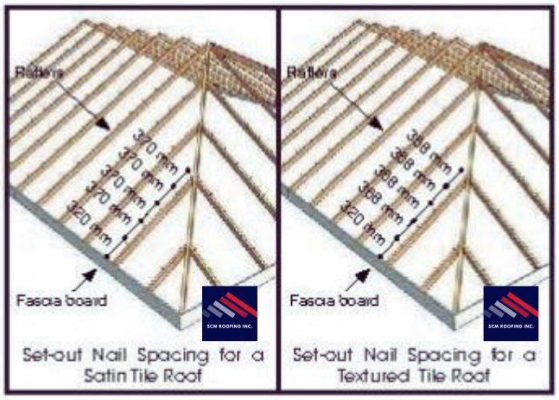
SCM ROOFING INC.

Preparatory Installation

1. Batten Spacing



Set-out Nail Spacing for a Satin Tile Roof

Set-out Nail Spacing for a Textured Tile Roof

Disclaimer: For purposes of uniformity, we have demonstrated 50x40mm battens as this is the most common batten size .This may be substituted for 50x25mm or 50x50mm for different rafter/truss spacings (see Tiling Batten Specifications).

A 50x40mm batten is placed directly behind the fascia around the entire roof.This will serve as the eave batten.

The next batten is placed 320mm from the outside edge of the fascia material to the front edge of the batten. Battens are then placed every 370mm (Satin) or 368mm (Textured) measured from the front edge of each batten continuing up the roof.

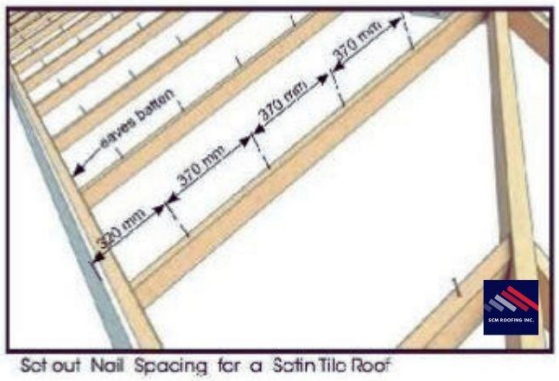
The set out can be done using a setout rod, which is made from a 50x40mm batten or measuring rod of similar thickness.

Measure every 370mm (Satin) or 368mm (Textured) measured up the setout rod and saw notches in the material, making sure the notches are accurate and that the bottom of the notch is square to the rod.The rod is then placed on the rafter and nails are placed in every notch so that you have a series of nails at 368mm or 370mm centres running up each rafter.

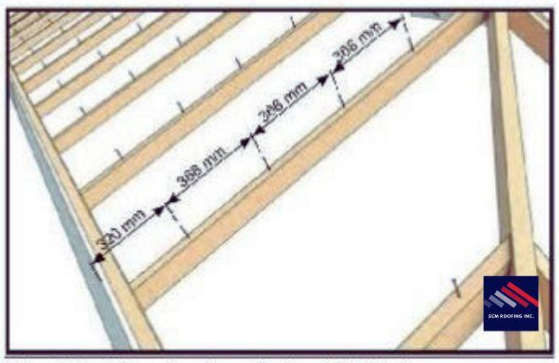
2. Batten Cutting

When placing the battens on the set out nails, care should be taken to stagger the joins across several rafters and not to have multiple joins on the same rafter going up the roof truss.

Place the battens on the setout nails mitring each batten onto the hip and valley boards. Make sure joining battens are centred on the rafters and cut ends off that are not straight. Then cut all other joins on the centre line of each rafter where each batten extends to. Then mitre cut each batten onto the hip and valley boards.



Set out Nail Spacing for a Satin Tile Roof



Set-out Nail Spacing for a Textured Tile Roof

SCM ROOFING INC.

Preparatory Installation

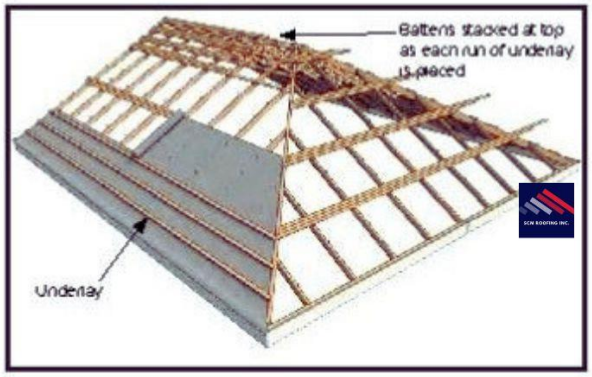
3. Underlay Installation

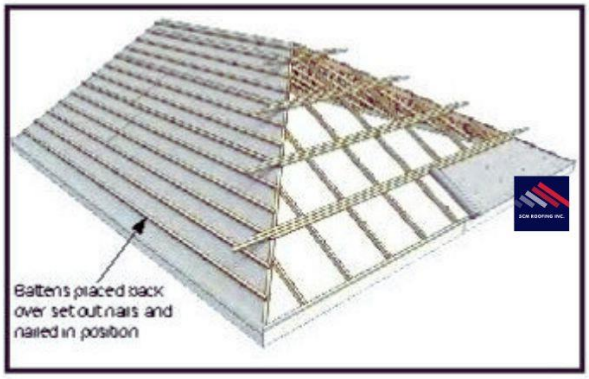
Once the battens are cut in completely the battens can be moved up to allow the underlay to be rolled out.

Self-supporting breather type building paper must be used. Starting at the bottom, roll out the underlay horizontally across the roof, ensuring that the lower edge of the underlay overhangs the outside edge of the fascia by a minimum of 40mm.

Once each run of underlay is run out, move the battens down to rest on pinout nails. This will enable the installer to continue up the roof plane by walking along these battens. Paper the whole roof, horizontal to the fascia line ensuring that each lap is no less than 150mm, unless it occurs directly underneath a batten, in which case it can be reduced to 75mm. Underlay is to be lapped over each hip and ridge line at least 150mm.

Where the roof meets a wall, the underlay must be folded and run up the wall no less than 200mm.

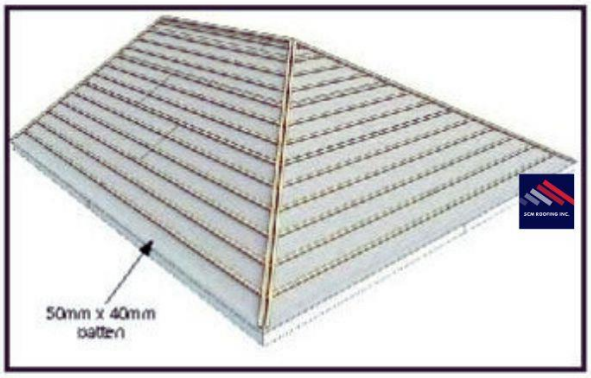




4. Batten Fastening

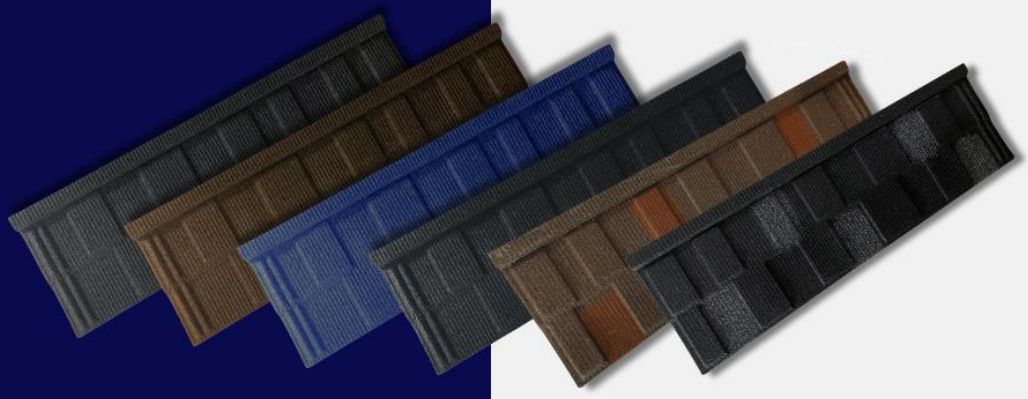
Battens shall be nailed through to the rafter with one 90 x 3.15mm nail at each intersection unless greater wind uplift resistance is necessary as stipulated in table 5.10 page 5.

Refer to section 9.0 Tiling Battens on page 6 of the manual, within General Information.



STONE COATED - SHINGLE TILE

QUALITY STONE COATED METAL ALUM-ZINC ROOFING



BRAND: SCM STONE COATED SHINGLE TILE
MINIMUM ROOF SLOPE: 15°
PANEL SIZE: 1340MM * 420MM
INSTALLED EXPOSURE: 1290MM * 370MM

AVAILABLE COLORS

GRAY | BROWN | ARTIC BLUE | BLACK | 2-TONE BROWN | 2-TONE BLACK

CUSTOM COLORS AVAILABLE FOR PRE-ORDER

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VIBER 0917-1105-517

scmroofingsales@gmail.com


NEW METAL SHINGLES ROOF

SHINGLE TILE
BLACK-WHITE

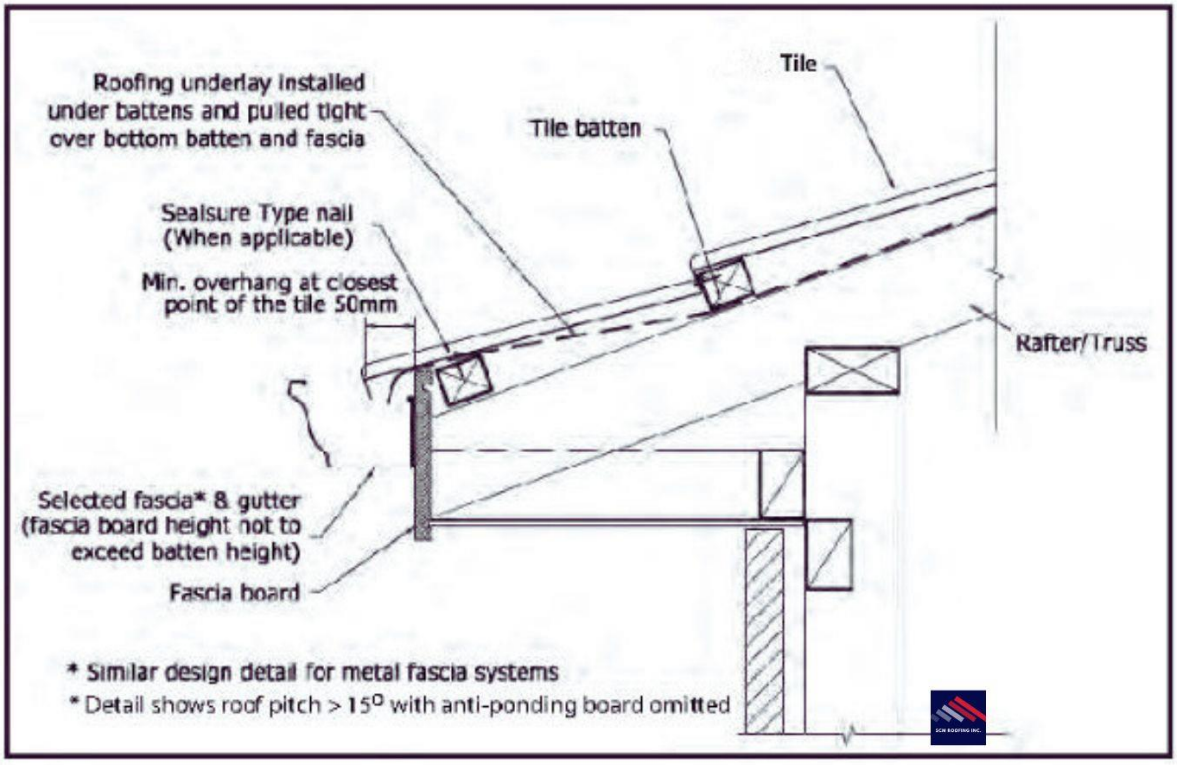
SCM - STONE COATED METAL

SCM ROOFING INC.

Preparatory Installation Continued

Tiling battens must be:

- H1.2 treated
- Douglas fir of moisture content <20%
- 50 x 25mm for 450mm rafter/truss spacing.
- 50 x 40mm for 900mm rafter/truss spacing
- 50 x 50mm for 1200mm rafter/truss spacing



SCM ROOFING INC.

Tile Laying

Tile Laying

Tiles can be interlocked either right over left or vice versa but should be laid with the laps facing away from prevailing winds or from discharging rain water pipes or valleys. Where possible the tiles should also be laid with the laps facing away from the normal line of sight. (Fig. 1.1)

Tiles are laid by lifting both tiles in the course above and sliding the next course under the nose of the tiles already in place. (Fig. 1.2)

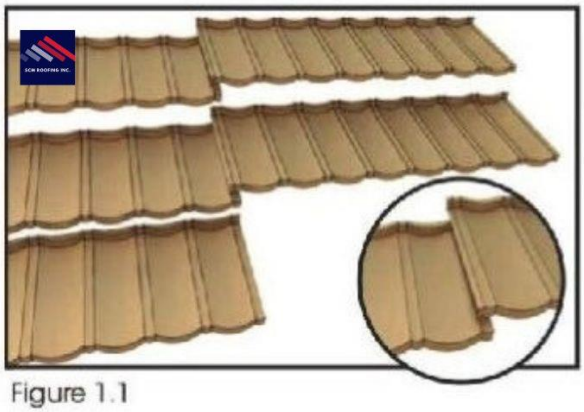


Figure 1.1

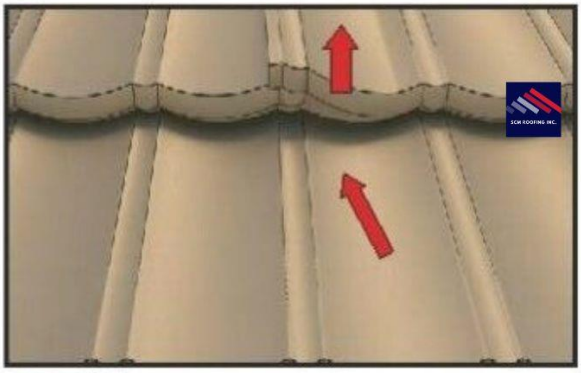


Figure 1.2

Tile Installation Procedure - Hip Roof

General instructions for tile laying as detailed above. On the second to top course (the higher most full tile course), lay the top corner of the first tile 150mm from the hip board. Continue to lay tiles towards the other hip until the last full tile will fit.

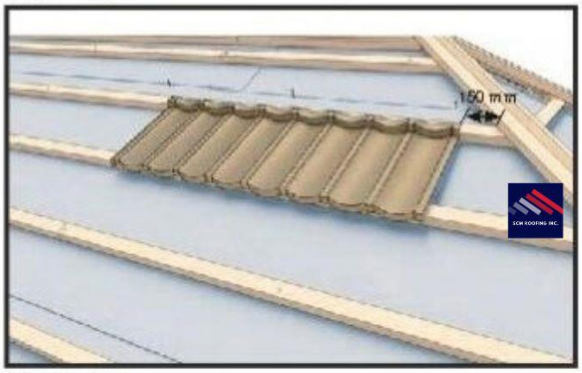


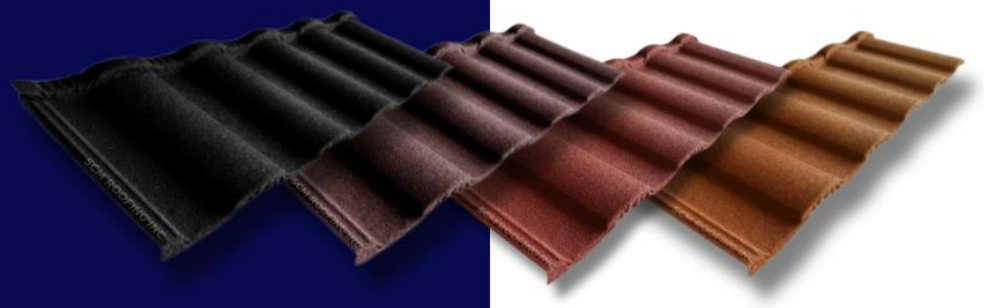
Figure 1.3

Secure these tiles by tacking through the back flange (Fig 1.3). Lay subsequent courses two at a time, both starting about the same distance from the hip board. (Fig 1.4 & 1.5)

Figure 1.4

STONE COATED - ROMAN TILE

QUALITY STONE COATED METAL ALUM-ZINC ROOFING



BRAND: SCM STONE COATED ROMAN TILE
MINIMUM ROOF SLOPE: 15°
PANEL SIZE: 1300MM * 420MM
INSTALLED EXPOSURE: 1250MM * 370MM

AVAILABLE COLORS

BLACK BROWN BEIGE RED TERRACOTTA

CUSTOM COLORS AVAILABLE FOR PRE-ORDER

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ROMAN TILE ROOF

ROMAN TILE
BEIGE RED

SCM - STONE COATED METAL

SCM ROOFING INC.

Tile Lay Continued

Care should be taken to line up the corrugations. To reduce waste, use part tiles to complete rows within approximately 150mm of hip board (Fig 1.6). This allows each end of a full tile to be cut and bent to fill the gaps.

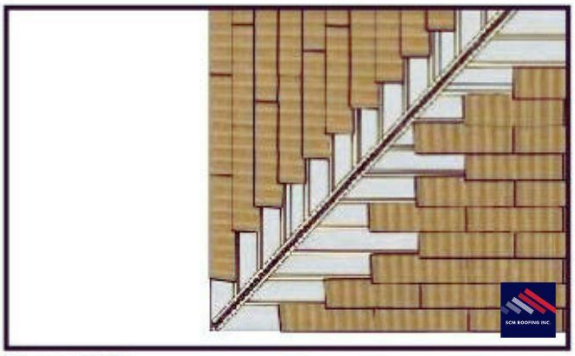

Figure 1.5

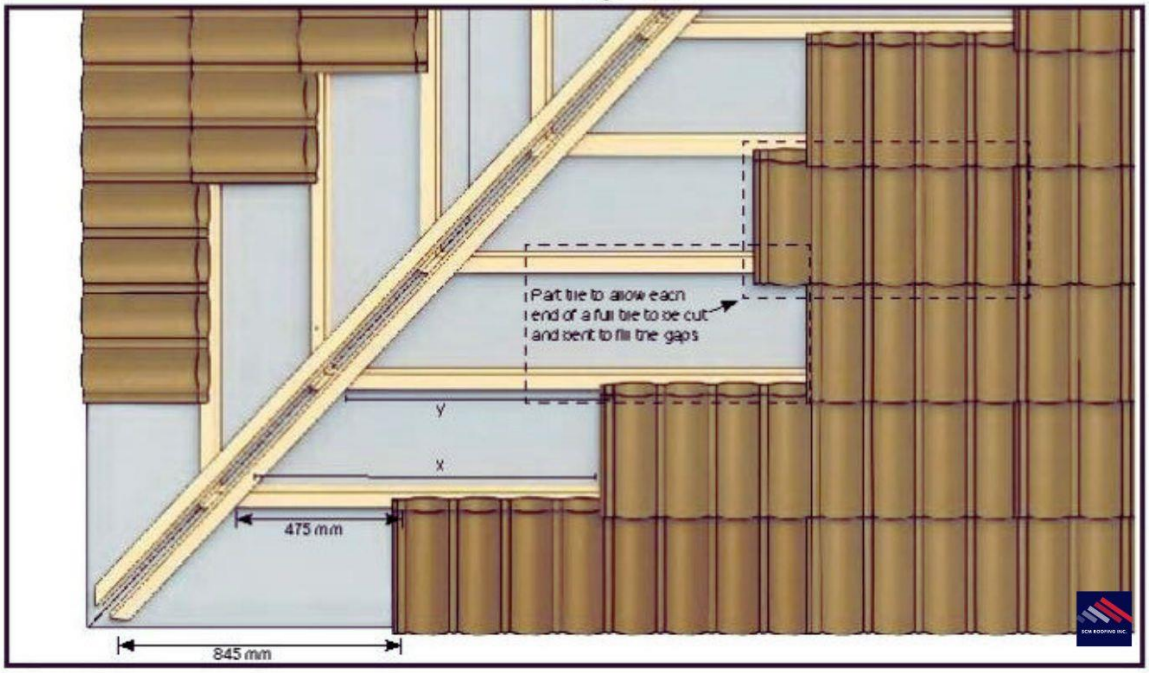

Figure 1.6

Measurements and Marking

Measurements are made on the roof, but tiles are normally marked, cut, bent and stacked on the ground.
To save time marking, cutting and bending each tile, it is best done by two installers - one to measure and the other to write the measurements down on a board or piece of paper as shown (Fig 1.7). To avoid confusion, cut, bend and stack tiles in strict order.

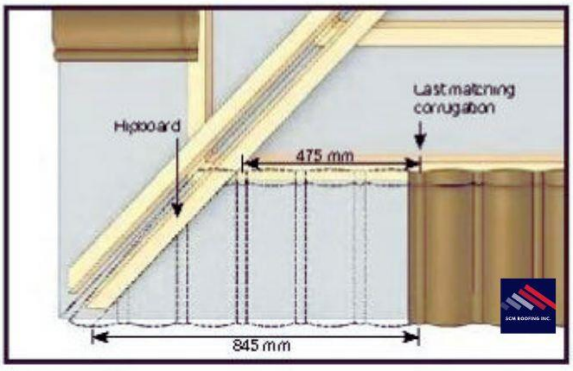

Figure 1.7

Tile Lay Continued

Note the following steps:

(i) The basic measurement (recorded on paper or board) is taken from the last corrugation on the bottom corner of the last full tile, to the hip board, along the front edge of the batten (Fig 1.7).

(ii) Measure and mark on the tiles with chalk or similar, the required measurements taken from the roof, ensuring the MATCHING corrugation of the overlapping tile to be cut, is taken as the measure starting point (Fig 1.7). This forms the BENDING line (Fig 1.9).

Add to the bending line measurement the height of the ridge board projection above the tile line 40mm. Mark on the tiles with chalk or similar. This forms the cutting line. (Fig. 1.9)

ALTERNATIVELY - Set a bevel to the angle formed by the hip board and tile batten. Place the bevel on the tile so that the measuring mark on the front of the tile lines up with the inside of the bevel. Mark along the inside of the bevel to give the BENDING line. Scribe the other side of the bevel to form the CUTTING line.

Each tile should supply two cut pieces leaving a minimum of wastage. Preferably a hip and valley cut from each tile will minimize this waste (Fig 1.9). However, two hip cuts will also provide a lower wastage factor.

Left-Hand Side Example

Top	475mm
Bottom	845mm
Top	*x* mm
Bottom	*y* mm
Top e.g.	342mm
Bottom e.g.	710mm

Right-Hand Side Example

Top	530mm
Bottom	900mm
Top	600mm
Bottom	970mm
Top	380mm
Bottom	750mm

Figure 1.8

STONE COATED - WOOD TILE

QUALITY STONE COATED METAL ALUM-ZINC ROOFING

BRAND: SCM STONE COATED ROMAN TILE
MINIMUM ROOF SLOPE: 15°
PANEL SIZE: 1340MM * 420MM
INSTALLED EXPOSURE: 1290MM * 370MM

AVAILABLE COLORS

BLACK GRAY BROWN

CUSTOM COLORS AVAILABLE FOR PRE-ORDER

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WOODSHAKE
BLACK

SCM - STONE COATED METAL


VILLA
1
WOODSHAKE TILE ROOF

Tile Lay Continued

Preferred and Low Waste Usage

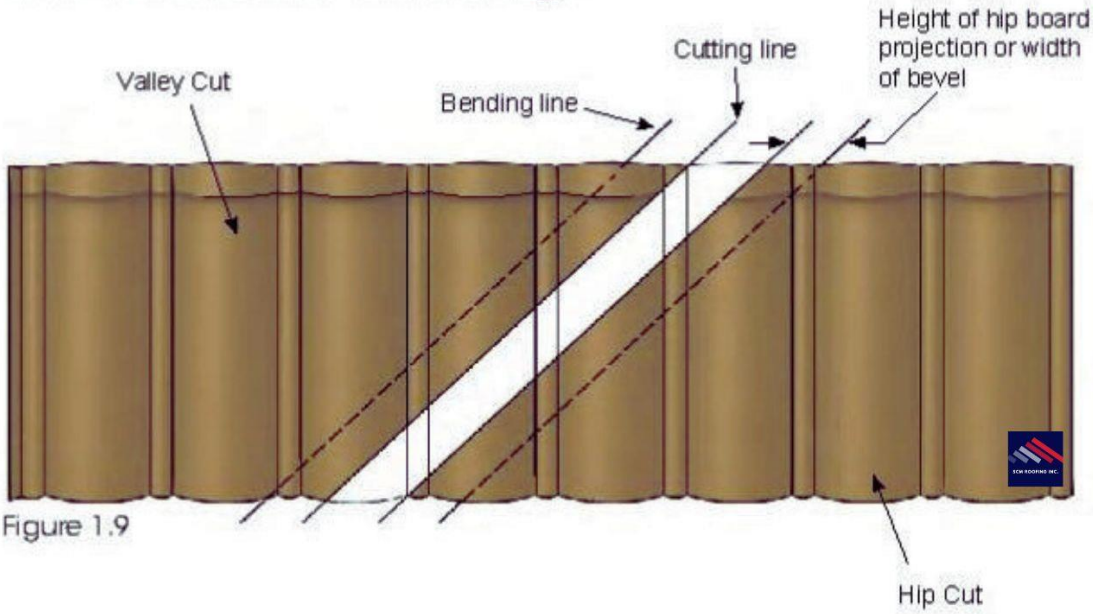


Figure 1.9

OR

Two Hip Cuts Per Tile

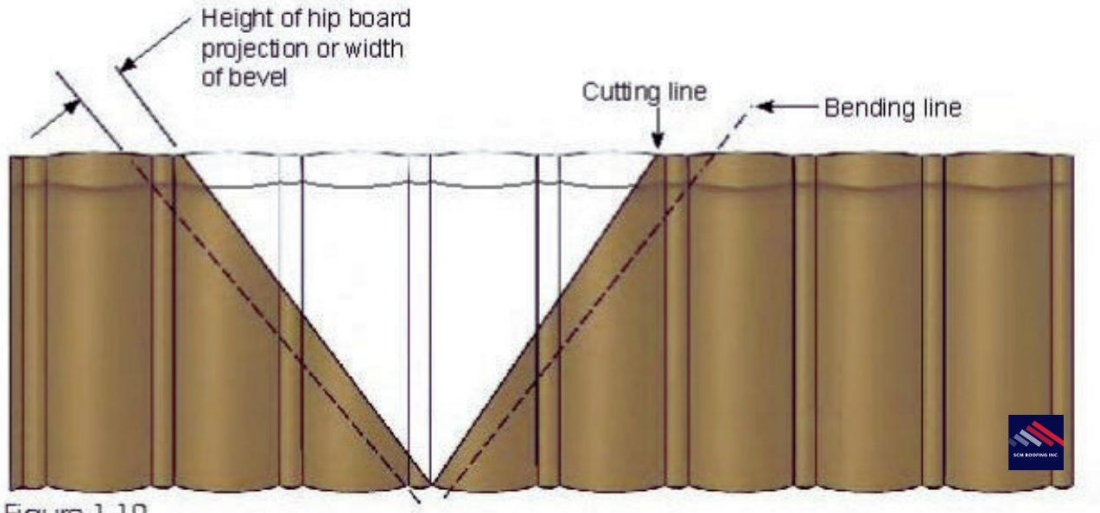


Figure 1.10

Tile Lay Continued

Hip Cutting

Use the guillotine to cut along the pre-marked cutting lines.

Hip Bending

Place the tile in the bender and line up the marks showing the bend line. Operate the foot controlled vice mechanism to hold the tile firmly, and bend the tile upwards.
Each cut tile will vary slightly in size, and as cutting and bending are done on the ground, it is very important not to mix up the individually cut tiles. Stack them in the sequence that they will be used. A simple practice is to cut off tiles in order and re-stack in order and then move to bending, repeating the process (Fig 1.8).

Figure 1.8

Installation of Cut Tiles

Start installing the cut tiles from the bottom course and work up the hip. Sometimes it is necessary to nail into the head of the tile to hold it in place before the next cut above is installed.
Install all cut tiles by nailing through the turn-up into the hip board, and one or more nails through the front edge into the battens (Fig 1.9).

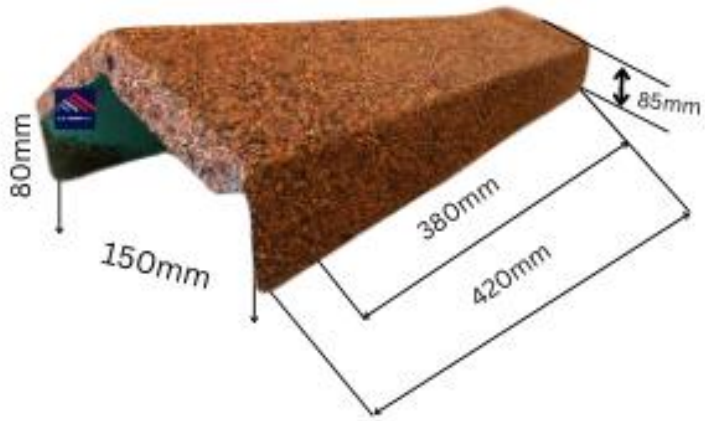
Figure 1.9

SHINGLE TILE
ARTIC BLUE

SCM - STONE COATED METAL


WOODSHAKE TILE

ANGLE RIDGE BROWN

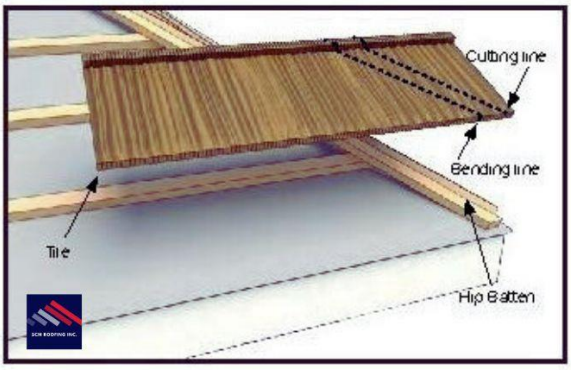


SCM ROOFING INC.

Tile Laying (Shake and Royal specific)

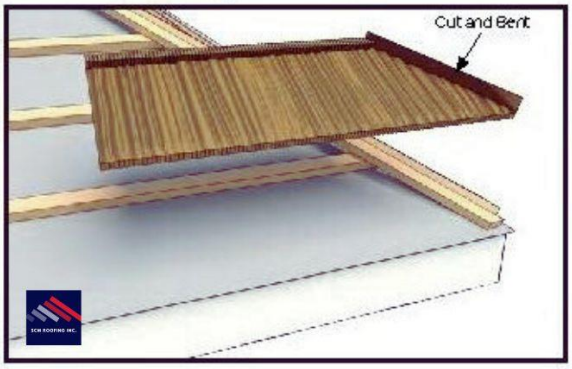
As the Shake and Royal profiles have a straight head and nose, the tiles can be laid anywhere along the length of the tile.

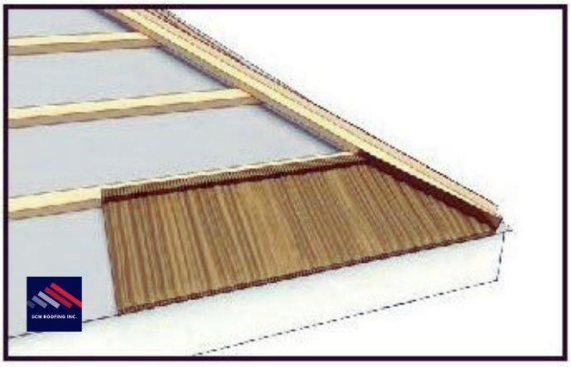
1.
Use a bevel to set the angle of the hip by placing the bevel in line with the batten and moving the bevel to meet the hip batten. Mark on the tile the cut and bend line allowing 40mm upturn. Proceed to cut and bend up enough cut tiles for the number of courses up the hip.



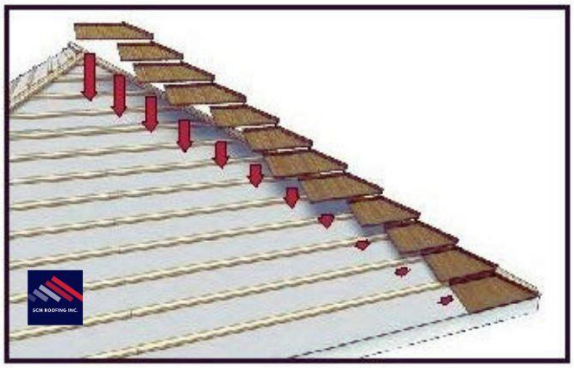
To minimise waste, it is advisable to use approximate half the tile for each cut so you can use the other half for a valley cut or another hip cut at the other end of the roof plane. These cut tiles should vary a little in size to try to avoid a pattern.

Note: Tiles must be turned up a minimum of 40mm against the hip battens, hip board or where they butt against a vertical or inclined surface.





2.
Install the cut tiles by starting at the bottom course and nailing the cut tiles to the hip batten. Proceed up the hip length one tile at a time.

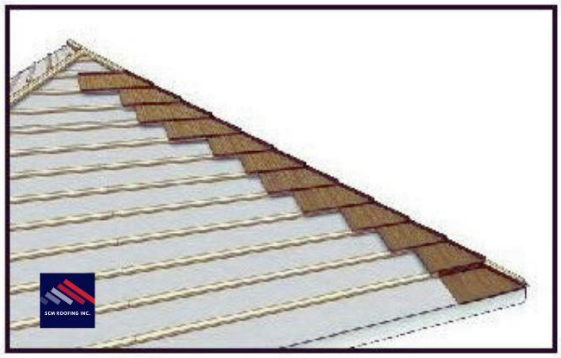


SCM ROOFING INC.

Tile Lay Continued

3.

Secure tiles down on batten, ensuring that they butt against hip batten as shown in step 2.



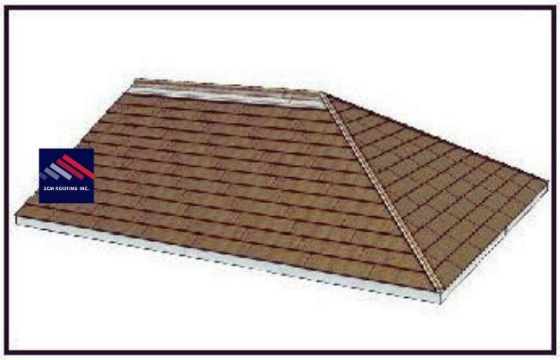
4.

In some instances it is desirable to cut and lay a half tile to ensure a cut tile is a desirable size.

Proceed to lay and secure all tiles out across length of roof.

On the second to top course, continue to lay tiles towards the other hip until the last full tile will fit.

Then continue to lay tiles down to the fascia and then across the roof to complete the roof plane with full tiles.

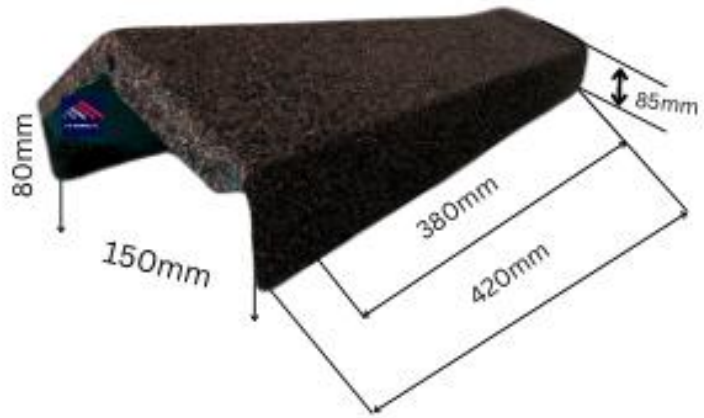



NEW METAL SHINGLES

SHINGLE TILE
PORTLAND

SCM - STONE COATED METAL

ANGLE RIDGE BLACK



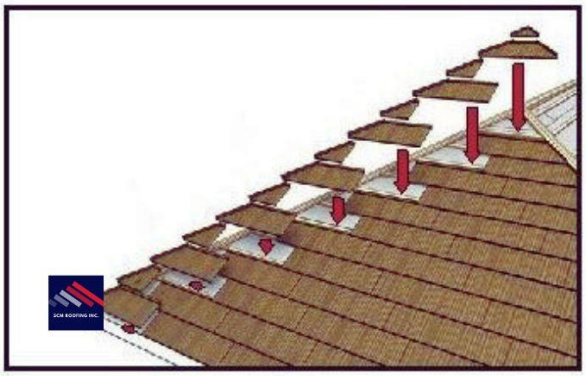
SCM ROOFING INC.

Tile Lay Continued

5.

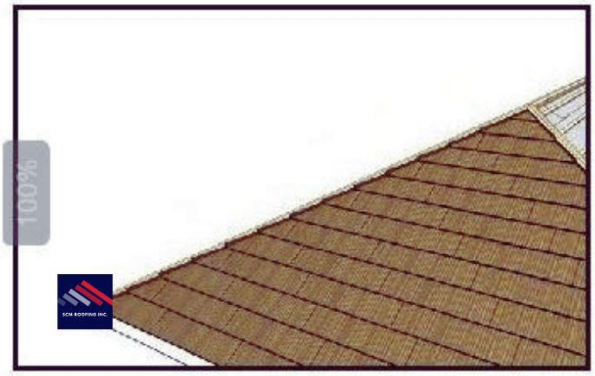
Measure the bottom length of each cut from the centre of the lap to the hip batten for each cut for the full length of the hip. Mark with bevel, cut and bend similar to the other side of the hip.

Fit cut tiles once again starting from the bottom course. Care should be taken to ensure the cut tile fits underneath the full tile above.



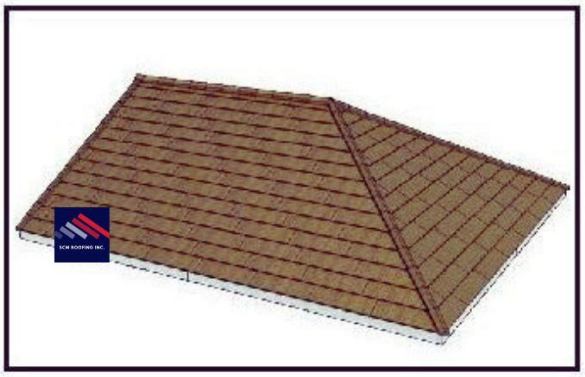
6.

Place in position and secure each tile at the lap, into the hip board and along the nose of the tile as required depending on the cut tile length.



7.

Once complete, The hip battens are then ready to be covered with V Ridge Caps.

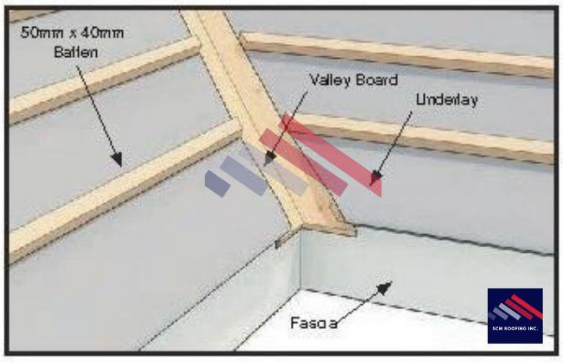


SCM ROOFING INC.

Valley Installation (Bond, Classic, Roman ,Tudor, Shake and Royal)

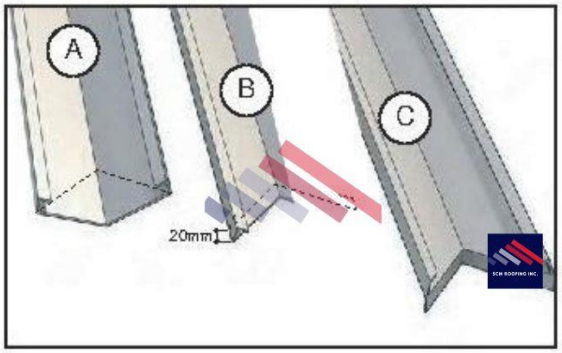
1.

The valley boards are installed between the valley jack rafters and flush with the roof plane to support the Metal Tile Valley. Valley boards are required to be set with their outer edge a minimum of 150mm (fig 1.11 pg 28) from the centre line of the valley. Valley boards are required to support a point load of 1.1.kN, which is taken to be the weight of a tradesperson with a bag of tools. Valleys are installed so that water discharges over the back of, and into, the eaves gutter.



Valley Tray

The valley tray is cut to match the angle of the fascia boards (A). It is then further cut to create a downturn of 20mm (B). The valley end is then corrected to discharge in to eaves gutter (C). The valley tray should protrude into the gutter in line with the bottom row of tiles (50mm).



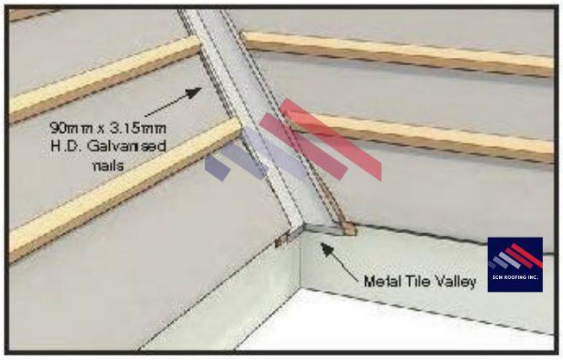
Fastening

First run out a strip of roofing underlay over the valley board to prevent the valley tray from coming into direct contact with the valley board.
Valleys shall be secured by 90mm x 3.15mm H.D. Galvanised nails fixed into the valley board at no more than 1.0m centers and bent over the top lip of the valley to hold the valley tray in place.

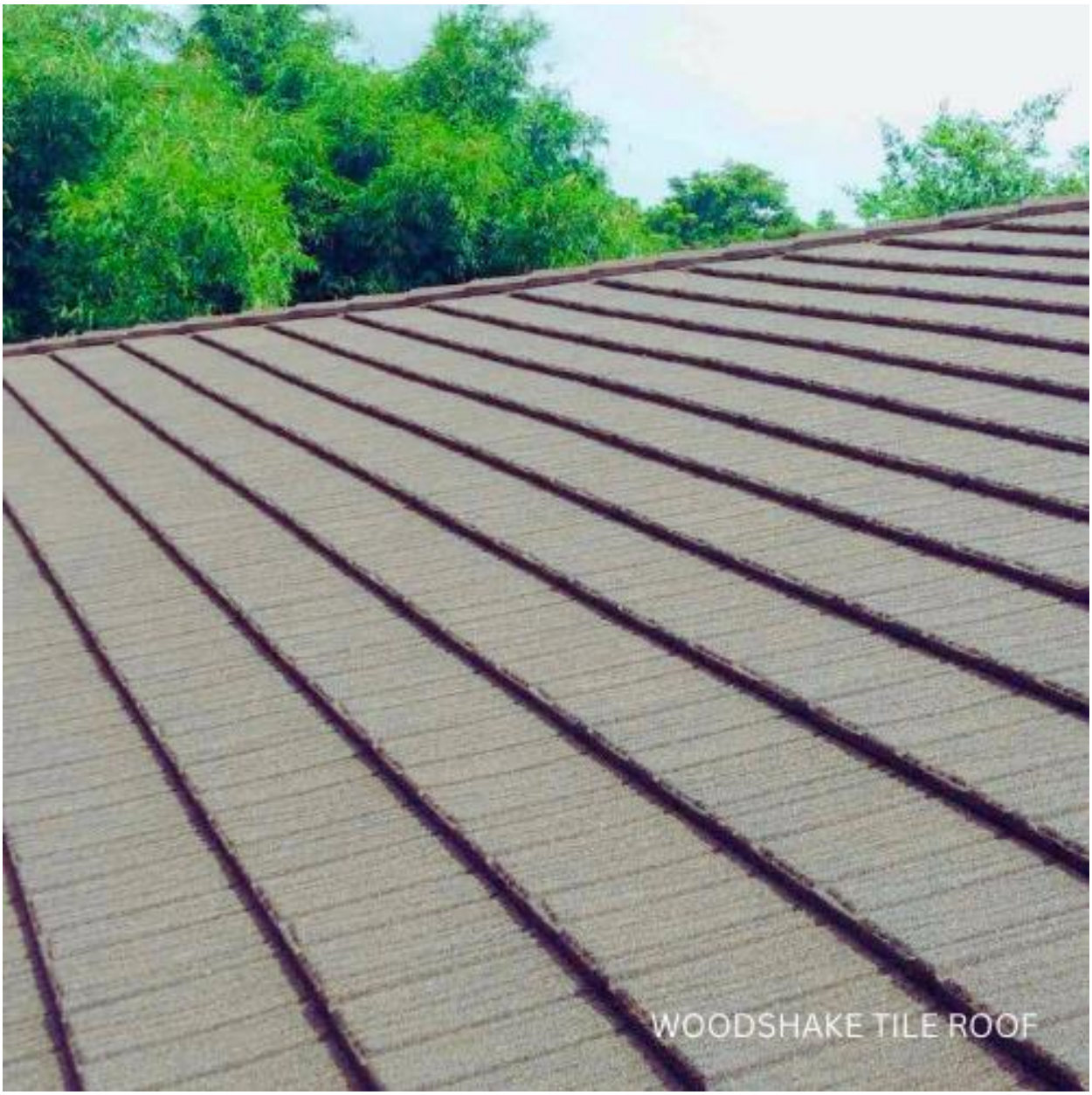
2.

Under no circumstances must the fasteners penetrate the valley surface.

Where joins occur the minimum overlap is to be no less than 200mm.



ROUND RIDGE
BEIGE RED


WOODSHAKE TILE ROOF

WOODSHAKE GRAY

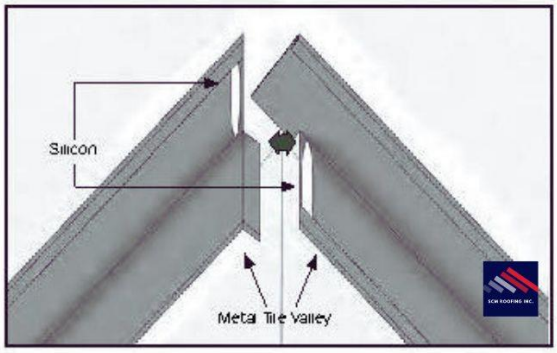
SCM - STONE COATED METAL

SCM ROOFING INC.

Valley Installation Continued

3.

Valley trays should be cut at the apex of the valley, as depicted in the right-hand picture. Silicon is placed on both trays before they are sealed in place.
The top end of the valley should be turned up against the hip or ridge battens to the height of the batten. Where two valleys meet over a dormer they are cut, shaped, joined and sealed so that they form a continuous valley.



Tile Measuring, Cutting and Bending

Tile measuring, cutting and bending for valleys is carried out as for hips, except that the bends are downwards.

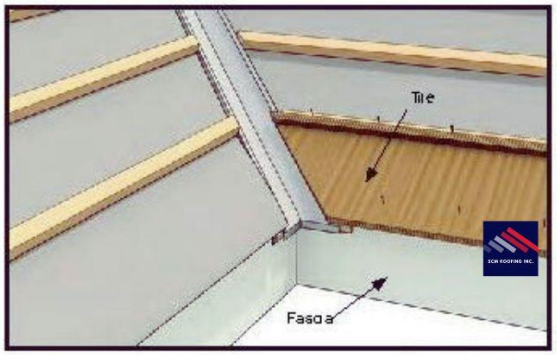
Measure the distance from the last corrugation of the installed tile to the desired finished tile line in the valley (approximately 40mm to each side of the valley centre line). This measurement is done at the top and bottom of the installed tile. This is the BEND line. To this measurement, add the depth of the valley from the FINISHED TILE line minus 10mm which is the amount the tile will drop into the valley. This is the CUTTING line and will result in a tapered downturn.

The tile edge should be bent down to a minimum of 5mm from the valley floor.

Cut with the guillotine and bend down the tile at the bend line.

Install in the normal manner, endeavouring to place one nail as close to the valley as possible to the end of the batten adjacent to the valley tray.

DO NOT nail in the valley itself.

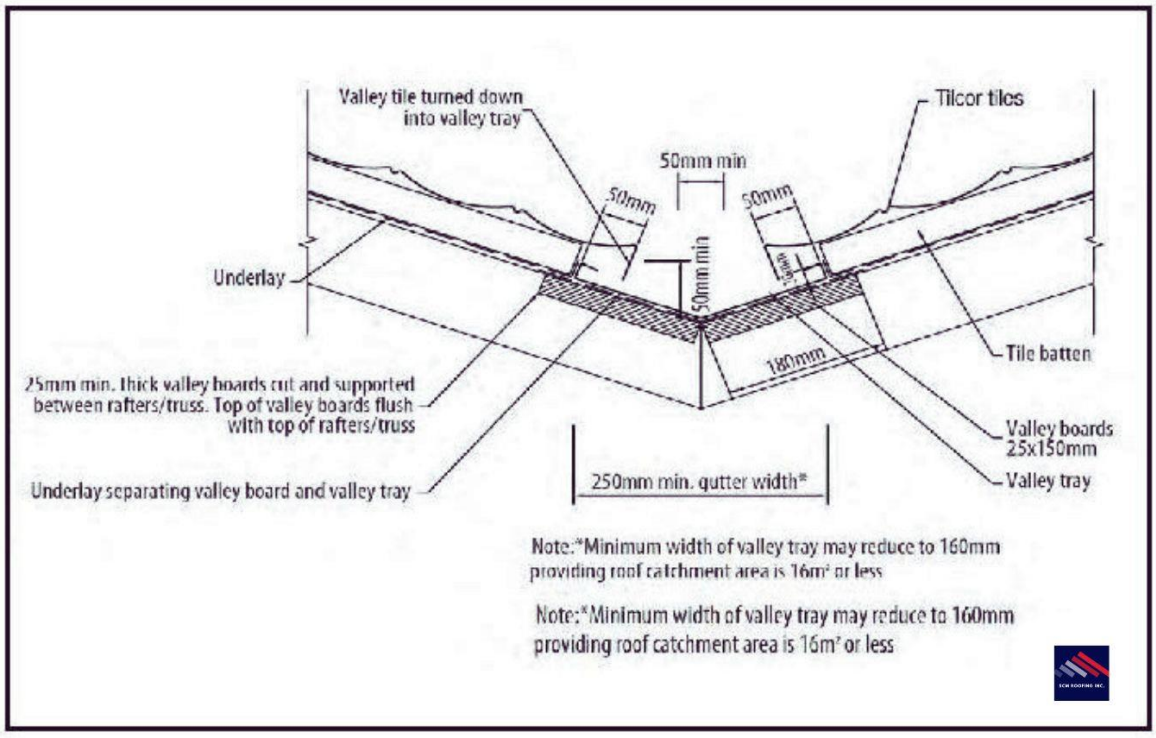


SCM ROOFING INC.

Valley Installation Continued

7.
The gap between tiles on opposing sides of the valley must be a minimum of 50mm.

Valley boards must be treated H3.2 and must be separated with underlay between any tile or flashing and the treated timber.



Note:*Minimum width of valley tray may reduce to 160mm providing roof catchment area is 16m² or less


ROMAN TILE ROOF

ROMAN TILE
BLACK

SCM - STONE COATED METAL

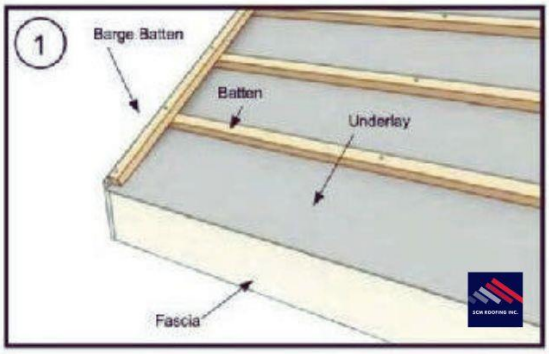
WOODSHAKE BROWN

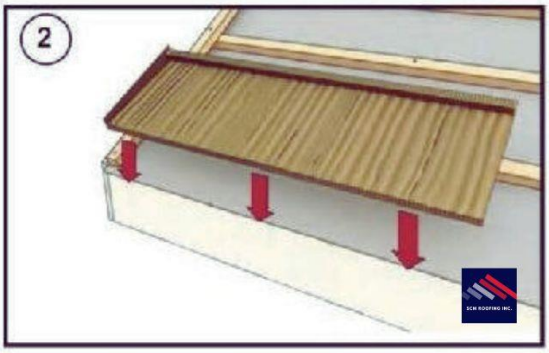
SCM - STONE COATED METAL

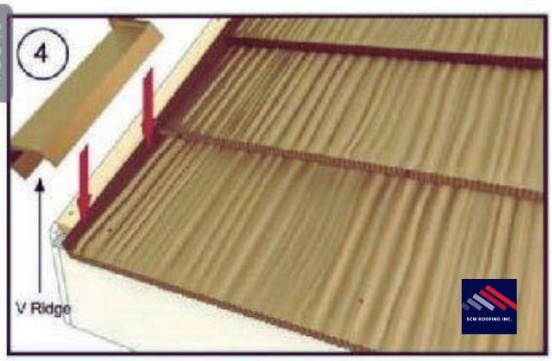
SCM ROOFING INC.

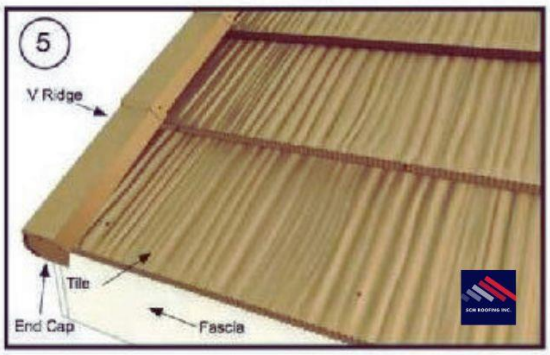
Gable Installation (Bond, Classic, Roman, Tudor, Shake and Royal)

Tile ends are turned up a minimum of 40mm and installed against the barge batten that is covered by a Standard Barge, Barrel Trim or V Ridge (as shown). Alternatives include under a metal fascia system where there is no barge batten or a hidden gutter. Where a hidden gutter is used, tile edges should be turned down into the gutter by a minimum of 20mm.









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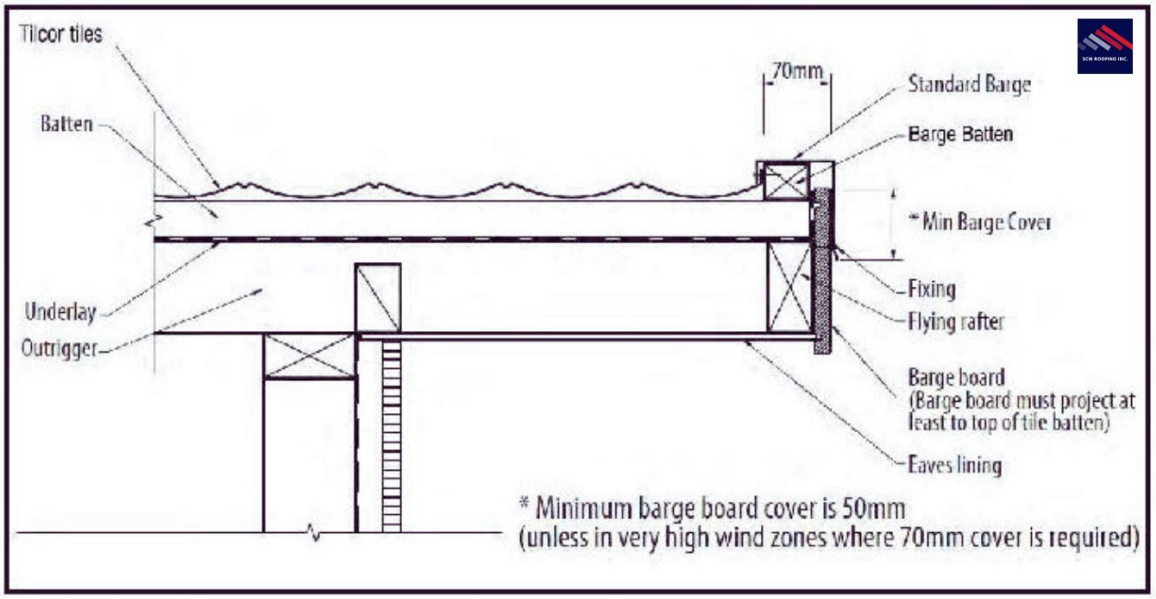
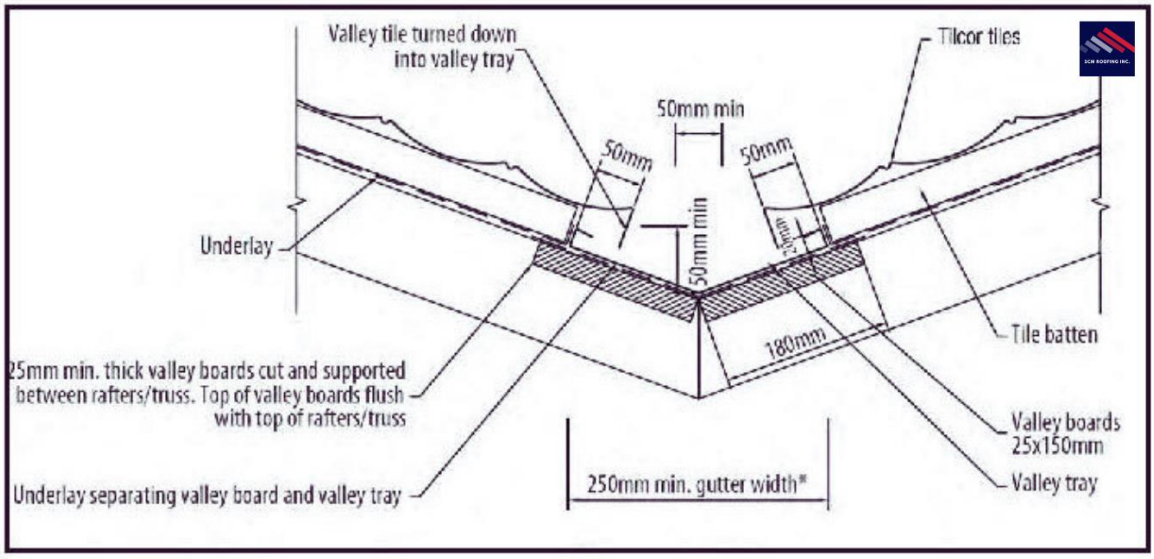
Gable Installation Continued

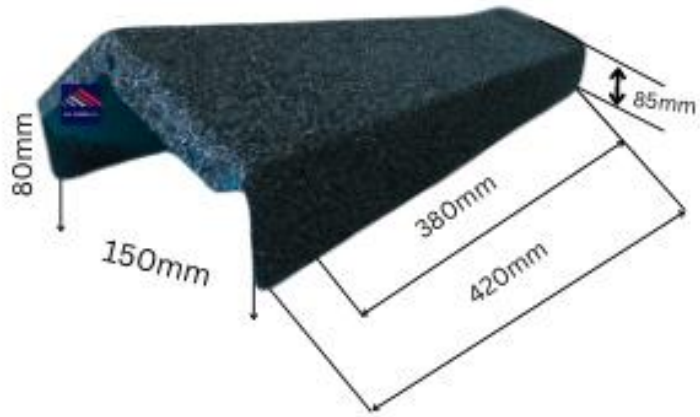
Standard barge Timber Fascia



Barrel Trim (shown) or V Ridge Timber Fascia



ANGLE RIDGE
ARTIC BLUE




ROMAN TILE

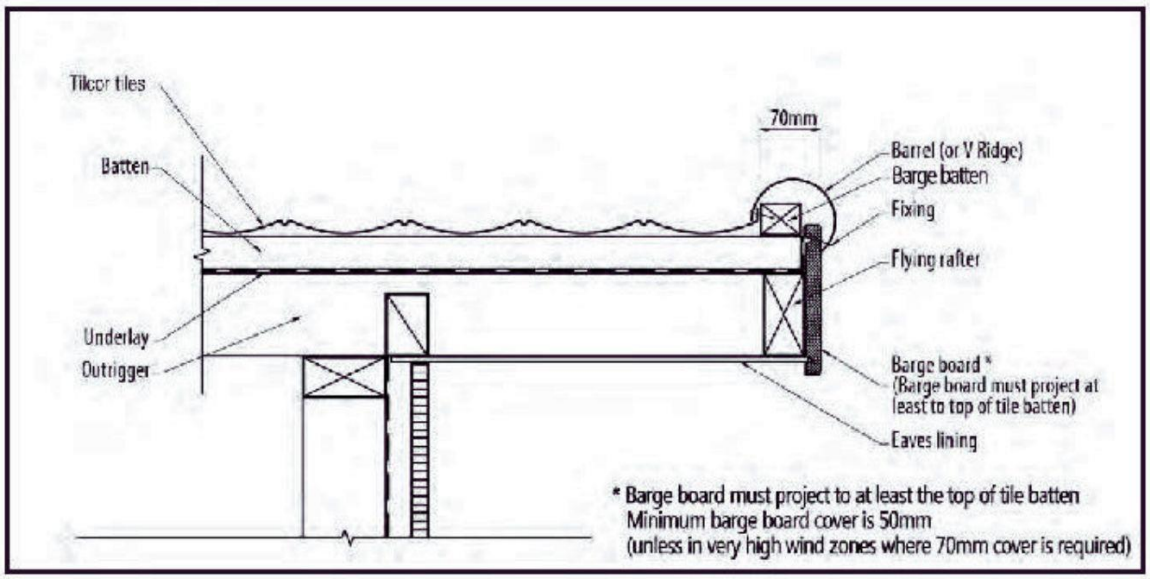
ROMAN TILE
TERRACOTTA

SCM - STONE COATED METAL

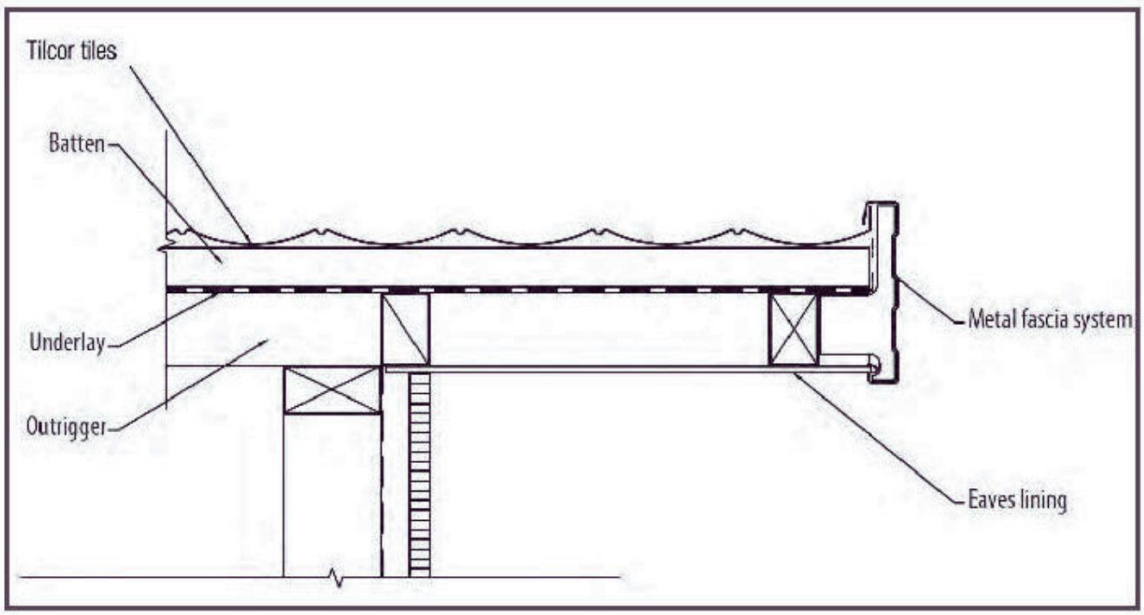
SCM ROOFING INC.

Gable Installation Continued

Barrel Trim (shown) or V Ridge or Standard Barge to Metal Fascia



Turn Up - Metal Fascia



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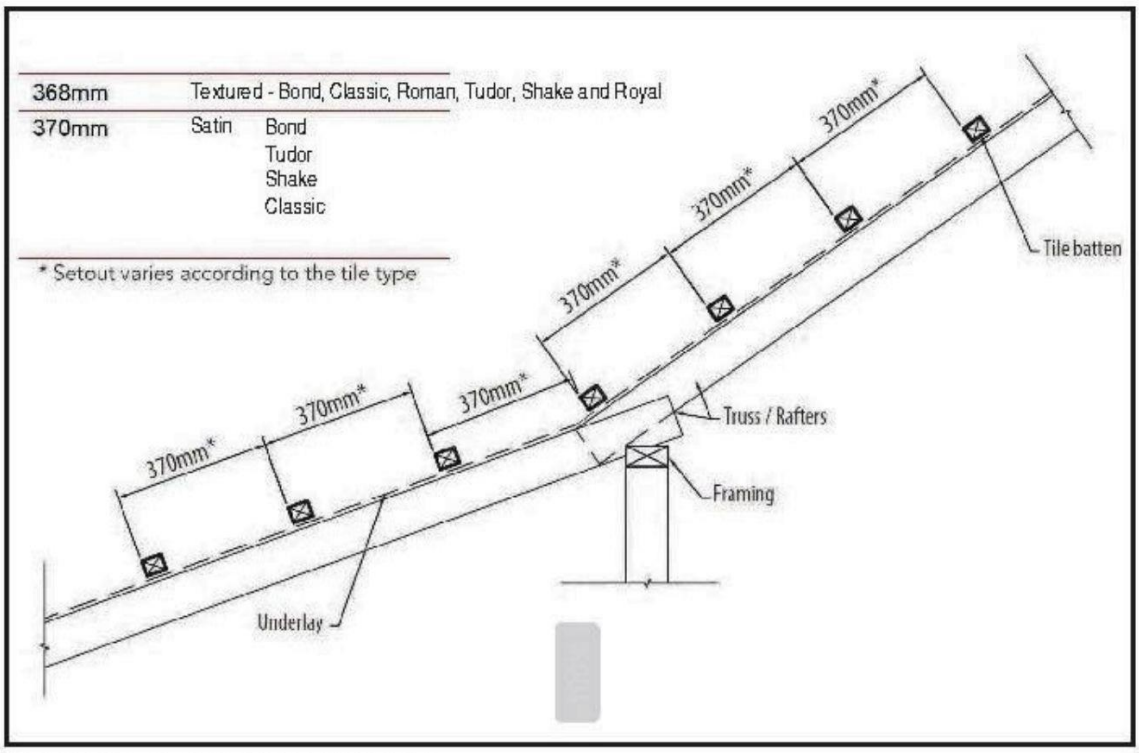
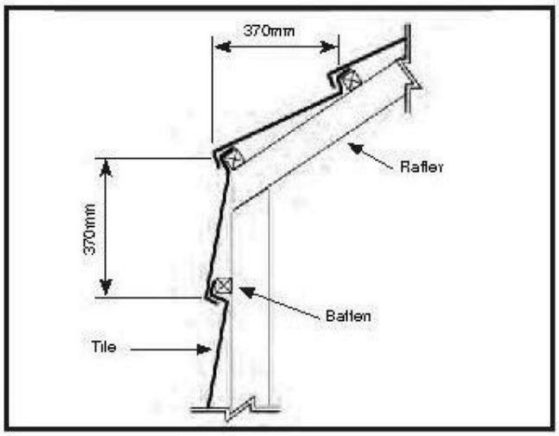
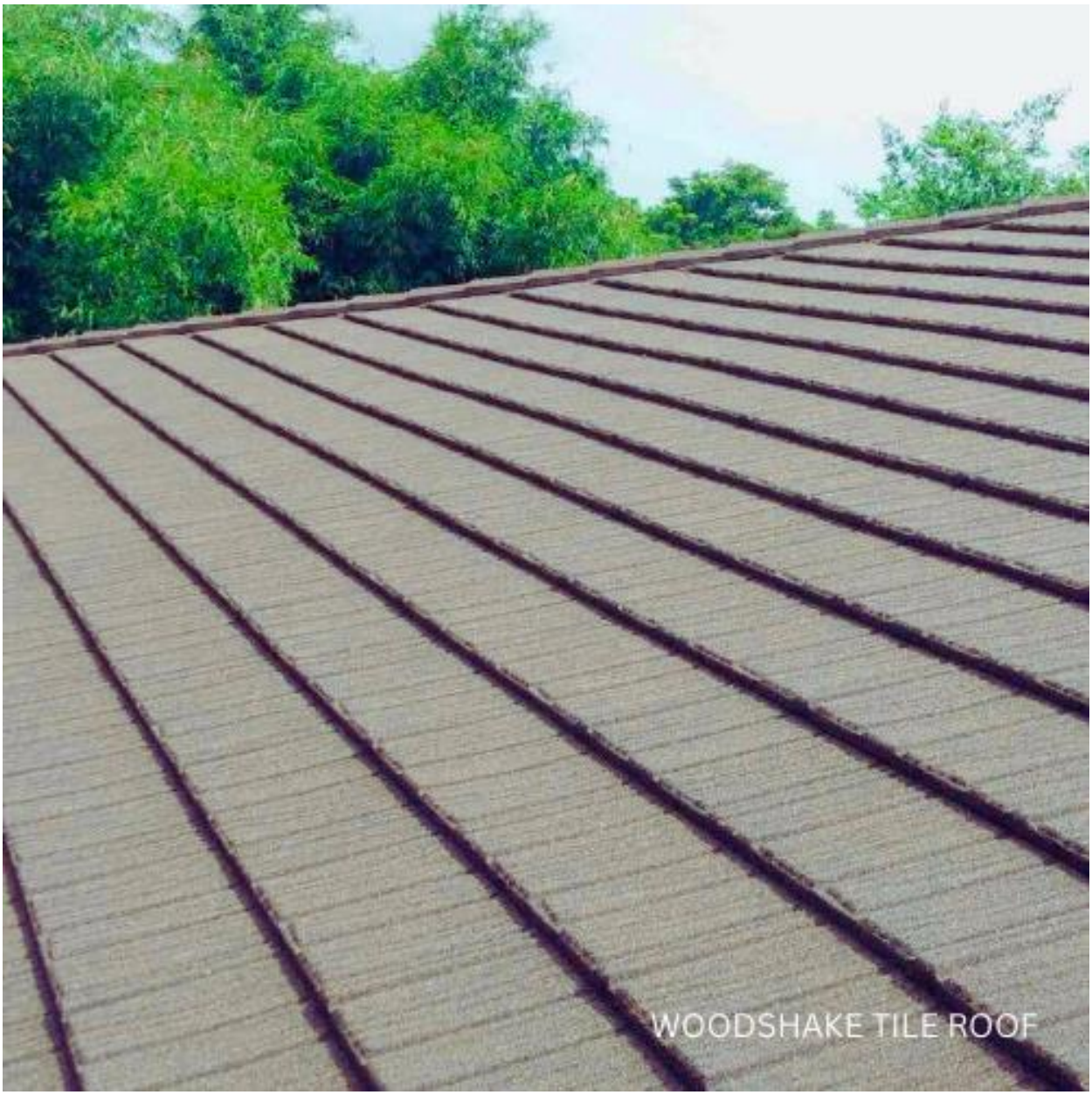
Mansard Roof Including a Change of Roof Pitch



Batten set out follows pitch change

As illustrated, where the roof line changes pitch, a batten is placed at this point. In situations where you have a pitch change and a specific number of full tiles cannot be laid down, it is suitable to bend a full tile lengthwise to compensate.

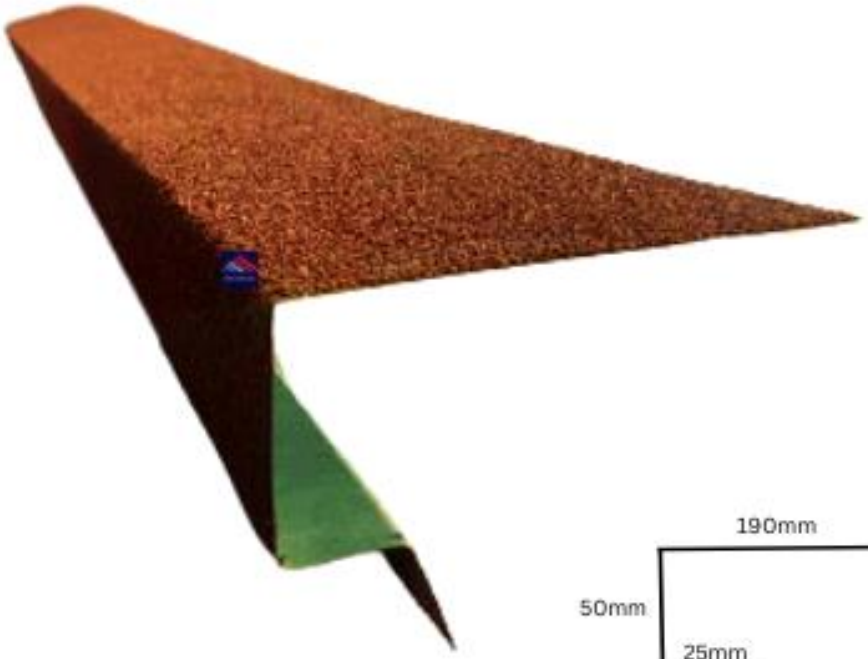


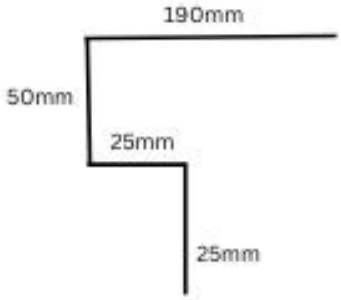

WOODSHAKE TILE ROOF

SHINGLE TILE
BROWN

SCM - STONE COATED METAL

BARGE EAVES COVER
BROWN



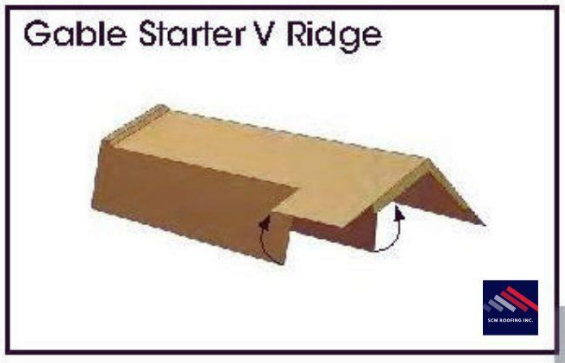


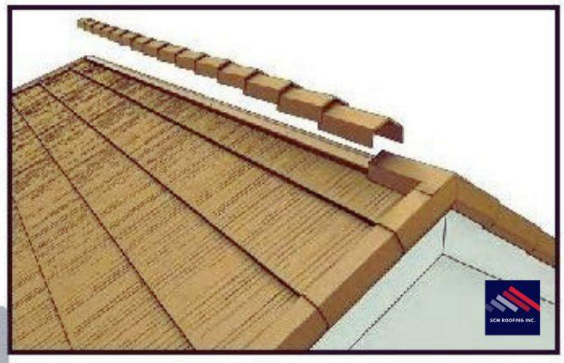
SCM ROOFING INC.

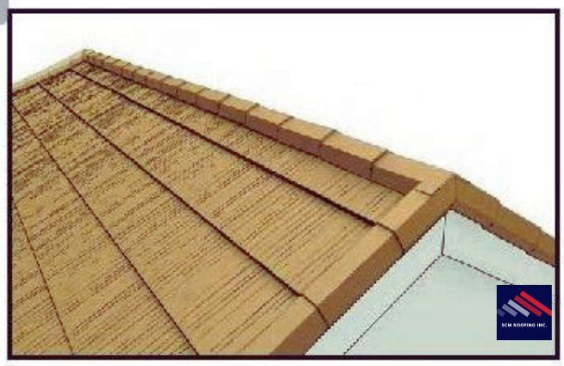
Ridge Installation

It is recommended to fit the V Ridge or Barrel Trim up all hips and gables before moving to the ridge. The starting and finishing trim on the ridge must be lapped over the hip or gable trim with silicon applied under the lap to create a waterproof seal. To ensure a watertight joint and prevent the ingress of water, a tight fit is required between the tile and the ridge cap.
Note: Tiles must be turned up a minimum of 40mm against the batten, hip board or where they butt against a vertical or an inclined surface.

The ridge trim can be fixed through the side of the trim using fasteners. It is also recommended that the silicon spots be covered for aesthetic reasons using the Touch-Up Kit.



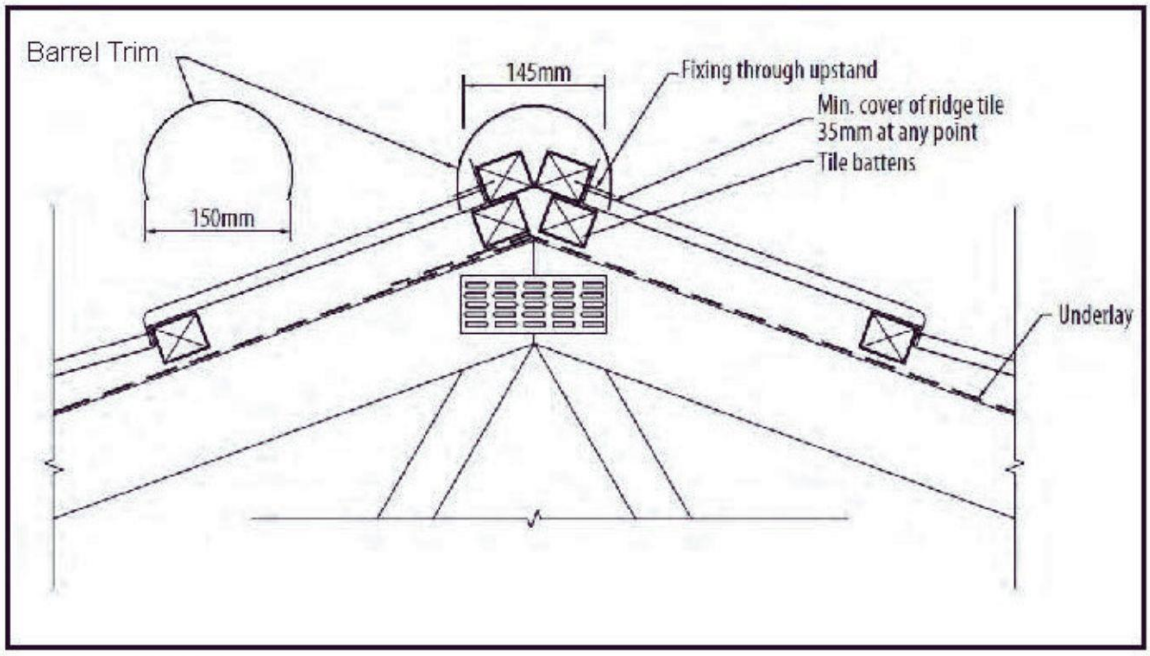




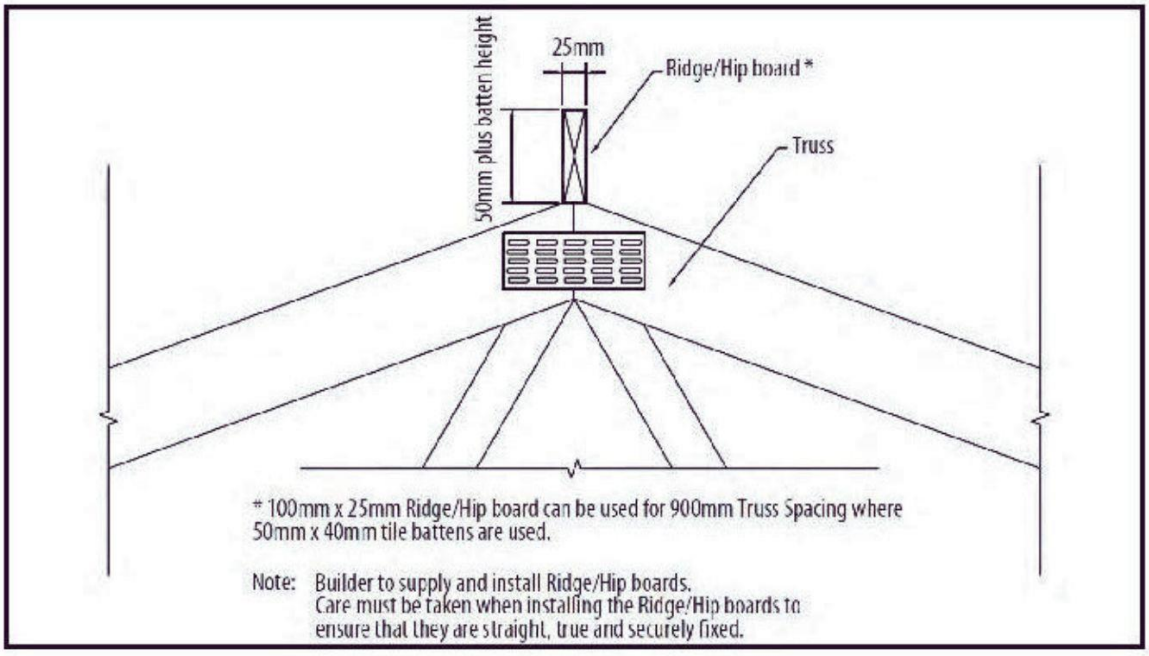
SCM ROOFING INC.

Ridge Installation Continued

Barrel Trim (shown) or V Ridge

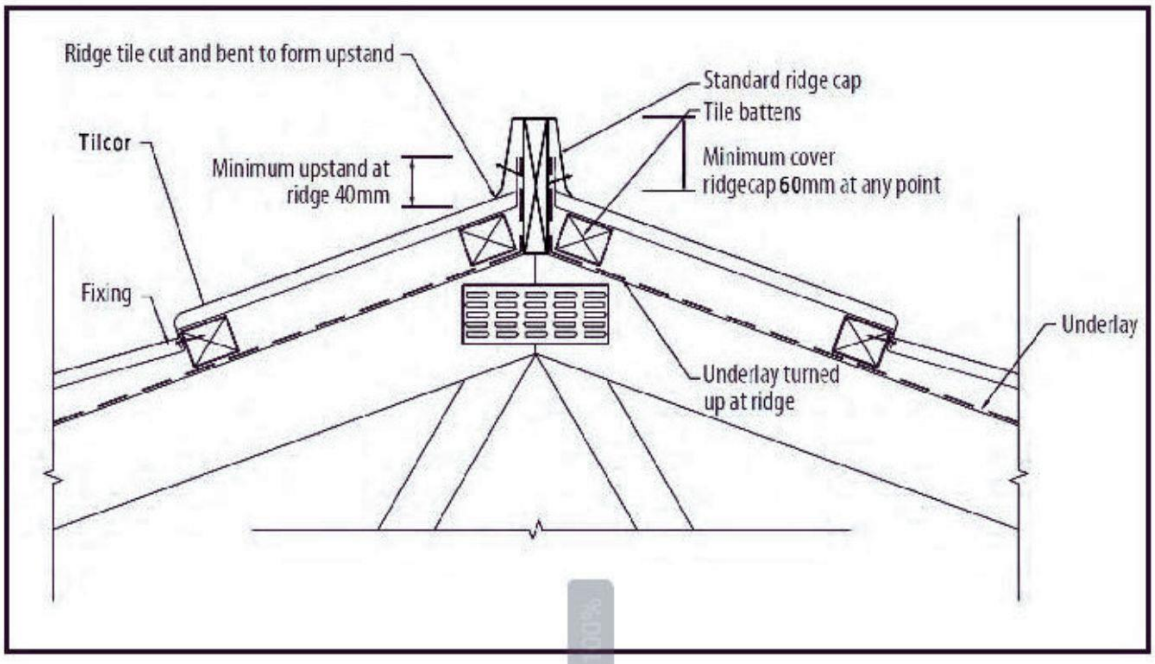


Standard Ridge



SCM ROOFING INC.

Ridge Installation Continued



ROUND RIDGE
BLACK

ROMAN TILE
BROWN

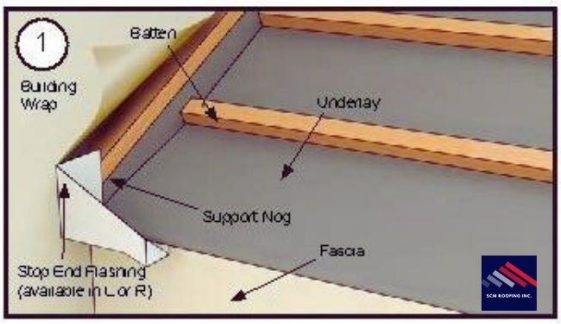
SCM - STONE COATED METAL

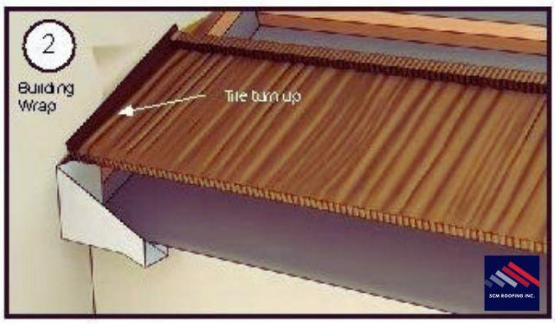

ROMAN TILE

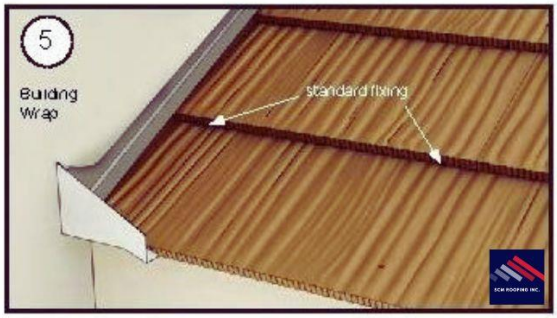
SCM ROOFING INC.

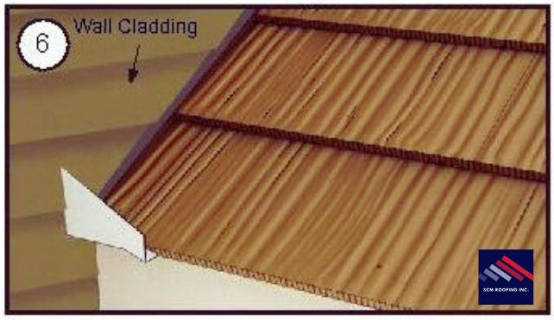
Sidewall Installation

Flashings at the ends of roofs, where the wall continues past the roof, require a stopend flashing that ensures water is directed into the gutter. Sufficient material should be left standing out from the wall so that cladding installers can ensure a weather secure finish.



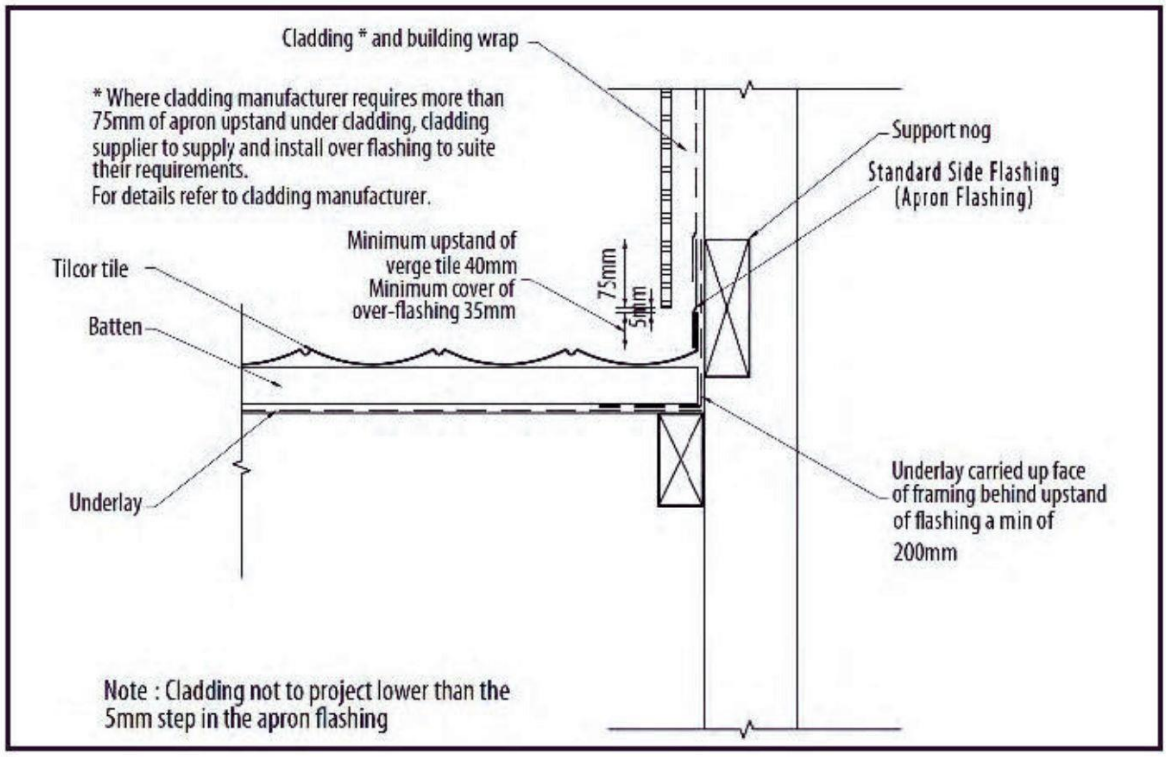






SCM ROOFING INC.

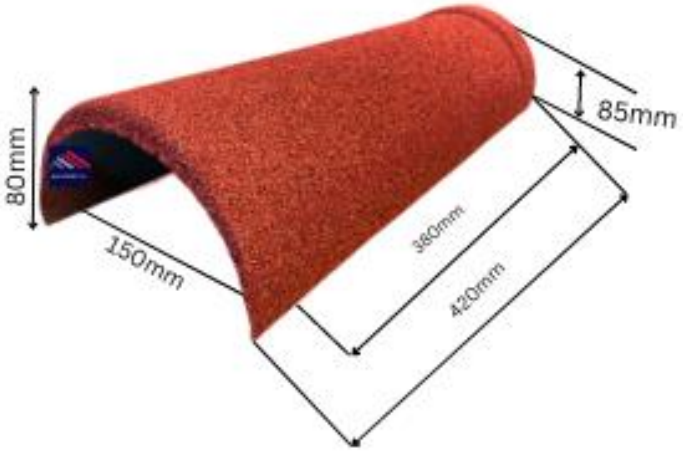
Sidewall Installation Continued



SHINGLE TILE
BLACK

SCM - STONE COATED METAL

ROUND RIDGE
TERRACOTTA

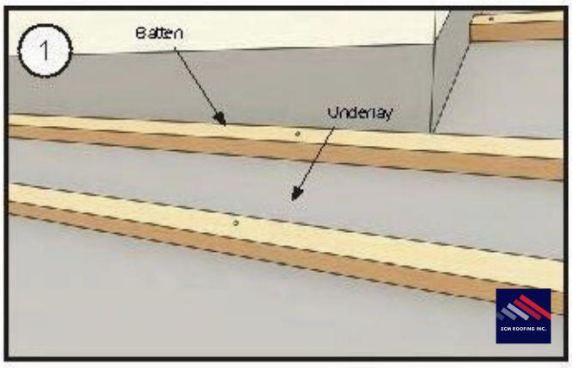


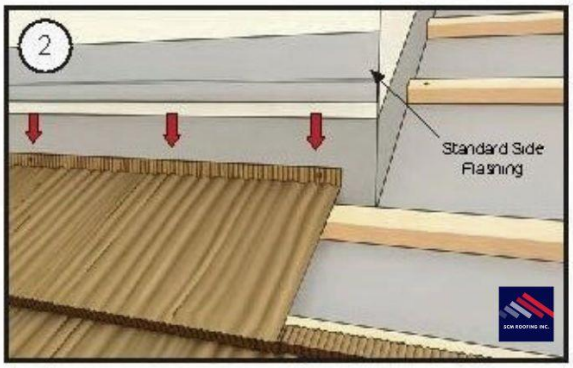
SCM ROOFING INC.

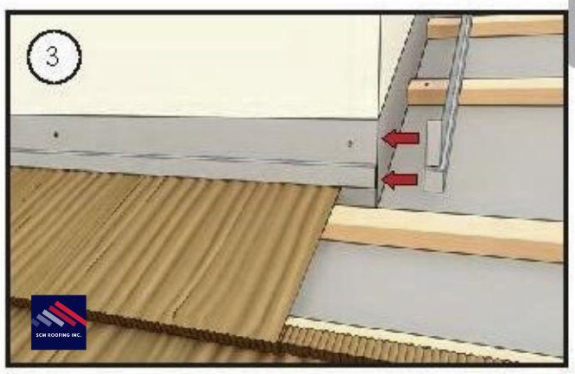
Headwall Installation

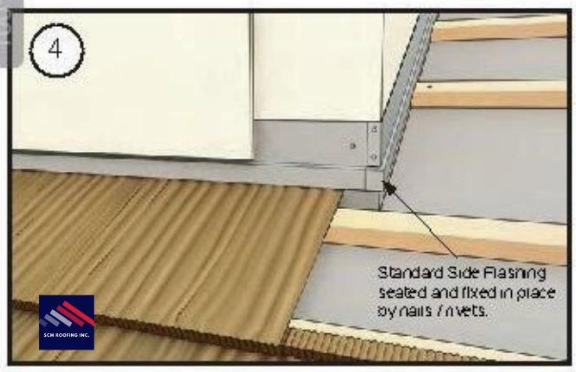
The wall cladding flashings must be positioned before the tiles and must be designed so that the turned up tile can be inserted behind the flashing.

Note: All preparatory work of under-flashing, fixing of eaves, gutters and valley gutters must be completed and all tiling battens must be in place before laying tiles.



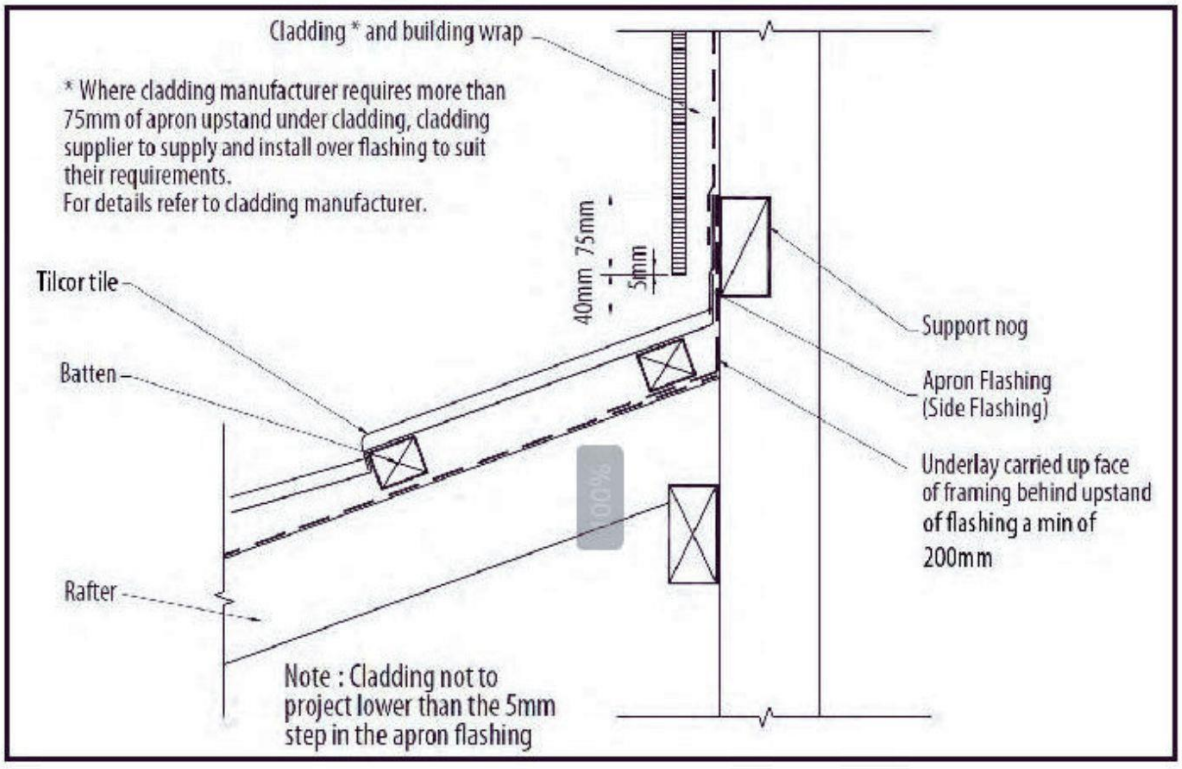






SCM ROOFING INC.

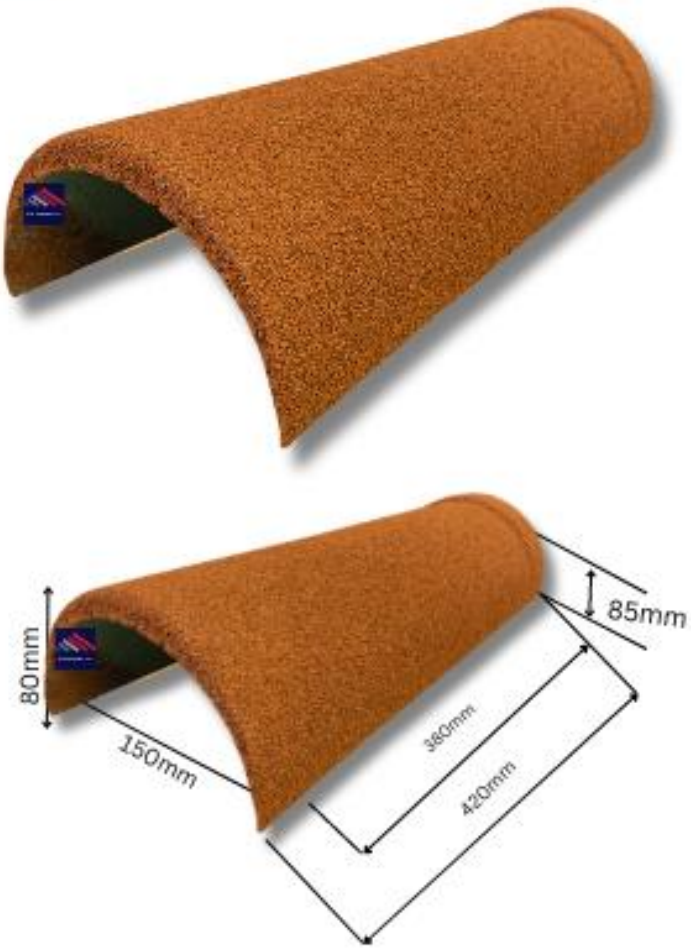
Headwall Installation Continued



SHINGLE TILE
GRAY

SCM - STONE COATED METAL

ROUND RIDGE BROWN

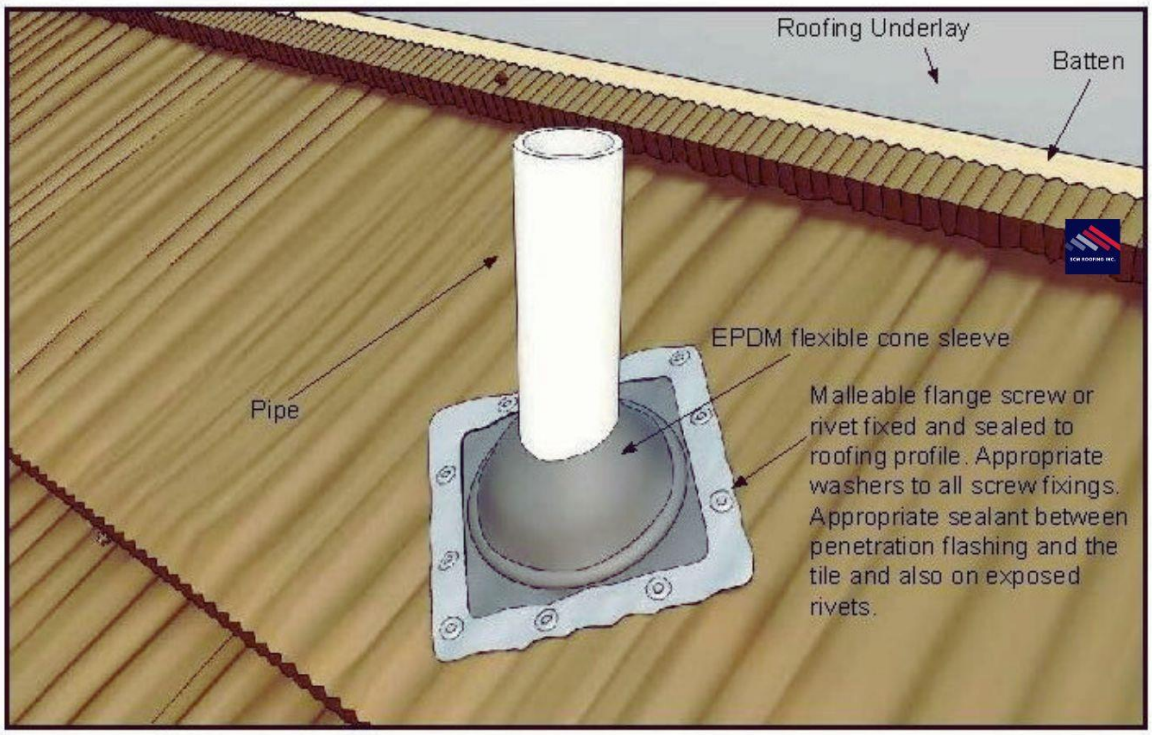


SCM ROOFING INC.

Penetration Installation

Roof penetrations shall be flashed as follows:

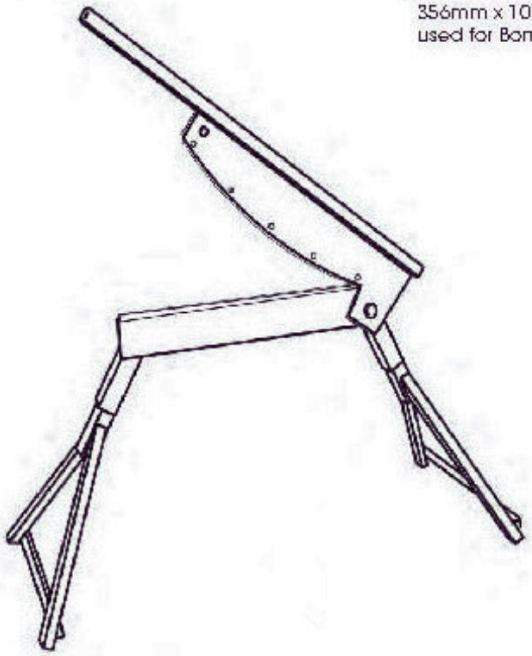
a) Pipe penetrations up to 60mm shall be flashed using an EPDM boot flashing as shown in below figure.



SCM ROOFING INC.

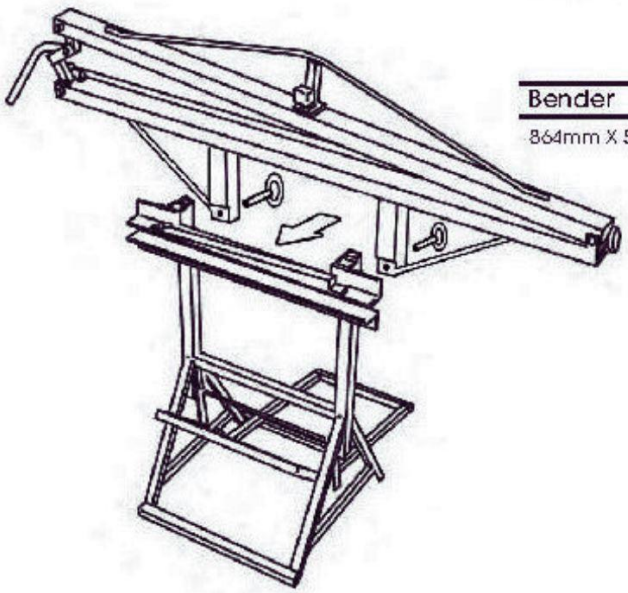
Guillotine (also known as a Cutter)

356mm x 1016mm x 76mm 17.7kg. This Guillotine is used for Bond. Classic. Roman. Shake & Shingle.



Top Course Bender

1549mm X 457mm X 101mm 28.1kg

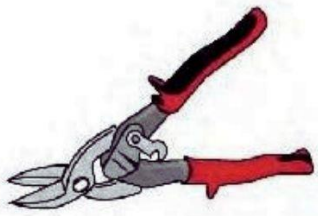


Bender

864mm X 508mm X 406mm 20.9kg

SCM ROOFING INC.

Recommended Tools Continued

Impact or Screw Gun	Hand Bender
	
Hand Scribe	**Measuring Tape**
	
Nail Gun	**Tin Snips**
	
Set-out Rod	**Bevel**