

BUILDER'S MATE

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Bottom plate fixings

The options and requirements around how bottom plates are fixed to concrete slab floors have changed.

Section 7 of the newly-revised Standard 3604 (2011) *Timber-framed buildings*, divides fixing requirements for slab on ground floors into two categories, cast-in anchors and proprietary anchors.

Cast-in anchors are restricted to M12 bolts, with the following key changes:

The embedment depth of bolts has been increased:

- Where the slab edge is formed with in-situ concrete, minimum depth is now 90 mm (previously 75 mm)
- Where masonry header blocks are used, minimum depth is now 120 mm (previously 75 mm). >



Win!

**A Makita 5007MGK
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INDUSTRY NEWS

Leaky home guides

Two new guides have been published about diagnosing and repairing leaky homes. Although they're aimed at assessors and designers, builders and homeowners will find them interesting.

Weathertightness: Guide to the Diagnosis of Leaky Buildings covers pre-site work, site visits, non-invasive investigation, invasive investigation, destructive investigation, analysing the evidence, and making recommendations. It also covers investigative tools available.

Weathertightness: Guide to Remediation Design outlines the options available for fixing leaky buildings, design and construction considerations, and detailing solutions.

The guides were developed by the Department of Building and Housing, the second one in conjunction with BRANZ. You can view or download them from the website www.dbh.govt.nz

HAMMER 'N' NAILS



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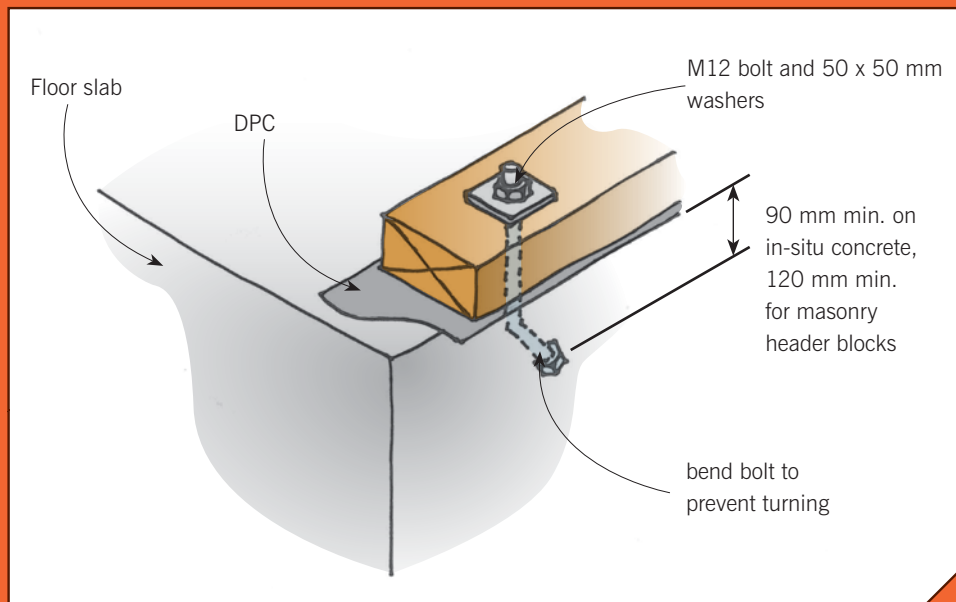
- A minimum edge distance of 50 mm is now required. In the case of masonry header blocks, that dimension is measured from the outside face of the blocks
- The spacing of bolts is reduced to 1200 mm centres maximum (previously 1400 mm)
- The maximum distance the bolts can be set from the end of the plate is now 150 mm (previously 300 mm).

- The maximum spacing where masonry header blocks are used is reduced to 600 mm.

The requirements for fixing bottom plates to foundation walls have also changed.

You'll find the details in the Standard NZS 3604 (2011) *Timber-framed buildings*, which can be bought from Standards New Zealand. See www.standards.co.nz

For proprietary post-fixed anchors, there is one key change:



Fixing of bottom plate to slab

Dribblings from the Old Geezer



I have recently moved closer to the action in the industry. I am looking to be part of the enormous team helping with the reconstruction of Christchurch and this move has reminded me how much I enjoy the constructing side of our industry. It is raw and real, opinionated ... sometimes confrontational. I've missed that and it is good to be back. Back in the day, a few months after I had started with BRANZ, I chanced upon an old work mate and he asked how it was all going and what was it like. I laughed and said that I sorta missed the every-day dramas. No one threw hard hats around the room or slammed phones down or shouted at subbies. In other words ... it was quite pleasant and respectful.

I have been both, a white-collar worker and a blue-collar worker. Going back to the coal-face has reminded how real it is. The world of 'doing it', rather than talking about it, is often irreverent and fun. The chat is occasionally bawdy and sexism and racism are never far away. Yet there is usually true affection with each apparent barbed quip or anecdote. Often it is too hard to get a handle on real names, so nicknames are the norm. Recently hearing a truckie called by his workplace name of Teabag, reminded me of many site names I've heard over the years ... bringing back my all-time favourite, of a pair of agency chippies who always seemed to go together, from task to task. It seemed apt that they would be called Truck and Trailer by all. Good eh! What's your favourite?

Des Molloy

build



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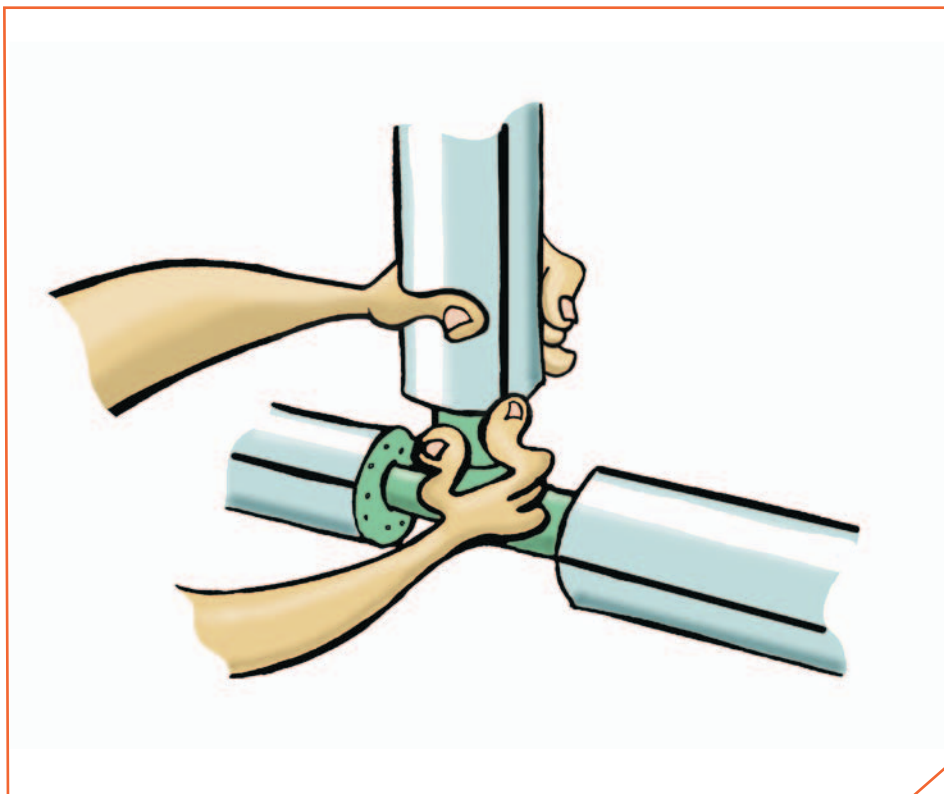
For the home owner and public enquiries

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Calls cost \$1.99 per minute plus GST

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Pipe Insulation



It is important to minimise heat loss from hot water pipes, and to prevent cold water pipes from freezing.

BRANZ recommends insulating all hot water pipes. Running these pipes inside the thermal envelope will further reduce heat losses.

What do the New Zealand Building Code and New Zealand Standards require?

Building Code

Building Code clause H1 *Energy Efficiency* requires that systems for heating, storing or distributing hot water must limit energy losses.

The Acceptable Solution for clause G21 *Water Supplies*, G12/AS1, requires hot and cold water pipes outside the building envelope to be insulated where there is a likelihood of freezing. Vent pipes for storage water heaters should be insulated in these circumstances too.

The Solution refers to closed cell polymer insulation or fibreglass insulation preformed to the shape of the pipe and not less than 13 mm thick.

One way to meet hot water pipe insulation requirements is to comply with NZS 4305.

NZS 4305

NZS 4305 *Energy efficiency – domestic type hot water systems* requires insulation to:

- generally, the first two metres of pipe from the hot water cylinder
- pressure relief valves and temperature and pressure relief valves
- the vent pipe to open-vented cylinders, from the top of the cylinder to 300 mm above the max standing water in the pipe.

NZS 4305 also requires the insulation of:

- all hot water pipes embedded in concrete, or underground. (These pipes must be in a duct.)
- hot water pipes outside the building envelope
- hot water distribution systems where water circulates in a loop
- connecting pipes between a cylinder and a wetback, a solar or a heat pump water heating system.

The Standard also suggests insulating the pipe from the water heater to the kitchen sink. BRANZ endorses that.

Designers should specify where insulation is to be installed and the type to be used.

At a glance

Recessed downlights

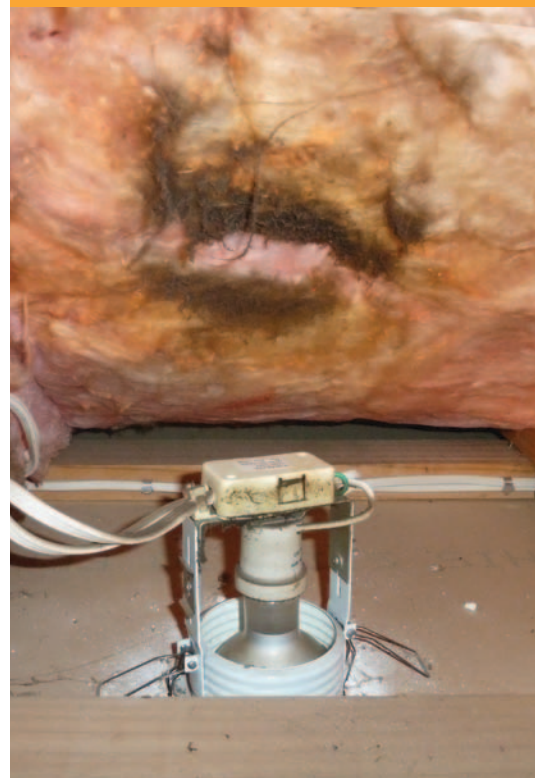
Recessed downlights are a popular home lighting choice, but they can lead to increased energy use, and care needs to be taken with their installation to avoid overheating.

Downlights that penetrate the ceiling provide a path for heat, air and moisture to escape. Older types of fittings must not be covered with insulation, nor should insulation touch the sides of the downlight, unless the fitting manufacturer can verify that this is acceptable. Covering older styles of downlight can bring a risk of overheating and fire.

The big drawback is that these gaps in the insulation material reduce its benefits. In extreme cases, the effective insulation value of the ceiling can be reduced to almost zero.

Some recessed downlights are able to be covered with insulation – these are ones rated “IC” or “IC-F”. With these, the thermal performance of the ceiling is not reduced.

BRANZ is publishing a Bulletin with more details about recessed downlights, and more details about a recently amended Standard covering their use, in October.



Glass wool insulation should never have been placed over the top of this downlight.

COMPETITION Win!



A Makita 5007MGK 185mm 1800W Circular Saw **Worth \$299!**

This great tool has a die-cast magnesium base for greater accuracy and smoother cutting, and twin built-in LED lights for improved visibility of the cut line. Max cutting capacity is 63.5 mm (at 90°) and 45 mm (at 45°).

The ToolShed has an extra special price on this for August of \$299 inc gst!

The prize is provided courtesy of The Tool Shed.

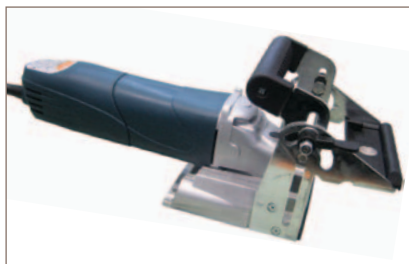
All you need to do to win is tell us the name of the mystery tool (above right).

Send us your answer plus your name, address, telephone number and email address on the back of an envelope. Post it (you don't need a stamp) to: Builder's Mate 48, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50 908, Porirua City 5240. 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 2 September 2011. 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 October 2011.



Here's a tool
What is it?



Terms and conditions:

Entry is open to all New Zealand residents except employees and immediate families of BRANZ and The Tool Shed shops. The competition will close on Friday 2 September 2011. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.



BUILDER'S MATE WINNER

The winner of the BM 48 competition was Terry King of Paeroa. The mystery tool was a nibbler for cutting metal, and the prize was an Arges 26 mm rotary hammer drill.

BLOKES on the job

BEN KEVEY

At BuildNZ, Auckland



Favourite tool

Hand plane.

Favourite tip

Listen and learn!

TUITI HUI

At BuildNZ, Auckland



Favourite tool

Lunch.

Favourite tip

Measure three times, cut once.

GEORGE BEVIN

On the BRANZ rebuild



Favourite tool

Battery plasterboard screw gun.

Favourite tip

Have pride in your work.

RENOVATE 1970s

This is your technical resource and covers exactly what defines 1970s style, how these houses were constructed and modifications they may have had in the decades since they were built.

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Standards referred to can be purchased from Standards New Zealand.
Tel: 04 498 5991 or www.standards.co.nz.

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Know someone on the job? Send us details of his or her favourite tip and tool and you could win \$50 worth of BRANZ books.