Guideline

May 2020

Welcome to this update on technical and informative advice for the building and construction industry on issues relating to building controls and good construction practices.

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COVID-19 construction protocols updated for alert level 2

New rules for building sites

The protocols for building sites – one set for residential, the other for commercial and civil construction – have been amended for the step down to alert level 2. Key updates for residential construction sites include:

- a recommendation workers stay 2 m from those outside their work bubble
- workers must stay 1 m minimum from all other workers (including delivery people) unless necessary and a risk assessment has been completed
- non-essential visitors can visit the site with prior notice
- multiple trades can work on site
- workers can leave site for food/drink but must sign out and sign in.

You can find the full details on the CHASNZ website.

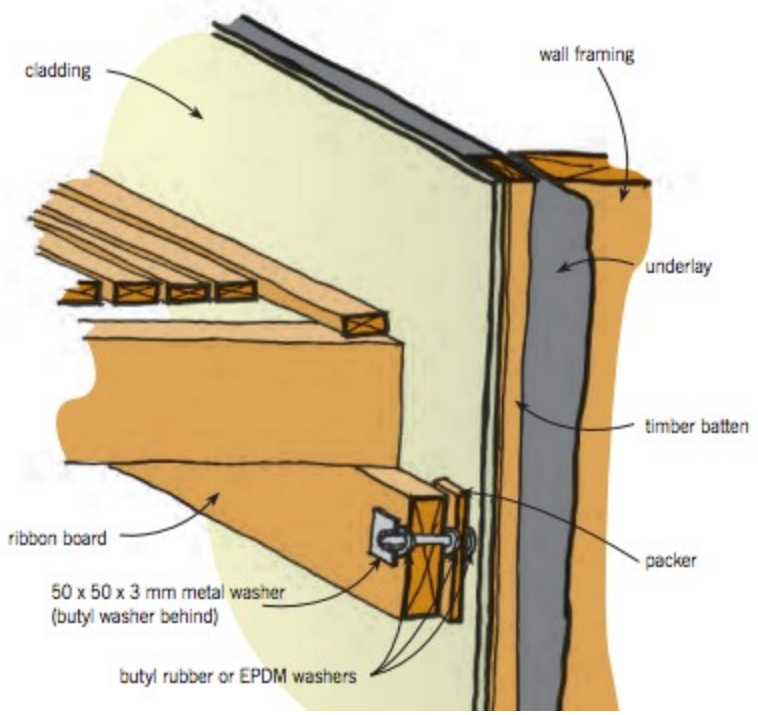
See the BRANZ COVID-19 web pages for information, resources and Q&As on the unfolding COVID situation.

Timber slat deck connections

Preventing corrosion

Timber slat decks are a common feature of houses today, but in a number of cases, we have seen prematurely corroded fasteners in the connections to the wall and even moisture getting into wall framing. It is important to ensure that the stringer or ribbon board is packed out from wall cladding by a minimum 12 mm to give drainage between the wall and deck (see drawing).

E2/AS1 requires 50 x 3 mm EPDM washers between packing and cladding, but best practice is to also install them (or butyl rubber washers) between the ribbon board/stringer and the packing and between the 50 x 50 x 3 mm metal washer and the ribbon board. With cavity claddings, the bolt must be positioned over a batten.



Protect against tool theft
Some steps you can take

We are aware of some very big thefts of building tools from building sites, vehicles, containers and garages in the last 12 months. While many builders are insured, you are still likely to be out of pocket after a theft because insurance deductibles for commercial tools are commonly around $1,000.

Some key steps to help protect what you've got (or get it back if Police catch the thieves) are to:

- photograph your tools and write down the serial numbers
- consider a kit to put hidden ID marks on your tools – Police can see these with an ultraviolet light
- don't skimp on lock quality – put top-quality locks on garages, sheds and containers
- get a purpose-built lockable toolbox and fix it in your truck
- get a good vehicle alarm and connect a fixed toolbox to the alarm
- where possible, park vehicles off street at night
- consider security cameras or employing security.

Getting ready for run-off
Rain is on the way

Much of New Zealand has enjoyed a relatively warm, dry and settled autumn, but the months of heavier rainfall are just ahead. Now is the time to start planning to avoid uncontrolled run-off from building sites when the rains arrive. Run-off isn't just bad news for neighbours or nature. Under the Resource Management Act, it is punishable with fines of up to $600,000 or 2 years in prison!

How to prevent uncontrolled run-off:

- Remove the minimum amount of grass/vegetation possible on site.
- Protect exposed soil with tarpaulins or shotcrete.

- Have just one entry to site and put down GAP 65 aggregate to stop drivers tracking dirt onto the road.
- Divert water (other than rain) away from earthworks and onto grass or gravel.
- If sediment run-off is likely to be a problem on a sloping site, install silt fences (geotextile filters fixed between waratahs) or hay bales to trap sediment.
- Prevent concrete wastewater or cement slurry getting into stormwater drains. One bucket of concrete wastewater in a stormwater drain can kill hundreds of fish and eels. It takes 100,000 litres of freshwater to dilute just 1 litre of concrete slurry to safe levels. Divert onto on-site grass or soil for later clean-up or, better still, contain it in a storage tank if possible.

When to cut a concrete slab
Depends on the season

To reduce the risk of shrinkage cracks in newly placed concrete floor slabs, control joints can be made by placing a metal or PVC crack inducer in the slab when it is poured or by cutting the slab after it has started to harden. NZS 3604:2011 *Timber-framed buildings* deals with shrinkage control joints in clause 7.5.8.6 and shows where they should be placed in Figure 7.19.

If cutting the joints is preferred, there are several options. The standard states: "Saw cutting shall take place no later than 24 hours after initial set for average ambient temperatures above 20°C and 48 hours for average ambient temperatures below 20°C." That roughly works out to the day after pouring in summer and 2 days after pouring in winter. (If you leave it too late, uncontrolled cracks will start forming.)

There is an earlier option, however. Concrete New Zealand recommends cutting the slab within 6–8 hours of placement using an early-entry saw. A conventional diamond-edge circular saw won't give a clean cut at this stage.

Concrete slab saw cuts are required to be detailed on the drawings and approved in the building consent process.

If the reinforced concrete floor slab has been engineer designed, confirm all the details of the saw cuts with the engineer in advance. Be aware that sometimes they will stipulate no cuts at all.

Soak pits stage a comeback
Control that stormwater

We have seen an increasing number of local authorities impose a requirement of hydraulic neutrality on new housing developments. Put simply, new houses cannot send more stormwater into the council system – it must be dealt with on site.

A soak pit is one solution. This is essentially a carefully calculated and designed hole in the ground where stormwater can be directed to slowly soak into the earth. It can be filled with rocks or a solid chamber with porous sides and base. New Zealand Building Code Verification Method E1/VM1 shows how to design a pit, but the calculations are not child's play and are best completed by someone with experience. Several proprietary models of soak pit are also available now.

Soak pits usually require building consent and often a resource consent too. Consented plans have to be carefully followed when the pit is constructed. Some key requirements for pits constructed using the Verification Method:

- Filter cloth a minimum 0.45 mm thick with a mass of 140 g/m^2 goes under and around every soak pit.

- In a rock-filled pit, the rocks should be 100–150 mm in size. Small gravel is not suitable.
- Where a chamber is used, there should be 100–150 mm rocks in the bottom to a depth of at least 250 mm.

PrefabNZ conference going virtual
Come and join online

PrefabNZ is putting its 2020 conference online. PrefabNZ COLAB20 Innovation In Action on 11 June includes international keynote speakers, Q&A sessions and discussion panels.

https://www.colabprefabnz.com/

Free education a hit
And still free

As a response to the COVID-19 lockdown and restrictions, BRANZ made its online eLearning modules and past seminars available at no cost. Over 1,000 eLearning modules and webstreams have been completed in just a few weeks.

The modules and seminars are still free. Use the promo code: **BRANZ**

- Access the elearning modules here
- Access the seminars here

BRANZ Maps has a new URL
Update your bookmark

The URL for BRANZ Maps has changed. It is now:

https://branz.maps.arcgis.com/apps/webappviewer/index.html?id=e64f302e59f84835b19e99270a305004

If you have bookmarked this page, you will need to update it to the new URL.

Recent news

Fast-track consenting for projects including housing
A law going through Parliament will introduce fast-track consenting that removes some Resource Management Act requirements. The intention is to get projects started faster. Environment Minister David Parker said that projects that help alleviate housing challenges will be among those to be given priority. The law is expected to be passed in June.

Report faults EQC, government
The Public Inquiry into the Earthquake Commission found that EQC was not equipped to take on the full responsibility for managed repair after the Canterbury earthquakes. The report says that before 2010, EQC was "left to its own devices by the Government and not given much support for its attempts to secure and build its funds or to plan for the future".

Photovoltaics milestone, new standards and specs

Over 25,000 residential photovoltaic (PV) systems have now been installed in New Zealand. Standards New Zealand has released a suite of technical specifications and standards relating to PV. They are adoptions of documents from the IEC (International Electrotechnical Commission), in some cases with modifications.

BRANZ Artisan finalist in Hi-Tech Awards

The BRANZ Artisan remote inspection solution is a finalist in the public good category of the 2020 New Zealand Hi-Tech Awards. Artisan allows each inspection step to be photographed by builders and reviewed off site by inspectors. It is currently being used by several councils.

Government help for small businesses

Inland Revenue says it will write off penalties and interest for businesses unable to pay taxes on time due to the impact of COVID-19. IRD asks employers to still file returns as normal. A small business cash flow loan scheme has also been set up (also available to self-employed and sole traders). Applications are open from 12 May to 12 June.

Space heating types linked to mould in houses

Research firm BERL, digging into Census 2018 data, found that 29% of homes heated only by portable gas heaters have mould problems. Of the houses with heat pumps or fixed gas heater only, heat pump and electric heater, or heat pump and wood burner, less than 15% had mould issues. This is a strikingly similar finding to the last BRANZ House Condition Survey, which found that 30% of houses with portable LPG cabinet heaters had moderate to extensive mould – much higher than houses with other forms of heating.

WorkSafe alert on non-compliant P2 dust masks

WorkSafe has warned that some non-certified and inadequate protective masks are entering New Zealand. These may leave workers unprotected from harmful respiratory risks. Dust masks should comply with AS/NZS 1716:2012 *Respiratory protective devices* or an international equivalent.

Law being changed for better product information, easier prefab consents

A Building Act update just introduced in Parliament brings minimum information requirements about building products to help designers make better decisions. It sets up a voluntary framework to speed up consenting on prefabrication and off-site manufacturing. It will also bring higher penalties for offences against the Building Act and allow a longer period for charges to be filed.