetic appearance:

Whereas the end of the hooks are visible, the nails are covered by the overlap of successive rows and this gives the roof a smooth appearance.

### Maintenance

With the nail and its hole covered by the next row of slates, replacing individual slates fixed with nails can only be achieved using hooks.

**Website**

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**Wastage**

Slates to be nail fixed can be supplied either pre-holed at the quarry or unholed for holing on site, a task that increases labour costs and wastage. Slates for hook fixing are, of course, supplied unholed.

**Nail vs hook fixing: a quick guide**

	Hook fixing	Nail fixing
Design flexibility	Good	OK
Resistance to wind lift	Good	OK
Resistant to storm force winds	Yes	No
Allows roof pitches below 20°	Yes	No
Effective width of the slate is reduced	No	Yes
Allows the use of narrow slates	Yes	No
Aesthetic appearance	Tips show	Smooth
Holing on site – labour cost	Not needed	Yes
Holing on site – material cost (wastage)	None	Possible
Lifespan of the fixing is the same as the slate	Yes	Yes
Risk of 'nail sickness'	None	Possible
Slate retention if it breaks across its width	Yes	No
Ease of maintenance and slate replacement	Easy	Difficult