

WEEPHOLES

What you need to know

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Weepholes are small openings built into masonry walls that allow trapped water to rain out, helping prevent moisture buildup that can cause mildew, rot, and other significant structural or building-health problems. The National Construction Code (NCC) requires weepholes to be incorporated in all masonry walls that contain a cavity and are usually found at the base of walls and around openings.

Moisture can enter a building in several ways, including through direct penetration (such as heavy rain), condensation or rising damp (where water is drawn up from the ground). Once inside, this can damage the surrounding structure, causing erosion or rot overtime if the water is not able to escape.

Weepholes also help with ventilation within cavity brick walls, as it allows air to flow throughout the building, reducing moisture levels in the air and assisting in drying rates of the internal structures if they have been impacted by water. Not having enough ventilation can cause significant damage to the structure and pose health risks to occupants as mold and mildew can easily grow.



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BUSH-FIRE PRONE AREAS

Whilst extremely important to the moisture management and ventilation of masonry structures, weepholes can pose a threat for buildings in high-risk bushfire-prone areas. These spaces provide access for embers to ignite materials as they enter the wall and roof cavities of the building, causing the house to ignite from the interior.

AS 3959 provides region-specific requirements for ember screening in weepholes dependent on BAL (Bushfire Attack Level) ratings. These BAL classifications quantify the anticipated severity of bushfire exposure at a location, and the standard calibrates its construction measures to ensure an appropriate level of protection for each risk category. While BAL-LOW regions have insufficient risk to warrant additional weephole requirements, (BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ) mandates weepholes to be screened with a mesh (maximum aperture of 2 mm) made of corrosion-resistant steel, bronze or aluminum. Products that have been tested and shown to comply with AS 1530 Clause 8.1, or with Clause 8.2 in BAL-FZ areas, may also be used to satisfy the relevant requirements of AS 3959. Due to the high melting points as well as ability to conduct and dissipate heat effectively, these materials remain the most reliable option for fire resistance.

PROTECTION DURING CONSTRUCTION

During the construction process, it is essential to neatly and precisely place weepholes to limit drainage and/or ventilation complications throughout the building's lifetime. To prevent mortar and debris from blocking the weep hole during initial construction, prefabricated weep holes or temporary weep hole insertions can be used to ensure the masonry wall complies with the Australian Standards.

Whether used as temporary or permanent weephole insertions, products such as the 'WeepEase Tool' by Technique Tools (suitable only for BAL-LOW applications) and Weepa's extensive range of prefabricated weepholes allow for neat, functional and compliant inserts that can be easily installed into the perpend joints. Weepa also offers solutions that cover the full range of BAL requirements, providing purpose designed products to meet the ember protection and flame resistance standards required for higher-risk bushfire zones.

To prevent pests, debris and embers from entering the weephole, quality weephole covers are the most suitable way to protect these openings.



LOCATIONS

To control the flow of moisture within the building, the position and configuration of damp-proof courses (DPCs) and flashings combined with weepholes are vital. As flashing catches any water that penetrates the exterior and guides it towards the edge, it is crucial that the weephole is placed immediately above it to ensure a functional drainage system (see Figure 1).

AS 3700 Clause 4.7.2 (or AS 4773.2 Clause 9.6.21 for residential buildings) requires weepholes to be placed immediately above the flashing, directly touching it at 1200 mm maximum centres. Without the weephole directly above the flashing, moisture will have no way to escape the wall cavity and would instead pool inside the cavity. Locations include at the base of the wall (see Figure 2 and Figure 3) and above and below openings (see Figure 4).

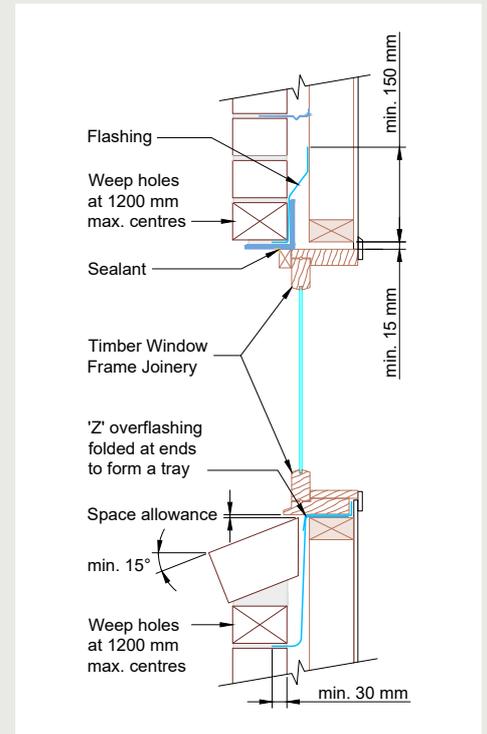
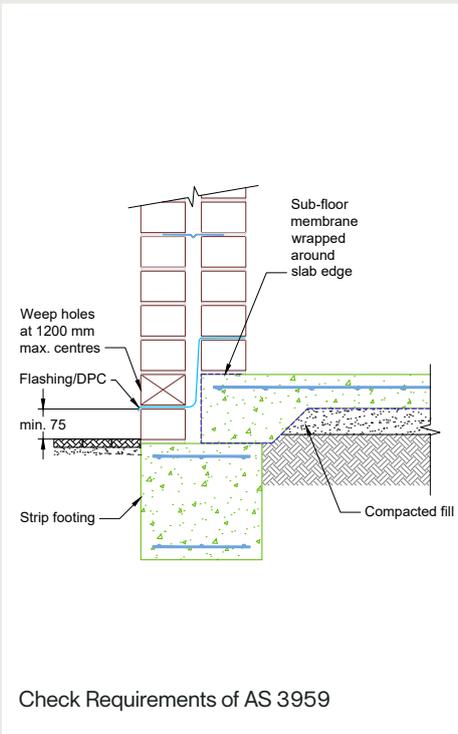


Figure 3: Base Flashing of Cavity Brick Wall

Figure 4: Window Flashing in Brick Veneer Wall

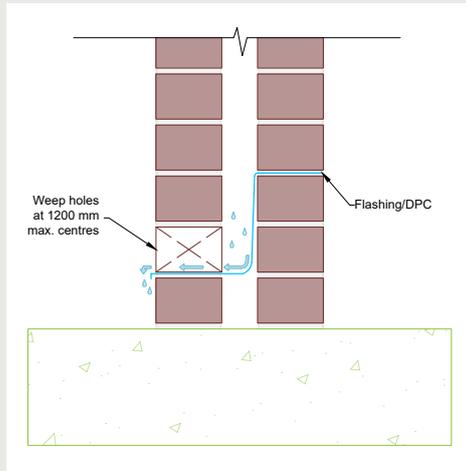


Figure 1: Moisture Path at Base Flashing of Cavity Brick Wall

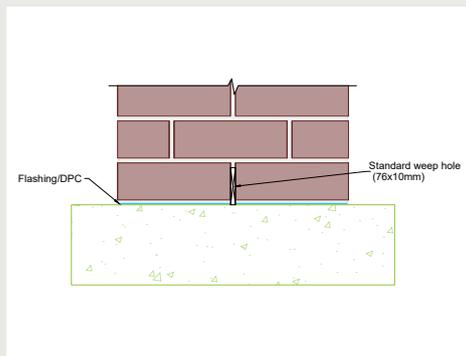


Figure 2: Front Elevation of Weephole and DPC

