Guideline

May 2017

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.

In this issue: Sizing deck bearers ● NZS 4223 Part 3 ● BRANZ NZS 4218 Calculation Method Tool ● Subfloor bracing ● Safety ● Improving thermal performance ● BRANZ seminars

---

Sizing deck bearers

Use the right table

When sizing deck bearers, the correct table to use in NZS 3604:2011 *Timber-framed buildings* is Table 6.4 (b) for timber members that are wet in service. If the bearer span is outside the limits of that table, an alternative is to size the bearer using the BRANZ Lintels and Beams Calculator.

To access the tool:

- log in to your My BRANZ account – new users will need to create one
- in the menu at the top, click on Toolbox then Lintels and Beams Calculator in the dropdown list
- click on the link in the introduction page, which describes how to use the tool
- enter the required details for a new project and/or beam options.

NZS 4223 Part 3

Now the only option

From the end of this month (May), the 1999 version of NZS 4223 *Glazing in buildings – Part 3: Human impact safety requirements* can no longer be used. From the end of the month, the 2016 version of the standard must be used to show compliance for glass in situations subject to human impact.

BRANZ NZS 4218 Calculation Method Tool

Update completed

The updating of the BRANZ NZS 4218:2009 Calculation Method Tool to incorporate the modifications to the calculation method by H1/AS1 (4th edition) has been completed. The revised tool is now available on the BRANZ website.

Subfloor bracing

Accommodating boomerang plans

We were recently asked "How is the subfloor bracing calculated where a portion of a suspended timber floor is at an angle to the remainder of the building?" The easiest approach is to consider each area as a separate building and calculate the requirements for each. Sufficient bracing must be provided as if each wing was a separate building.

Safety

TV advertisements

In the April *Guideline*, we featured safety on site. It is interesting to note the current television advertising that highlights our relatively poor safety record when compared with other countries.

Why are the advertisements required? On the WorkSafe New Zealand website it says:

- *Construction is one of New Zealand's biggest industries with almost 200,000 workers – but it's also one of the four sectors with the worst worker injury rates.*
- *Worker fatalities are more than double the average for all other sectors.*
- *The cost of workplace injuries is huge – ACC pays more than $100 million per year in the construction sector. And that doesn't include the cost to businesses in terms of lost productivity.*
- *Construction workers risk exposure on a daily basis to potential harmful dusts, fumes and asbestos that can lead to serious ill health or even an early death.*

Construction industry statistics published by WorkSafe make sobering reading. Since 2008:

- an average of 10 workers have died on site each year
- there have been over 625 serious harm injury notifications every year
- on average each year, more than 26,000 workplace injuries have occurred in construction – more than 3,000 of those were serious, requiring more than a week off work
- airborne substances have caused 185 deaths and 731 hospitalisations
- there have been 3,055 falls from height requiring an average of 236 days off.

Improving thermal performance

Achieving the best

BRANZ research has shown that energy performance of buildings will be enhanced where:

- the building footprint has a high area-to-perimeter ratio
- Building Code minimums for wall and ceiling insulation are exceeded
- higher-performing windows are specified
- window size is smaller rather than larger
- glazing on south-facing walls is minimised
- thermal mass present in all concrete floors is utilised – typically, available thermal mass in a floor is not utilised
- if possible, buildings have an east/west axis to maximise the potential north-facing glazing to living and sleeping spaces to give winter heat gain (onto exposed thermal mass)
- houses are smaller as they require less energy to heat them.

As an industry, we need to extol the benefits of doing things better in terms of thermal performance. Information on these benefits is given in the BRANZ Up-Spec web resource and the website www.level.org.nz.

BRANZ seminars

BRANZ Answers 17

Following on from the successful BRANZ Answers 2016, this 2017 seminar will cover a wide range of new topics that have been developed from common questions asked of the BRANZ helpline. This is important technical information everyone needs to know.

As we said in 2016, the key to any question is getting the right answer. This seminar aims to give you the answers to a wide range of practical questions. The topics covered will range from the

new requirements for fencing of swimming pool to specific topics covered under a wide range of headings including the following:

- Concrete slab design and construction – 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 finishes, timber profiles.
- 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.
- Innovation – prefabrication/panellisation, CLT, LVL.
- General – mitigating bushfire risk, earthquake damage prevention, wet room drainage channels.

This seminar is a must for BCAs, architects, designers and builders.

The seminar will be delivered by:
Greg Burn – NZCD(Arch), DipBus (Marketing) – Structure Ltd
Des Molloy – the 'Old Geezer' returns

Dates and locations are:

Mon 12 Jun	Napier	Napier Conference Centre
Tue 13 Jun	Palmerston North	Distinction Palmerston North Hotel & Conference Centre
Wed 14 Jun	Upper Hutt	Silverstream Retreat
Mon 19 Jun	Invercargill	Ascot Park Hotel
Tue 20 Jun	Queenstown	Crowne Plaza Queenstown
Wed 21 Jun	Dunedin	Forsyth Barr Stadium
Mon 26 Jun	Nelson	Rutherford Hotel Nelson
Tue 27 Jun	Hokitika	Order of St John Hokitika
Wed 28 Jun	Christchurch	Sudima Christchurch Airport
Mon 3 Jul	Timaru	Landing Service Conference Centre
Tue 4 Jul	Christchurch	Addington Events Centre
Wed 5 Jul	Blenheim	Scenic Hotel Marlborough
Mon 10 Jul	Whangarei	Forum North
Tue 11 Jul	Auckland – North Shore	QBE Stadium
Wed 12 Jul	Wellington	InterContinental Wellington
Mon 17 Jul	Auckland – Central	Crowne Plaza Auckland
Tue 18 Jul	Hamilton	FMG Stadium Waikato
Wed 19 Jul	New Plymouth	The Devon Hotel
Mon 24 Jul	Tauranga	Trinity Wharf Tauranga
Tue 25 Jul	Rotorua	Millennium Rotorua
Wed 26 Jul	Auckland – Ellerslie	Ellerslie Event Centre

All seminars run from **1.00–4.00pm**. Online registration is available now.