

GUIDELINE

BRANZ

HELPLINE 0800 80 80 85 (press 1)

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Requirements for clean-out openings in masonry construction

To ensure the bottom cells of all concrete masonry construction are free of mortar droppings, dirt and rubbish before grouting, clean-out openings are required to be formed at regular spacings along the bottom course of the wall. Typically, this is done by removing the face shell of the block.

NZS 4210:2001 *Masonry construction – Materials and workmanship* requires clean-outs for solid-filled (all cells) high-lift grouted walls (i.e. wall heights over 1.2 m grouted in one operation) at each vertical reinforcing bar position with the gap between openings not more than 800 mm. The minimum opening size specified is 100 x 75 mm.

Where a wall has partially filled cells, a 100 x 75 mm opening is left at the foundation or beam level for each filled cell.

While NZS 4210 does not require clean-outs for solid-filled walls up to 1.2 m high (the height limit for low-lift grouting), BRANZ believes that clean-outs are good practice for walls more than three block courses high, or 600 mm, and where low-lift grouting is employed.

More detail is given in BRANZ Good Practice Guide *Concrete Masonry*, now available as an Epub on the BRANZ website.

Concrete slabs – shrinkage control joints and edge distances

Where the saw-cut/joint is positioned alongside the wall as described in the *May Guideline*, the edge distance requirements for the location of the fixings relative to the joint will be met.

Eaves flashings

The errata to E2/AS1 issued in December 2011 modified the requirements of E2/AS1 Figure 45 regarding the situations when an eaves flashing is required for profiled metal roof cladding. An eaves flashing is required where all of the following conditions are met:

- Roof slope less than or equal to 10°.
- Soffit less than or equal to 100 mm.
- Wind zone is very high or extra high.

The article on pages 22–23 of *Build* 130 (June/July 2012) on 25 E2/AS1 changes did not incorporate the errata modifications.

Tying of roof framing to wall framing

NZS 3604:2011 *Timber-framed buildings* clause 8.7.6 and Table 8.18 require that top plates across openings that directly support roof members (trusses or rafters) are tied to lintels at 600 mm maximum centres to resist uplift. Along the remainder of the wall, roof members must be tied to wall studs.

Options for meeting this requirement for lintels include installing strapping:

- to the top and bottom of the jack stud to tie it to the top plate and lintel respectively
- that connects the roof member directly to the lintel, which would be required where there are no jack studs.

To determine the required fixing capacities, go to:

- clause 8.7.6 and Table 8.18 of NZS 3604 for jack studs – namely 0.7 kN (2/90 x 3.15 mm end nails) or 4.7 kN (2/90 x 3.15 mm end nails plus two wire dogs)
- Table 10.14 of NZS 3604 for roof members connected directly to the lintel – namely 4.7 kN (2/90 x 3.15 mm end nails plus two wire dogs) and 7.5 kN (2/90 x 3.15 mm end nails plus a strap fixing as shown in NZS 3604 Figure 6).

Fixing capacities are designed to take account of the roof weight, wind zone and roof member spacing.

Choosing the right lintel

When choosing the correct lintel size in NZS 3604 using Table 8.11, the options available (to determine the loads the lintel needs to be selected for) are:

- light roof with light cladding
- light roof with medium cladding
- heavy roof with light cladding
- heavy roof with medium cladding.





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NZS 3604 lintel tables do not give an option for heavy cladding directly supported from the wall frame using a shelf angle as this is outside the scope of the standard. NZS 3604 only covers heavy claddings directly supported by the foundation wall /slab.

New developments on the BRANZ website

Two new features have been added to the BRANZ website:

- **BRANZ Maps:** This interactive tool that allows the user to enter a property address and view the legal description, exposure zone and earthquake zone. Over time, further data related to properties, such as wind zones, will be added as it becomes available.
- **BRANZ Epubs:** A number of BRANZ books are now available for purchase as ebooks to provide you with easy access to essential building information. Simply download and start reading today on your Apple or Android devices. (See our [Epubs User Guide](#) for more information.) *Building Basics: Weathertightness* is available as a free download.

Fixings with ACQ and CuAz timber treatments

NZS 3604 clause 4.4.4 specifies the use of stainless steel or silicon bronze fixings where ACQ (ammoniacal copper quaternary) and CuAz (copper azole) treated timber is used in situations exposed to moisture such as cladding and external deck framing.

However, the requirement to use stainless steel for ACQ and CuAz treated timber does not apply where timber framing fixings and lining fixings are within a dry enclosed environment.

More detail on the selection of appropriate fixings is given in *Build* 118 [Choosing a nail or screw for 50-year durability](#) (pages 28–29).

Invitation to contribute to University of Auckland research

Improving productivity performance is arguably the only real way of improving our standard of living in a global competitive economy. Improving productivity means producing more output for less input and is achieved by working smarter, more efficiently and with less waste. This research project by the University of Auckland seeks to identify ways of improving productivity in the construction sector in New Zealand. More particularly, this study investigates the relationship between ways of using information and performance. Participating organisations will benefit from participation in the survey through gaining access to the report when it is completed.

We invite your participation with this research by answering a few questions in an online questionnaire:

www.surveymonkey.com/s/InformationFlowMattersPerformanceFactors.

BRANZ Seminars 2012

Free BEES research seminar

This seminar will cover results from the 5th year of this 6-year project looking at energy and water use in commercial buildings:

- Water use patterns in non-residential buildings in Auckland.
- Exploration into some of the higher and lower energy users that have been detailed monitored in BEES.
- Results from the modelling carried out to assist the development of the new Christchurch CBD, which will help inform city planners, designers and building owners of options on how to get the most from their site.
- Analysis from interviews with different players in the non-residential building area about the barriers to improving their buildings.
- Early results from Building Evaluations Survey (BUS), which collects information on the occupants' perception of the building performance.

Online registration is now available. Seminars run from 1–4 pm:

- 13 July **Christchurch** Sudima Hotel Christchurch Airport

The 19 July seminar for **Wellington** and the 23 July seminar for **Auckland** are fully booked.

Internal Moisture seminar dates and locations:

16 July	Invercargill	Kelvin Hotel
17 July	Queenstown	The Heritage Hotel
18 July	Dunedin	Forsyth Barr Stadium
19 July	Timaru	The Function Centre
23 July	New Plymouth	Quality Hotel Plymouth International
24 July	Wanganui	151 on London
25 July	Palmerston North	Convention Centre





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26 July	Masterton	Copthorne Hotel & Resort Solway Park
30 July	Mount Wellington	Waipuna Hotel & Conference Centre
31 July	Auckland City	Crowne Plaza
1 August	Albany	Harbour Function Centre
2 August	Whangarei	Forum North
6 August	Greymouth	The Ashley Hotel
7 August	Christchurch	Addington Events Centre
8 August	Wellington	Amora Hotel
9 August	Upper Hutt	Silverstream Retreat
13 August	Hamilton	Claudlands Conference & Exhibition Centre
14 August	Tauranga	The Sebel Trinity Wharf
15 August	Rotorua	Rydges Hotel
16 August	Napier	War Memorial Conference Centre
20 August	Nelson	The Rutherford Hotel
21 August	Blenheim	Chateau Marlborough

Online registration and content detail is now available on the [BRANZ website](http://www.branz.co.nz).

