CONDRON CONCRETE WORKS

LOW PITCHED ROOFING

INTRODUCTION

A tiled pitched roof on rafters, battens and underlay should be regarded as a system rather than simply individual components. Although roof tiles are carefully designed and thoroughly tested in simulated wind and rain conditions in wind tunnels, there will always be weather events when rain, snow and dust can find their way through the tiling. In addition, condensation may form in the batten cavity as water vapour passes through the vapour-permeable underlay from inside the building.

It is therefore important to design and build the roof so that any water that does find its way into the batten cavity can be safely and effectively drained away to the gutter.

SCOPE

This guidance is intended for use on domestic single storey extension roofs only with roof pitches of 22 degrees and below. The maximum rafter length should be no greater than 6 metres and . for roof pitches below 17.5 degrees but more than 12.5deg the maximum rafter length should be no greater than 4 metres. Water from higher roofs must not shed onto lower roofs, eg from valleys, abutments or gutter down pipes These limits ensure the roof functions effectively at lower pitches where capillary action and winddriven rain pose increased risks."

VENTILATION

It is advisable to minimise the passage of water vapour into the batten cavity by installing eaves ventilation and cutting the underlay back 30mm each side of the roof apex and ventilating the ridge with a dry ridge system. This is particularly important during the drying out stage of a new building where excessive moisture may cause efflorescence on the underside of the tiles.

UNDERLAY

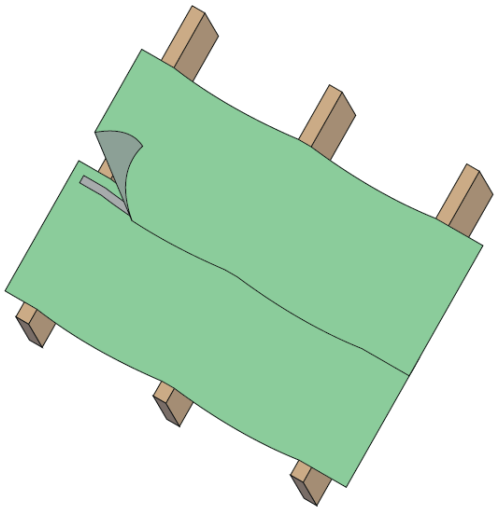
Modern, polymer-based underlays have many advantages, such as air or vapour permeability to reduce the risk of roof space condensation and their lighter weight eases handling and installation. However, they do not compress and seal around nail holes in the same way that bituminous underlays do, therefore it is important to protect nail holes through the underlay using a suitable butyl nail tape fitted between the underlay and tile battens.

INSTALLATION

METHOD 1

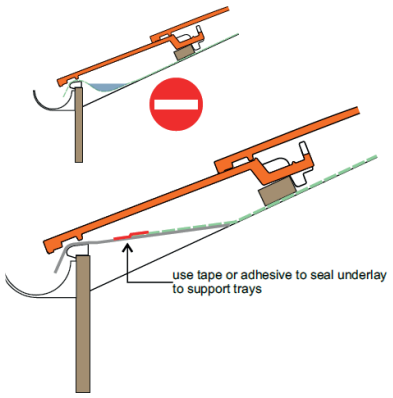
UNDERLAY

Lay the underlay over rigid sarking board, insulation or directly over rafters. Drape the underlay between the rafters to create a gap between the underlay and tile battens to enable water to run towards the gutters. Lay the underlay with minimum 150mm horizontal laps between each course and 100mm vertical laps. Seal all laps using double sided lap tape or the integral underlay lap tape, if present. Repair any cuts, tears or perforations using a suitable adhesive underlay tape.



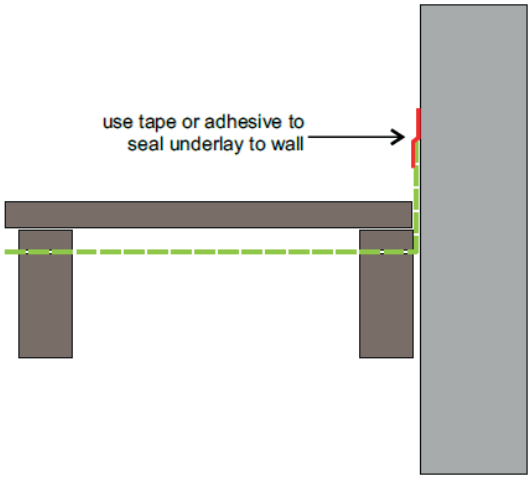
AT EAVES

any water in the batten cavity must be able to drain safely down the underlay to the gutters. Install underlay support trays to fully support the underlay to an adequate fall so that water cannot collect behind the fascia. Secure and seal the underlay to the underlay support trays using a suitable tape or adhesive.



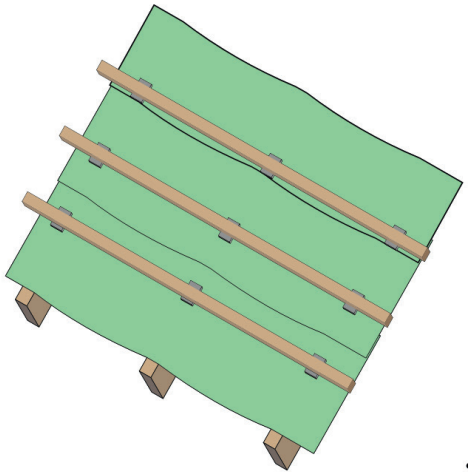
AT ABUTMENTS

Such as walls and chimneys, turn the underlay up the abutment 100mm and secure and seal to the abutment using a suitable tape or adhesive.



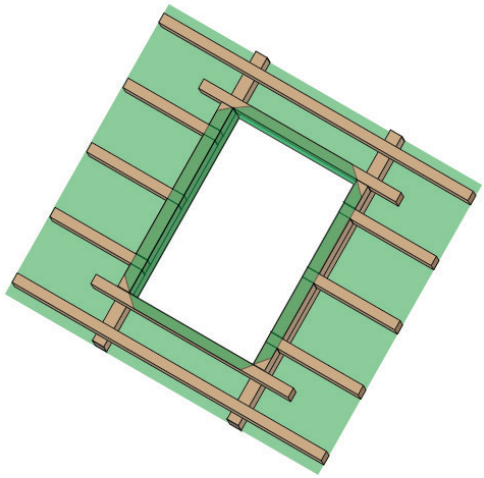
TILE BATTENS

Install tile battens at centres to suit the roof tiles, with joints square cut and centred on the rafters. Install suitable butyl nail tape between the underlay and battens. Battens should not be less than 1.2m long, with no more than 1 joint over the same rafter in any 4 courses for batten gauges over 200mm, or no more than 3 joints in any 12 courses for batten gauges under 200mm.



ROOF WINDOWS

Cut and turn the underlay up around the window surround to prevent water access into the opening, secure and seal to the timbers. Follow the roof window manufacturer's installation instructions and fit an underlay collar sealing to the tile battens and general underlay using a suitable adhesive tape.



METHOD 2

ALTERNATIVELY

If using counter battens, install suitable butyl nail tape between the underlay and counterbattens. Counterbattens should be 50mm wide and 10mm deep, unless the roof specification states otherwise. Fix the counterbattens into the rafters at maximum 300mm centres.