

# LEAKING BUILDINGS – Residential Strata

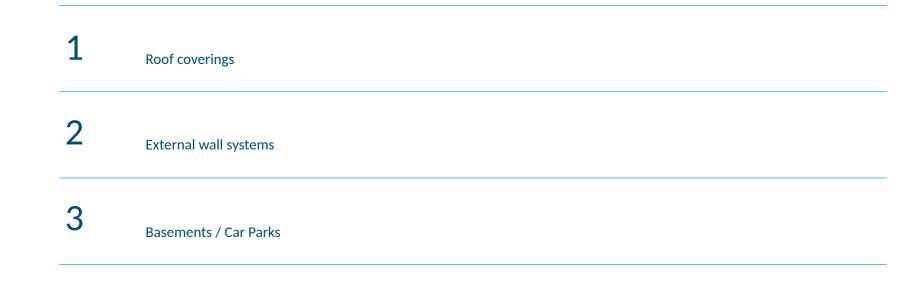
*Common areas of water ingress* 

July 2022

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# Agenda – common areas of water ingress





# ROOF COVERINGS

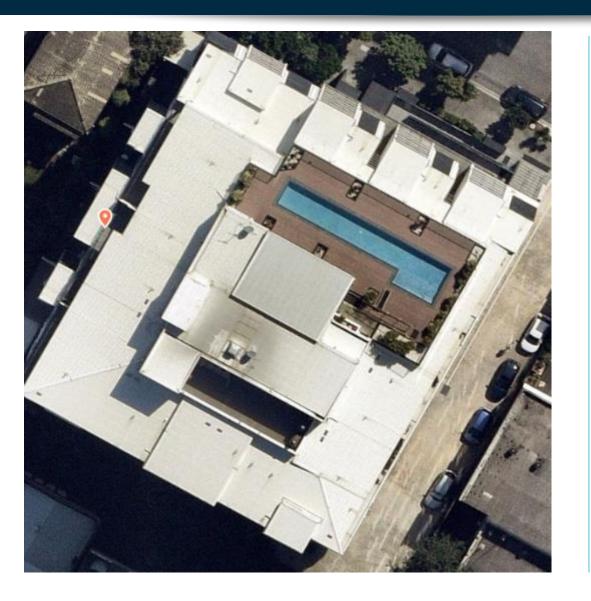
RESIDENTIAL STRATA

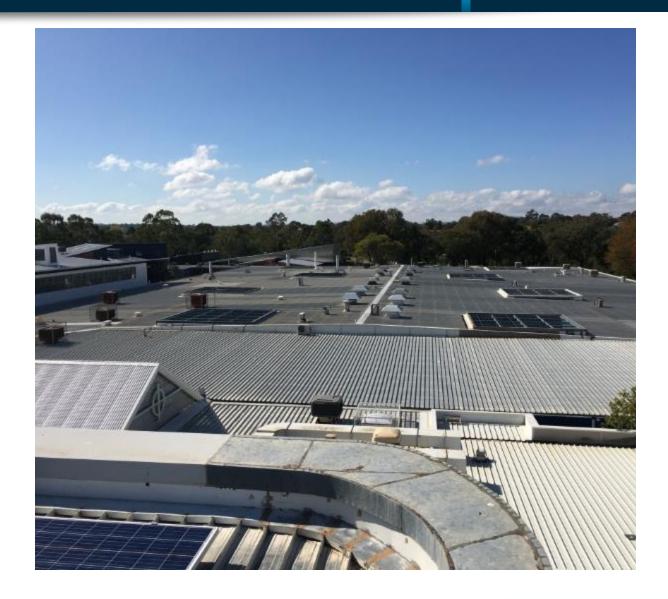


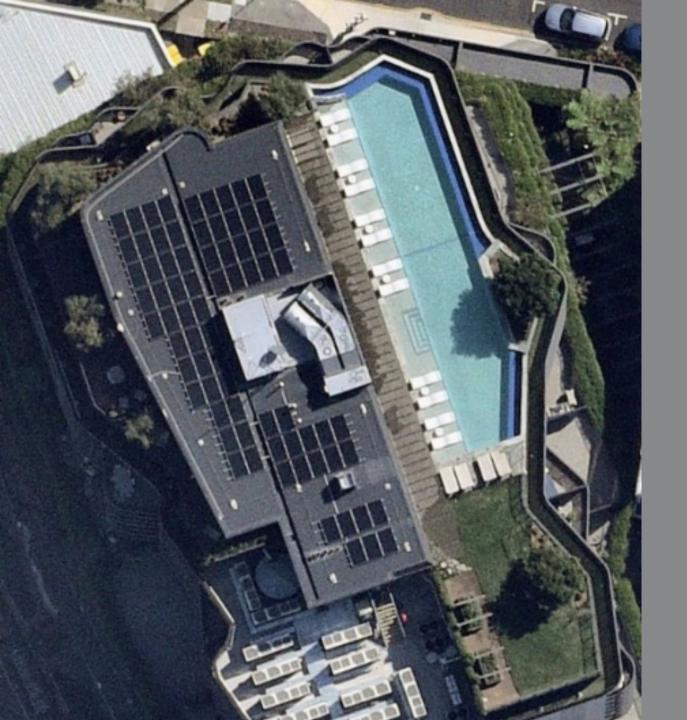


# Roof Coverings









#### > CHALLENGES OF THE CONTEMPORARY ROOF TOP

#### Swimming pool

Grassed area – including sub grade

Established trees

Retaining walls and garden beds

Plant and machinery

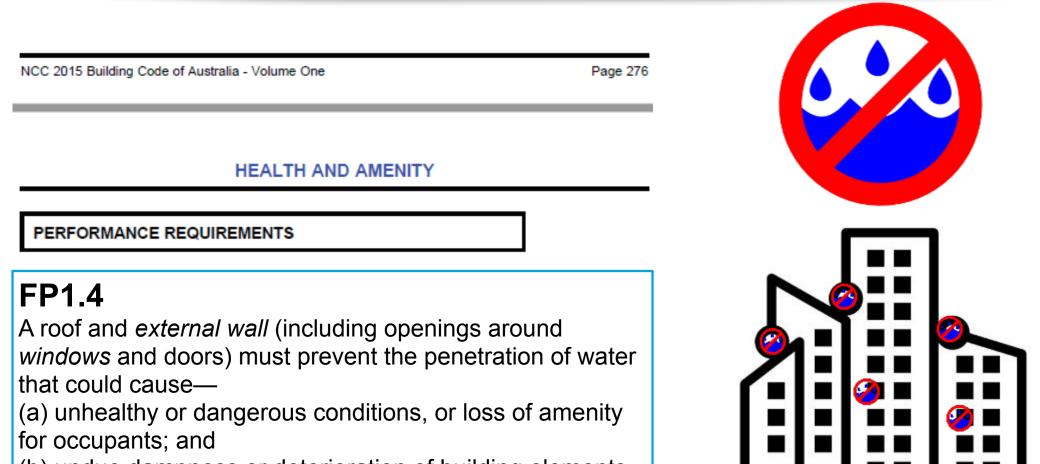
Service ducts

Solar systems

Box Gutters

## Performance Requirement of the NCC





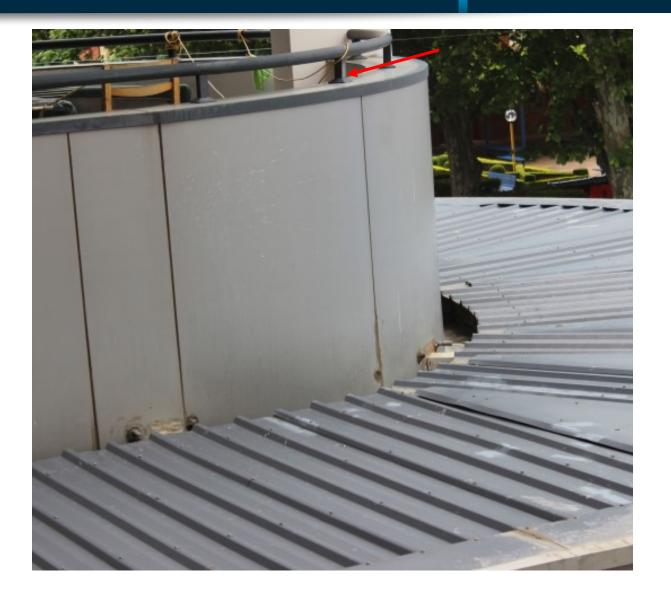
(b) undue dampness or deterioration of building elements.

# Box Gutters

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## Provision for overflow









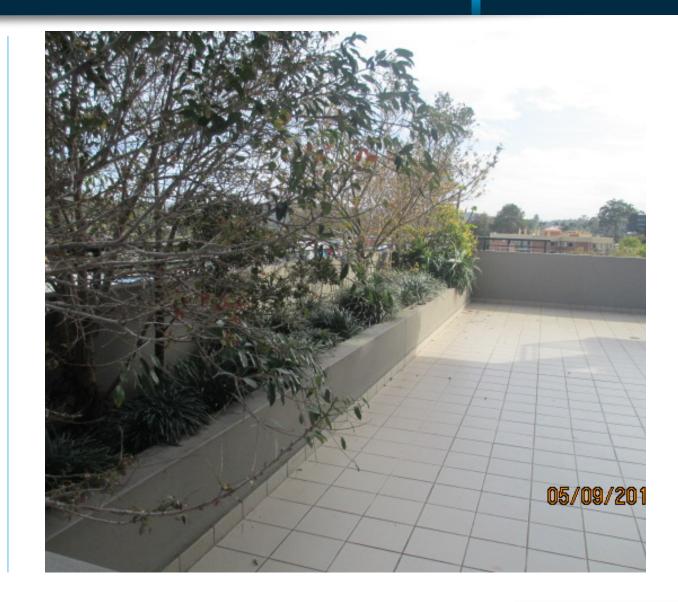
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# Case study 1 - Accessible roof tops









# Case Study 1 – Accessible roof tops









# Case Study 1 – Accessible roof tops









# EXTERNAL WALL SYSTEMS

Cavity Masonry, Single skin masonry and Cladding





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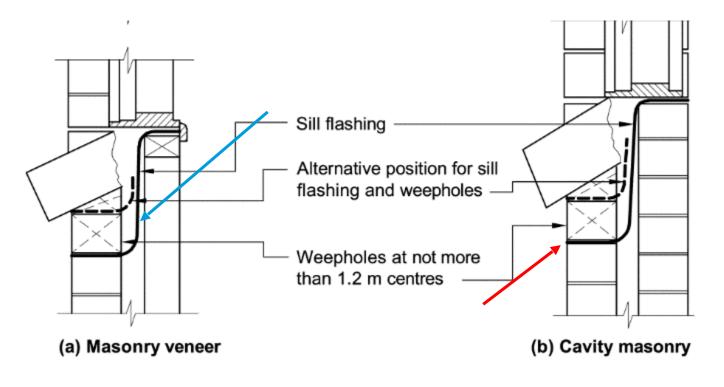


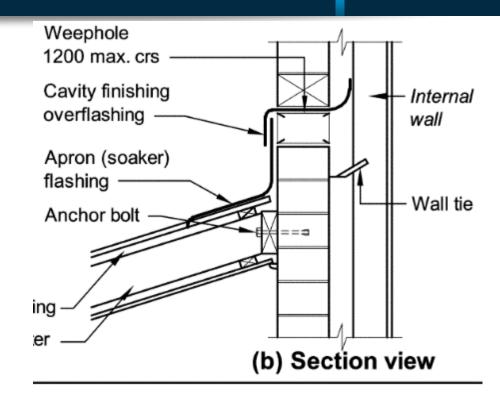
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# Weatherproofing of cavity masonry – double skin

In brick veneer and *cavity* masonry construction, a *cavity* must be provided between the inner and outer walls as follows:

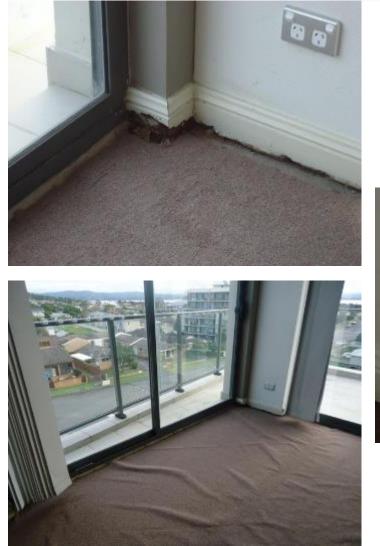
- (a) Brick veneer-not less than 25 mm width.
- (b) Cavity masonry-not less than 35 mm nor more than 65 mm width.
- (c) The minimum cavity width specified in (a) and (b) is to be maintained between the outer masonry leaf and any services, insulation, sheet bracing or other element located in the cavity.





# Case study 2 – Cavity Masonry construction





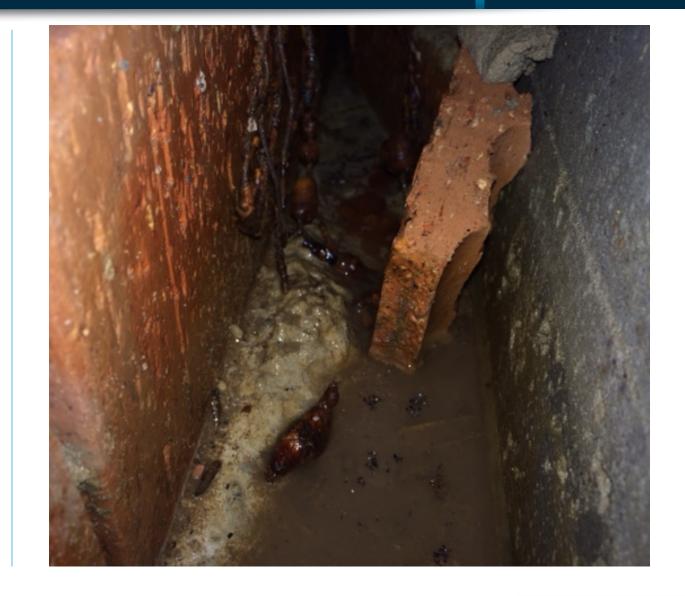




# Case Study 2 – Masonry cavity construction



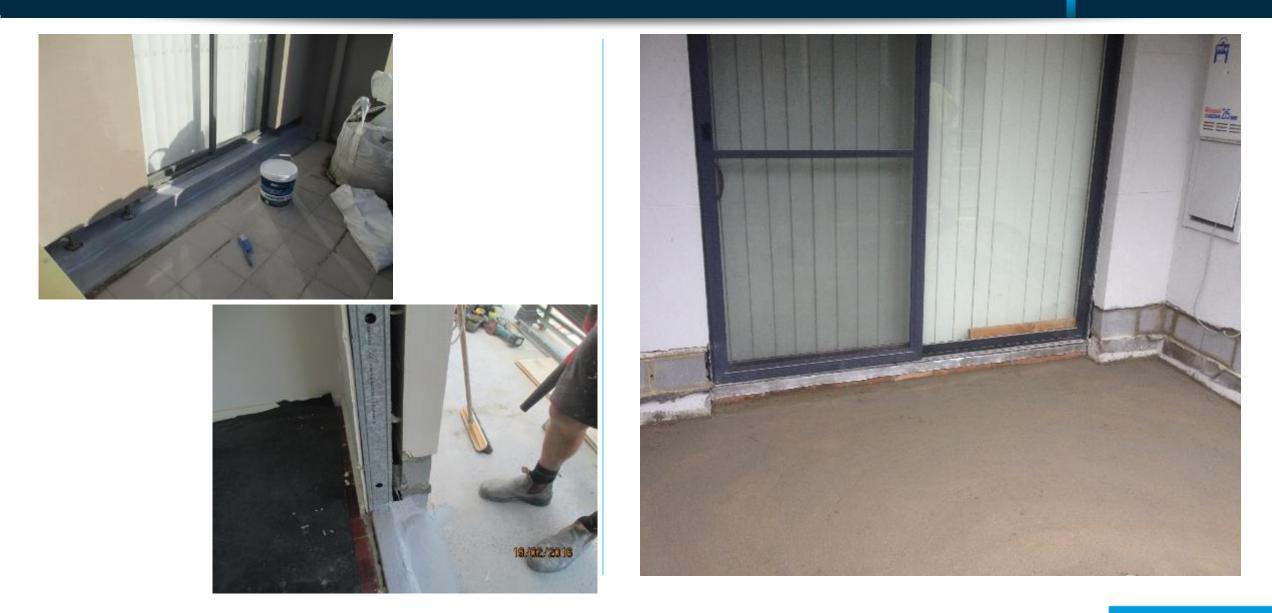




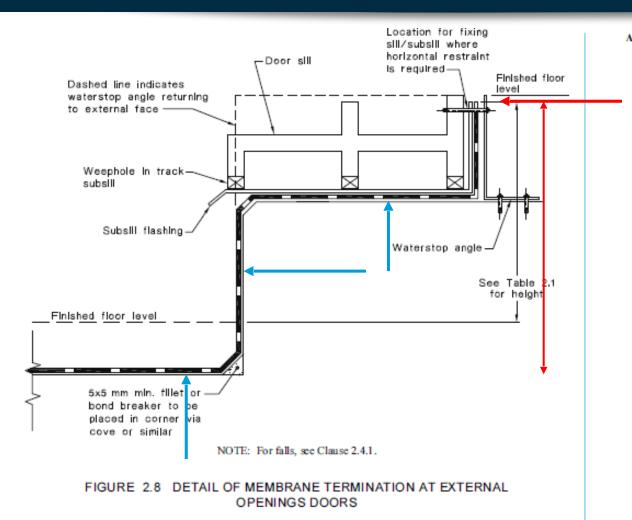
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# Case Study 2- Balconies and Planter boxes





## Australian Standard 4654.2 – Minimum requirement of sliding door detailing



AS 4654.2-2009

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#### 2.6.3.2 Doors and windows protection

Openings should be protected with a set-down or hob to provide a vertical surface of sufficient dimension to satisfy the requirements of Table 2.1.

Where circumstances do not permit the inclusion of a set-down or hob (e.g., for wheelchair access), a gutter shall be formed into the substrate immediately in front of the opening.

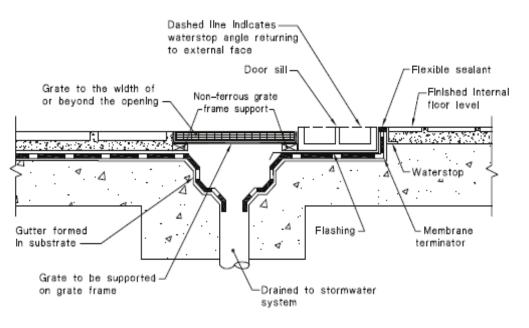
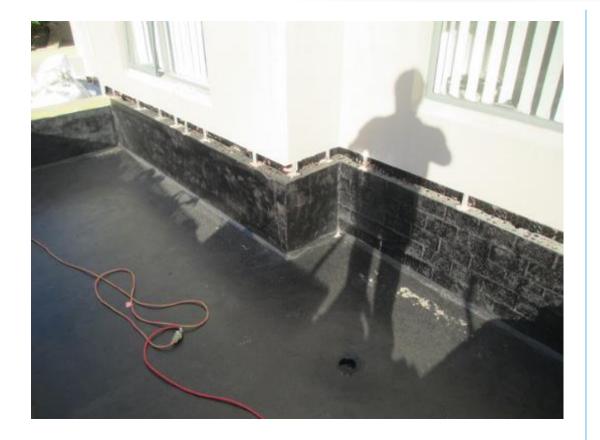


FIGURE 2.9 DETAIL OF MEMBRANE TERMINATION AT WALL OPENINGS WHERE THE INTERNAL AND EXTERNAL FINISHED FLOOR LEVELS DO NOT ALLOW THE UPTURN REQUIRED IN TABLE 2.1

# Case Study 2 - Balconies and planter boxes cont...





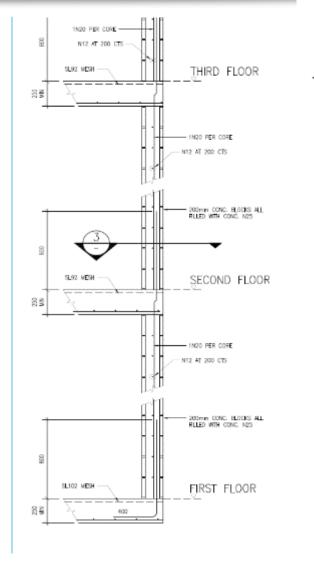


# Weatherproofing of masonry – single skin



#### 3.3.4.12 Weatherproofing for single skin masonry walls

- (a) A waterproof coating material must be applied to all external single skin masonry walls in accordance with the following:
  - ) The coating must extend from the upper most exposed part of the wall-
    - (A) to a level adjacent the internal finished floor level, if the external blockwork overhangs the edge of the slab 10 mm; or
    - (B) 50 mm below the internal floor level if no edge overhang is provided to the blockwork (see Figure 3.3.4.9).
  - (ii) Acceptable external waterproof finishes are—
    - (A) three coats of 100% acrylic based exterior quality gloss paint; or
    - (B) one complete coat of cement based paint and two coats of 100% acrylic based exterior quality gloss paint; or
    - (C) clear water repellent, provided the wall is protected by a roof overhang.
- (b) Windows must be installed in accordance with Figure 3.3.4.8.
- (c) A damp-proof course and vapour barrier or damp-proofing membrane must be installed in accordance with Figure 3.3.4.9.



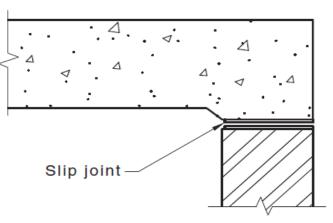
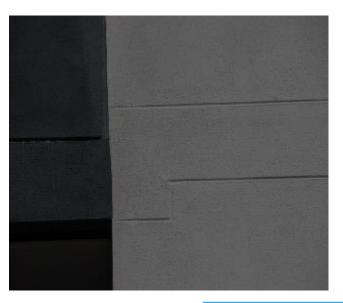
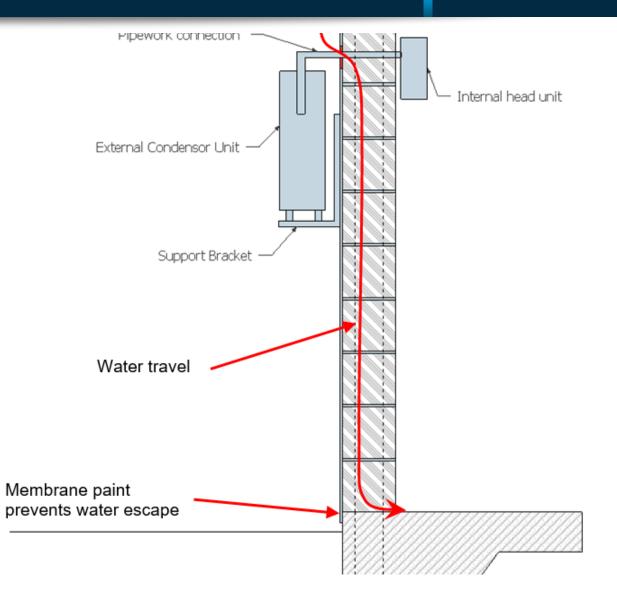


FIGURE 4.2 SLIP JOINT



# Case Study 3 – Weatherproofing of single skin masonry Sedgwick



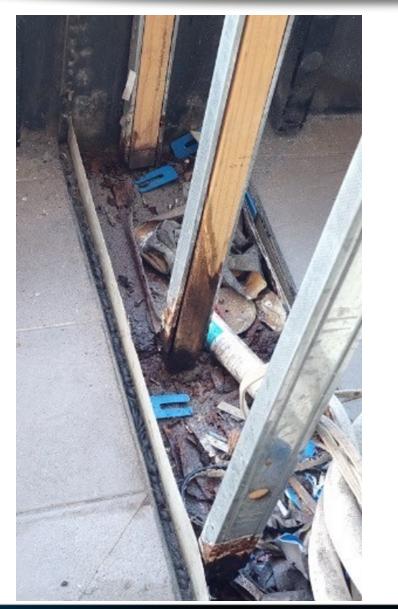


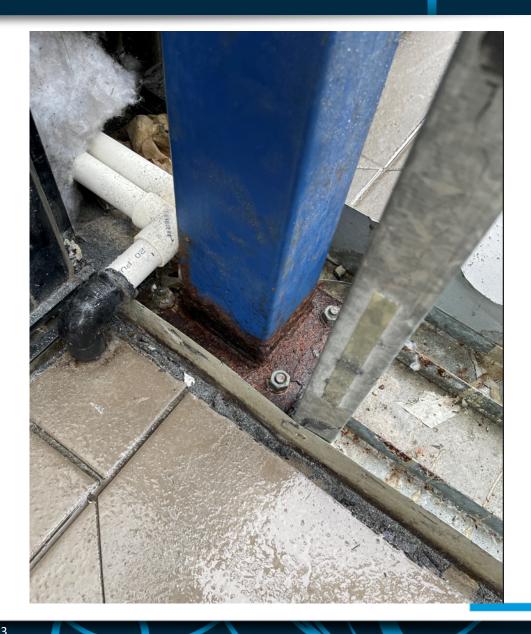
# Combination of Masonry and cladding











# BASEMENT / CAR PARKS





# FP1.4

A roof and *external wall* (including openings around *windows* and doors) must prevent the penetration of water that could cause— (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements.

#### Limitation:

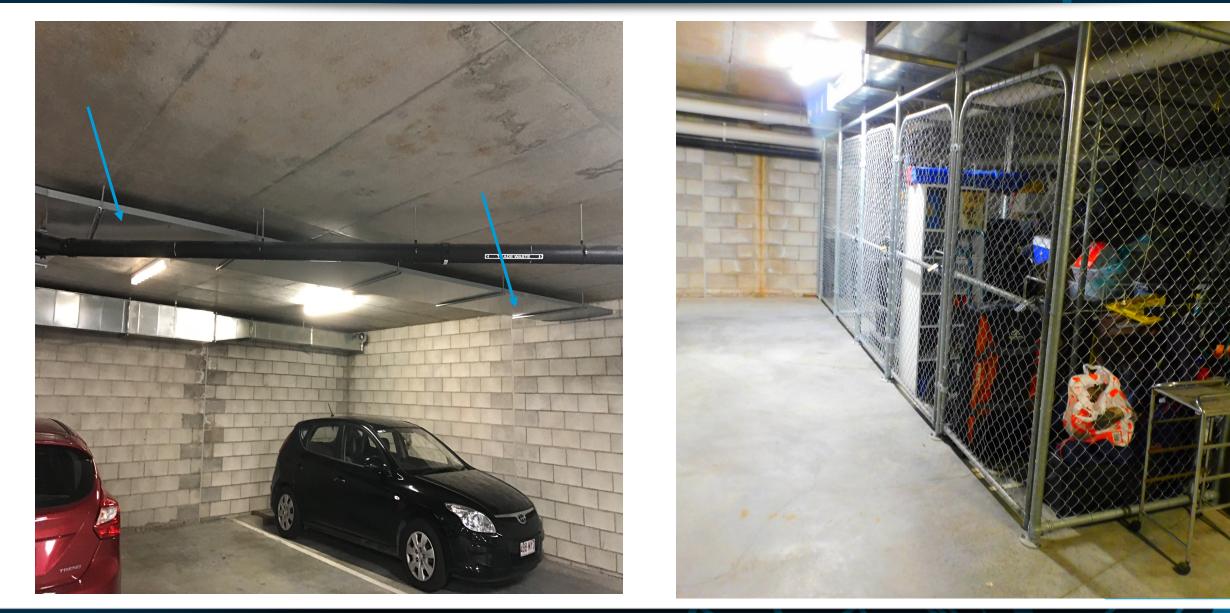
FP1.4 does not apply to-

- (a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or
- (b) a garage, tool shed, *sanitary compartment*, or the like, forming part of a building used for other purposes; or
- (c) an open spectator stand or open-deck carpark.



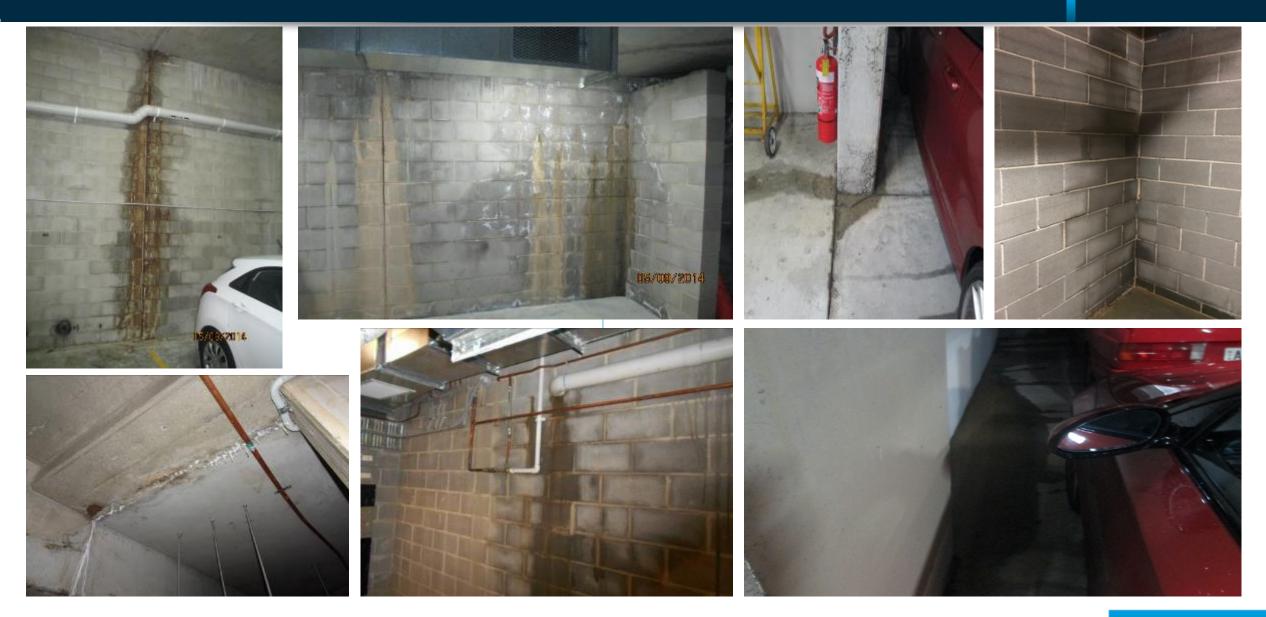
# Loss of Amenity in a Class 7 – basement car park

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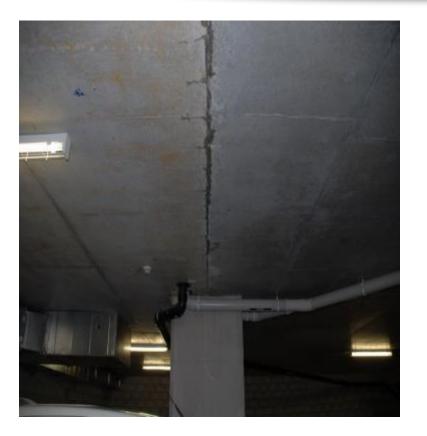
# Basement Car Parks – water ingress

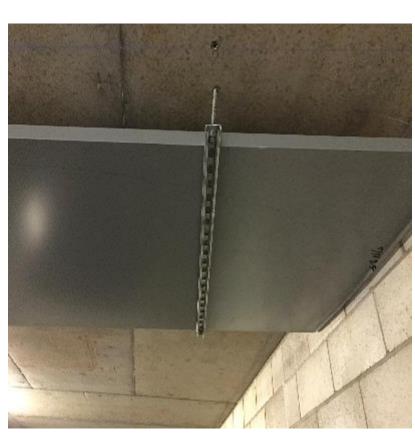


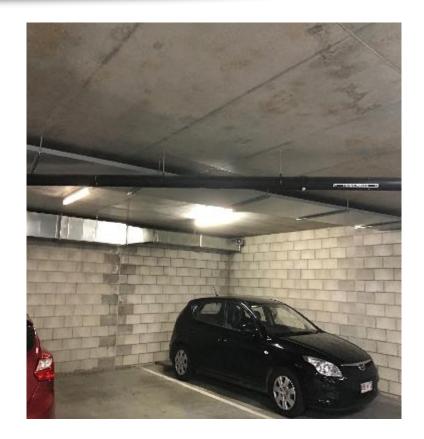


# Solutions for water ingress to soffit – the use of catch trays?



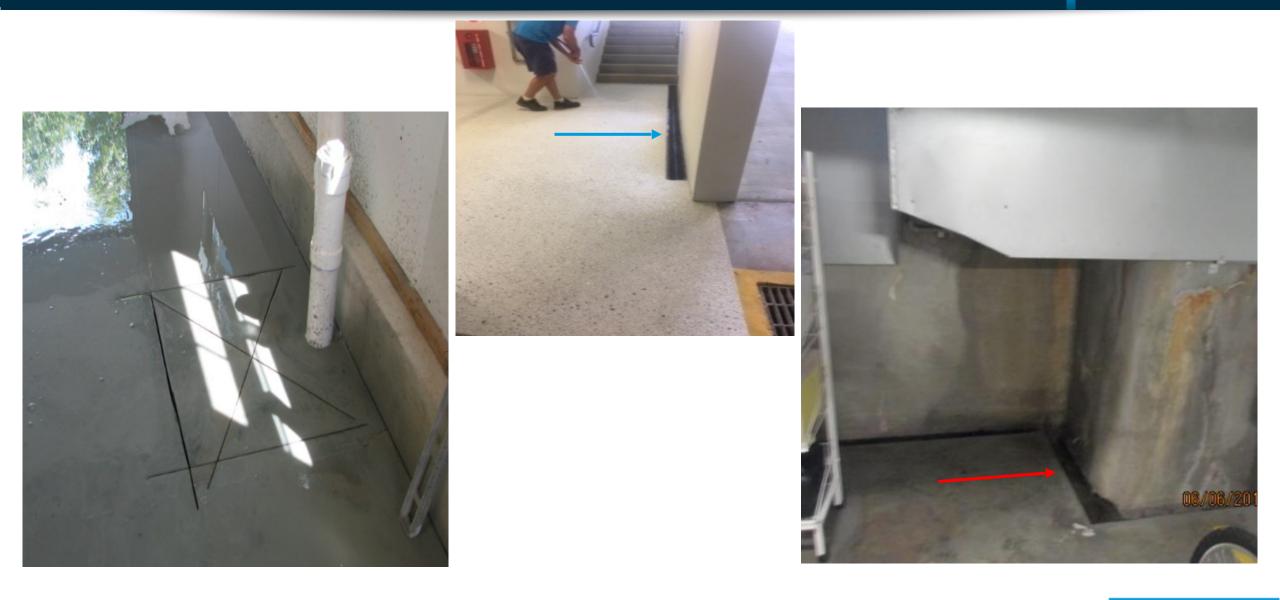










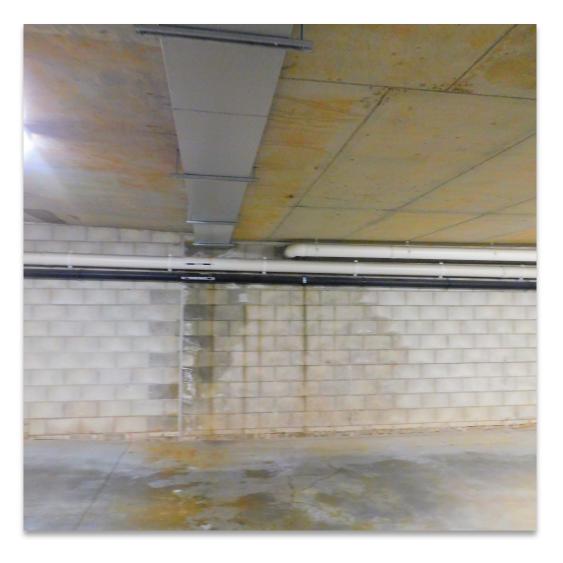


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# Perimeter Drainage











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# **THANK YOU!**

# QUESTIONS