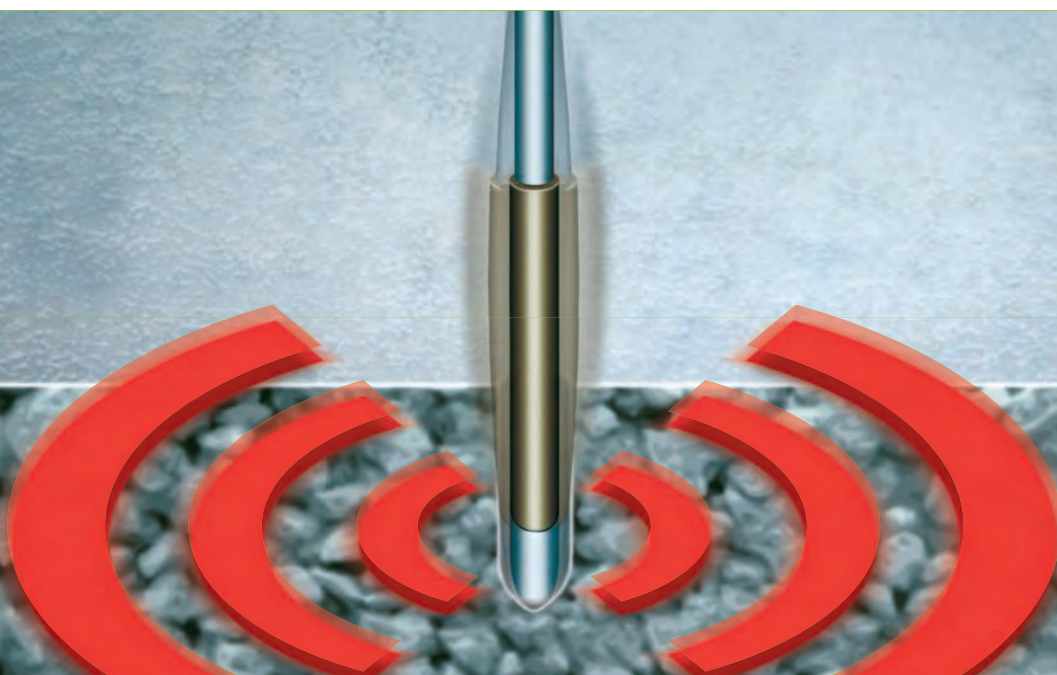


BUILDER'S MATE

ISSUE 56 | October 2012



Good vibrations

Concrete must be vibrated after it is poured to compact it – to consolidate the mix by removing trapped air – and ensure the cured concrete is of good quality. Poorly compacted concrete with air voids, particularly any voids exposed to the weather, will be significantly weaker and less durable. This could result in expensive call-backs and remedial work.

Pump mixes can appear to be more readily compacted by the screeding process, but even they must be vibrated.

Pay special attention to compacting concrete in locally thickened regions, such as perimeter beams and thickenings under loadbearing walls.

An immersion or poker vibrator will improve the compaction of all types and thicknesses of concrete

construction. A vibrator with a head diameter of 20–30 mm will be satisfactory for most house slabs.

A poker vibrator is essential for compacting concrete in walls. The concrete should be placed and compacted in layers not exceeding 300 mm. >



Win!

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INDUSTRY NEWS

Changes coming in apprenticeship training

Getting more people completing training with good skills is one of the aims behind upcoming changes to training and apprenticeships.

One proposal being examined is for people to complete trade training in a simulated classroom setting rather than on a real building site – a proposal that has spurred debate.

Final decisions are due in November, with changes being made in 2013 and 2014.

Renovation seminar coming up

Residential retrofit and renovation is the topic of the next BRANZ seminar, starting on 23 October and going to 22 centres. One of the speakers is a director of Salmond Reed Architects, the Auckland firm with a wealth of experience in this area.

More information about the seminar can be found at www.branz.co.nz.

Safety up top

Falls from roofs and ladders is the main cause of serious accidents on building sites, and the Department of Labour has just launched an interesting new campaign to reduce injury numbers. Visit www.dol.govt.nz/prevent-falls.

HAMMER 'N' NAILS



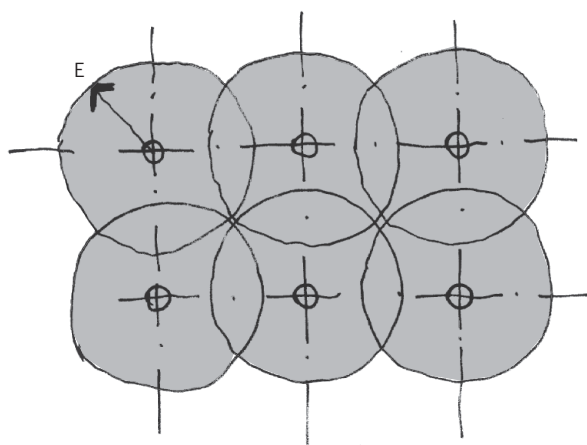
Here are the keys to properly vibrating walls and slabs:

- Make sure you can see the concrete surface
- Let the poker sink quickly – if done slowly, the top of the layer will be compacted first, making it more difficult for trapped air to escape
- Leave the poker in the concrete for about 10 seconds and withdraw it slowly to make sure that the hole made by the poker is filled up
- Repeat the process at the correct centres (Figure 1)
- Make sure that the poker head doesn't touch the formwork face, reinforcing or DPM.

Compacting concrete with a vibrator takes place in two stages (Figure 2):

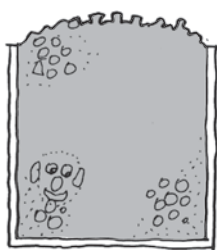
- In stage 1, which takes 3–5 seconds, the concrete liquefies.
- In stage 2, which takes a further 7–15 seconds, the trapped air is expelled.

Take care not to under-vibrate the concrete. Initial consolidation is rapid and the level of the concrete will drop, but this does not mean that all the air has been driven out.

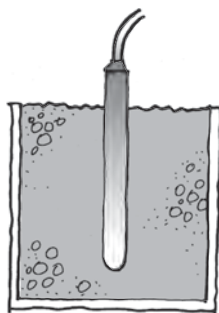


E = the effective range of the immersion vibrator is 180 to 360 mm

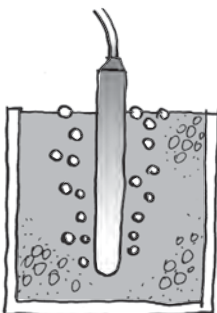
Figure 1. Centre for insertion of poker vibrator.



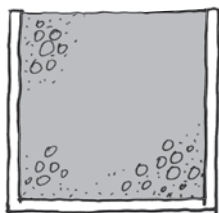
Stage 1. The form is surcharged with concrete



Liquefaction of the concrete. It slumps and fills the form (3-5 seconds)



Stage 2. Trapped air is expelled



7-15 Seconds

Figure 2. The process of compaction. Total time for both stages 10–20 seconds.



Dribblings from the Old Geezer

My old mate Dick once said on film "After all everything comes to an end, except snarlers ... they have two ends." Yes I was a little confused too but now when I am on the cusp of saying "See you later", I am groping for something coherent to say. I could say that this is the end of an era, but that could be countered by those who feel it is an end of an error. I am now in the big West Island, supposedly on my way to the great red dust bowl that is Port Hedland, and although BHP has just cancelled my particular project, I still hope to "go West old man".

It's been a good ride with way more ups than downs. For well over 50 issues I have dribbled my dribble, vented my spleen and sometimes just mused. I have to say that the vain side of me has been assuaged by recognition in the most unlikely of places. There's been no paparazzi bargaining off revealing photos for cash, but I have been sprung in Wellington's cake tin, the Interislander, a suburban street in the far north and a Nelson plant nursery to name a few instances. But my favourite occasion of celebrity fame came one morning as I was about to sling a leg over one of my brother's motorbikes whilst on a visit to Wellington. A road gang's truck shuddered to a stop in the middle of the road, as they can and do. A window wound down and a voice boomed "Hey Old Geezer!" A second passed and the truck rumbled away.

I'll miss you guys. E noho ra.

Des Molloy

Edge details

for membrane roofs

It is important to get the edge detailing right around the top and side edges of a membrane roof. If you don't have an anti-spill edge, rainwater blown along a roofing membrane and over the edge can stain the wall surface it flows down.

UV exposure to these membranes can cause the surface to oxidise, and when this oxidation is carried down a wall surface by rain it can cause staining.

The solution is an anti-spill edge detail (Figure 3).

These have been required by E2/AS1 since 2005, and are recommended by membrane suppliers, but haven't always been designed and installed.

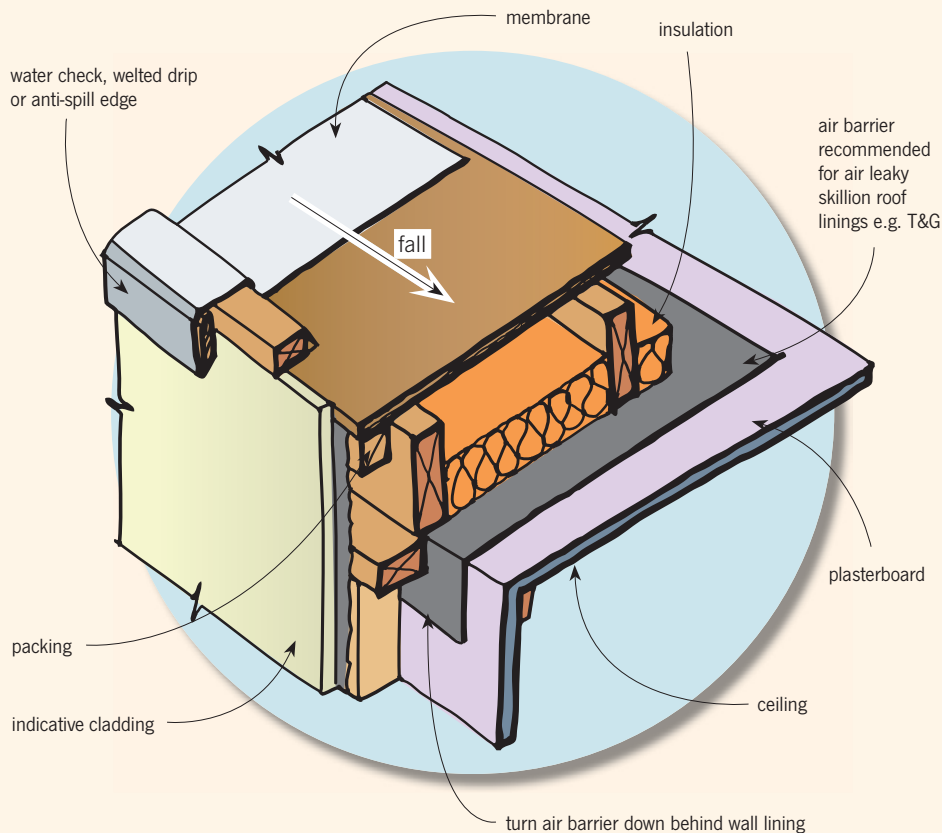


Figure 3: Anti-spill edge or water check to prevent water spillage.

build



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COMPETITION Win!



?

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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).

Email you answer to buildersmate@branz.co.nz. Put "October 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 2 November 2012. 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 3 December 2012.

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 November 2012. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.



The winner of BM 55 was Jeffrey Chen of Auckland. The mystery tool was an air shear and the prize was a distance measurer and a digital level worth \$149.90

What's wrong with these PICTURES?

1

EIFS HOUSE



2

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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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1. The ground level is too high – the cladding should finish above ground. The ground is also too high around the gully trap.
2. The steel beam is corroded, either from poor initial corrosion protection or lack of maintenance, and the bolts have not been tightened.

Answers: