

# Slating & Tiling

TIPS 26

## Temporary roof coverings

There are times when all the tiles or slates on a pitched roof need to be removed to allow repairs or alterations to be undertaken to the roof structure or sub-structure.

Between stripping off the roof covering and putting it back on again, may be as little as one week or perhaps as long as a year. The anticipated time period between stripping and reinstatement will decide the choice of temporary roof covering.

### Duration

If the time period of exposure is short, say less than one month, it is quite normal and acceptable to use normal underlay. If the period of exposure is greater than one month but less than six months, tarpaulins would be more appropriate. In excess of six months it would be more appropriate to use corrugated iron sheets or similar materials. If the total roof structure is to be modified or if the building below the roof is sensitive to water ingress, such as a hospital or a museum, then it may be more appropriate to install a total scaffold over-roof with enclosed sides.

With each of these options there are considerations to be taken into account at the planning and construction stage, to ensure that the roof functions properly.

### Short duration

Exposed underlay, depending upon its manufacture, has a limited life. Many of the polyester and polythene based underlays have restrictions on the maximum period that the material should be exposed to ultraviolet light. Like most plastics, sunlight will affect the durability of the material and given sufficient time will cause it to disintegrate. In the short term the material can shrink with temperature. Initial shrinkage is a reaction to the material being held in tension while being coiled into rolls to stop it creasing. Some underlay materials can shrink with heat like shrink wrap, while others are more stable. Under high wind

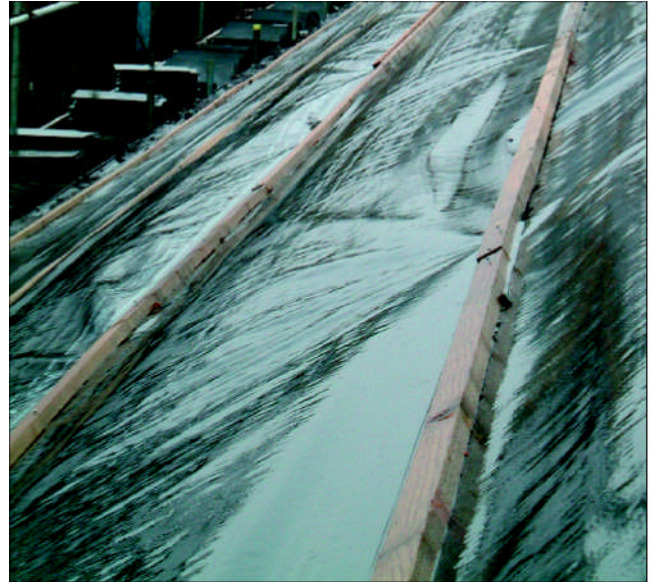
suction loads, some underlay materials can be stretched sufficiently to make them flap. Generally, bituminous underlays do not shrink or stretch as much as plastic-based underlays. However, hessian reinforced underlay is more prone to tearing under wind flapping conditions.

### Traditional timber rafters

To overcome the effects of wind disturbance it is normal to lay the underlay with a sag and temporary batten at the laps and mid-span of each sheet. The sag allows rainwater to drain under the temporary battens, while the battens hold the underlay on the roof under windy conditions. With underlays that will shrink, an excessive sag may be advisable to ensure that after shrinkage the underlay is not taut. In some instances the underlay can shrink sufficiently to develop horizontal corrugations that will hold water rather than dissipate it.

### Boarded roofs

If the roof is boarded, such that it is not possible to lay the underlay with a sag, then the underlay should either be laid on counter battens or held down with counter battens. If temporary tile battens are laid horizontally to hold the underlay down, each batten will act as a dam to rain water draining down the roof slope. Water will always take the easiest route to the earth, therefore if it is trapped it will seep between the batten and the underlay. If the underlay shrinks and stretches, the holes in the underlay – formed by the batten fixing nails – will become elongated and oversize sufficient to let water seeping between the battens and the underlay to track down the nail into the roof below. By fixing the battens vertically they will not act as a dam and will hold the underlay down tight. With horizontal bands of underlay the total height of the roof slope will need to be unrolled together and the counter battens installed as work proceeds across the roof. Alterna-



- This roof is boarded, with the battens nailed directly to the boarding. Each batten is acting as a dam to rain water flowing down the roof.

tively the underlay could be installed vertically with vertical battens fixed over the laps. Water leakage down nail holes is less of a problem with bituminous underlay as a little heat causes the bitumen to melt and seal around the nail hole.

### Longer duration

The installation of tarpaulins is similar to that of underlay with the addition of rope anchorages and a material that is more robust and will be removed prior to roofing work commencing. In place of temporary tile battens scaffold boards are frequently used.

The use of corrugated sheeting will require larger sized temporary battens (minimum 38x38mm) to be nailed to the rafters at centres to suite the corrugated iron sheets to allow the sheets to be correctly nailed to the battens. The most difficult parts to weather will be the junctions with other features and roof slopes; this is generally done with metal sheet trims. In some instances the corrugated sheets could be retained as a rigid underlay for the final construction. But in most instances these will be removed prior to roofing work commencing.

### Scaffold over roof

If a total over-roof is used this will provide the greatest protection to the building. However it is less convenient for the roofer. The height of the temporary roof above the existing roof needs to be sufficient to allow men to stand upright safely. Delivering and manoeuvring materials about the roof can be more difficult,

especially where materials are craned into position. It can be very dark under the temporary roof and some form of lighting may be needed. All flue pipes discharging noxious gasses need to be temporarily diverted or turned off to ensure roofers are not overcome or made ill from the fumes. This applies to domestic heating systems, soil pipes and fume extracts from laboratories and production processes. There is also the risk that damage will be inflicted on the new roof covering during the dismantling of the temporary roof.

### Conclusion

- A temporary roof needs to keep out all of the elements, just like a conventional tiled or slated roof.
- Some underlays deteriorate, shrink and stretch under heat, sun and wind conditions. Check with the manufacturers.
- Vertical counter battens are not as easy to install as horizontal battens, and do not act as a dam to water.
- The safety of tradesmen on a roof should be paramount.

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