

builder'smate



INDUSTRY NEWS

149,000 needed for construction

A recent government report forecasts a need for 49,000 more people in construction-related occupations by 2021, with the highest demand for electricians, plumbers and engineers.

The majority of the new workers (32,000 people) will be needed in Auckland, followed by Waikato/Bay of Plenty (6,800) and Wellington (4,800).

Canterbury had a jump in workers for earthquake rebuilding, but numbers there are expected to decline. See constructionprojections.mbie.govt.nz.

Homestar V4 launched

Version 4 of the Homestar rating tool has been launched. The tool measures energy efficiency and other aspects of houses and apartments on a scale up to 10. Version 4 streamlines the assessment process. See www.nzgbc.org.nz/homestar.

Tradeswoman of the year

At the recent Excellence Awards of the National Association for Women in Construction, Verena Maeder was named Tradeswoman of the Year. Verena owns Solid Earth Ltd and is an earth builder with 19 years' experience in Europe and New Zealand.

LIVE AND LET DRY

The pressure is on these days to get houses finished as quickly as possible. There can be big problems, though, if you put fixed floor coverings or membranes onto a slab before it is sufficiently dry. So how can you tell when a slab is dry enough?

It's not unusual for tiles, timber or vinyl flooring or waterproof membranes to be installed or applied to concrete slabs before the slabs are properly dry. The result can be bubbles forming and adhesion failing under vinyl sheet flooring, warping/rot in solid timber/timber composite overlay flooring, cracking in floor tiles, mould under loose-laid carpet – all expensive headaches.

Building Code Acceptable Solution E2/AS1 says that concrete floors should have a relative humidity reading of less than 75% at the time of laying fixed floor coverings. NZS AS 1884:2013 *Floor coverings – Resilient sheet and tiles – Installation practices* requires the relative humidity to be 75% or less.



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These are upper limits:

- Some flooring manufacturers require a maximum relative humidity figure below 75%.
- Because of the sensitivity of timber or wood-based flooring to moisture, a maximum 70% relative humidity for timber floors is considered prudent.

A typical 100 mm thick slab can take 4 months or longer to get to 75% relative humidity. A slab only begins to dry properly once the building is weathertight. Drying will be slower where there are lower air temperatures, higher humidity or little ventilation. Using dehumidifiers, fans or heaters to try to dry the slab faster doesn't work – they only work on the surface.

Sometimes there is confusion between drying and curing. They are not the same. Curing is the chemical reaction that takes place when all the ingredients of concrete become bonded together. Drying is where surplus water evaporates from a slab. Drying normally takes much longer than curing. The amount of water needed to activate the chemical curing process is quite small. Most of the water in the concrete is there to allow it to be mixed, pumped and placed, and it is this water that must be allowed to evaporate from the slab.

Testing for humidity

E2/AS1 refers to testing with a hygrometer, while NZS AS 1884:2013 also covers humidity probes. Most hygrometers today give an electronic readout. Hygrometers have an insulated box that must be sealed to the slab. Water vapour coming out of the concrete enters an opening



in the bottom of the box. After 16–32 hours, the water vapour pressure in the box equals that in the floor, and the relative humidity is shown. More details on the process can be found in BRANZ Bulletin 585 *Measuring moisture in timber and concrete*.

Humidity probes are either embedded in the slab when the concrete is poured or inserted into a hole drilled in the slab. Probes may be more reliable than hygrometers because the relative humidity is measured in the body of the concrete, not the surface.

Several measurements should be made at different points in the slab – a single spot test isn't good enough.

Once the slab is dry enough to lay flooring, let the flooring acclimatise in the space so it is at the same temperature and moisture level as the room. Open packets of timber or wood-based flooring and stack it so air circulates around it. Let timber and wood-based flooring acclimatise for at least 2 days – manufacturers may specify 3 days. Ideally, roll out vinyl flooring and leave it for 2 days so it can relax and reach room temperature.



Mouthpiece

It's been 10 years since the LBP scheme was set up in 2007, and back then, it's fair to say it came as a bit of a shock for many in New Zealand's construction industry. The scheme introduced standards for LBP skill levels and accountability for when behaviour isn't up to scratch.

The scheme became compulsory in 2012, and LBP numbers initially climbed sharply before steadying. We currently have almost 26,000 LBPs holding over 30,000 licences. Each of these individuals adds to New Zealand's economy, even more so now in this building boom.

From 2 November, all LBPs will move to our updated skills maintenance model that's compulsory for them to qualify for relicensing every 2 years. The new model includes elective activities, on-the-job learning and reading our *Codewords* articles and quiz. Skills maintenance prompts LBPs to update their skills and knowledge without overloading them. *Codewords* articles also appear in BRANZ *Build* magazine, free to all LBPs.

When necessary, LBPs can be penalised by the Building Practitioners Board. If an LBP's work presents as careless or they're working outside of their licence, they should be prepared to face the consequences.

We also have a robust system for dealing with unlicensed builders who have undertaken restricted building work. Complaints against them are investigated by MBIE, and they may face court proceedings.

These functions give Kiwis confidence that LBPs and non-LBPs will be held to account when necessary. In saying this, it's important to acknowledge that most of the building industry here is doing a good job following regulations.

For LBPs reading this, remember: being an LBP comes with responsibility and accountability to do a good job. It's ultimately your role to provide safe, sanitary and compliant buildings to New Zealanders.

Paul Hobbs
LBP Scheme Registrar

WHAT A RACKET!

Around 71,000 New Zealanders have become deaf after being exposed to loud noise, and 95% of them are male. With all the noisy power tools on site, it's a real problem for builders. Of all construction industry ACC claims, claims for ear damage (mostly hearing loss) have one of the highest average costs.

You can't get your hearing back once it's gone. The best approach is to use protection before it becomes a problem.

- Wear earmuffs or earplugs on noisy jobs. Wear earmuffs directly on your head – not over a beanie.
- Choose protection that fits and feels comfortable.
- Choose gear that gives you the right level of protection. Earmuffs and earplugs are rated from class 1–5, where class 5 gives the highest protection. Talk to your supplier about what is most appropriate for your type of work.
- Keep tools maintained – some equipment is noisier when not in good order.
- When buying tools, ask about noise levels. Look for quieter models.

Council noise requirements

It's not just your ears you need to think about – councils restrict the noise permitted on building sites to protect the neighbours.

General council noise limits for construction typically vary depending on location and the day of the week.

For example:

- In the Auckland CBD, construction noise is allowed 6.30am–10.30pm Monday–Friday, 7am–11pm Saturday, but only 9am–7pm on Sunday.
- In Auckland residential areas, noisy construction work is only allowed 7.30am–6pm weekdays and Saturdays, and none is allowed on Sunday and public holidays.

The rules apply to noisy work. You can usually arrive at work earlier or leave later, so long as what you are doing on site is quiet – like setting up a work area, checking plans/materials or measuring.

If you want to do noisy work outside the set hours – for demolition or house removal, for example – you'll need to apply to the council for an exemption.

The resource or building consent for the job you're on may also include rules around noise levels or working hours that you need to follow.

If your job will be especially noisy for a day or two, let the neighbours know beforehand.



build

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Competition

Here is a tool



What is it?

WIN!



A DeWalt brushcutter worth \$699

This great brushcutter does the job fast, from light trimming to heavy-duty work. Brushless motor in metal housing, 9.0 Ah battery and fast charging.

The prize is provided courtesy of The ToolShed.

All you need to do is tell us the name of the mystery tool at the top of the page.

Email your 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 17 November 2017. Details will be posted on the BRANZ Ltd website (www.branz.nz) and in the next edition of **Builder's Mate** due out on 1 December 2017.



Mike Lean from Kaiwaka, the June competition winner, collects his prize from Bill Philpott, Branch Manager at The ToolShed in Whangarei.

Winner of **Builder's Mate 85** is Benjamin Slierendrecht of Nelson. The mystery tools were diamond files. Benjamin wins a Hitachi circular saw.

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 17 November 2017. 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 introduce some great apps and tools for your smartphone. The apps can be found in the iPhone store and/or the Android store. If you know any you'd like to recommend, email us the details at buildersmate@branz.co.nz.



SUN PATH

Sun path apps show where the sun will rise and set in your location through the year. Gives a good indication of how window shades, solar panels, thermal mass etc. will perform.



KNOTS

Whether you're strictly work-minded or open to something you can also use camping or on the boat, a knot-tying app could be very useful. Some come with step-by-step animations.



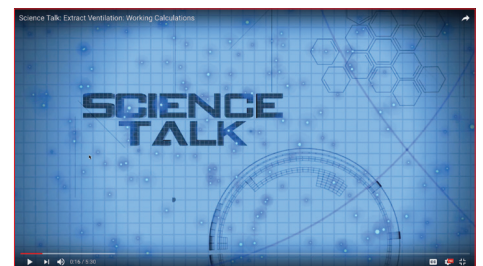
ScienceTalk

It's now easy for building and construction professionals to keep up to date with practical and scientific building research knowledge without picking up a book.

We have transformed a range of our robust technical research into videos narrated by the scientists and engineers doing the research.

These include Science Talk videos, which are packed with demonstrations of software, research techniques or equipment and analysis.

Search our Science Talk playlist at www.youtube.com/user/branzmedia/playlist



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