

# G is for gap

Sometimes, gaps must be sealed, but in other circumstances they shouldn't. The reasons are backed by science, so stick to these guidelines for a well performing building.

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**THERE ARE GOOD** scientific reasons for gaps being left in a cladding system. They let in air and let out water when located on the outer face of the cladding. However, there is also a good scientifically based reason why some gaps need to be sealed to stop air and water flow.

## **Some gaps need to be left open**

Gaps that must be left open to allow gravity drainage, drying and pressure moderation are those located:

- at the base of all cavities either in a cavity closure or via open perpend in brick veneer - allow 1,000 mm<sup>2</sup> of clear opening for every metre of wall length
- at the top of brick veneer to allow for ventilation - either every third perpend (one course down) being left open (see Figure 1) or a 5 mm gap to a soffit
- under brick sills more than 2.4 m wide (open perpend)
- between the back of brick veneer and the face of wall underlay - 40 mm minimum and 75 mm maximum
- across the face of a sill tray flashing when windows are installed in direct-fixed cladding - 5 mm minimum
- in both direct-fixed and cavity claddings,

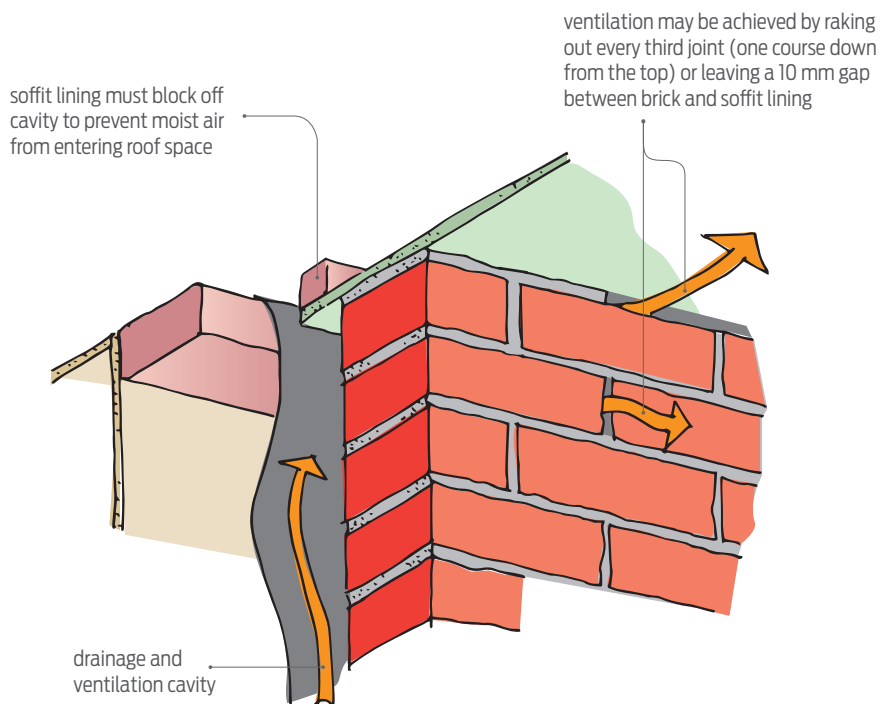


Figure 1: Gap left open at top of brick veneer for ventilation.

between the base of the cladding and:

- a head flashing across openings - 5 mm minimum
- a horizontal joint flashing - 5 mm (see Figure 2)
- between vertical solid timber cavity battens and horizontal fixing blocks - 50 mm.

## **Other gaps need to be sealed**

Gaps that must be sealed are:

- movement control joints, as the sealed gap forms part of the weatherskin of the building
- exterior vertical joints in face-sealed panel claddings, as the sealed joint is critical to preventing water entry ➤

- air seals around penetrations such as windows, doors and meter boxes to stop airflow across a wall (outside to inside) and also to allow pressure moderation to occur across the cladding system
- behind the jamb flanges of aluminium windows to stop water entry
- gaps around pipe and wiring penetrations through a wall underlay or air barrier to stop airflow. ➡

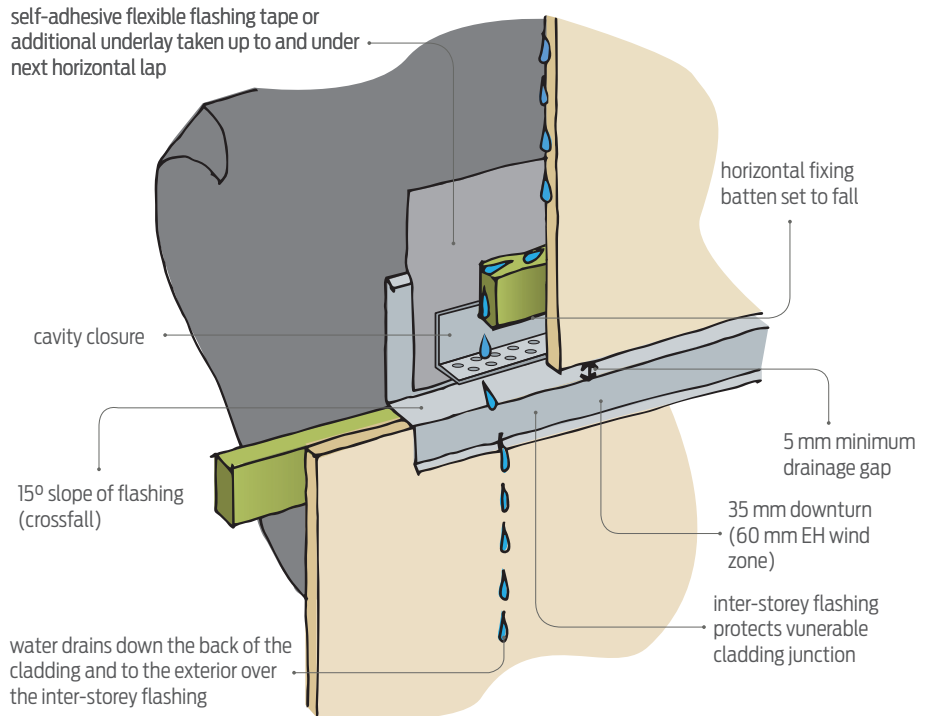


Figure 2: Inter-storey drainage is required for cavities over 2 storeys (or 7 m) high.