Section 3:
Wall flashings

3.1 Door and window flashings

What are the requirements for door and window flashings?

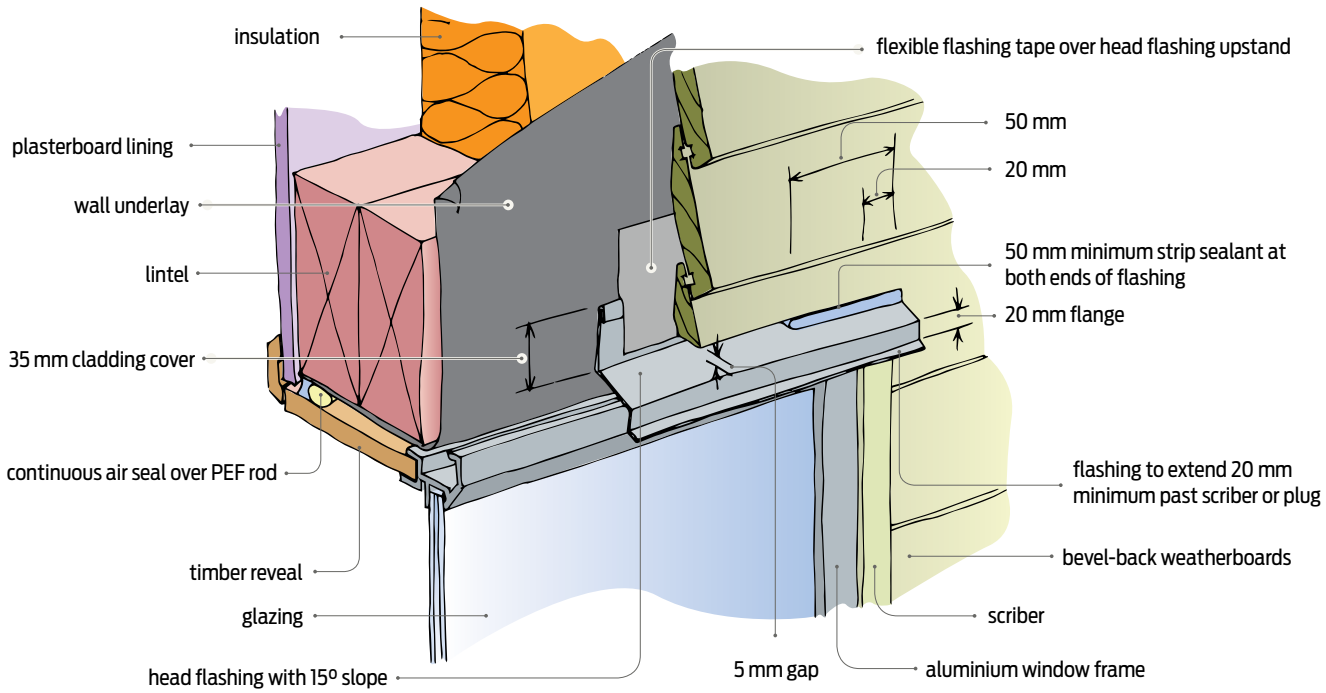


Figure 34 **Window head flashing – direct-fixed cladding.**

DOOR AND WINDOW flashings include:

- head flashings
- window sill flashings
- jamb flashings.

Head flashings

Minimum requirements for head flashings for both direct-fixed claddings and claddings on a cavity (see Figures 34 and 35) include that they:

- comprise a single continuous flashing for the full width of the frame with 10 mm stop-ends terminating at the back face of the claddings
- have a 15º cross-fall
- have a 10 mm minimum cover (excluding drip edge) to the face of the window frame
- have upstands behind the cladding that have a minimum:
  - 35 mm cladding cover for stucco, weatherboard and fibre-cement cladding in low (L), medium (M), high (H) and very high (VH) wind zones (that is, total upstand of 40 mm) – E2/AS1 Figure 81(a)
  - 50 mm for vertical and horizontal profiled metal in L, M, H and VH wind zones (total upstand of 55 mm) – E2/AS1 Figure 95 and 99
  - a 60 mm minimum cladding cover (total upstand of 65 mm) for extra high (EH) wind zones
- have a 5 mm minimum gap between the top of the sloped flashing and the bottom of the cladding above to let water drain out and air to enter for drying
- do not allow water to enter at flashing ends by extending the head flashing at least 20 mm past the window opening trim (facing boards and closing scribers)
- have sealant installed between the underside of the head flashing and the top edge of the window and door head flanges in VH and EH wind zones – E2/AS1 Figure 71(c).

Other requirements:

- For direct-fixed claddings, install a 50 mm long bead of sealant between the cladding and head flashing at each end of the flashing to

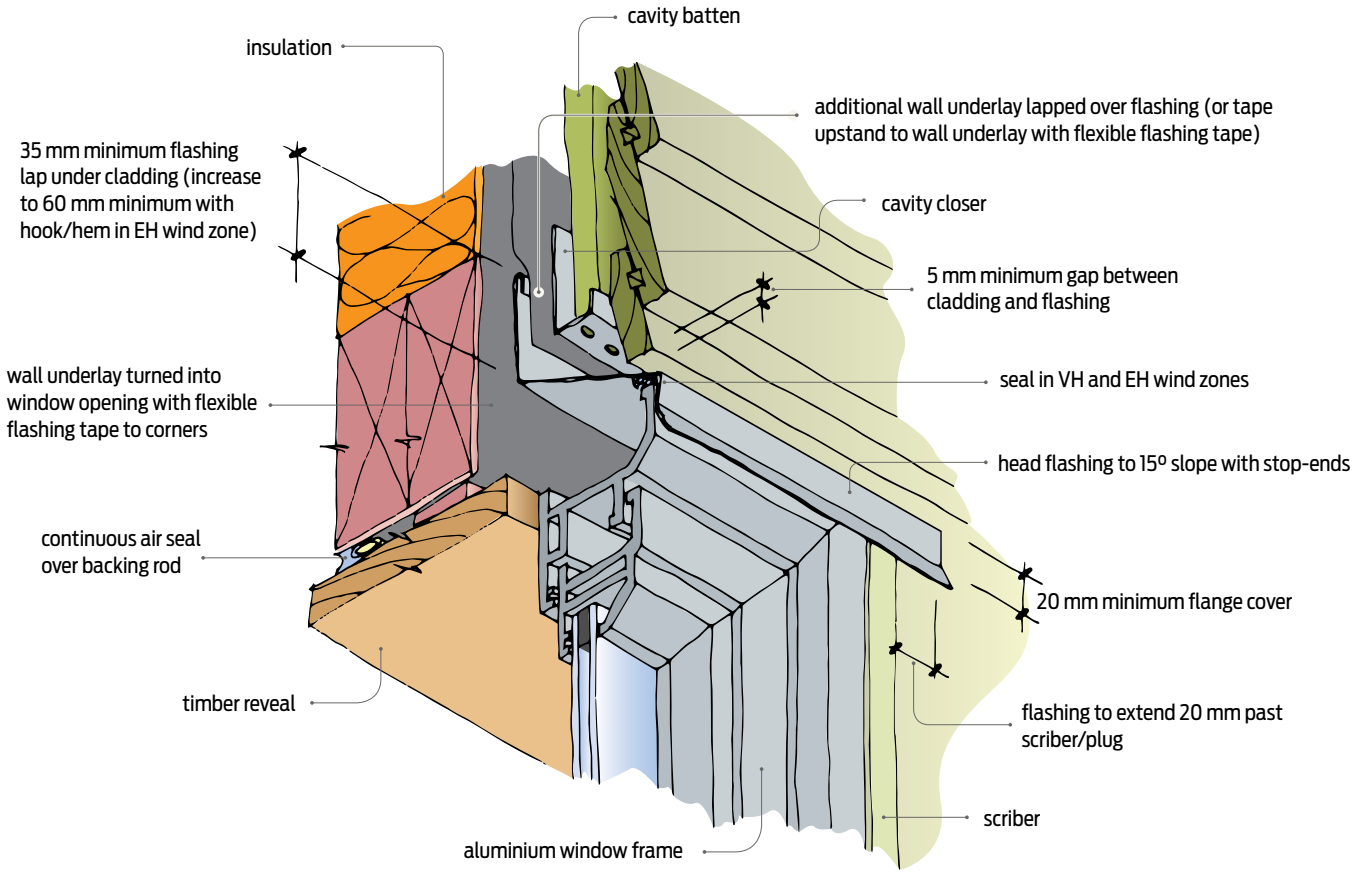


Figure 35 **Aluminium window head detail – drained cavity construction.**

perform the function of stop-ends (see Figure 34) – E2/AS1 Figure 71(b).

- For cavity construction, the head flashing must bridge the drainage cavity so that water can drain to the exterior across the top of the opening. Provide a cavity base closer and vermin proofing to allow drainage and ventilation (1,000 mm²/m) but prevent vermin entry (see Figure 35).

Window sill flashings

Sill tray flashings (see 3.6 *Sill support for windows* (pages 49–51)) are required for all windows and doors where the cladding is direct-fixed – E2/AS1 Figure 72A.

Sill tray flashings must:

- be continuous for the full width of the opening
- extend back past the condensation channels of the window
- not slope backwards
- not be sealed between the window facing and the tray
- have an 8 mm minimum upstand to the back of the tray and sloping end dams – E2/AS1 Figure 95.

A sill tray flashing that extends behind the line of the aluminium frame is also required with vertical profiled metal cladding.

A flexible sill flashing is required with masonry veneer – E2/AS1 9.2.4 and Figure 73(c).

Jamb flashings

Jamb flashings are required by E2/AS1 for:

- stucco – E2/AS1 Figure 76
- profiled metal – E2/AS1 Figures 95, 99 and 100
- EIFS – E2/AS1 Figures 127 and 128
- masonry veneer – a flexible flashing – E2/AS1 Figure 73(c).

3.2 Direct-fixed window installation

What is the construction sequence for openings in walls with direct-fixed claddings?

DIRECT-FIXED CLADDINGS are not permitted in the EH wind zone, parapets or enclosed balcony walls. Since 2012, there have been changes for designs following E2/AS1. For openings in walls with direct-fixed claddings, this particularly concerns:

- the sill tray flashing design
- installation of jamb battens
- head flashing sealant at each end of the window.

Sill tray flashing

Windows installed in openings with direct-fixed wall claddings must have a sill tray flashing as shown in Figure 36. It must:

- extend for the full width of the opening between trimming studs
- have an 8 mm back upstand
- have tapered end upstands
- provide 35 mm minimum cover to the cladding.

The sill tray can be flat – the 5º slope required in previous versions of E2/AS1 is removed.

The window must be supported on frame support blocks (supplied by the joinery manufacturer) and have a minimum 8 mm flange cover over the sill tray flashing downturn (previously, this was a 10 mm minimum cover) with a 5 mm unsealed air gap.

The jamb flanges must have a 10 mm minimum cover, and if not protected by a scriber or plug, the gap must be sealed (unchanged from previously). The changes mean that the packers underneath the timber reveal to the sill need to be a minimum of 8 mm – measure with the flashing in place to get the correct height.

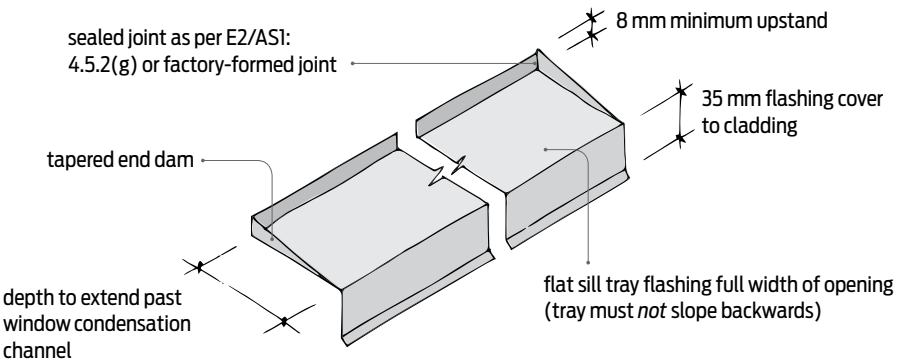


Figure 36 **Sill tray flashing.**

Jamb battens

Window openings with direct-fixed wall claddings require two 45 × 20 mm vertical jamb battens to be fixed to the face of the trimming stud on each side of the opening:

- The inside batten must be fitted between the lintel and the sill trimmer.
- The outside batten is fitted to the underside of the lintel but is stopped 20–40 mm short of the sill trimmer. This allows the sill flashing to extend along the full length of the sill trimmer between trimming studs without requiring stud notching.

The battens are installed after the timber-framed opening has been protected by folding the wall underlay back around the frame opening, then covering the corners and the full length of the sill trimmer with flexible flashing tape.

The cladding is fixed and trimmed to the battens, not the studs. The window opening width should be measured after the sill battens and the sill tray have been installed.

Head flashing sealant

A 50 mm long bead of sealant must be installed between the cladding and each end of the head flashing to prevent water tracking around the end of the flashing. . .

Installing a window with direct-fixed cladding

The construction sequence for installing a window in direct-fixed cladding is described in Steps 1–15 and shown in Figures 37a–e.

Step 1 – Install wall underlay across the full window opening. Make diagonal cuts, then fold the underlay round the opening and secure.

Step 2 – Install flexible flashing tape in the corners and across sill trimmer:

- 100 mm along the head and down the jamb at the top corners and turned out 50 mm over the face of the wall
- across the full length of the sill trimmer and 100 mm up jambs at bottom corners and turned out 50 mm over the face of the wall.

Step 3 – Install jamb battens to both trimming studs.

Step 4 – Fix cladding up to sill level.

Step 5 – Fix horizontal trim batten (which will be under the sill tray flashing).

Step 6 – Fit the sill tray flashing. Provide a 35 mm minimum cover over the cladding.

Step 7 – Fix the cladding up to the top of the opening. Cut slots in the cladding as required round the sill tray flashing.

Step 8 – Install sill packers behind the sill flashing to support timber window reveal.

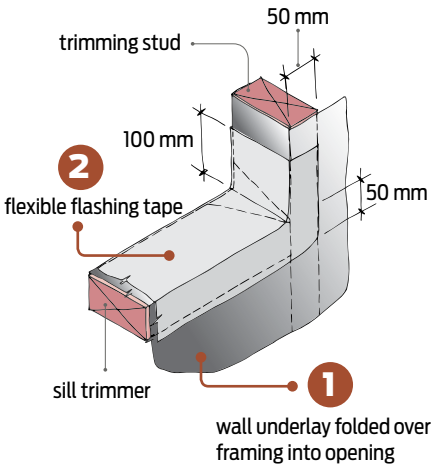


Figure 37a **Construction sequence Steps 1–2.**

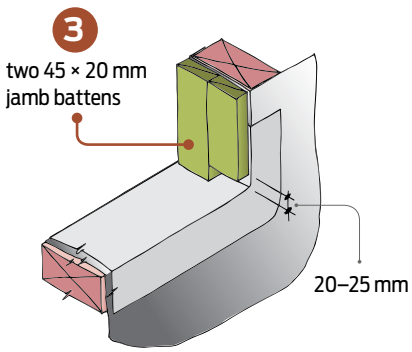


Figure 37b **Step 3.**

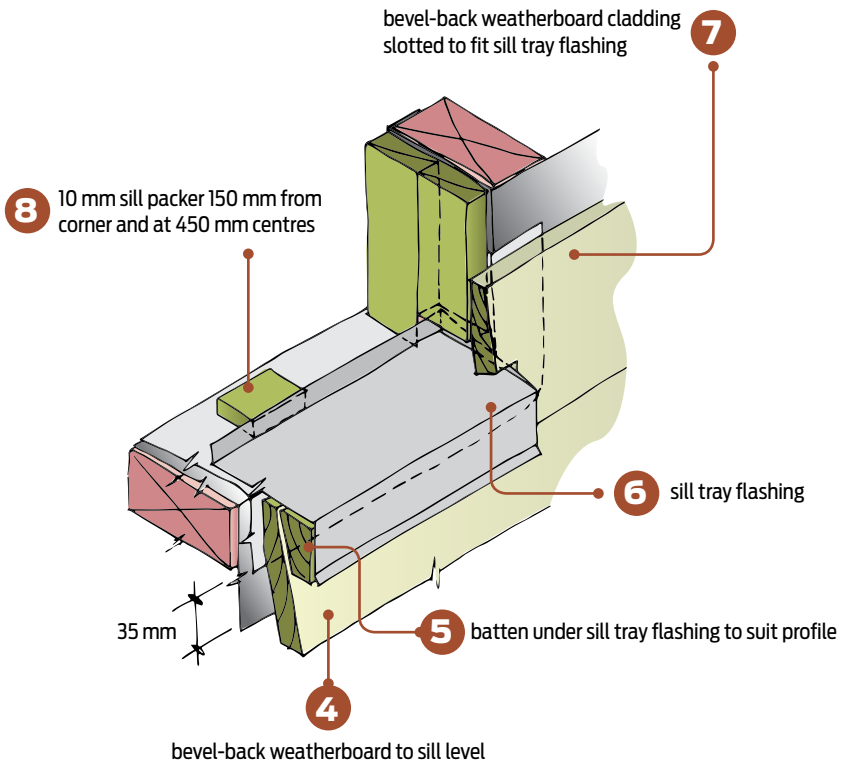


Figure 37c **Steps 4–8.**

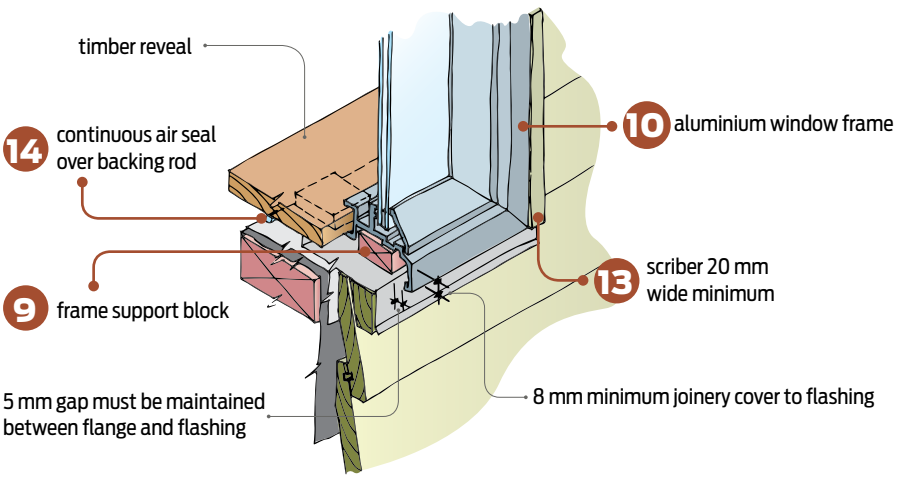


Figure 37d **Steps 9–14 for sill.**

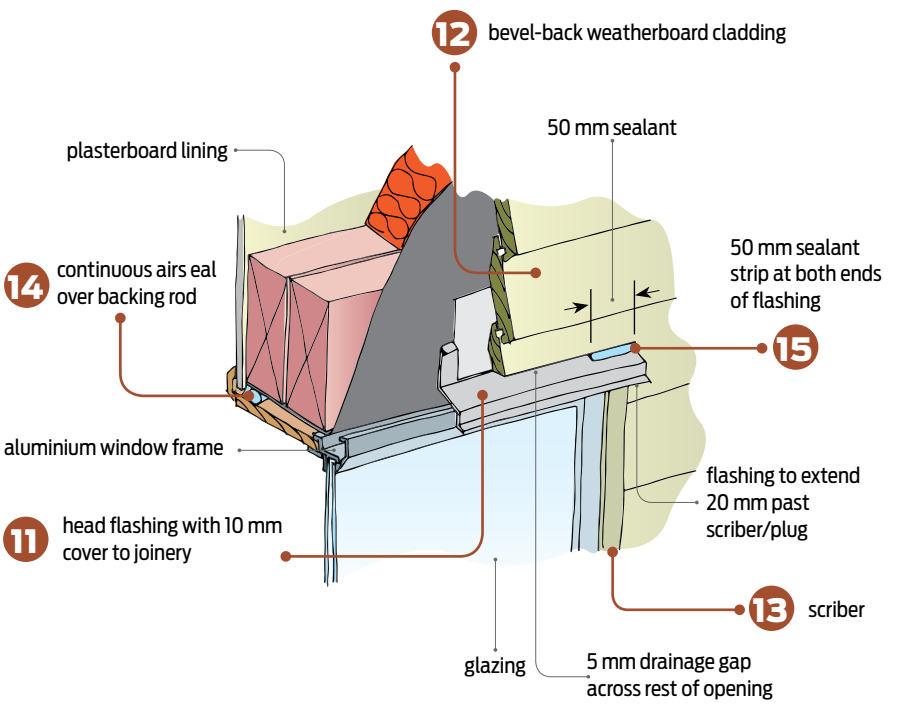


Figure 37e **Steps 11–15 for window head.**

Step 9 – Install the window frame support blocks (supplied with window by manufacturer).

Step 10 – Install the window, providing the requisite minimum flange cover, i.e. 8 mm at the sill, 10 mm at the jambs. Ensure that a minimum 5 mm gap between the window flange and sill tray flashing is maintained.

Step 11 – Fit head flashing and cover either with additional wall underlay extended up under next lap or flashing tape for the flashing full length.

Step 12 – Fix the remaining cladding.

Step 13 – Install scribers or plugs to suit weatherboard profile. Scribers need to be 20 mm wide minimum to cover sill flashing.

Step 14 – Install air seal over PEF backing rod around perimeter of the trim opening.

Step 15 – Install a 50 mm bead of sealant between the cladding and head flashing at each end of the window.

3.3 Drained cavity window installation

What are the requirements for window installation in drained cavity construction?

AMENDMENT 5 in 2011 to Acceptable Solution E2/AS1 *External moisture* included changes to both direct-fixed and drained cavity construction window installation requirements. The changes to direct-fixed window installation are described in 3.2 *Direct-fixed window installation* on pages 38–40.

Sill support bar

The most significant change for drained cavity window installation requires the fitting of a sill support bar to all doors and windows over 600 mm wide.

The sill support bar must allow any water that gets past the external cladding to drain away, and it must maintain at least 1,000 mm² clear opening per metre length of window between the drainage cavity and the window or door trim cavity to allow air passage. To do this, sill support bars incorporate drainage and ventilation openings.

Sill support bars must end within 100 mm of the trimming stud.

Sill support bars must also comply with BRANZ Evaluation Method EM6, Verification Method E2/VM1 and Acceptable Solution B2/AS1.

Additionally, manufacturers must provide information about the support bar loading limits.

Jamb flange gap

For fibre-cement sheet or ply claddings, E2/AS1 now requires a 5 mm gap for sealant to be left between the jamb flange and cladding.

Other cavity construction changes

There are several other changes:

- In extra high (EH) wind zone situations, flashing upstand dimensions must be 25 mm more than the dimensions stated in E2/AS1 section 4.5.1 or Table 7, and all flashings must have a hook or a hem.
- In very high (VH) and EH wind zones, sealant must be inserted between the head flashing and the window head flange as shown in E2/AS1 Figure 71(c).
- The minimum cover to the cladding for window sill flanges has been reduced to 8 mm, although the minimum jamb flange cover remains at 10 mm.
- Factory-fitted soakers are required behind the sill/jamb mitred frame joints of aluminium windows and doors.

Installing a window into cladding with cavity

The construction sequence for installing a window into a cladding with a cavity is described in Steps 1–13 and shown in Figures 38a–e.

Step 1 – Install flexible wall underlay across the full window opening. Make diagonal cuts, then fold the underlay round the opening and secure. For rigid underlay, trim to opening.

Step 2 – Install a small patch of flexible flashing tape across corners. Then install flexible flashing tape in the corners and:

- at the top corners 100 mm along the head and down the jamb and turned out 50 mm over the face of the wall
- across the sill trimmer with 100 mm return up the jambs and turned out 50 mm over the face of the wall.

If rigid underlay is used, tape the whole opening.

Step 3 – Install the sill support bar.

Step 4 – Fix cavity battens beside and below the window opening.

Step 5 – Fix cladding over cavity battens below window and to side of opening.

Step 6 – Fix horizontal trim under window to suit profile. Notch edge over cladding as required.

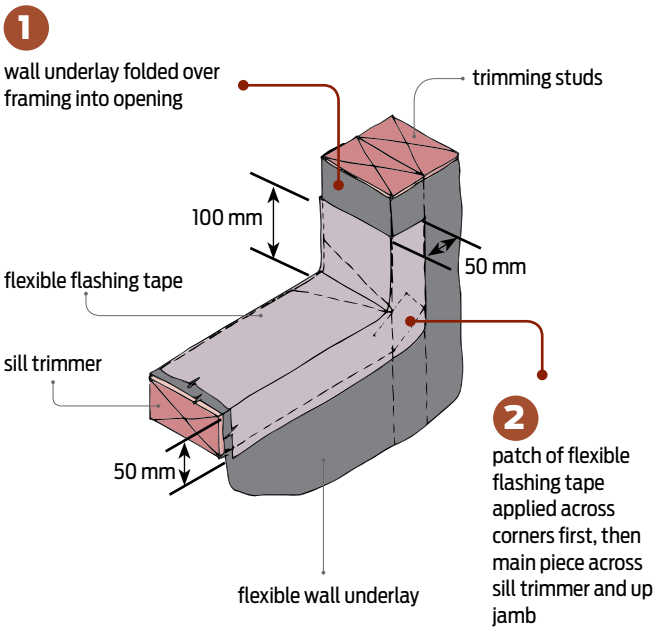


Figure 38a **Steps 1–2: Install wall underlay and flexible flashing tape.**

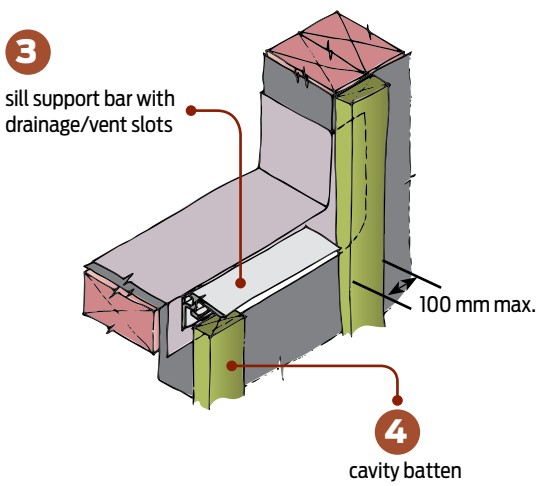


Figure 38b **Steps 3–4: Install support bar and cavity battens.**

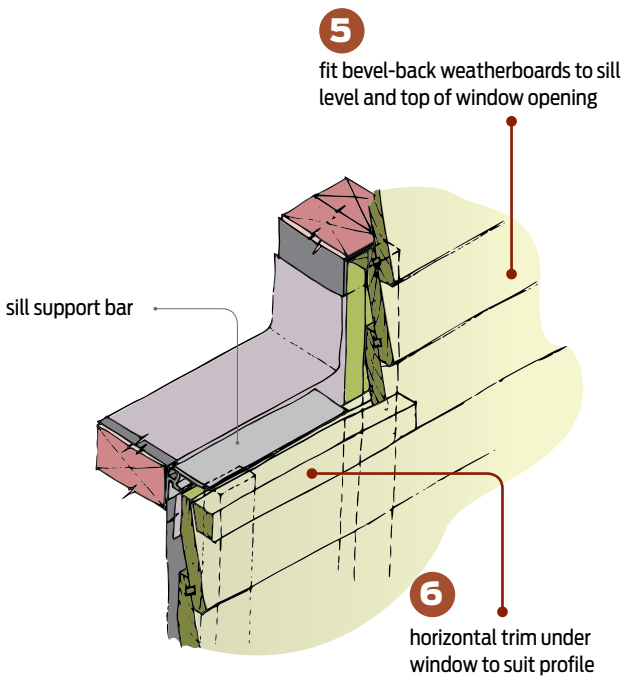


Figure 38c **Steps 5–6: Fix cladding to sill level and top of window.**

Step 7 – Install windows to meet the minimum flange cover – 8 mm at sill, 10 mm at jamb. No gap is required at jambs or sills unless fibre-cement sheet or ply cladding.

Step 8 – Fit head flashing and cover with either additional wall underlay extended up to next lap or flashing tape for full length of the flashing. Apply sealant between head flashing and window head flange in very high (VH) and extra high (EH) wind zones before fitting flashing. Ensure head flashing is stop-ended.

Step 9 – Fit cavity closure.

Step 10 – Fit cavity battens above window opening.

Step 11 – Fix the remaining cladding above the opening.

Step 12 – Install scribers and plugs to suit weatherboard profile.

Step 13 – Install air seal over backing rod around perimeter of the trim opening shortly before fixing interior linings.

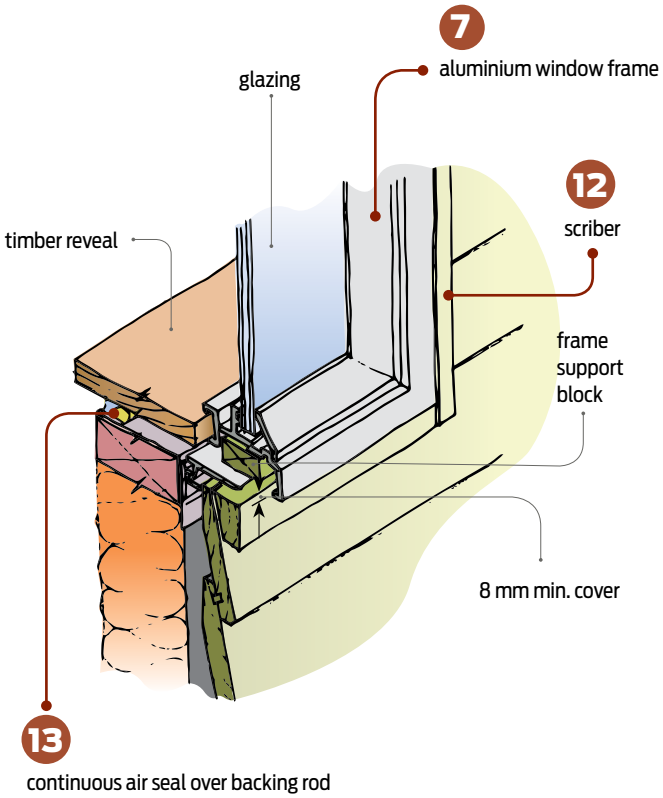


Figure 38d **Steps 7, 12 and 13: Install window and finish sill.**

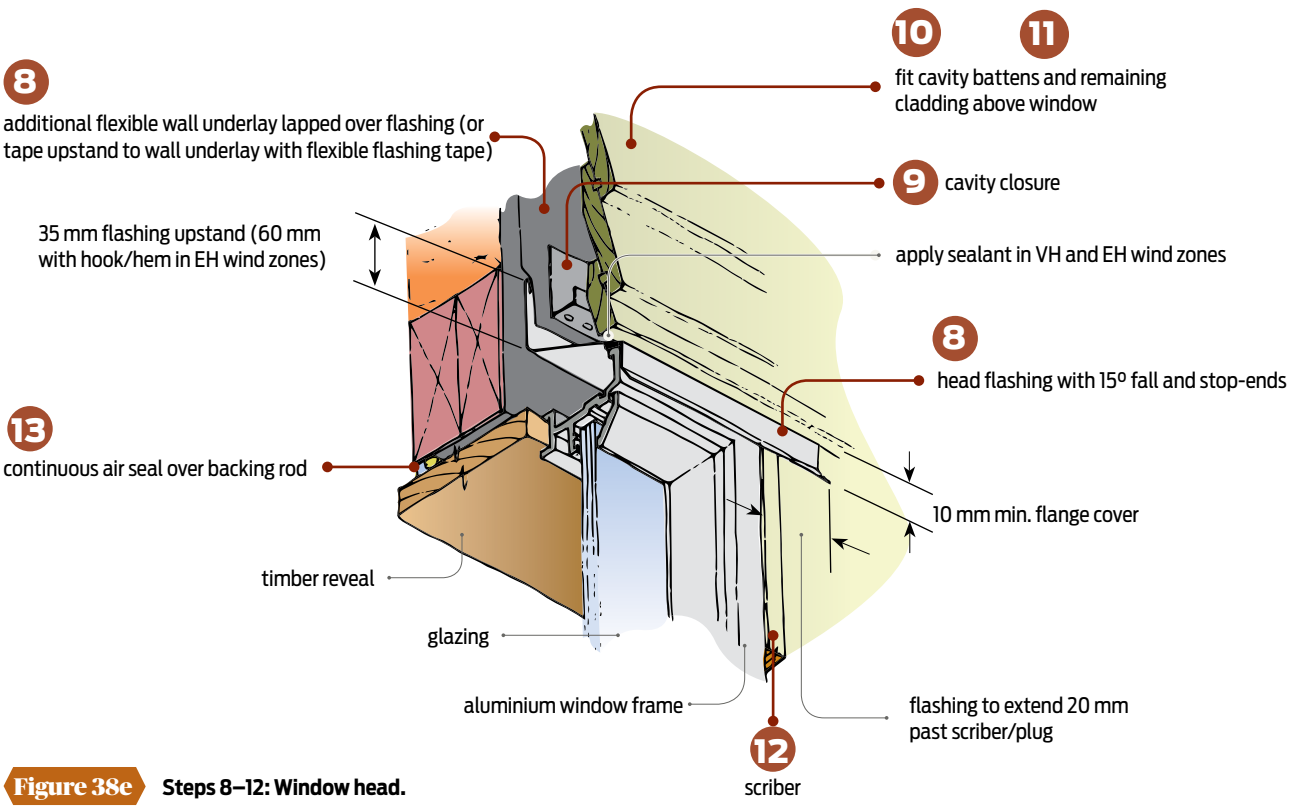


Figure 38e **Steps 8–12: Window head.**

3.4 Timber windows in a cavity

These details should help you to correctly install timber windows into a cavity cladding system.

TIMBER WINDOW FRAMES and sashes were the sole option for New Zealand buildings until the 1970s when aluminium became the dominant material for window frames and sashes.

Demand continues for timber windows, particularly in renovation projects or where the natural appearance and thermal properties of timber are desired.

Get the installation right

Allied with this is the demand for reference details that show the correct installation for timber windows, particularly into cavity cladding systems.

Figures 39 and 40 give two options for the window head detail, while Figure 41 covers the sill and Figure 42 the jamb.

The details incorporate features to improve performance such as:

- folding the flexible wall underlay into the framed opening
- installation of flexible flashing tape as shown in E2/AS1 for aluminium windows
- taping the head flashing upstand to the wall underlay or installing an additional layer of flexible wall underlay
- installation of air seals over backing rods.

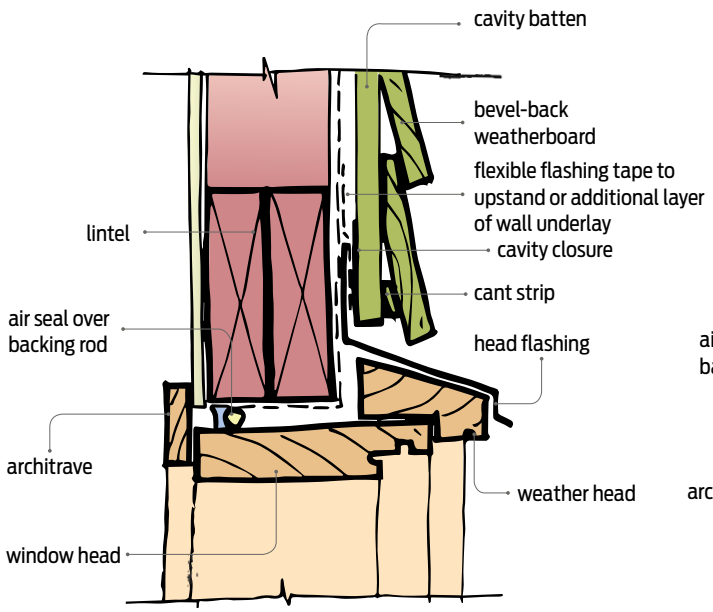


Figure 39 **Window head detail option 1.**

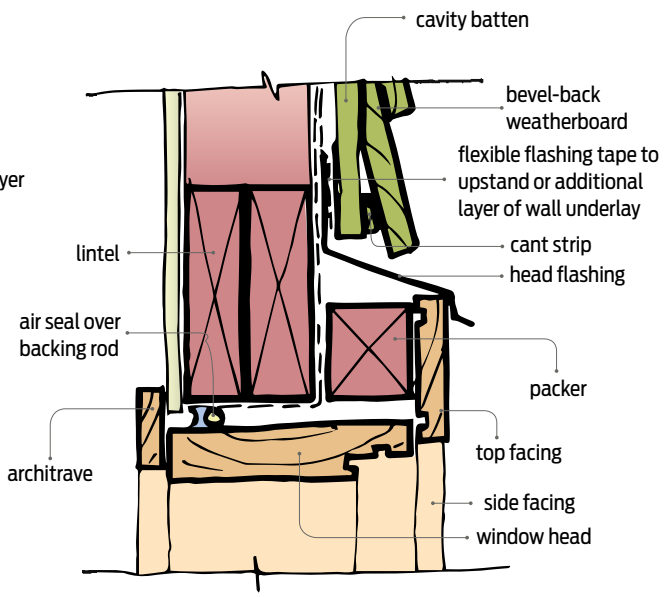


Figure 40 **Window head detail option 2.**

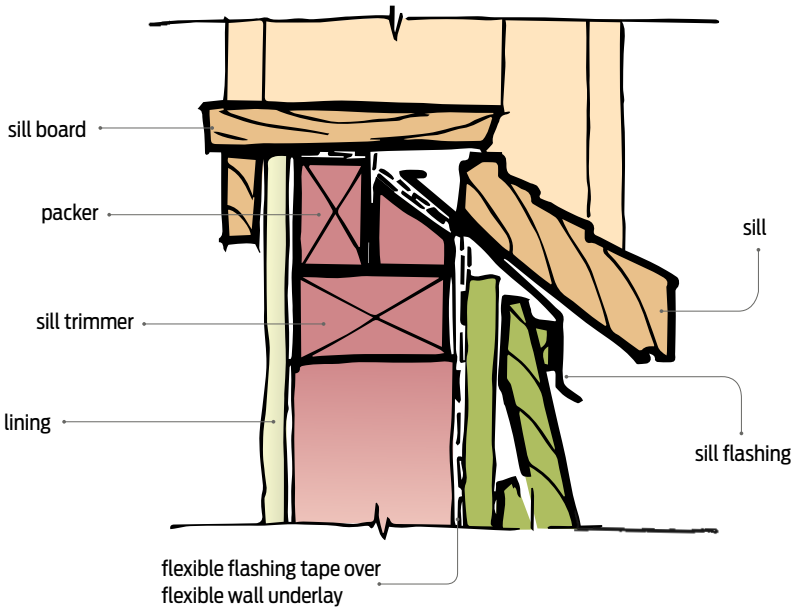


Figure 41 **Sill detail.**

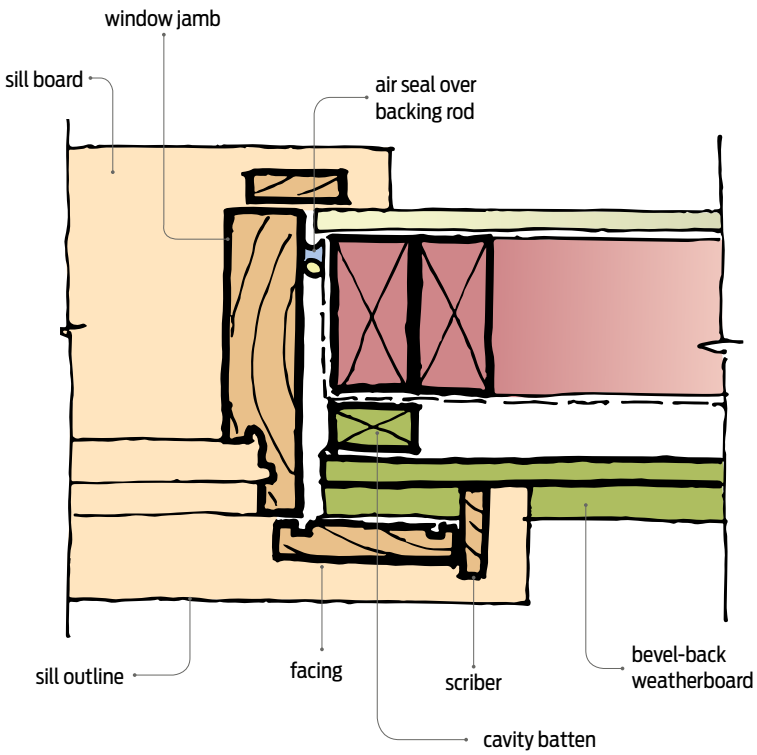


Figure 42 **Jamb detail.**

3.5 Raking window head detail

Raked windows make an interesting feature with a sloped rather than horizontal window head that may follow the roofline. Careful design and installation is needed so they are weathertight, particularly at the low end of the rake.

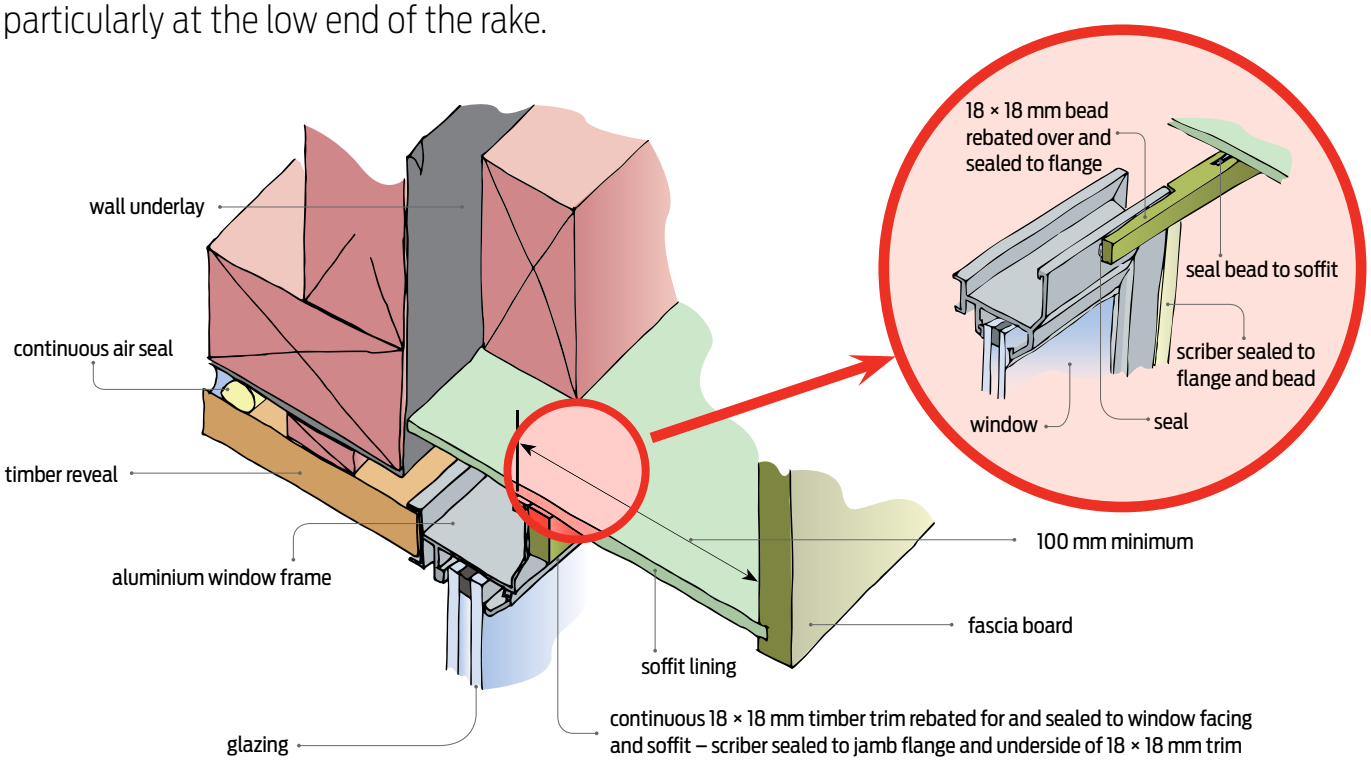


Figure 43 **Raked window head directly under soffit (based on traditional soffit installation). A window head detail based on BRANZ's soffit details in *Build* 158 will be published in *Build* 163.**

RAKED WINDOWS are often found where high-level glazing follows the roofline. The sloping head means that it may have rainwater flowing along as well as across the head flashing. Water accumulating at the low end of the rake makes this area of a raking window particularly vulnerable to water entry.

Always an alternative method

Acceptable Solution E2/AS1 to New Zealand Building Code clause E2 *External moisture* only applies to aluminium windows (with flanges that overlap the cladding) with a horizontal head.

No solution is provided in E2/AS1 for the installation of any raked windows. For a building consent application, the raked window head detail must be designed and submitted as an alternative method.

However, some of the requirements of E2/AS1 may be applied to a raked window head detail (see Figures 43 and 44). For example, E2/AS1 allows a window directly under a horizontal soffit to be installed without a head flashing. Figure 43 shows this applied to raked windows.

Applicable E2/AS1 requirements

E2/AS1 window head flashings must deflect water to the outside of the wall cladding and:

- have a 15º minimum cross-fall
- have a minimum upstand behind the cladding above of:
  - 40 mm (35 mm minimum cladding cover plus 5 mm gap for drainage and ventilation) in low (L), medium (M), high (H) and very high (VH) wind zones
  - 65 mm (60 mm minimum cladding cover plus 5 mm gap) in extra high (EH) wind zones

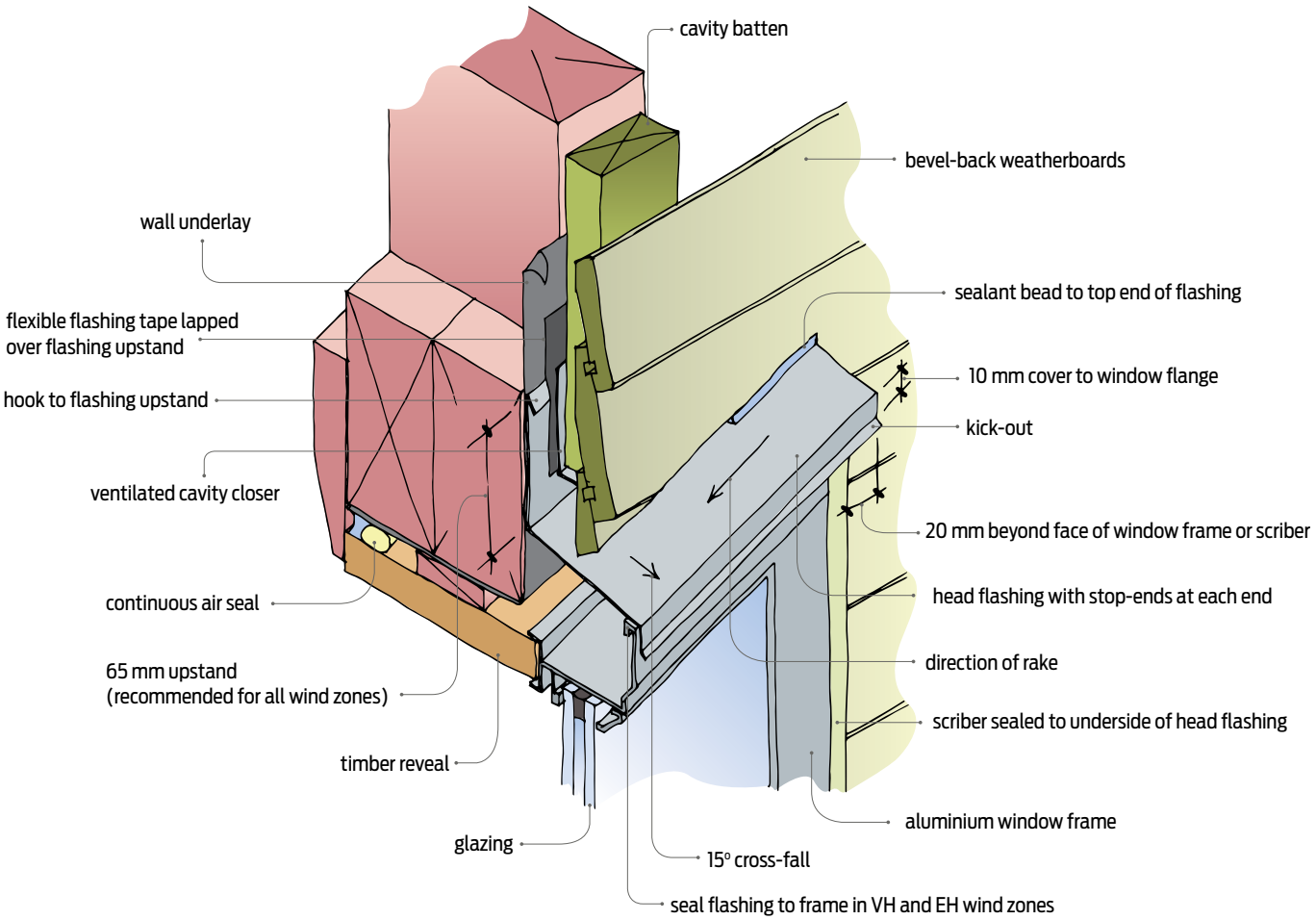


Figure 44 **Raked flashed window head – preferred option.**

- have:
  - in L, M, H and VH wind zones, either a hem or hook or a 25 mm increase in the upstand beyond the requirement of E2/AS1 Table 7
  - in EH wind zones, a hem or hook and a 25 mm increase in the upstand beyond the requirement of E2/AS1 Table 7
- be sealed to the face of the wall underlay with flexible flashing tape or be overlapped by an extra layer of wall underlay from above
- provide 10 mm minimum cover to the face of the window flange, and the exposed bottom edge of a head flashing must be folded out to form a bird's beak or kick-out
- extend at least 20 mm beyond the face of the window frame or the scriber or rustic plug where horizontal weatherboards are installed (see Figure 44)
- have sealant installed between the underside of the head flashing and the top of the window flange in VH and EH wind zones.

For direct-fixed cladding, E2/AS1 requires a 50 mm length of sealant at each end of the flashing between the cladding and flashing. For raked windows, install the sealant at the top end of the flashing only to allow the stop-end to discharge water.

Where a drained and vented cavity is installed, a horizontal flashing must have a 10 mm stop-end at each end that finishes at the inside face of the cladding. Raked windows require a 10 mm stop-end at the top and a kickout at the bottom (see Figure 45). The stop-ends **must not** pass through the cladding. The base of the drainage cavity above the window head must be closed off by a ventilated cavity closer.

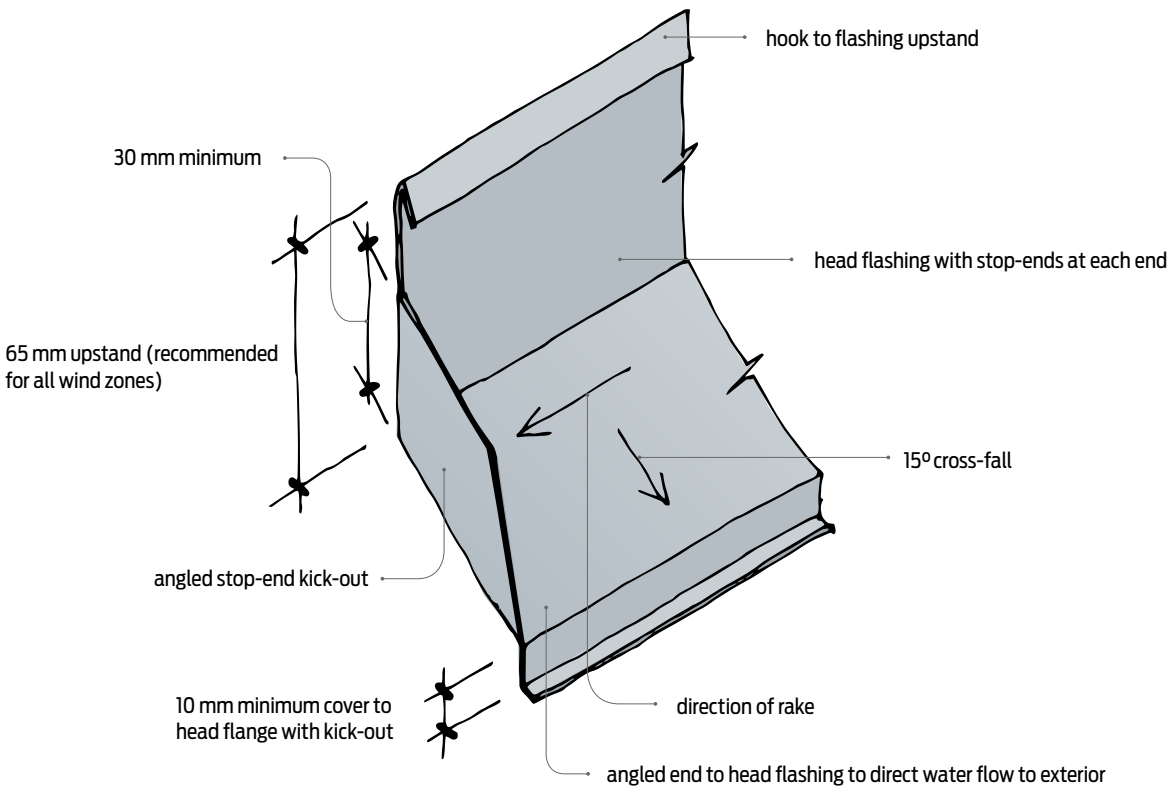


Figure 45 **Head flashing shaped to deflect water.**

Pointers when detailing a raked window head

The key elements to the detailing of a raked aluminium head (Figure 44) that overlaps the cladding are:

- getting water off the flashing at the bottom of the rake
- stopping water getting in at the top of the rake.

Key elements of Acceptable Solution E2/AS1 that can be applied to the raked flashing installation are the interaction of the flashing upstands (suggested increase in height), cladding cover and cover to the window flange.

Option 1 – Head as apron flashing

The preferred option is to consider the raked head flashing as an apron flashing with a stop-end kick-out (see Figure 45) at the bottom of the rake. This will discharge water to the outside for both cavity and direct-fixed claddings (having a cavity is preferred). A flashing stop-end as detailed in E2/AS1 is designed to prevent water being driven past the end of the flashing into a cavity. When applied to a raked window, it has two flaws:

- It does not deflect water to the outside face of the cladding as it terminates at the back face of the cladding.
- It is not of sufficient size to deflect the amount of water that may be present.

Key requirements include:

- sealing any cut in the cladding to allow the installation of the kick-out flashing
- sealing the top of the scriber to the underside of the head flashing.

Option 2 – Timber bead

A second option where the top of the window fits directly under a flat sheet soffit (see Figure 43) is to protect the junction at the raked head with a timber bead that is sealed to both the window flange and the soffit.

3.6 Sill support for windows

New Zealand houses often have large, typically double-glazed windows. Care is needed to support the weight of these windows particularly when installed beyond the face of the wall framing.

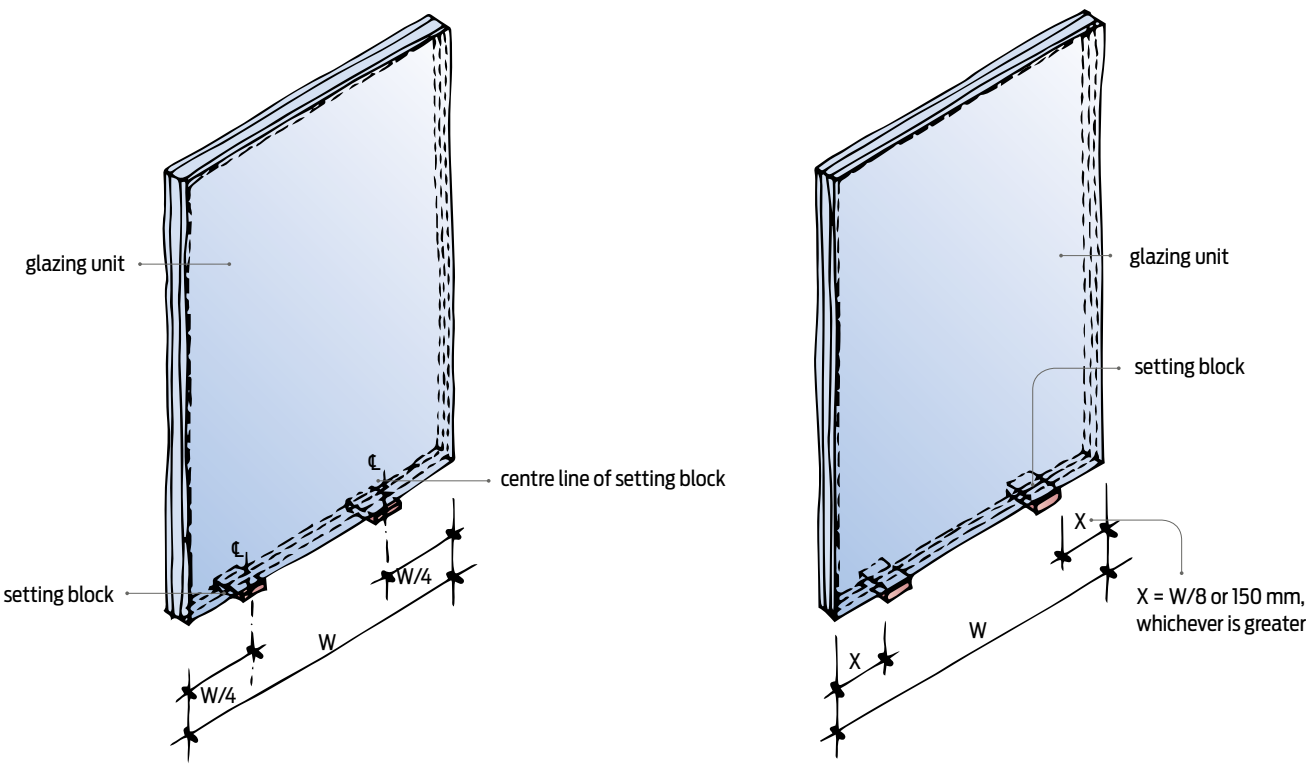
TWO CHALLENGES CREATED by large, double-glazed units installed beyond the face of the wall framing are:

- ensuring the weight of the window is carried down through supporting elements to the building structure
- providing support to the sill flashing in direct-fixed cladding situations.

Align setting blocks and frame support blocks

Double-glazed units are supported within the window frame on setting blocks to prevent glass-to-frame contact. They are used in pairs and must be located in accordance with AS/NZS 4666:2012 *Insulating glass units* generally at ¼ and ¾ points across the width of the glazing units (see Figure 46a) but they may also be located within the greater of the width/8 or 150 mm from the glass edge (see Figure 46b).

For direct-fixed claddings, E2/AS1 requires aluminium window frames to be supported on frame support blocks. These may either be fitted to the frame by the manufacturer or be a proprietary product that is installed by ➤



(a) Preferred location.

(b) Alternative location.

Figure 46 **Location of setting blocks.**

the window installer. However, E2/AS1 does not state where the support blocks must be installed.

Support blocks must be located directly underneath the setting blocks to ensure the load of the windows is transferred directly to the building structure. In some situations, windows have failed because the support blocks have not been aligned with the setting blocks.

Therefore, before installing the window, confirm the location of the setting blocks, and ensure that the support blocks align with them (see Figure 47).

Sill flashing support for windows

The flat sill tray flashing that is required by E2/AS1 for direct-fixed claddings must also be supported and allow for the installation and support of the frame support blocks.

Typically, the sill tray is supported at least in part by the sill trimmer (E2/AS1 Figure 72A) and by the top edge of the cladding where it is accurately trimmed to the opening (E2/AS1 Figures 81 to 84 for weatherboards and Figure 115 for flat sheet cladding).

A problem can arise where the cladding is not installed accurately and there may be insufficient bearing for the frame support blocks because of the cladding used and/or the location of the installed window frame, for example, E2/AS1 Figure 90 for fibre-cement weatherboards.

Where this occurs, the options are to install:

- a metal angle bracket to the sill trimmer (not a proprietary sill support bar used for cavity construction) to support both the part of the

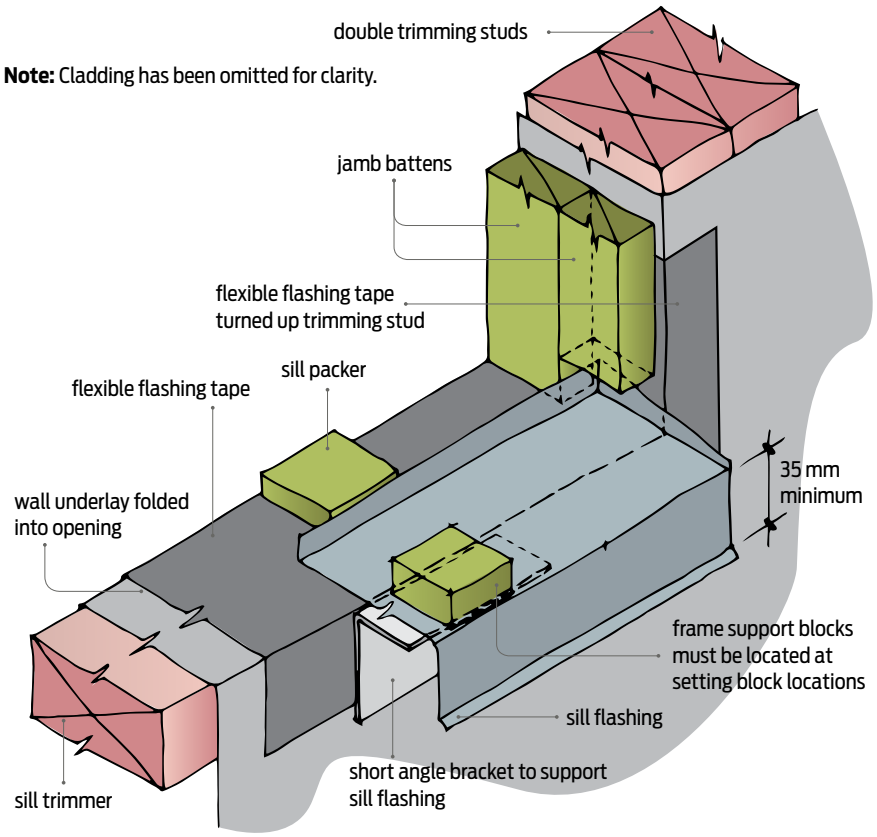


Figure 47 **Angle bracket supporting sill tray – preferred option.**

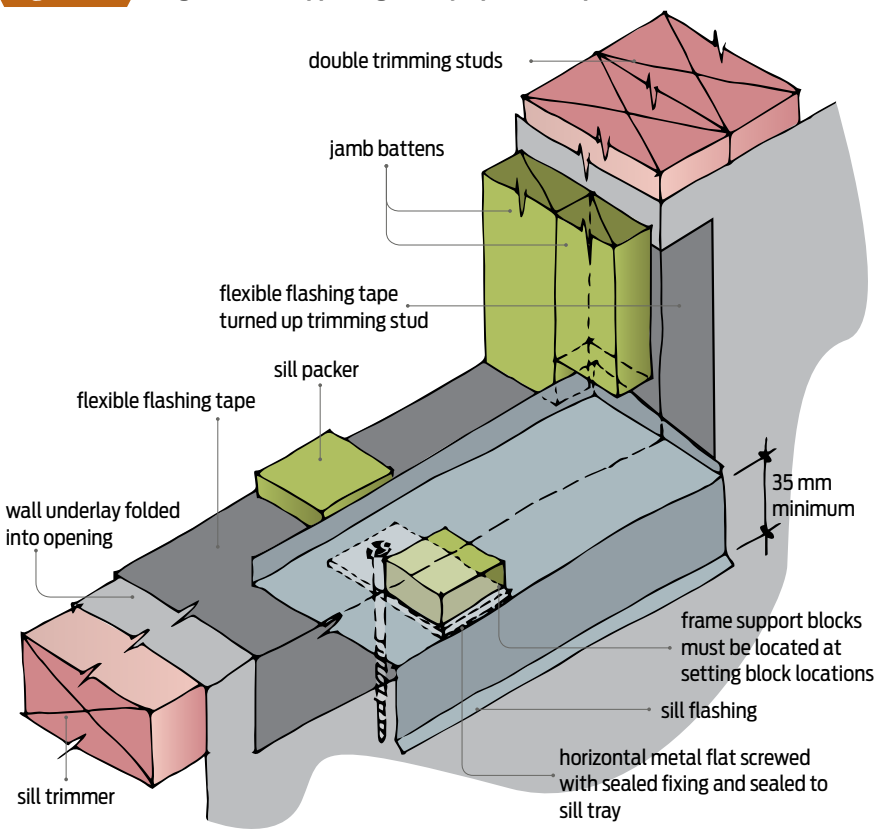


Figure 48 **Horizontal metal flat supporting sill tray.**

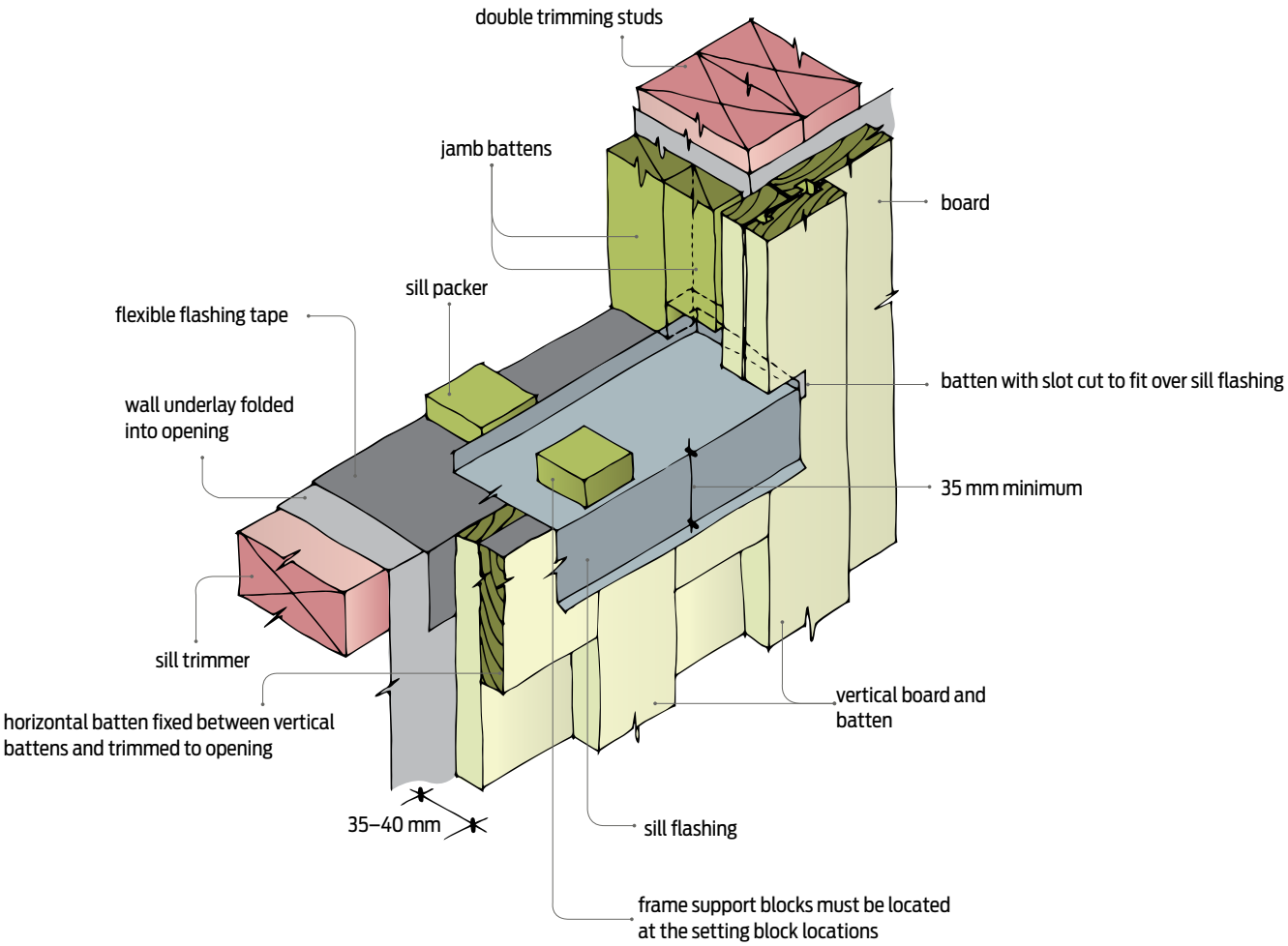


Figure 49 **Horizontal batten supporting sill tray.**

sill tray flashing forward of the framing and the frame support blocks (see Figure 47)

- a horizontal metal flat sealed to the sill tray and screwed with a sealed fixing into the upper face of the sill trimmer and projecting forward of the framing line on which a frame support block can be placed (see Figure 48).

Figure 49 shows the board and batten cladding trimmed to the line of the sill trimmer with support also provided by the horizontal batten fixed between the vertical battens. (Fixing the horizontal batten between the verticals ensures the vertical board joint is fully protected from the weather. If the horizontal board under the sill is continuous and the verticals butted to it, the bottom edge should be undercut or the flashing downturn extended to provide better weathering to the joint.)

Simpler over a cavity

It is worth noting that installing windows is considered easier where a cladding is installed over a cavity, a proprietary sill support bar can be used and the sill tray flashing omitted.

3.7 Installing a timber sill

There are 10 main steps to installing timber windows in direct-fixed bevel-back weatherboards.

WHILE NOT IN E2/AS1, this installation sequence for the sill of a timber window into a direct-fixed bevel-back cladding system is relatively straightforward.

There are 10 key steps for an Alternative Solution (see Figures 50a–f).

Step 1 – Turn the wall underlay into the rough opening. Remember to allow for the vertical packers at the jamb when setting out and site measuring for the windows.

Step 2 – Fit a flexible flashing tape that is compatible with the wall underlay to the sill trimmer.

Step 3 – Install the weatherboards.

Step 4 – Fit the flashing support packer to the sill trimmer.

Step 5 – Fit the vertical jamb packer where required.

Step 6 – Insert the sill tray flashing across the full width, over tape and to jambs.

Step 7 – Insert the window and install the air seals.

Step 8 – Fit insulation (not shown for clarity).

Step 9 – Line interior.

Step 10 – Fit sill and architraves.

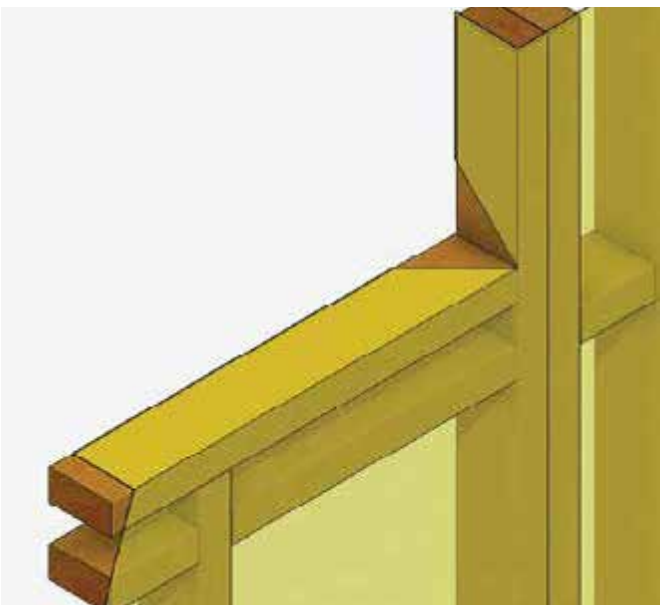


Figure 50a Construction sequence – Step 1.

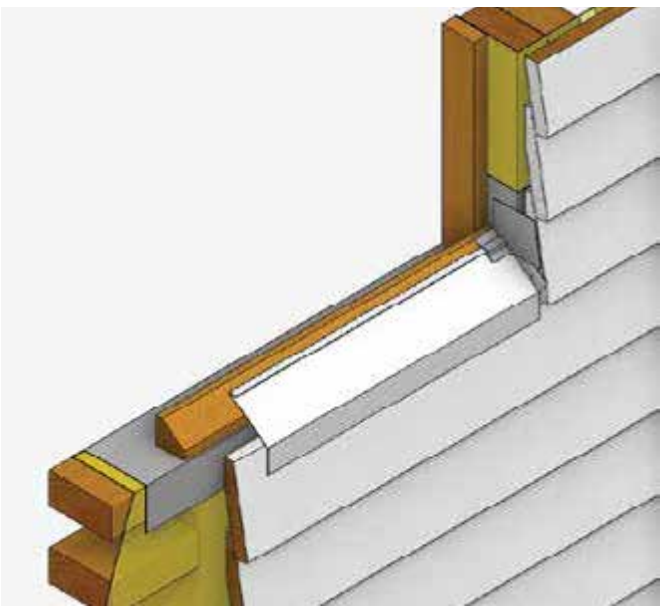


Figure 50d Step 6.

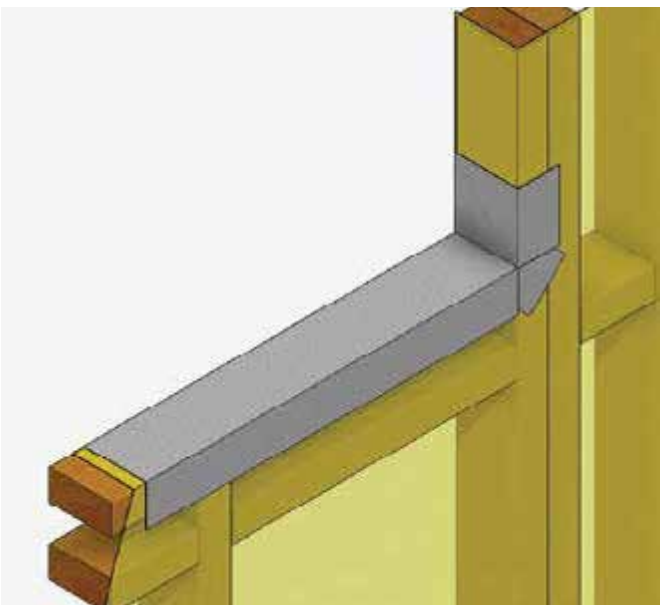


Figure 50b Step 2.

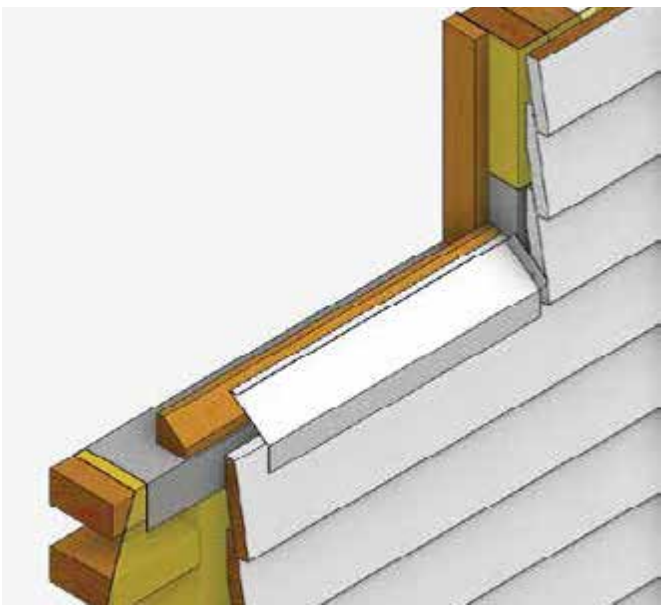


Figure 50c Steps 3–5.

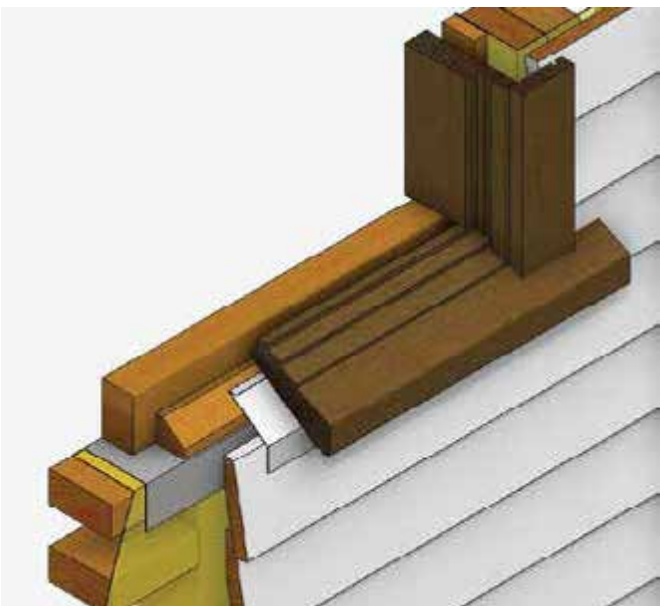


Figure 50e Step 7.

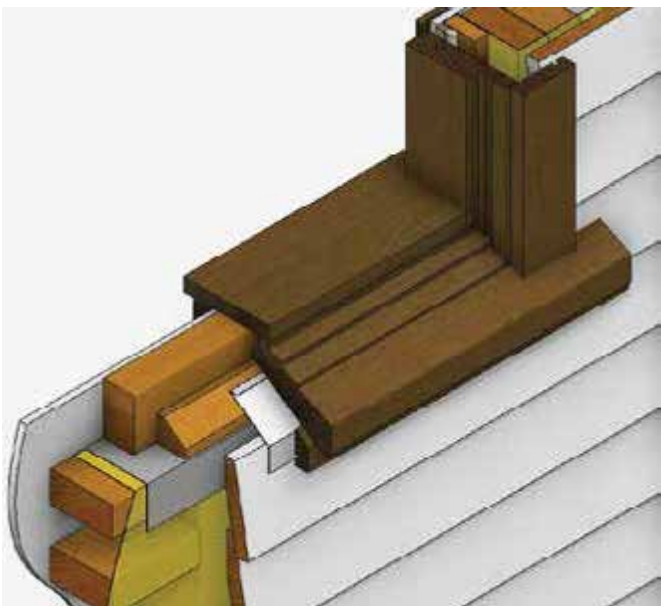


Figure 50f Steps 8–10.

3.8 Flashing openings in masonry veneer

Correctly flashing openings in masonry veneer is the first step to ensuring weathertightness.

MASONRY VENEER comprises about a third of the domestic external cladding market. With its common usage, it is important to understand the specific requirements for flashing openings in masonry veneer.

Flashings to openings generally

Openings in the timber or steel wall framing must have the following:

- Flexible wall underlay cut and dressed into the opening on all sides (or, for proprietary RAB systems, follow the specific installation details).
- Flexible flashing tape applied to the top corners of window and door openings and extended 100 mm from the corners both horizontally and vertically (see Figure 51).
- Flexible flashing tape applied across the full opening width of the sill and extended vertically 100 mm up the trimming studs under the jamb battens (see Figure 51).
- Flexible head flashing across the opening, bedded into the mortar joint above the opening and extended 200 mm beyond the jamb line on both sides. A layer of wall underlay or flexible flashing tape must be lapped over the flexible flashing (see Figures 52 and 53).
- Flexible sill flashing across the sill, folded into the opening and down the face of the wall underlay and over a tilting fillet to provide a kick-out to give a drip edge. The flashing must be extended 200 mm beyond the jamb line on both sides (see Figures 54 and 55).
- Flexible jamb flashings attached to the window jamb section and fixed on both sides of the opening for the full height of the opening, clout-fixed over the wall underlay so moisture is directed to the outside face of the cladding (see Figures 54 and 55).

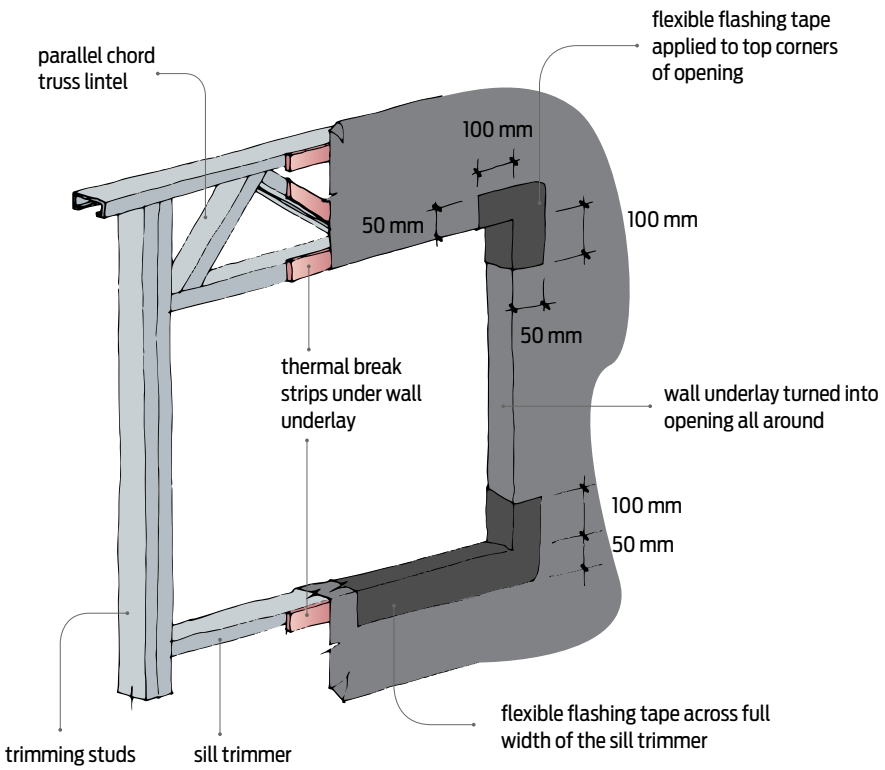


Figure 51 **Flexible wall underlay and flexible flashing tape turned into a steel-framed opening with thermal break strips.**

Rigid head flashing

BRANZ also recommends installing a rigid head flashing with a minimum 15º slope and stop-ends abutting the brick jambs for both aluminium ➤

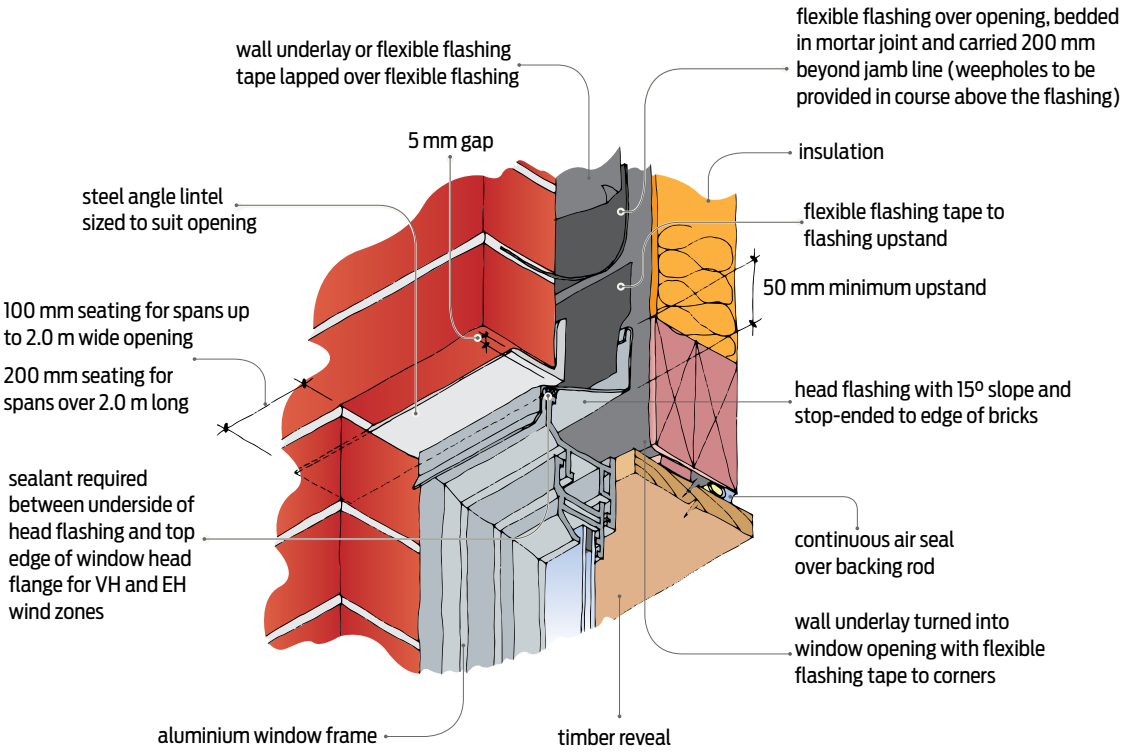


Figure 52 **Aluminium window installation – head detail.**

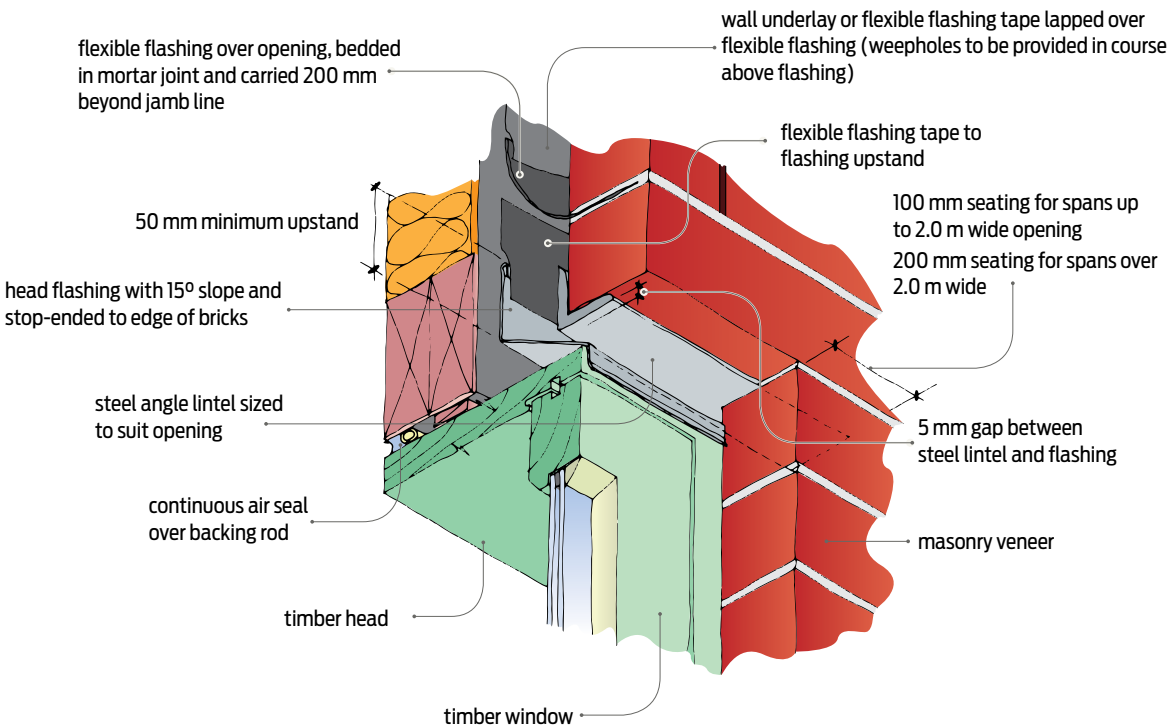


Figure 53 **Timber window installation – head detail.**

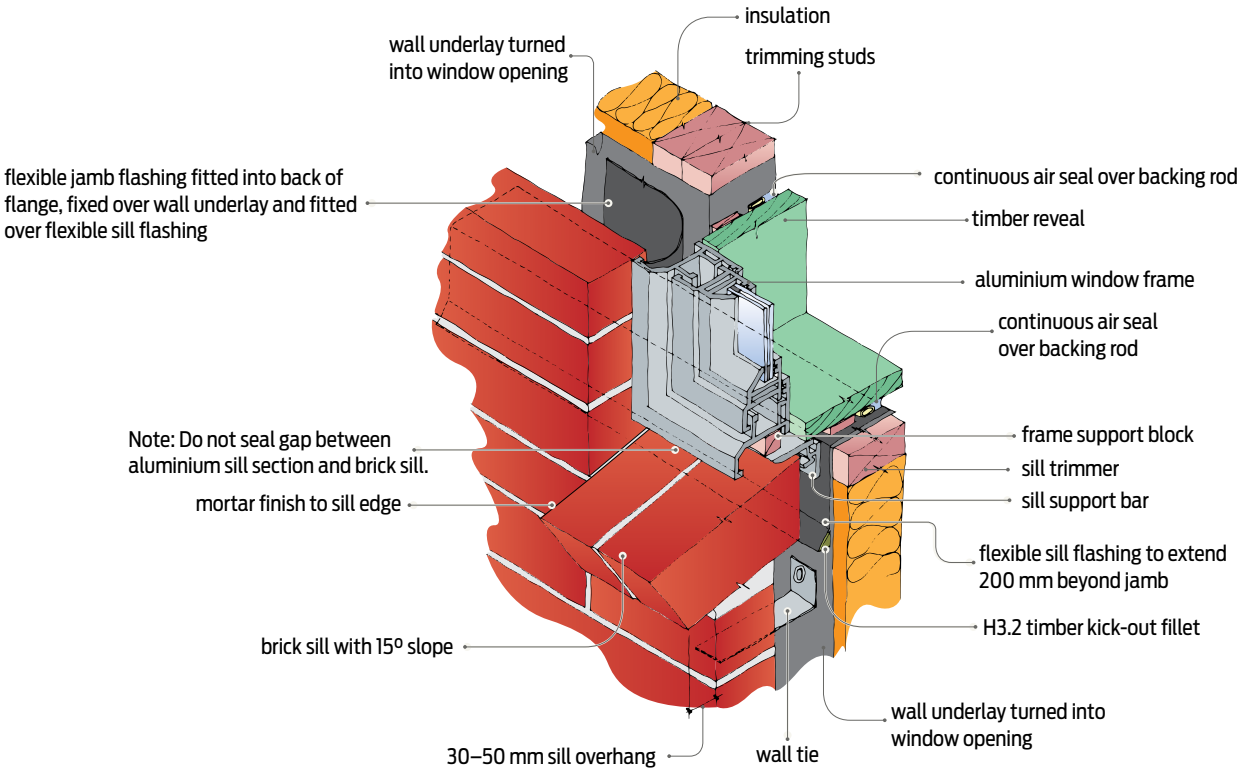


Figure 54 **Aluminium window installation – jamb and sill detail.**

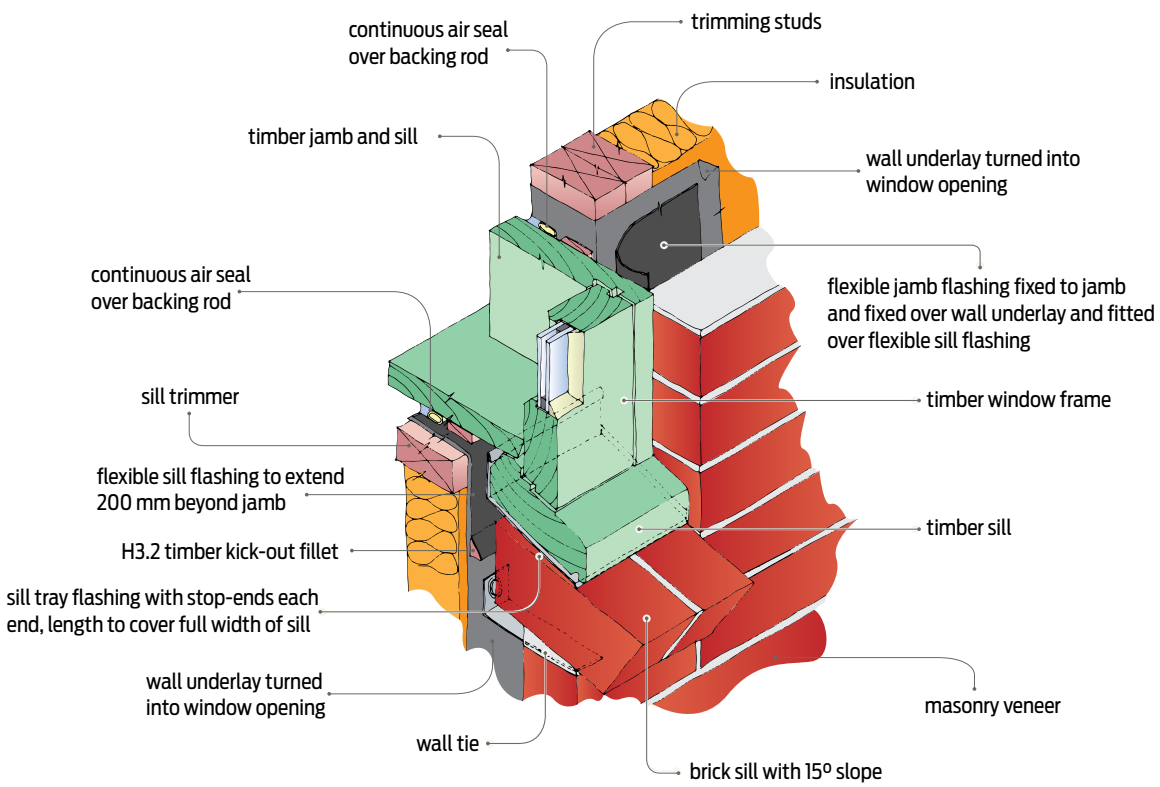


Figure 55 **Timber window installation – jamb and sill detail.**

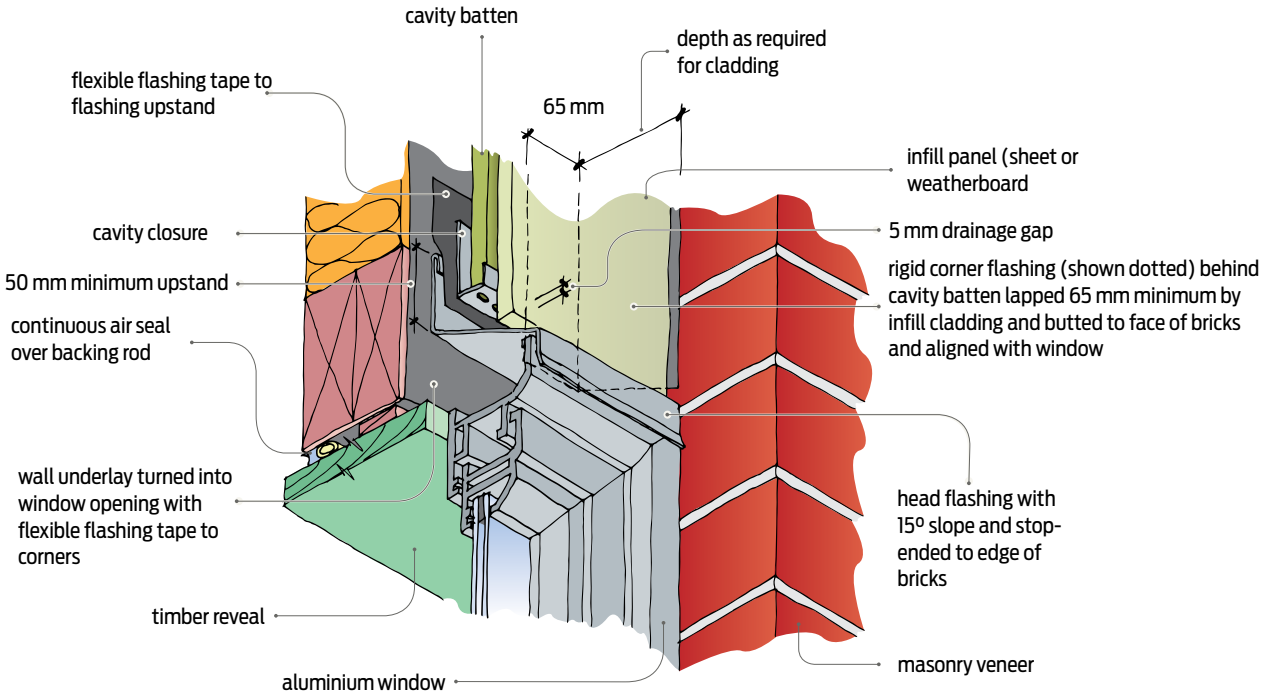


Figure 56 **Aluminium window installation – head detail with infill panel.**

and timber window frames. Note that E2/AS1 does not require a rigid head flashing for aluminium windows.

For very high (VH) and extra high (EH) wind zones, sealant must be applied between the underside of the head flashing and the top edge of the window head flange (see Figure 52).

Infill panel above opening

Where a window is installed with an infill panel instead of bricks above the opening, rigid corner flashings for the full height of the panel must be installed behind the cavity battens. They must be lapped at least 65 mm by the panel and butted to the face of the bricks (see Figure 56).

Head and sill flashings

Head and sill flashings to masonry veneer openings must be either:

- 1.5 mm butyl rubber
- 2-ply asphaltic pliable waterproofing membrane
- 0.5 mm minimum pliable polyethylene.

Jamb flashings

Jamb flashings must be either:

- 2-ply asphaltic pliable waterproofing membrane
- 0.5 mm minimum pliable polyethylene.

The flashings must direct any water that gets past the external cladding to the back face of the masonry veneer.

Window flanges

Window flanges must be forward of the back face of the veneer by 10 mm minimum.

Continuous flexible air seals must be installed over a PEF backing rod between the reveals and window and door openings.

Meter box

Openings for meter boxes less than 500 mm wide do not require a lintel or head flashing. However, the meter box must be sealed to the wall underlay and separated from direct contact with the masonry veneer or mortar with flexible flashing tape.

Sill requirements

Sill bricks or tiles should have a 15° minimum slope to the outside and an overhang to provide protection for ventilation slots if required below the window.

A gap of at least 20 mm should be left between the back of the sill bricks and the wall underlay and framing. This gap is to prevent mortar getting trapped and/or water bridging the gap.

Door sill openings

Door sill openings must have:

- a sill tray flashing that is the full width of the opening and has a depth that extends past the back of the aluminium joinery profile
- an 8 mm minimum upstand and sloped end dams
- a 5 mm minimum air gap behind the downturn.

Window sill openings

Specific requirements for window sill openings include:

- aluminium window sills must have a sill support bar where the window is wider than 600 mm (see Figure 54)
- the flexible sill flashing must have a drip edge created using a 20 mm H3.2 timber kick-out fillet
- window sill flanges must not be sealed at the sill edge.

BRANZ also recommends installing a rigid sill tray flashing for timber windows. The sill tray should be the full width of the opening, have stop-ends at each end and be sloped to suit the timber sill (see Figure 55). Note that aluminium windows do not require a sill tray.