

Part 7.4 Gutters and downpipes

7.4.1 Application

[New for 2022]

- (1) Part 7.4 applies subject to H2D6(2) and the limitations set out in H2D6(3).
- (2) Part 7.4 need not be complied with if H2D6(1)(a) is complied with.

Explanatory Information

- The requirement to install drainage systems from roofs and sub-soil drains should be confirmed with the *appropriate authority*. These provisions need only be applied when drainage systems are necessary.
- Information on drainage requirements outside the allotment can be obtained from the *appropriate authority*.
- Where box gutters are proposed to be installed, AS/NZS 3500.3 may be used to calculate minimum sizes, falls and overflow requirements.
- For Class 10 buildings, it may not be necessary to comply with the requirements for removing *surface water* where the Class 10 building is not connected to or does not impact a Class 1 building. For example, where a Class 10 garage is attached to a Class 1 dwelling, the run-off from the garage would most likely directly impact the dwelling and therefore be *required* to be removed. However, a garage that is separated by a reasonable distance from the dwelling so as to not have an impact would not necessarily have to comply with the requirements for removal of surface water.
- The following are a number of other Clauses and Parts of the ABCB Housing Provisions that contain requirements related to drainage and roofing in addition to the provisions of this Part:
 - 7.5.8 for parapet cappings.
 - 7.3.6 for water discharge.
 - 7.2.7 for *flashings* and cappings as they relate to penetrations through roofs.
 - Part 3.3 for *drainage*.

Explanatory Information: Design of stormwater drainage systems

Stormwater drainage systems specified in the NCC Volume Two and the ABCB Housing Provisions are not designed to remove all water to an appropriate outfall during exceptionally heavy rain, particularly in tropical areas. Specifically, eaves gutter systems are designed to remove water arising from rainfall events with an *annual exceedance probability* of 5% provided they are not blocked.

Accordingly, it is necessary to design and install the system to incorporate overflow measures so that when overflowing occurs, during a rainfall event with an *annual exceedance probability* of up to 1%, any water is directed away in a manner which ensures it does not pond against, enter or damage the building, even if the stormwater drainage system is blocked.

Insufficient and poorly located downpipes are a frequent cause of poor roof drainage system performance. The installation of downpipes, especially near valley gutters, is designed to ensure rainwater from areas on the roof that have concentrated water flows is adequately removed.

Particular consideration needs to be given to box gutters, valley gutters etc. located above the internal areas of a building. There are several options available to designers using the requirements of NCC Volume Two and the ABCB Housing Provisions. The designer will need to choose an overflow system that will cope with the rainfall intensity for the particular location. Consideration needs to be given to the total capacity of overflow measures on lower level roofs where overflow measures adopted for a higher roof catchment will result in overflow to a lower one. Overflow discharge onto lower roofs may also require consideration of sarking, flashing and other weatherproofing precautions to the lower roof area.

The acceptable overflow measures in Table 7.4.4a and Table 7.4.4b were calculated using the following formulas:

- For continuous slots or rainhead: