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## Maintenance, Repair and Restoration

# Slate Roofs



### The Conservation Value of Slate Roofs

Although it is not a naturally occurring building material in the region, slate, particularly the blue Welsh slate, is synonymous with the Victorian era rebuilding and expansion of the towns and villages of the district. The building of the district's familiar Victorian townscape from the mid-19th century onwards followed the establishment of a national railway network which allowed slate, a durable roofing material that is cheaper, lighter and thinner than stone slate to be used in new development. As a result, Welsh slate is a common historic roofing material and is a key feature of the skyline and roofscape of many conservation areas, helping to visually unify different residential, civic, commercial and industrial buildings of the Victorian era and the early 20th century. The texture, colour and profile of slate complements the local sandstone

and gritstone. The three main types of roofing slate used in the district are Welsh (a blue/grey colour), Westmorland (green/grey), and Burlington (grey). Slate is still quarried in Britain and remains a commonly available roofing material.



### The Maintenance and Repair of Slate Roofs: Best Practice

#### DO...

- 4 Inspect the condition of the roof every year for minor problems such as loose slates, and loose ridges externally, and damp roof timbers internally.
- 4 Remove any vegetation or debris from the roof. Excess moss holds water and can speed up the deterioration of the slate, while creepers such as ivy can dislodge slates.
- 4 Hire roofing contractors who have proven experience in working with slate roofs and can show you local examples of their work.
- 4 Obtain advice from a structural engineer if you are worried that the structure of a roof might be unstable. Only prolonged neglect or a serious failure of the structure would occasion the full replacement of the roof structure.
- 4 Re-use as much of the existing roof as possible. If replacement slates are needed, these should have the same appearance and proportions as the existing slates.

- 4 Agree with your contractor the source and detailing of new slate and ensure that this agreement is observed. Welsh slates should only be replaced with Welsh slates, Westmorland with Westmorland, and Burlington with Burlington.

- 4 Retain the original coursing of the slates on the roof. Slates are usually set in diminishing courses, which means the slates should get smaller closer to the ridge. Large slates lower down the roof were a sign of wealth and this detail should be retained during repairs or re-roofing.

- 4 If the roof has decorative slate (such as fishscale slates, so called because of their scale-like shape), replacement slates should match this detail.



- 4 Fix slates in place using copper, aluminium alloy or galvanised nails and fittings. Stainless steel or galvanised nails should be used in the roof structure.



- 4 Replace a roof rather than repair it if more than 20% of the slates need fixing or replacing, as this is the cheaper option and makes sense if the roof is nearing the end of its useful life.
- 4 Check the sheathing (timber boards under the slates) for rot and projecting nails. Replace if necessary with new solid timber boards, ensuring that any new sheathing is the same depth as any original sheathing.
- 4 Ensure that any zinc soakers or flashing is visually discrete; flashings which wrap onto a wall or chimney are a poor modern detail, which is visually detracting.
- 4 Photograph the roof before it is repaired or re-laid. This way there is a record of the original detail which can be used for comparison.

## The Restoration of Slate Roofs

There are a few cases where roofs which were originally roofed with slate have been re-roofed with synthetic modern materials. If a original roofing material were to be reinstated, most of the advice above would be applicable. More detailed and in-depth advice concerning the maintenance repair and re-laying of slate roofs can be found in the US National Park Service's (1992) 'The Repair, Maintenance & Replacement of Historic Slate Roofs' preservation brief, which can be downloaded from [www.nps.gov](http://www.nps.gov). In any event, the Conservation Team is happy to advise.



## DO NOT...

- 6 Ignore minor problems, as they can lead to larger and more costly problems if left unattended.
- 6 Leave slates which are crumbling and past their best on the roof. Slates which easily break apart can hold water like a sponge and allow water to soak into the roof timbers.
- 6 Hire building or roofing contractors with no proven experience with working with slate roofs, otherwise repairs may be inappropriate.
- 6 Tar or add any other external coating to a slate roof. The coating can seal the roof void, causing problems such as fungal attack and infestation of roof timbers due to the lack of ventilation. The coating can crack and allow water into the roof.
- 6 Substitute slate with another roofing material. Any replacement material will not have the same visual qualities and will detract from the feel of the conservation area. This also applies to using a different type of slate (e.g. Welsh instead of Westmorland).
- 6 Ignore the original detailing of the roof. The loss of details such as diminishing courses of slate, or decorative slates such as fishscale has a negative impact on the building as a whole and in some cases can affect the group value of houses.
- 6 Use plywood or pressured timber board for sheathing. Plywood is so hard that the bounce created by hammering nails into it can dislodge other slates. Pressurised timber is prone to shrink, displacing or cracking slates in the process. If new sheathing is not the same thickness as adjacent sheathing, this unevenness will show in the finished roof and may cause the slate to crack.

