FREE TO ALL BUILDERS | ISSUE 84 | JUNE 2017

BRANZ

builder's mate

STEPPING BEYOND THE SCAFFOLD

There are more choices than just ladders and scaffolds when it comes to keeping safe while working at height. Here are some of the other safety systems available.

Many serious building site accidents are the result of falls, most commonly from a temporary or incorrectly erected/used structure such as scaffolding, trestles or a ladder used as a work platform. The keys to safe and successful working at height are selecting the right fall prevention system for the situation and installing and using it correctly.

Guard rails/edge protection

Guard rails and other edge protection barriers protect anyone working behind them, not just specific individuals. They should be used at unprotected edges of working platforms, roofs and around openings, skylights etc.

Guard rail systems should:

- have a top rail 900–1100 mm above working/walking level
- have a midrail – there should be no more than 460 mm between rails
- have a bottom rail (or a toeboard 225 mm minimum above the platform if there is a risk of tools or materials falling) >

INDUSTRY NEWS

BRANZ has the answers

The seminar **BRANZ Answers 17** is going to 21 centres on 12 June–26 July. Topics have been developed from common questions to the BRANZ helpline. This is important technical information. Find out about:

- concrete slabs – free joints, shrinkage control joints, floor tile movement control joints, reinforcing steel cover, edge distances, slab moisture content, screw bolt installation
- flashings – proprietary flashings and large roof flashings
- access – level entries, stair design
- building exterior – timber profiles and finishes
- verandas and sunshades – uplift, fixings/connections, bracing
- corrosion – protection to structural steel, dissimilar metals
- compliance – notices to fix, certificates of acceptance, outbuilding exemptions, acoustic wall principles, NZS 4246:2016 *Energy efficiency – Installing bulk thermal insulation in residential buildings.*

For details, go to: http://branz.arlo.co/find-a-course.

New painting standard

AS/NZS 2311:2017 *Guide to the painting of buildings* has been released. It covers preparation, description of paint types, paint application and maintenance. See www.standards.govt.nz.

> Continued from previous page

- have a gap of 100 mm or less between the guard and the roof edge guttering where possible (or 200 mm maximum if not possible)
- have screens or projecting platforms to avoid the risk of tools or materials falling on passers-by if the workspace is above or beside a public thoroughfare
- incorporate a chain, gate or removable section where access for personnel or hoisting materials is required.

There are proprietary systems available that come with their own installation requirements.

Safety harness systems

Body harness systems require training for use and should be set up by an experienced and competent person.

A total restraint system is designed to stop a worker going over the edge. It is a body harness connected by a safety line to a strong anchorage point or lifeline.

By contrast, a fall arrest system does not stop a worker going over the edge, but it slows the fall and avoids a hard impact. These systems are used when workers need to be close to an unprotected edge. The worker's body harness is connected to a lanyard incorporating an energy absorber, and that is connected to an anchorage point. A safety helmet should be worn.

A work positioning system also involves a harness and safety line, but the system is under tension while the worker is carrying out a job.

Workers should not be alone when using a harness system so they can quickly be assisted if they get into trouble.

Safety nets

Synthetic safety nets installed below the area of work but sufficiently high above a hard surface can catch a falling worker. Safety nets should be examined regularly to make sure they are undamaged.

Air bags

Air bags or soft landing systems are inflated devices that, like safety nets, do not prevent a fall but reduce the impact.

Safety mesh

Safety mesh securely connected to roof framing is a protection option for workers installing roofing. The mesh must comply with AS/NZS 4389:2015 *Roof safety mesh*.

General guidelines

On steeper roofs – where the slope is over 25° – WorkSafe recommends adding a roof ladder to the guard rails or harness system to reduce the likelihood of a worker slipping. The bracket on the roof ladder should reach over the ridge line.

You can find more help in *Best practice guidelines for working at height in New Zealand* on the website www.worksafe.govt.nz.

Mouthpiece

A few years back, I was The Old Geezer who opined (real word) each issue. Now, I am an even older geezer who never did make his fortune in the big red country next door ... still opinionated, still wanting you to do things right. So I am a 'Mouthpiece' with only 250 words to get my message across. Well if Trumpster the Dumpster can steer the most powerful nation with 140-character tweets, surely I can give guidance on the Construction Contracts Act with the number of words I'm allowed.

For 3 and a half years, I have been part of a team trying to spend a million dollars a day building an expressway. We have 250 contractual relationships in the project. With some sadness, I have to note that fewer than the number of fingers on one hand would cover the contractors fully compliant each month with their progress claim.

The Construction Contracts Act 2002 (CCA) is the most powerful piece of legislation covering participants in our industry. Other countries call this type of law more evocative names like Security of Payments Act, and that's what it is. In days of yore, main contactors would dispense old-fashioned justice: "You'll get paid when and if I get paid!" The CCA did away with that and ensures you get paid because you have done the work ... and you'll be paid in a timely manner.

You can't contract out, and being unaware of how you are covered by it is a sadness because of the blood, sweat and tears that went in to getting this protection for our workforce.

Look it up and learn: www.building.govt.nz/projects-and-consents/why-contracts-are-valuable/construction-contracts-act-2002/.

Des Molloy

Earthquake

strengthening a timber subfloor

Check pile/foundation connections. Check fixings/connections between piles and bearers and between bearers and joists.

A house not tied down can slide off its piles in an earthquake. Replace corroded fixings. With concrete piles, a galvanised wire should go through the hole in the pile and be stapled to the bearer with galvanised staples (Figure 1). Timber piles and bearers should be fixed together with hot-dip galvanised Z nails and skew nails (Figure 2).

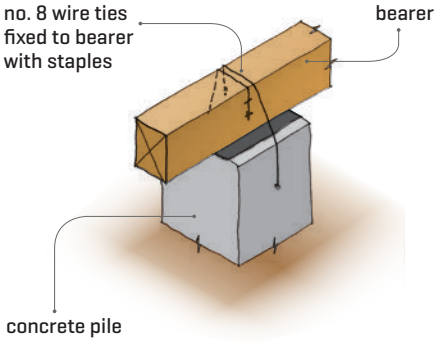

Figure 1. Fixing between concrete pile and bearer.

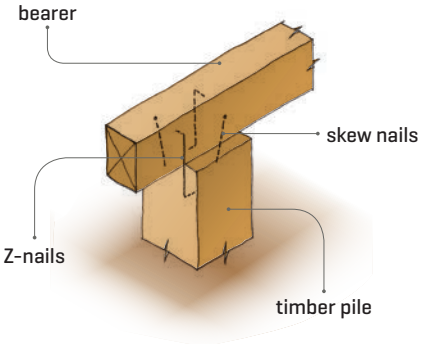

Figure 2. Fixing between timber pile and bearer.

Add bracing to piles where there is none. Fix timber braces at a slope no more than 45° (Figure 3) – flatter slopes are better. Connect each brace to framing parallel with it, e.g. pile to bearer or joist. Sheet bracing (treated plywood or fibre-cement) can also be used so long as it does not reduce subfloor ventilation.

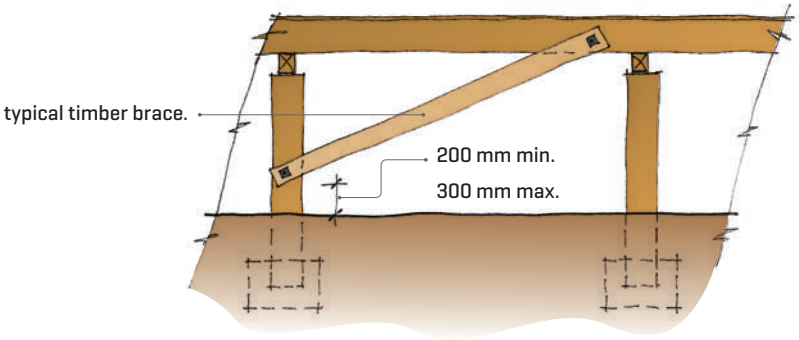

Figure 3. Timber brace added to subfloor framing.

Add sheet bracing to unbraced wall framing/jack studs under a floor (Figure 4). Ensure ventilation is provided for where necessary. Alternatively, if the exterior cladding is in poor condition, replace with sheet cladding that will also perform as bracing. All edges of the sheet must be fixed to solid framing. This may mean some additional timbers need to be installed along the base of the piles. (If the existing cladding is sheet material in good condition, it probably provides some subfloor bracing already.)

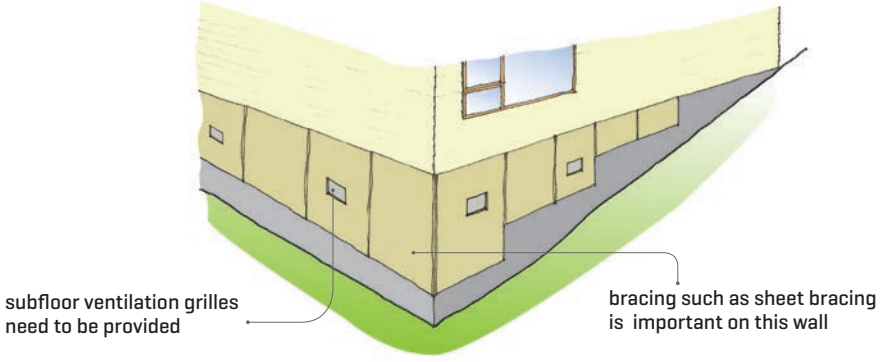

Figure 4. Sheet bracing to wall framing/jack studs under a floor.

Competition

Here's a tool

What is it?

WIN!

A ToolShed trade-quality planer worth $129

This 900 w 3 mm cut trade-quality electric planer is a great addition to your kit – similar quality to big brands that sell for a lot more.

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**. Put "June 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 14 July 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 August 2017.

February winner Brian Fisher of Mt Wellington receives his prize from Derek Montgomery of The ToolShed Penrose.

Winner of the ***Builder's Mate 83*** competition was Simon Peterson of Hastings. Simon wins a Milwaukee jigsaw worth $429. The mystery tool was a demolition hammer.

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 14 July 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.

VPN

A VPN (virtual private network) app gives better security when you are on a public or unsecured network, protecting against anyone trying to hack your phone. It also allows access to a lot of content. Some VPNs have servers in New Zealand.

YOUTUBE

YouTube is a video platform that lets you subscribe to a host of channels. The BRANZ channel has 73 interesting short videos you can watch on your smartphone on a host of construction topics.