

SECTION 4 PREPARATION



AS PER AS 2050 THE CORRECTNESS AND SAFETY OF THE BUILDING
IS THE RESPONSIBILITY OF THE BUILDER.

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KEY RESPONSIBILITIES

Before roof tiles can be loaded onto the roof frame, the following must be completed, unless otherwise specified in the roof contract.

1. The roof structure and rafters secured, square and properly braced
2. Fascia boards installed at the correct height with counter (tilt) batten (where applicable)
3. Valley boards and valley irons installed in place
4. Barge boards installed with counter (tilt) battens fitted (where applicable)
5. In the case of exposed rafters, all above rafter boarding and ceiling materials are to be installed
6. Gutters, spouting, down pipes and dry soakers (where applicable) installed
7. Anti-ponding facilities installed (within NZ, Vic and WA)
8. Chimneys, abutments, vent pipes and roof ventilation installed, complete with their flashings and supports
9. Installation of full scaffold, guardrail or safety mesh in accordance with Occupational Health and Safety guidelines. If there is uncertainty about the builder's safety requirements, contact your CSR Roofing office.

This section deals with specifications associated with the construction of the roof frame and installation of associated materials leading up to the installation of roof tiles.

WORKING AT HEIGHTS

The Falls from Heights Advisory Standard 2000 or equivalent Codes of Practice in each state gives practical advice about ways to identify and manage the risk of people falling while carrying out:

- >> Housing construction; and
- >> Any other type of construction work

The specific recommendations for fall protection varies by region, therefore it is highly recommended that local guidelines are referred to. A system of fall protection is required where there is:

- >> Potential for a person to fall working at heights*
- >> Where persons at or near a workplace may be exposed to the risk of injury from falls from heights.

A workplace health and safety plan must be completed detailing the control measures to be used to prevent the risk of injury.

Several control measures are available to protect persons from the risk of falling when carrying out work at a height.

The five levels of control measures, in order of preference are:

- >> Elimination – If you eliminate a hazard you completely eliminate the associated risk.
- >> Substitution – You can substitute something else (a substance or a process) that has less potential to cause injury.
- >> Isolation/engineering – You can make a structural change to the work environment or work process to interrupt the path between the worker and the risk.
- >> Administrative – You may be able to reduce risk by upgrading training, changing rosters or other administrative actions.
- >> Personal protective equipment – When you can't reduce the risk of injury in any other way, use personal protective equipment (gloves, goggles, etc.) as a last resort.

Edge protection should be used on the edge of a working platform, walkway, stairway, ramp or landing and be able to withstand the impact of a person falling against it.

* Confer with your local safety authority for height regulations.



ROOF FRAME

Wall frames and all load-bearing internal partitions must be properly framed and braced.

The roof structure, must be square and straight and of dimensions true to specification. Braces should be fixed diagonally on the underside of the rafter or truss top chord.

Creoper rafters must be installed at hip corners to ensure that normal rafter spacing along the eave is maintained. Hip and ridge boards should have their top edges level with the top of the rafters.

Please note that even a slight deviation in a roof plane will be noticeable on a finished roof, and cannot be corrected by the tiler.

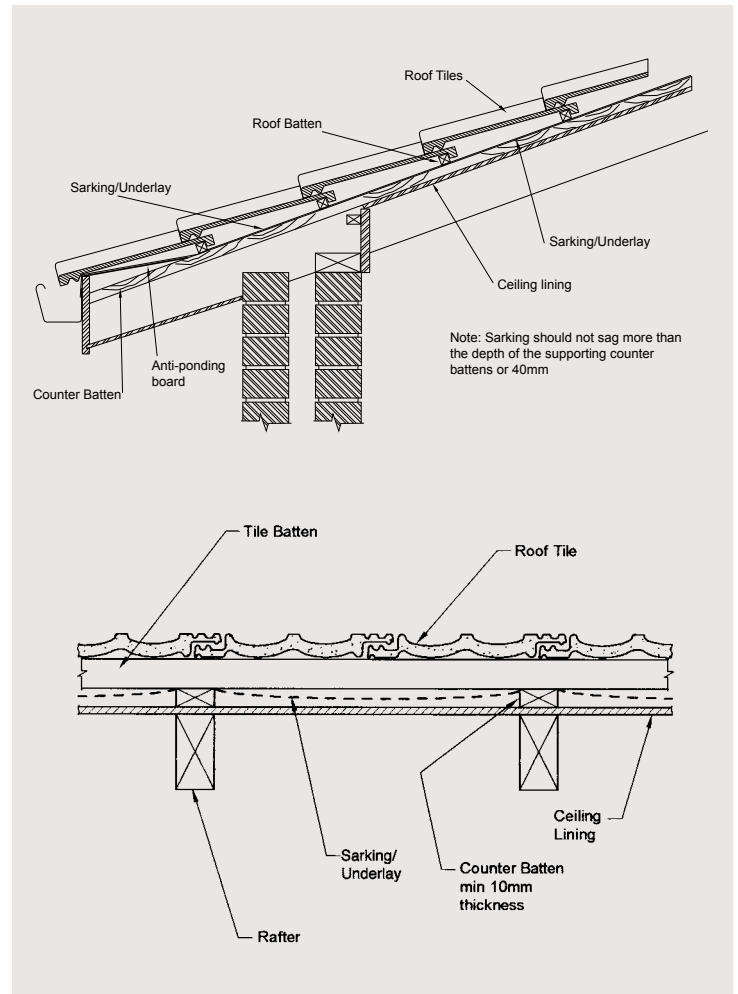
METAL ROOF FRAMES

When installing to metal roof frames the nails/screws used must be non-ferrous, stainless steel or steel with an appropriate corrosion resistant coating. Corrosion may result from an unfavourable galvanic relationship in metallic substrate, particularly in corrosive areas.

EXPOSED RAFTER

In the case of raked ceilings or exposed rafters, ceiling linings, counter battens and sarking/underlay installed on top of the rafters. Counter battens must be fastened over the rafter centre lines to ensure the sarking/underlay sag complies with AS/NZS 4200.2

Clearance between the sarking/underlay, any insulation material and the ceiling linings.



VALLEY BOARDS

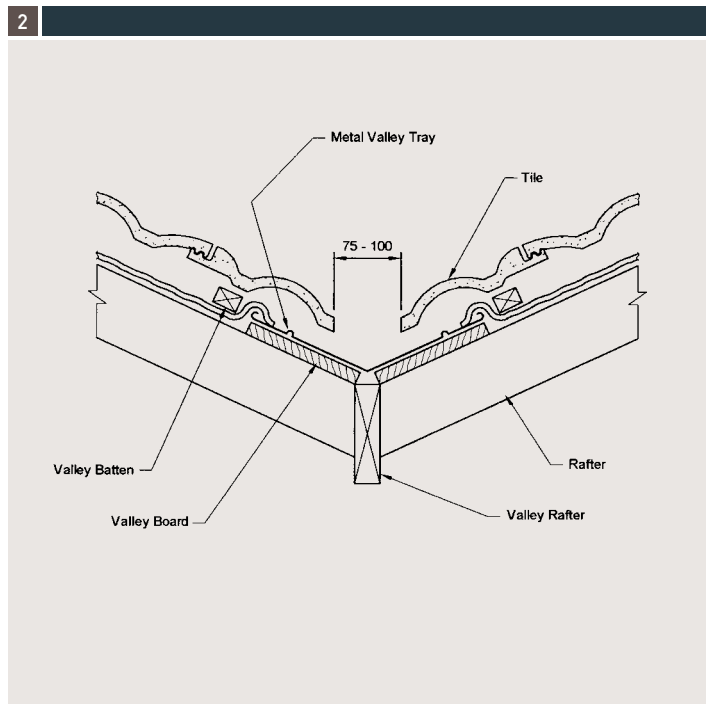
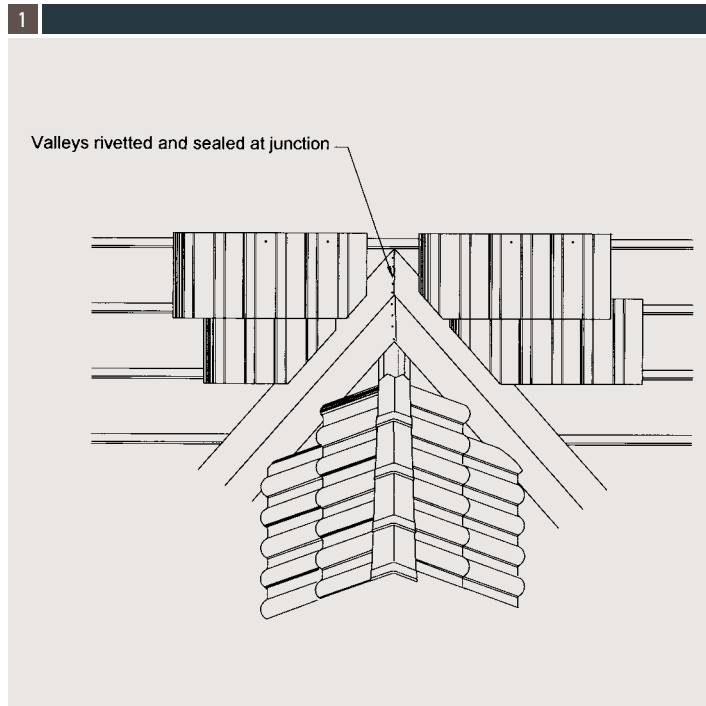
Valley boards should be at least 19mm thick and laid over the ends of the valley rafters.

Valley boards and irons should be installed to finish level with the top of the tile batten, and must extend the full width of the valley.

Tapered valley boards having a section of 175 x 19 and 6mm can be used. The 6mm edge should be placed to the outside of the valley. Where 38mm thick tile battens are used, a valley board with an outside thickness of 25mm should be used.

1 Valley boards must comply with Standards. Valley Boards should not extend less than 220mm up each slope of the roof. Tiles should overlap each side of the valley guttering no less than 100mm.

2 Where there is a change in direction of a valley, a nonflammable polyurethane water based bitumen impregnated foam is recommended. Great care should be taken to ensure that valley boards and valley irons form a continuous water path to the eaves. The lip of the valley should, at all points, reach the height of the roofing battens.



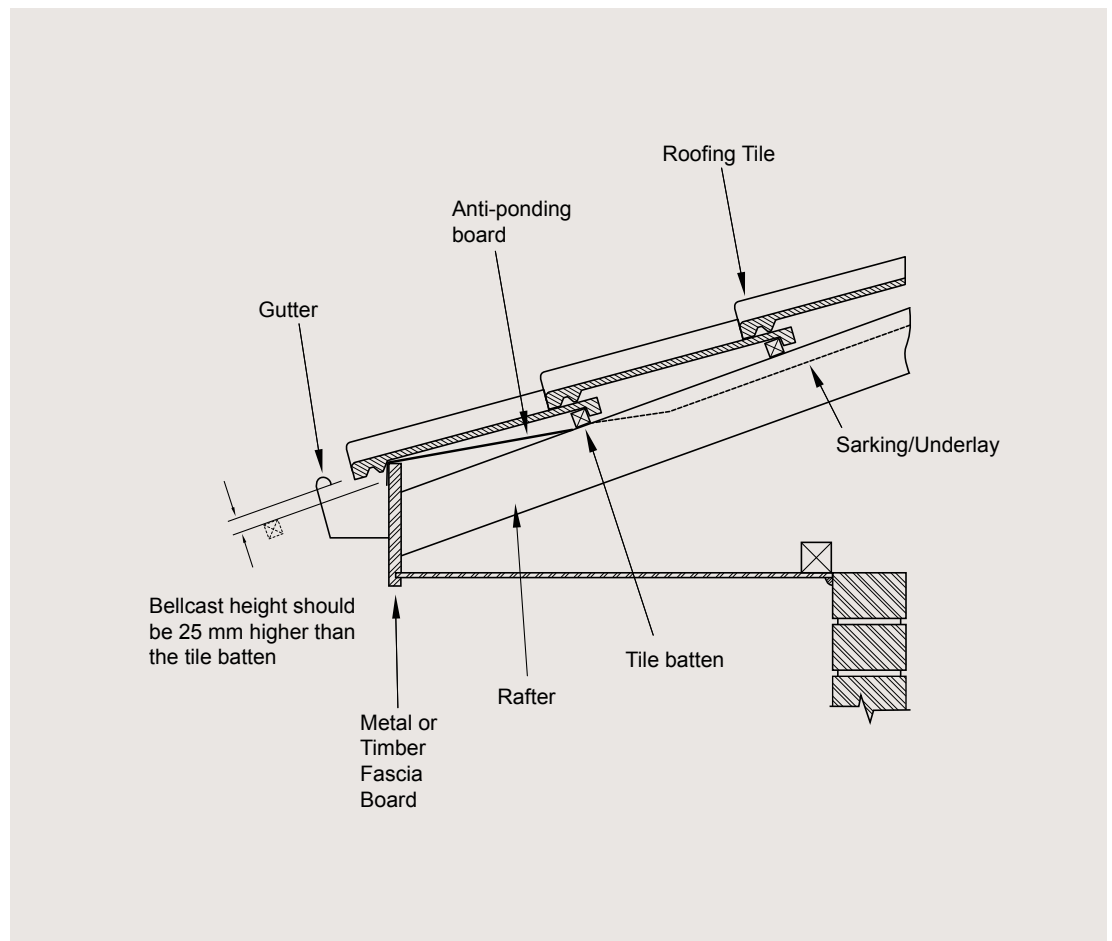
FASCIA

Fascia board height is extremely important to ensure the last course of tiles on a roof does not dip. If the fascia height is deficient or if a fascia batten is not employed, the last course of tiles will not appear in the same plane as the remainder of the roof.

The top edge of the fascia boards should be secured to the rafters, 25mm higher than the tile batten thickness. For example, a batten of 25mm thickness requires a 50mm distance between the top of the rafter and the top of the fascia board. This distance is known as the fascia, tilt or bellcast height.

The measurement of the fascia distance should be reduced by 10mm if the roof pitch is less than 20 degrees. Conversely, as the pitch increases to 45 degrees, the fascia distance must also increase.

Where a fascia board is not used, or fascia height is not adequate, a batten referred to as a "fascia", "bellcast" or "tilt" batten must be installed. The fascia batten height can be calculated using the same method, as above, and should be installed on the top edge of the bottom rafter.



Note: weather checks should be position fully into the gutter.

FLASHINGS

Flashing should be installed by a qualified tradesperson prior to tiling, where possible.

Flashing should be pliable enough to be dressed down well into the tile profile with sufficient mass to retain its position under wind pressure (at least 20kg per m² AS/NZ 17kg).

Cover flashing should be carried a minimum of 115mm over the tile, and dressed closely into the wall, watercourse and against the tile profile. The top edge should be firmly secured into raked joints or machine cut

grooves in masonry. Flashing against vertical framework must be suitably supported.

The lower edge of wall sheeting over a tiled roof must finish 90mm above the top of the tile batten to allow clearance over the tiles. The distance must be maintained for all batten sizes. Minimum clearance between top of rafter and the bottom edge of raking, stepped or cover flashings should be 100mm therefore the following table applies for different batten thicknesses.

1 Secret Gutter Flashing

There are a number of different flashings that can be employed in the roof, depending on the junction type. The following are typical details of roof flashings.

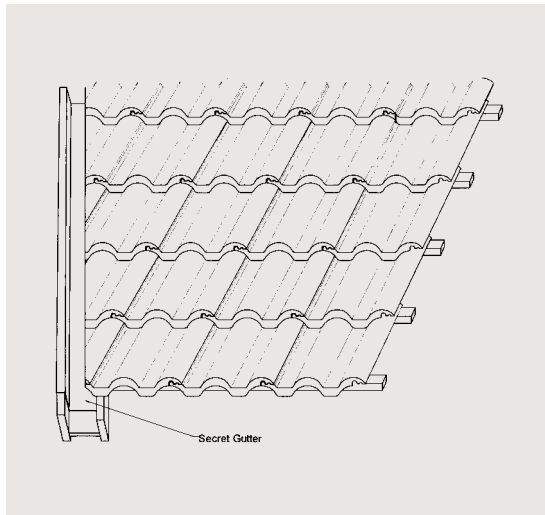
2 Saddle Flashing

3 Dutch Gable Flashing

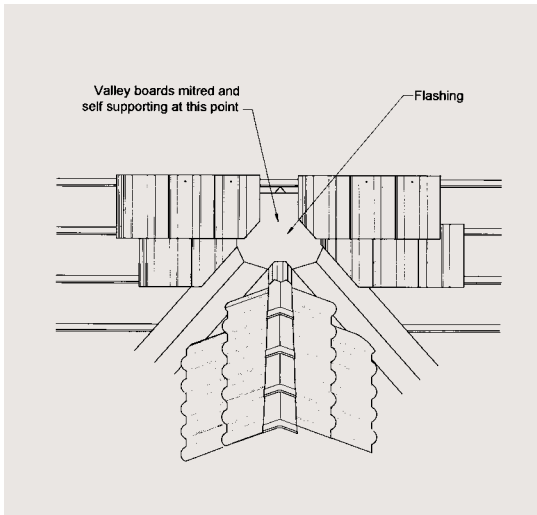
Flashing should extend past the hip line by a minimum of 300mm.

Clearance	Batten Thickness
125 mm	25 mm
138 mm	38 mm
150 mm	50 mm

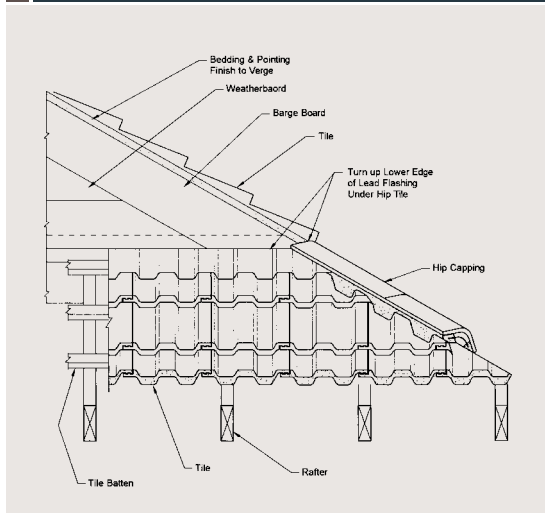
1 SECRET GUTTER FLASHING



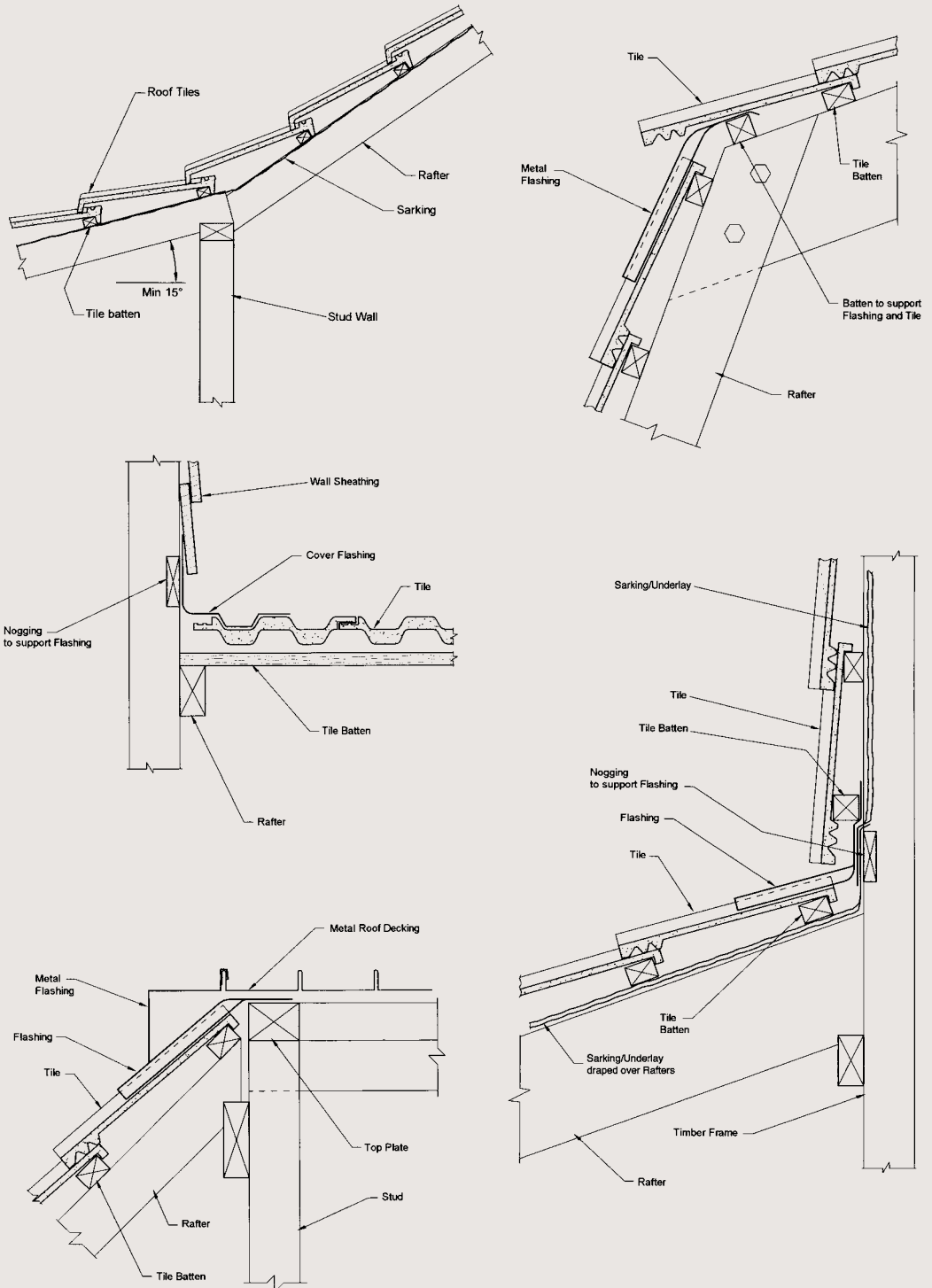
2 SADDLE FLASHING



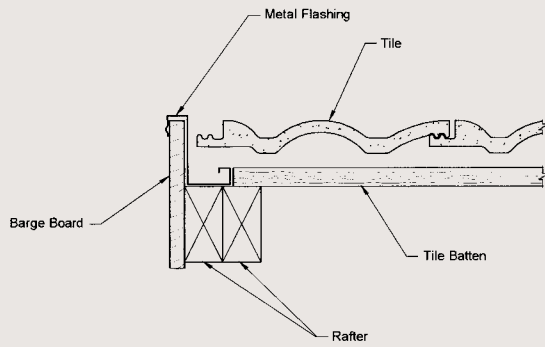
3 DUTCH GABLE FLASHING



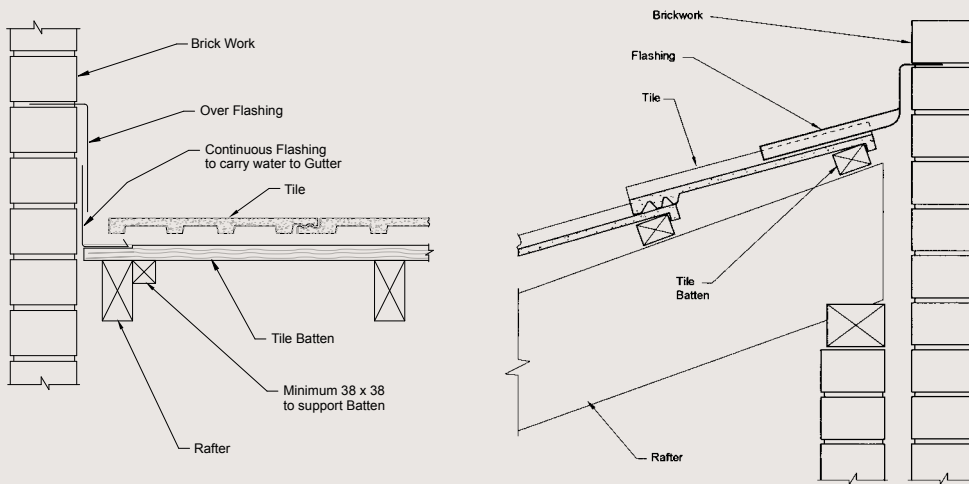
4 CHANGE OF PITCH FLASHING



5 BARGE BOARD FLASHING



6 BRICKWORK FLASHING

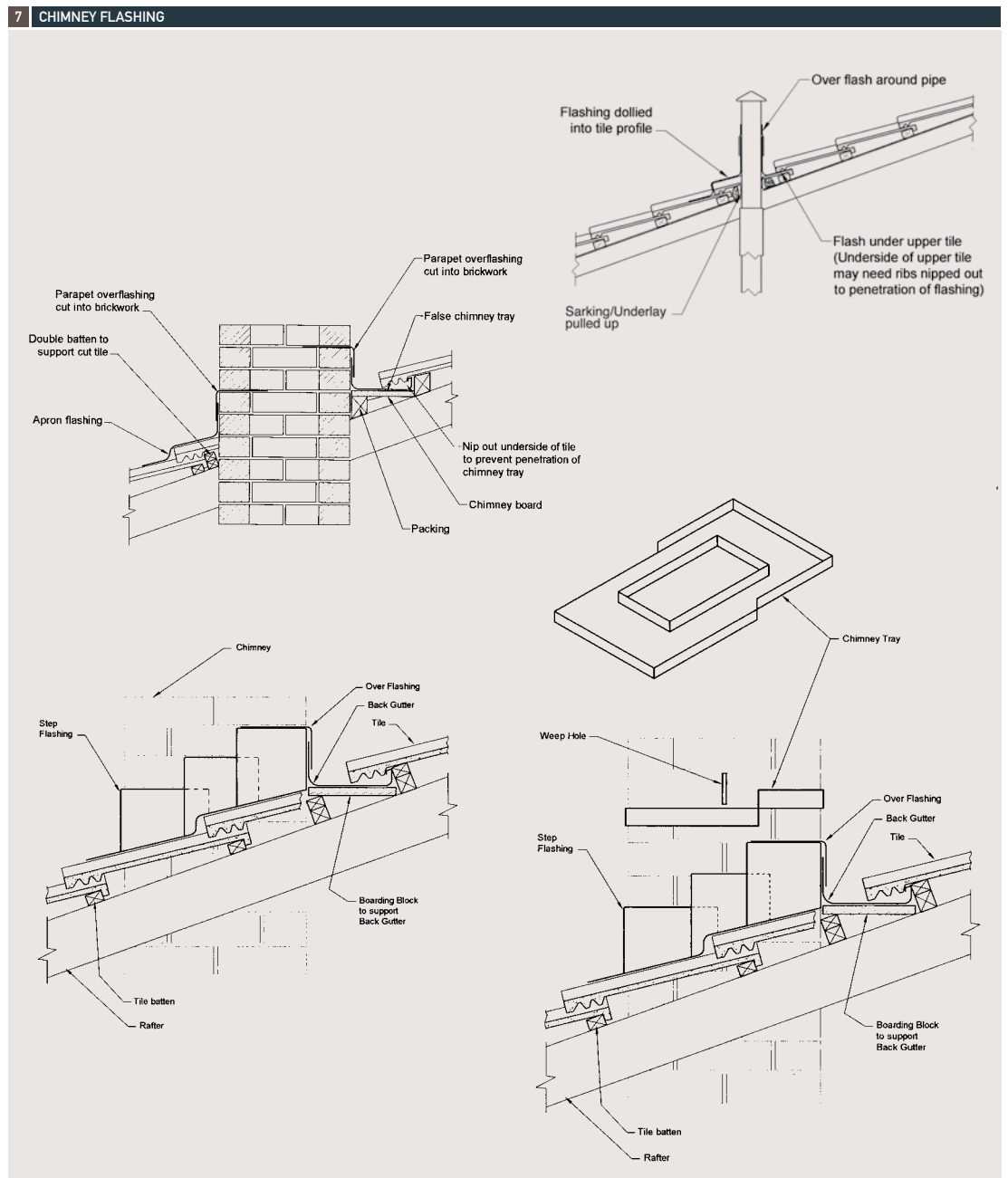


GENERAL

All edges and junctions of finished works should be clean and properly sealed against water penetration.

7 Chimney Flashing

Sarking/underlay around penetrations in the roof, such as chimneys, shafts, vents and skylights, abutments, should be trimmed and the edges turned up to divert water around the projections and from under flashings. The issue of ponding should be considered.



BARGE

1 Height

Where fitted, barge boards should be aligned to the top of the roof battens.

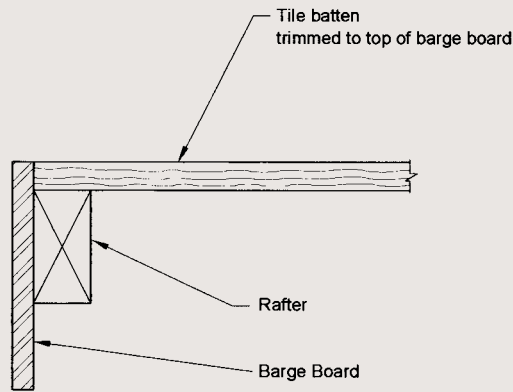
For bed and point finish which utilise a fibre cement strip barge boards should be finished 6mm below the surface of the tile batten.

2 Installation

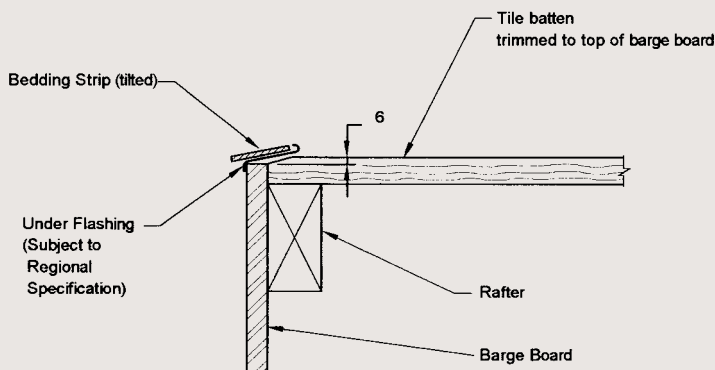
Where tiles are installed next to a barge board, the barge board should be fitted 5mm above the highest point of the tile.

The gutter should project approximately 18mm past the outside face of the barge board for square barge tiles, and 65mm for half round barge tiles.

1 HEIGHT



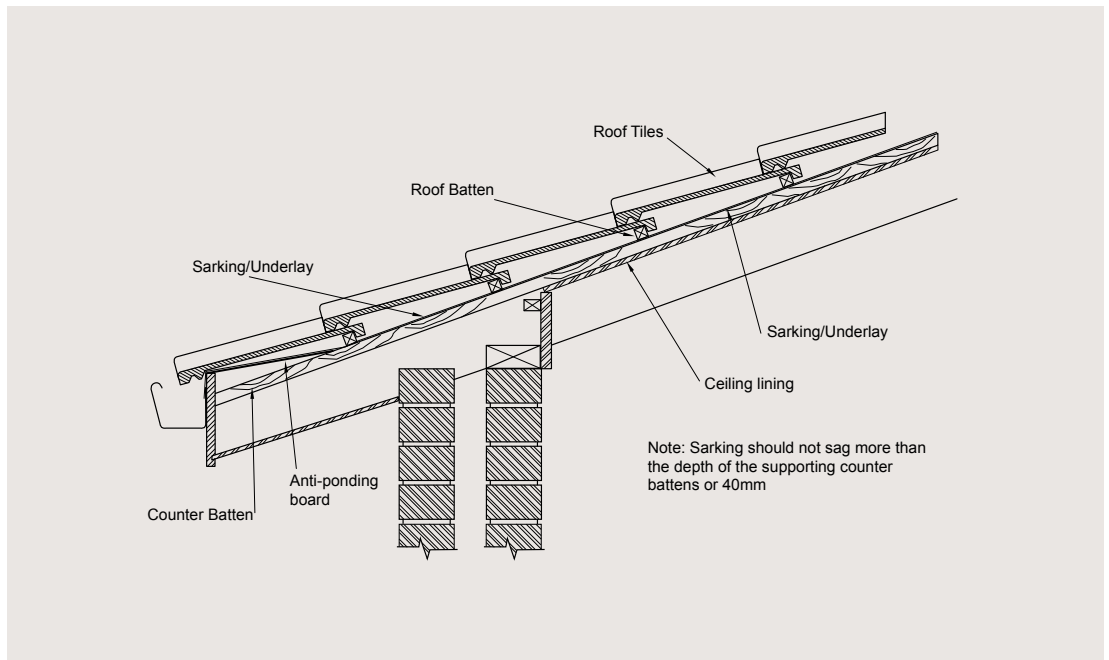
2 INSTALLATION



ANTI-PONDING BOARDS

Anti-ponding boards should be installed at the eaves line to prevent sarking/underlay from sagging, and to ensure that water collected will discharge into the gutter. In accordance with AS 4200.2 and NZS 4206, anti-ponding boards are recommended on pitches less than 20° as stipulated in AS 2050.

Anti-ponding boards are strongly recommended where no eaves overhang exist.



DOWNPIPES

As per AS 2050, where a downpipe discharges (via a spreader) onto a tiled roof, a distance of 1.8m either side of the point of discharge to the eaves gutter should be protected from inundation with either sarking/underlay, flashing or soakers. Ideally, water from the top roof should be directly to the storm water system.

The spreader employed should also have both ends sealed to prevent water discharging into the side lap of tiles. The discharge holes on the spreader should be aligned with the valleys within the tile.