

## WEEPHOLES

### INTRODUCTION

Weepholes are the unfilled gaps provided at regular intervals in the vertical mortar joints of external masonry or masonry veneer walls. They are typically required for two purposes:

- 1. Ventilation of the internal wall cavity:** Without ventilation, mildew, dry rot and damp will reduce the life of the internal wall studs and other building materials within the cavity.
- 2. Drainage:** Water that enters the cavity due to capillary action, condensation, damage, or accidental flooding needs to escape.

### AUSTRALIAN STANDARDS AND THE NCC

**NCC BCA Volume 1, Section C - Fire resistance** describes the requirements for weepholes as follows:

(Note: BCA Volume 2 Clause H1D5 cites the ABCB Housing Provisions, AS 3700 and the AS 4773 series, which include the weephole requirements below).

**Clause C2D14 Ancillary elements:**

*An ancillary element (a weephole) must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is ..... screens applied to vents, weepholes and gaps complying with AS 3959.*

**ABCB Housing Provisions** describes the requirements for weepholes as follows:

**Clause 5.7.5 Weepholes:**

*.....open perpend joints (weepholes – minimum of 50 mm height x width of vertical mortar joint (10 mm)) must be created in the course immediately above any flashing.....* (Note: The clause also details requirements for weepholes and exceptions).

**AS 3700 Masonry structures** describes the requirements for weepholes as follows:

**Clause 4.7.2 Weepholes:**

*Weepholes shall be provided to drain moisture from or through masonry construction. Where flashings are incorporated in the masonry, weepholes shall be provided in the masonry course immediately above flashing, at centres not exceeding 1200 mm.*

**Clause 12.4.14 Weepholes:**

*Weepholes shall be free from any mortar or other material that will prevent their proper functioning. Weepholes shall be formed either by the inclusion of a pipe or duct at the given location or by omission of mortar (partially or fully) in the perpend joint.*

**AS 3959 Construction of buildings in bushfire-prone areas** describes the requirements for weepholes as follows:

**Clause 3.6.1 Vents, weepholes, joints and the like**

*All gaps including vents, weepholes and the like shall be screened, except for weepholes to the sills of windows and doors.*

(Note: Reference to sills of windows and doors above relates to weepholes that don't provide a direct passage for embers to the interior of the building or building cavity).

**Clauses 5.4.3, 6.4.3, 7.4.3, 8.4.3 and 9.4.3 Vents and weepholes**

*Except for exclusions provided in Clause 3.6, vents and weepholes in external walls shall be screened with a mesh made of corrosion-resistant steel, bronze or aluminium.*

(Note: Aluminium not included in clause 9.4.3 (BAL-FZ). A 2 mm maximum allowable mesh aperture size is required to prevent ingress of embers).

**AS 4773.2 Masonry in small buildings - Part 2: Construction** also sets out similar requirements to those mentioned above in the following clauses:

**Clause 9.6.2 Flashings and weepholes** for masonry veneer walls; and

**Clause 10.5.3 Flashings and weepholes** for cavity masonry walls.

**National Construction Code - NCC:**  
**Volume 1 - Section C**  
**C2D14 Ancillary elements.**

**ABCB Housing Provisions:**  
**Part 5 - Masonry**  
**5.7.5 Weepholes.**



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**Australian Standards:**  
**AS 3700 Masonry structures.**  
**AS 3959 Construction of buildings in bushfire-prone areas.**  
**AS 4773.2 Masonry in small buildings – Part 2: Construction.**

## WEEPHOLES

### LOCATION AND SET OUT OF WEEPHOLES

#### General

Locate weepholes to follow the same level as the damp-proof course. For masonry veneer construction built off slabs on ground, locate in the bottom course of the outer leaf, continuous horizontally across the cavity.

Maximum spacing: 1200 mm.

#### Weepholes above windows and doors

Other than weepholes built into proprietary window and door frames, as described in AS 3959, it is a requirement of AS 3700 that weepholes are provided in the masonry course, or external leaf of cavity walls, located above either end of the opening and at maximum 1200 mm spacing, if the following situations exist:

- Opening exceeds 1200 mm in length without a roof overhang directly above opening.
- Roof overhang length is less than three times the distance between the top of the opening and the soffit of the roof overhang.

### WEEPHOLE MATERIAL

A weephole in simple terms is a hole in a wall designed to drain off accumulated water. However, the need to prevent the ingress of embers (i.e. Bushfire Attack Level / BAL) and pests requires a suitable infill to meet compliance requirements. There are a range of products on the market to suit various applications. The product manufacturer's information will describe each product's suitability for each specific circumstance.

BAL compliance can be achieved via the prescriptive requirements of AS 3959. It can also be achieved by testing to AS 1530.8.1 by an accredited testing laboratory. As a result, the materials used to achieve compliance can vary. The following table provides general guidance on typical materials for the various bushfire attack levels but doesn't exclude the use of other materials such as aluminium and bronze.

Bushfire Attack Level (BAL)	Typical body material	Typical vermin guard
BAL-Low	Fire Resistant Polymer	PVC
BAL-12.5 and BAL-19		Stainless Steel Mesh
BAL-29 and BAL-40		Stainless Steel Grate
BAL-FZ	Stainless Steel	

### CONSIDERATIONS

#### Critical period of design

Tender submission to Construction phases. The general weephole provisions, location and set out should be coordinated and documented prior to tender documentation with the detailed information provided for construction.

#### Potential issues

Common defects include insufficient provision of weepholes, the filling of cavities with builders' debris resulting in the weephole being unable to function and the incorrect selection of proprietary weephole products (i.e. the incorrect BAL rating). Correct documentation and the inclusion of notes to drawings and specifications to flag this as an issue to be monitored on site, may help avoid these issues. After construction it is essential to ensure that the weepholes are not covered by vegetation/soil/landscaping.

#### Conclusion

Drawings for construction should provide fully coordinated elevations and details identifying all requirements for weepholes, including:

- GA Reference elevations (Scale 1:100 / 1:200) showing extent, location and set out of each weephole.
- Details (Scale 1:5 / 1:10) showing typical and non-typical applications. Detailed elevations and sections for construction should set out the interfaces within the cavity of flashings and damp-proof courses and the specification of weephole type (BAL rating) required. Detailed sections should show the height of the weep hole in relation to the ground level.

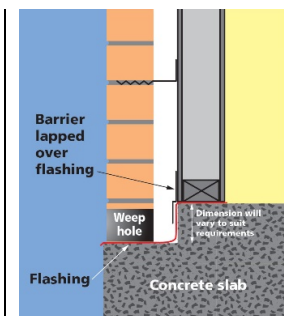


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#### Relevant NATSPEC worksections:

- 0331 Brick and block construction.
- 0332 Stone masonry.
- 0334 Block construction.
- 0335 Brick construction.

#### Other documents:

NATSPEC TECHnote  
DES 018 Bushfire protection