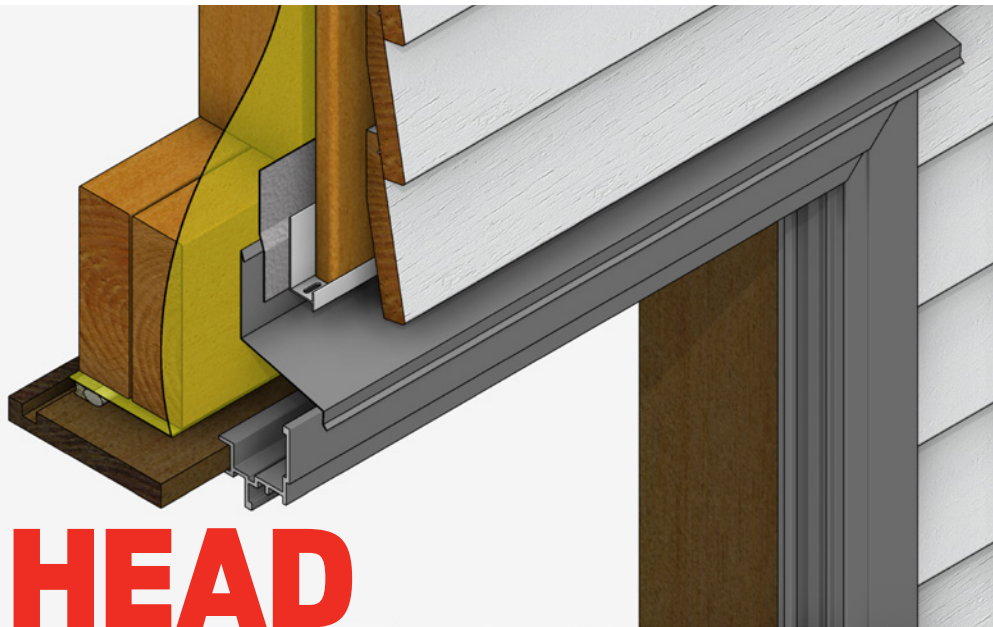


builder's mate



HEAD FLASHINGS

Head flashings over windows have the vital job of directing water back to the outside. Unfortunately, poor installation is common. Here's what you need to know.

As part of a BRANZ research project, inspectors visited over 200 houses under construction. They found a number of issues with head flashings, including:

- no stop-ends or upturns
- upturns too small
- flashings too short to cover the window frame at the ends
- inadequate slopes to flashing surfaces
- inadequate gap between flashing and cladding
- flashing in two pieces with nil or a poor junction seal.

frame to provide 10 mm cover to the face of the window frame (Figure 1). The flashing should be in a single piece that fully reaches both ends of the frame. Stop-ends must be formed at each end to prevent water running behind the cladding.

A 5 mm minimum drainage and ventilation gap must be left between the top of the sloped flashing and the bottom of the cladding above it. This opening lets water drain from the assembly and allows air to enter to provide drying. ▶

This is what should happen

A metal head flashing with a minimum 15° slope is installed against the wall underlay and over the window

INDUSTRY NEWS

LBP's and skills maintenance

The skills maintenance requirements of the Licensed Building Practitioners Scheme have just changed. There are two new compulsory activities: reading Licensed Building Practitioners News (in MBIE's *Codewords* newsletter) and identifying two examples of on-the-job learning over the 2-year skills cycle. LBPs will still need to do elective activities, but the time required for these is cut by half.

Subbies better protected

If a building company fails, subbies are more likely to be paid in future. That's because changes in the Construction Contracts Act require retentions money to be held in trust. The law change also includes better access to dispute resolution.

Determinations online

When there is a building dispute with the council or neighbours – the council won't issue a building consent or Code Compliance Certificate, for example – you can ask MBIE for a determination. This is a legally binding decision. You can read the results of past determinations online at www.building.govt.nz/determinations.



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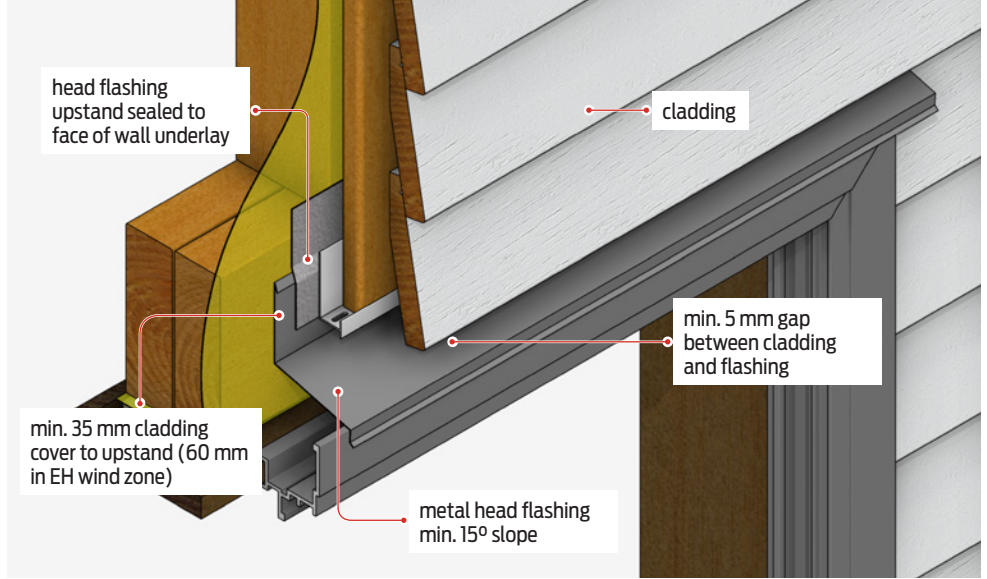


Figure 1. Head flashing on weatherboards over a cavity.

The head flashing upstand must be sealed to the face of the wall underlay with flexible flashing tape, or an extra layer of wall underlay must be dropped from above to create a gravity drainage path out over the flashing.

The total upstand must be 40 mm minimum. The lap under the cladding must be a minimum 35 mm (60 mm in the extra high wind zone).

The key requirements for head flashings are given in Acceptable Solution E2/AS1.

This document also has other requirements in addition to those above:

- With direct-fixed claddings, there must be a 50 mm sealant bead between the cladding and each end of the flashing.
- In cavity construction, there must be:

- 10 mm turn-ups acting as stop-ends, finishing at the inside face of the cladding and not passing through it
- ventilation of the cavity with use of a cavity base closure.
- In very high and extra high wind zones, there must be sealant between the underside of the head flashing and the top of the window head flange.
- Sloped heads must have specifically designed kick-out flashings at the bottom edges of head flashings.

BRANZ research (Study Report 313) found that head flashings were more leak resistant when the upstand fitted tightly against the cavity closure. It also found that window head flashings handle run-off better where there is a greater clearance between cladding and flashing.



Mouthpiece

Not good enough

Does everyone on site know what they should be doing and how well they should be doing it? The attitude “It’s not my responsibility” is common on some projects. This results in the quality issues reported in the media, reinforced by Auckland Council’s videos of substandard construction.

Examples of issues found:

- foundations not continuous between residential multi-units

- floor slabs cantilevered over the foundation or too small resulting in overhanging frames (in one case by 150 mm)
- slabs cut to remedy set-out failures, exposing reinforcing
- holding down bolts not anchored into the foundation
- garage door floor rebates missing or inadequate
- no reinforced connections between multi-unit block walls
- missing reinforcing steel and grout fill in blockwork
- unsealed wall penetrations
- double-nailed timber weatherboards
- cladding nails missing the stud for every weatherboard
- profiled metal sheets not meeting the ridge flashing
- ground levels sloping back towards the building.

To deliver all buildings of a sufficient quality, we must have:

- good QA processes and record keeping
- sign-off by the designer, LBP, contractors, BCA and client
- adequate, accurate documentation
- someone taking responsibility
- sufficient design and construction skill
- sufficient time and money
- the right attitude by developers, designers and all trades.

Fixing bevel-back weatherboards

Bevel-back weatherboards are back in fashion. The last time they were in vogue was the 1940s and 1950s, so many of today's builders don't have experience with them.

Issues seen on recent installations include:

- not effectively sealing cut ends, notches and holes
- double-nailing or screwing of timber boards
- poor-quality cutting of mitres to external corners and omitting soakers or backflashings, or mitre joints opening up as a result of timber movement
- incorrect installation sequence at internal corners
- sealing of the board laps – this is not recommended as it restricts drainage and drying.

The right way

Bevel-back weatherboards can be direct-fixed or installed over a cavity. Under E2/AS1, a cavity must be used when the risk score exceeds 12.

All cut ends of painted weatherboards must be primed, and the boards must be drilled for nailing at joints and ends.

When installing bevel-back weatherboards, laps must be:

- 32 mm for non-rebated boards, or
- 25 mm for rebated boards, with a minimum gap of 2 mm at the overlap between boards.

Joints can only be made over supports and must be scarf or splay joints or have corrosion-resistant soakers fitted.

Figure 2 gives the correct fixing location. Fix a single nail to each board just above the lap. This allows the timber to expand and contract as temperatures and moisture levels change. (Double-nailing can lead to timber splitting.)

The MBIE *Guide to tolerances, materials and workmanship in new residential construction 2015* indicates that it is not acceptable for fixings to penetrate both the outer and lapped timber weatherboards.

When making internal corners, fit corrosion-resistant flashings first. Scribe new boards to fit those already installed (Figures 3 and 4).

Weatherproof external corners by:

- corner boxes with scribes, or
- mitred joints with backflashing, or
- mitred joints with corrosion-resistant soakers.

You can find more help in E2/AS1 section 9.4 or BRANZ Good Practice Guide *Timber Cladding* (3rd edition) and *House Building Guide* (3rd edition).

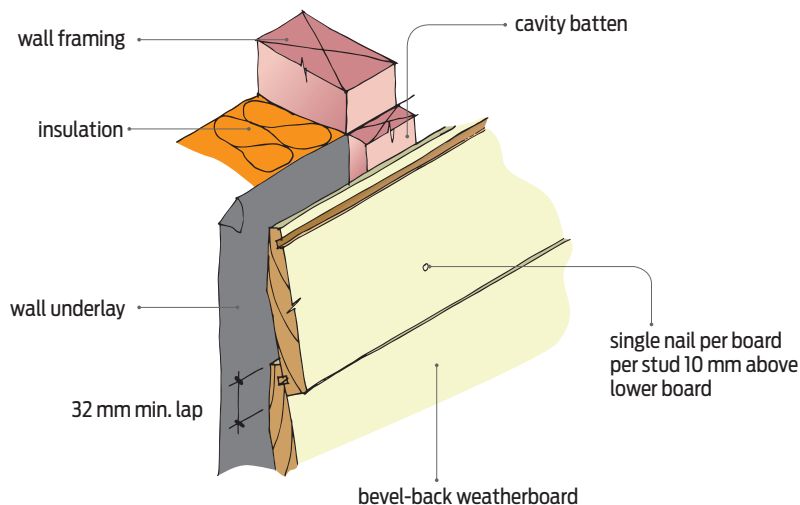


Figure 2. Correct fixing location for bevel-back weatherboards.

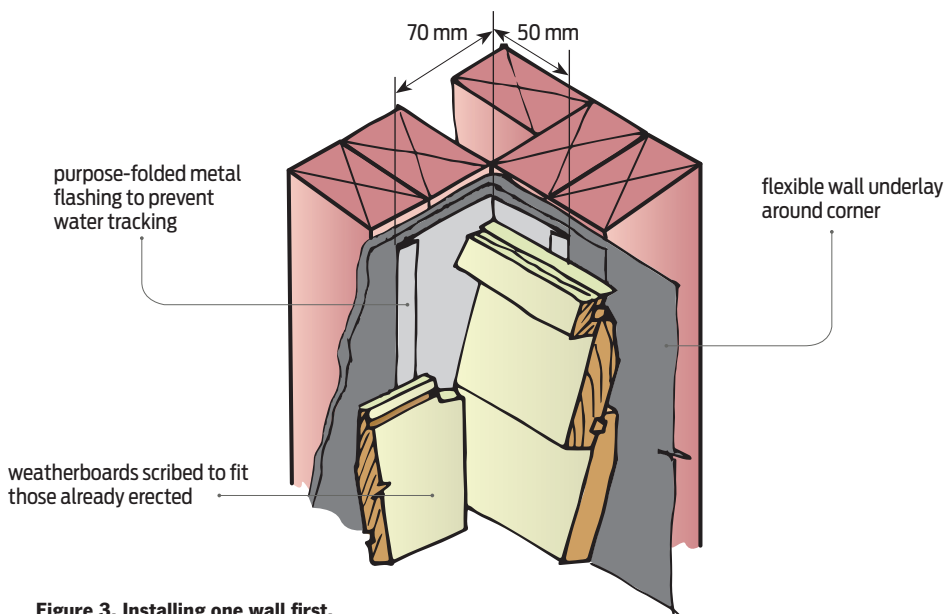


Figure 3. Installing one wall first.

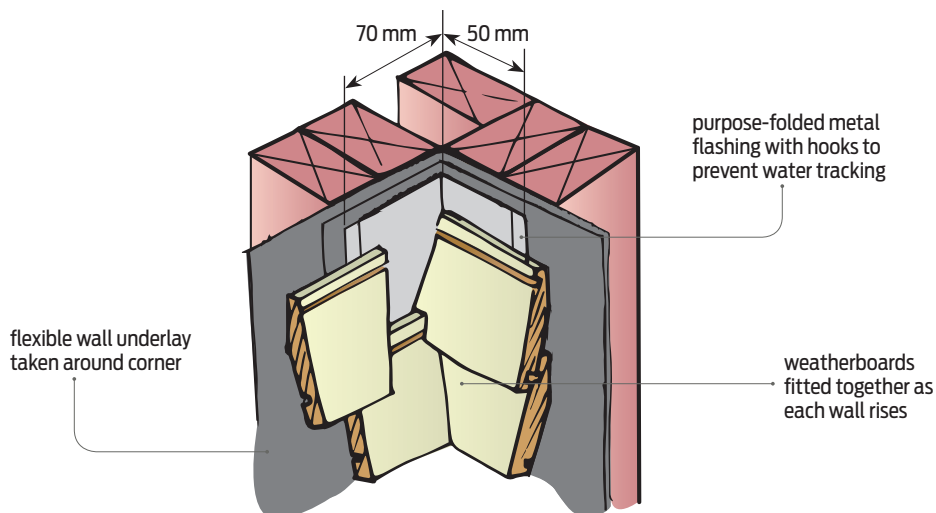


Figure 4. Interleaved corner.

Competition

Here's a tool



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All you need to do to win is tell us the name of the mystery tool (above).

Email your answer to buildersmate@branz.co.nz. Put "December Competition" in the subject line. The message should include your answer, your name, postal address and phone number. One entry per entrant please.

Don't forget to tell us where you picked up your copy of *Builder's Mate*! The winner will be the first correct entry drawn at 9 am on Friday 8 January 2016. Details will be posted on the BRANZ Ltd website (www.branz.co.nz) and in the next edition of *Builder's Mate* due out on 1 February 2016.



The winner of *Builder's Mate* 74 competition was Barry Willetts of Henderson, Auckland. Barry wins a drill bit sharpener worth \$119. The mystery tool was a brick bolster (mason's chisel).

Terms and conditions:

Entry is open to all New Zealand residents except employees and immediate families of BRANZ and The ToolShed shops. The competition will close at 9 am on Friday 8 January 2016. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

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