# Overflow in eaves gutters

## Background

From recent audit activity and discussions with industry, the Victorian Building Authority (VBA) is concerned that many plumbers may be unaware, or uncertain about the regulatory requirements for overflow provision in eaves gutters.

The VBA has prepared this fact sheet to provide:

- information on the relevant Australian Standards;
- guidance on how to install eaves gutters that are compliant with current overflow requirements; and to
- highlight overflow methods for eaves gutter installations particularly high fronted gutters which are a popular aesthetic choice utilised to hide the lower edge of tiles or roof coverings.

## Designing and installing eaves gutter systems: AS/NZS 3500.3

One of the key objectives when designing and installing any eaves gutter system is the prevention of damage to buildings from the ingress of rainwater.

**AS/NZS 3500.3: Plumbing and drainage Part 3: Stormwater drainage** states that:

> *Eaves gutter systems, including downpipes, shall be designed and installed so that water will not flow back into the building.*

*An example of rainwater overflowing from the eaves gutters during a storm event.*

To ensure rainwater does not flow back into buildings, overflow measures must be sized to accommodate a 1 in 100 year rainfall event.

Water overflow mainly occurs during high intensity rainfall events when due to either poor design or blockages - the eaves gutter system is unable to cope with the volume of water entering the gutters.

No eaves gutter system should, when overflowing allow water to enter the walls or internal structure of a building.

*An example of a roof requiring new eaves linings after damage caused by water overflowing from the eaves gutters.*

## Eaves gutter overflow: complying with AS/NZS 3500.3

**AS/NZS 3500.3** requires plumbers to "Select overflow measures". Plumbers are required to follow the procedure detailed in *Figure 3.5.2(A) Flow Chart – General Method for Design of Eaves Gutter Systems.*

The design of adequate overflow measures will vary from site-to-site depending on the choice of eaves gutter and the allowance for drainage and downpipes.

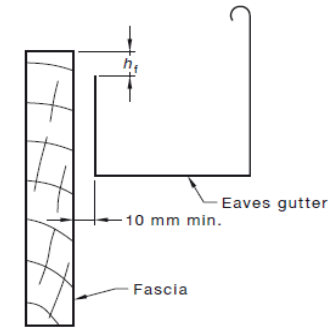
The licensed plumber is responsible for complying with the relevant plumbing laws and must design and install an appropriate eaves gutter system for each individual circumstance.

An example of an accepted overflow measure for high fronted gutters is the installation of an eaves gutter system with a 10mm gap between the fascia and the back of the gutter – it may be necessary to use a spacer or other proprietary trade product to establish the 10mm gap.

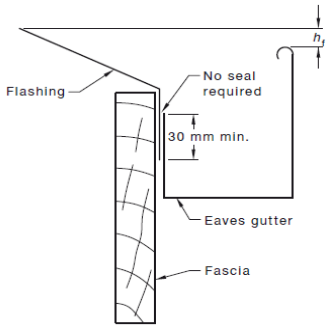
## Examples of eaves gutter overflow measures

Examples of overflow measures can be found in *Appendix G* of **AS/NZS 3500.3** and in **SAA HB:114 Guidelines for the design of eaves and box gutters**, including those reproduced on the following page:

# Overflow in eaves gutters




(c) Eaves gutter with high front and min. 10 mm gap to fascia




(b) Eaves gutter with high front and rear flashing

Appendix G, AS/NZS 3500.3:2015, pg. 126 Figure G1

If plumbers install to either of the above sample designs then they are deemed to be compliant with the plumbing laws.

If plumbers wish to install overflow measures that are not covered by the examples in **AS/NZS 3500.3** or **SAA HB:114** then they may use an Alternative Solution under the provisions of the Plumbing Code of Australia. The VBA can provide further information on the requirements for an Alternative Solution.

## VBA's role

The VBA does not advise plumbers of specific overflow measures, designs, products or installation methods. The VBA can only provide general information to guide the plumber in understanding his or her obligations under the plumbing laws.

The VBA undertakes audits and investigations to ensure compliance with the *Building Act 1993*, *Plumbing Regulations 2008*, Plumbing Code of Australia and the relevant Australian Standards (including AS/NZS 3500.3). The VBA's Compliance and Enforcement Policy can be found at: http://www.vba.vic.gov.au/__data/assets/pdf_file/0012/20910/Compliance-and-Enforcement-Policy.pdf

**The VBA encourages plumbers to consult the relevant Australian Standard or Standards in order to ensure they comply with all installation requirements.**

**The full text of AS/NZS 3500.3 and SAA HB:114 can be found at the SAI Global website:**

**http://www.saiglobal.com/**

Other reference information:

- **VBA Technical Solution Sheet 0.04 Roof Plumbing** http://www.vba.vic.gov.au/__data/assets/pdf_file/0013/22333/0.04-Roof-Plumbing-Roof-and-Stormwater.pdf
- **The Plumbing Code of Australia** http://services.abcb.gov.au/NCCOnline/Publications/2015