

DRY VALLEYS TO TILED ROOFS

Victorian Roofing Tile Association Inc

Reprinted April 1999

For many years terracotta and concrete tiles have been laid with wet valleys, that is, the edges of tiles adjacent to valleys have been bedded in mortar. This has led to a number of problems, including:

- Restriction of drainage behind the bedding.
- Mortar cracking due to structural and thermal movement.
- Moisture entering the roof space and rotting or corroding building materials.
- Development of ant nests behind the mortar bedding.
- Corrosion of valley gutters.
- Unightly finished valleys with clear widths of up to 175 mm.

Dry valleys have been universally used on slate roofs and steel decking. For many years they have also been used successfully on tiled roofs in other states of Australia. Now dry valleys (and dry barges) are being introduced into Victoria.



The relatively narrow clear space of a dry valley improves appearance. Dry valleys also offer better drainage and reduced callbacks.

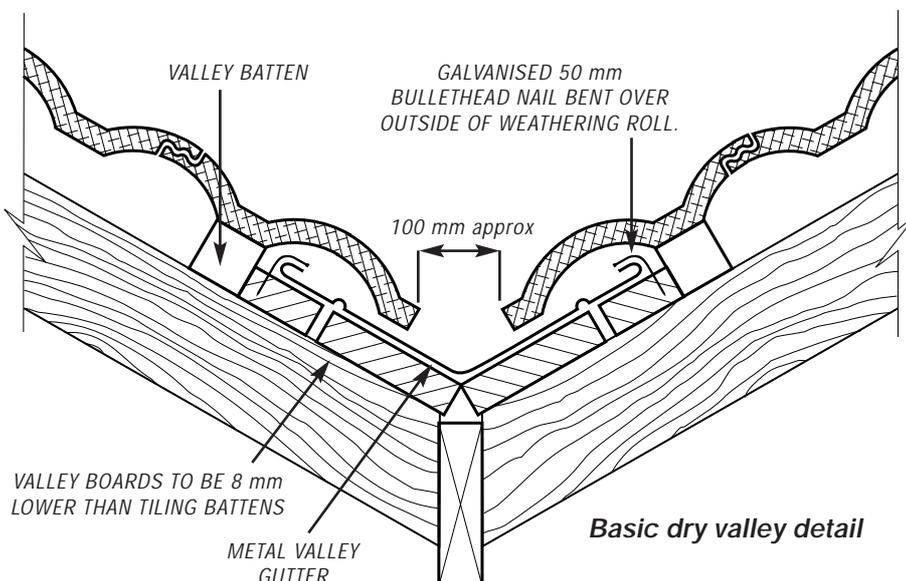
What is a dry valley?

In a wet valley the edges of tiles adjacent to the valley are bedded in mortar. Many people are under the impression that the mortar bonds the tiles to the valley gutter and prevents movement. However all structures, from aeroplane wings to houses, must flex and these movements often cause the mortar bed to crack and possibly dislodge.

A dry valley eliminates mortar and allows drainage over the **full width** of the valley gutter, including the area directly under the tiles.

What are the advantages of a dry valley?

- **No maintenance:** Creates a long-term, maintenance-free finish.
- **Improved drainage:** The gutter is effectively wider and there is no mortar to reduce or block the flow.
- **Fewer overflows:** Improved drainage reduces the chance of overflows that can lead to rotting or corrosion of underlying materials.



- **Improved appearance:** Because of this improved drainage a narrower section of the gutter can be exposed thereby improving appearance.
- **No cracked mortar:** There is no cracked mortar to trap leaves and twigs, provide a home for ants, or dislodge and roll into the spouting.
- **No callbacks:** Callbacks to repoint cracked mortar are eliminated.
- **No corrosion:** Corrosion caused by the reaction between mortar and the valley gutter is eliminated.





Dry valleys also suit raised-profile tiles. There is no mortar to crack and roll into spouting.

Is a dry valley harder to build?

A dry valley is basically identical to a wet valley and the same materials are used, except that mortar is not required. There are fewer steps in constructing a dry valley, leading to additional savings.

As before, the valley gutter is placed on valley boards. **Weathering rolls must not be flattened!** They are vital because the full width of the valley gutter is used for drainage. Using valley boards about 8 mm thinner than the battens eliminates any need to flatten the weathering roll. The tiles will sit flat and maintain a constant profile across the roof.

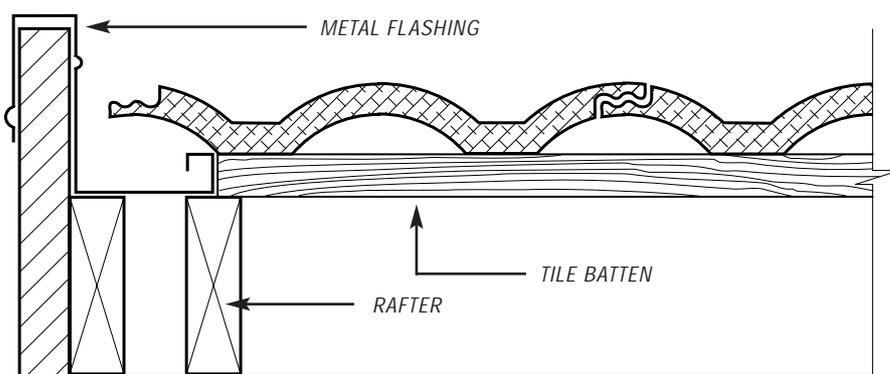
Because there is no mortar to disguise a rough edge, care must be taken when cutting tiles to be placed in the valley.

Hand cutting is satisfactory providing care is taken to ensure straight lines. Small cuts are held in place by construction adhesive or galvanised clips.

The clear width of the valley between the tiles should be about 100 mm. The narrow opening improves appearance and protects the roof space from wind-driven rain.

What about dry barges?

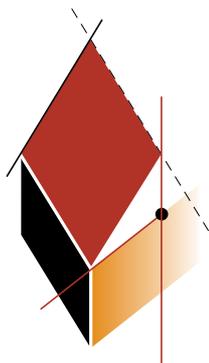
Wet barges have similar problems to wet valleys. Cracking mortar is unsightly and can lead to water entering the structure and rotting timber. A dry barge uses a simple soaker tray and barge capping that protects the barge board and acts as a gutter under the tile edge.



Basic dry barge detail

F u r t h e r i n f o r m a t i o n

Further information on dry valleys is available from the Victorian Roofing Tile Association and its member companies. This publication is based on 'Introduction of Dry Valleys to Tiled Roofs in Victoria', a paper prepared for the Victorian Roofing Tile Association by Mr Andy Anderson, building consultant and supported by The Roofing Tile Distributors Association of Victoria Inc. Copies are available from both associations.



Victorian Roofing Tile Association Inc

Reg no. A0008396V

GPO Box 4352QQ
Melbourne VIC 3001

(486 Albert Street, East Melbourne)

Tel (03) 8662 5333

Fax (03) 8662 5358

Published by the Victorian Roofing Tile Association Inc, copyright © 1999. Whilst the contents of this publication are believed to be accurate and complete, the information is given for general guidance and does not replace the services of professional advisers on specific projects.

The Victorian Roofing Tile Association Inc and its member companies cannot accept any liability whatsoever regarding the contents of this publication.