

BRANZ

# builder'smate

## Six steps to quality

Too often, builders struggle with final costs and late completion, while clients complain about defects in the work. Here are six tips that will help keep the job up to scratch.

In many parts of New Zealand, builders are feeling a workload squeeze, and sometimes quality slips. A BRANZ survey of 225 new houses found that most had Code compliance or quality defects.

The good news is there are some simple solutions.

1. Check that ground levels meet requirements at the start of a job and save hassle down the track. Table 1 shows some of the basics from E2/AS1.
2. Check for plumb and straightness of framing and floors. The BRANZ survey found a lot of bowed wall frames, beyond the maximum 6 mm per 2.4 m stud height allowed in NZS 3604:2011.
3. Get brick veneer joint width, vent and drainage slots right:
  - Mortar joints should be 10 mm (+/-3 mm) while the bottom joint can be up to 20 mm to allow for slab variations. ➤

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## INDUSTRY NEWS

### New building material grows on trees

Local production capacity for cross-laminated timber (CLT) is doubling this winter. CLT is solid timber boards face-glued in alternating directions. Connected panels make a strong structure that doesn't need stick framing. It can be used for houses or larger projects – CLT was used in a 10-storey Melbourne apartment block.

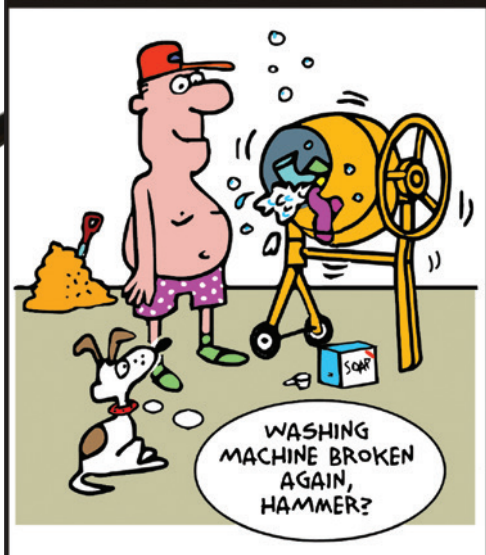
### Solar adds value

Early BRANZ research findings indicate that solar hot water and photovoltaic systems add value to a house. In a pilot study of house sales in Nelson, those with solar hot water sold at an average \$7,250 higher (after adjusting for house size etc), although the sample of solar houses was small.

### Everything at your fingertips

Looking for information and not sure whether you should go to MBIE, BRANZ or Standards NZ? BRANZ Find is a single digital search tool that links you straight to information from all those organisations. [www.branzfind.co.nz](http://www.branzfind.co.nz)

## HAMMER 'N' NAILS



- Allow one 10 x 75 mm vent slot every 800 mm in the second row of bricks from the top or a 5 mm gap around the top of the veneer.
  - Allow one 10 x 75 mm drainage slot every 800 mm along the base.
4. Make sure timber weatherboards are always straight and correctly jointed. Seal cut or exposed ends before installation.
  5. Make sure subcontractors protect previous work and finished surfaces and that they clean up after their work is done.
  6. At the end of the job, remove rubbish and clean up. It makes a great impression on clients and could be a good investment if they recommend you.

If there is ever a problem with documentation or something missing, holler to the supervisor or designer. In a BRANZ survey of builders, 3 out of 5 said they found construction details lacking, and almost 1 in 4 said some aspect of a house couldn't be built the way it was drawn.



**Making sure minimum ground level requirements are met and framing is straight and plumb will help the job run smoothly.**

TABLE 1	
Minimum distance of finished concrete slab to unpaved ground (masonry veneer)	150 mm. This will be 200 mm if the slab rebate is 100 mm instead of 50 mm and there is 100 mm minimum required between the base of the rebate and unpaved ground (E2/AS1).
Finished concrete slab to paving (masonry veneer with 50 mm slab rebate)	100 mm minimum – the bottom of the veneer must be 25 mm minimum above the paving.
Finished concrete slab to unprotected ground (other than masonry veneer)	225 mm minimum – cladding to unprotected ground clearance is 175 mm minimum.
Finished concrete slab to paving (other than masonry veneer)	150 mm minimum – cladding to ground clearance is 100 mm minimum.
Garage floor slab to paving at garage door opening	50 mm minimum – check wall cladding manufacturer's ground clearance requirements for their product.



# Mouthpiece

Quality is the word on everyone's lips at the moment. There is evidence that house construction work is not as good as it should be. Fortunately, there are tools to help get it right.

Rising workloads, time constraints and mixed industry skill levels have led to more complaints. BRANZ research is picking up the trend. Our 2014 survey of new house owners found callbacks rose to 88%, from 73% in 2013.

In other research, inspections of 225 homes under construction found that only 18% had no Code compliance defects, while a fifth had four or more. Only 8% had no quality defects, while 14% had nine or more. Expecting zero defects is unrealistic, but too many houses have too many defects.

This comes when consumers have more rights. For building work started after 1 January this year, clients can notify the contractor of defects up to 12 months

after the work is completed. The contractor must fix the defects (or prove the defects weren't part of the construction).

## New MBIE publication

Every contractor should read the *Guide to tolerances, materials and workmanship in new residential construction 2015* from MBIE. This outlines acceptable levels of workmanship in house building in normal conditions. It will be a key resource if there is a dispute.

You can also find help in New Zealand standards, Acceptable Solutions, manufacturers' literature – and of course BRANZ publications, websites and tools.

Better quality and fewer callbacks will lead to more satisfied clients, greater profitability and an improved industry reputation.

**BRANZ**



# Cavity battens

Cavity battens come in three materials – timber, polypropylene and polystyrene. Where you can use each is listed below.

Non-structural cavity battens act as a packer between wall cladding and framing, allowing drainage and drying behind the cladding. Under Building Code clause B2 *Durability*, they must be durable for a minimum of 15 years.

## Timber

Radiata pine and Douglas fir battens must be treated to H3.1. Treatment must be done in their final shape and cross-section, so they can't be ripped from larger pieces of H3.1 timber. Many battens are treated with LOSP. Battens treated with copper chrome arsenate (CCA), copper azole (CuAZ) or copper quaternary must not be in direct contact with metal wall cladding – this would pose a corrosion risk. Separate with a material such as paper-based underlay – either sheets across the battens or strips down the batten faces. Although copper naphthenate (CuN) LOSP treatment is less corrosive, separation is still a good idea.

Continuous timber battens must only be fixed vertically so they do not block drainage. Any horizontal fixing blocks must stop 50 mm short of a vertical batten.

## Polypropylene

Extruded fluted polypropylene battens are available for use with timber or steel framing (the battens for steel are a composite including polystyrene to provide a thermal break).

Polypropylene can be used in most places where timber battens can be used. Because the polypropylene is fluted – there are holes in it that water and air can pass through – it can also be fixed horizontally.

## Polystyrene

Use expanded polystyrene class H or class S or extruded polystyrene. These are typically used with EIFS claddings.

## Other systems

Some proprietary cladding systems use profiled cavity battens that allow weatherboards to be locked into battens with an EPDM lock strip, reducing the need for nail fixing to a few specific locations.

Fibre-cement structural cavity battens are also available in New Zealand for use with a proprietary wall cladding system.



Polystyrene battens.



H3.1 timber battens.

# build

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# Competition

Here's a tool



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This 200 W 3-speed multi-function tool sands, cuts wood, metal and plastic, grinds and cuts masonry and more! 3 to be won!

The prize is provided courtesy of The ToolShed.

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](mailto:buildersmate@branz.co.nz). Put "August 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 winners will be the first three correct entries drawn at 9 am on Friday 11 September 2015. Details will be posted on the BRANZ Ltd website ([www.branz.co.nz](http://www.branz.co.nz)) and in the next edition of *Builder's Mate* due out on 1 October 2015.



The winner of the June *Builder's Mate* competition was Phillip Bone of Timaru. Phillip wins an Arges cordless drill. The mystery tool was a suction cup lifter for carrying glass.

#### 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 11 September 2015. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

## + BUILDERS' APPS

In this series, we'll introduce some great apps and tools for your smartphone. If you know any you'd like to recommend, email us the details at [buildersmate@branz.co.nz](mailto:buildersmate@branz.co.nz).



#### RULERS

Measure small objects (such as screws or nails) by placing them on your smartphone screen, or measure larger objects.



#### TIMESHEET

Record time, expenses and so on for multiple clients. Some apps allow data exports to programs such as Excel and have numerous features.



## GOOD PRACTICE GUIDE



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Standards referred to can be purchased from Standards New Zealand. Tel: 04 498 5991 or [www.standards.co.nz](http://www.standards.co.nz).

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