

Slating & Tiling

TIPS 32

Security roof

We look at most buildings and consider that they are solidly built of brick or block, and as secure as we can make them. However, as we all know a tiled pitched roof is the weak link in any chain of security.

Flat roofs are perhaps more secure but allow easy access to bedroom windows, especially if at the rear of a property, and so are equally undesirable.

The problem

The only reason a pitched roof is not a common point of entry for burglars is the difficulty of getting onto the roof in the first place. But if there is a simple means of access such as a fire escape, scaffolding, low eaves, or steep sloping ground, then the opportunities for a forced entry through the roof are increased.

All tiled roofs, and many slated roofs, are simple to dismantle often with the tip of a steel toe cap boot to push the tiles up, lift out two rows of tiles, break two battens, kick through the felt and you are into the loft. Once in the loft, access to the rest of the house via the loft hatch is easy, or if that is locked, a boot through the ceiling and you are into a bedroom or landing.

Access

To make a tiled roof secure is a matter of slowing down the burglar. First, make access to the roof difficult. Inevitably during the construction period there will be

times when the roof will have no tiles on it, making access through the felt and battens easier. This may mean surrounding the scaffold with secure fencing, removing or boarding ladders at night and weekends, keeping diagonal bracing high or steep, sheeting the walk-way, and installing an alarm system.

The building may have low level roofs which lead to higher level roofs, nearby trees or steep ground so that access onto a roof is simple. These elements should have been designed out before any roofing work commences, but invariably their significance will not be realised until it is too late.

Construction

If access onto the roof cannot be avoided, the second deterrent is a steep roof pitch. Shallow roof pitches are easy to walk across, whereas steeper pitches are more difficult. If the roof covering is smooth and slippery, like patent glazing, so much the better.

The third deterrent is a fully nailed and clipped roof covering, or better still screwed and clipped – preferably one that is not simple to dismantle and will require smashing to get through. Generally, the sound of smashing will attract some attention. Sheet metal that looks like tiles can be effective, but if you know how the system is nailed it can soon be levered up out the way.

The fourth deterrent could be to batten the roof at close centres,



requiring more battens to be broken out to make a man-sized hole. Alternatively, deeper battens screwed to the rafters would achieve a better solution.

The fifth deterrent could be to board the roof over the rafters with plywood or oriented strand board, requiring cutting tools to break through the layer. An alternative, or an addition, would be to lay sheets of weld-mesh, chain link fencing or expanded metal lathing, on the rafters before laying the board, underlay and battens. This would require bolt croppers to cut through, or, if under the plywood sarking, will blunt a wood saw before it can do too much damage.

The sixth deterrent could be to add additional rafters to make the centres so close that it is impossible to get down between them.

The seventh deterrent could be to design and construct the roof using a composite metal sheet or metal liner tray system, in place of the timber-trussed rafters. Unless you have metal cutting equipment it can be very time-consuming and noisy to get through.

Last Resort

If none of these methods can be introduced, or it is felt that these measures will still not stop entry through the roof covering, the loft itself may need to be alarmed

using movement sensors, along with a boarded floor to protect the plasterboard ceiling below.

While this all sounds excessive, before long the insurance industry may be requiring the owners of buildings of a certain type, or those used for business purposes, to be made secure, or face higher premiums. Houses in certain areas could fall into the same category, especially if the value of the contents is above a certain figure.

Some of these deterrents are design-related, while others are roofing contractor-related (eg, scaffolding access). The extent that these deterrents may need to be implemented will depend upon each individual situation.

Tips

- Make access onto, and about, the roof as difficult as possible
- Think like a burglar when specifying the construction
- All board and metal layers will require tools to cut through
- Replace nails with screws in the construction

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