August 2012

BRANZ seminar: Residential Retrofit and Renovation

The next BRANZ seminar gives expert guidance in the billion-dollar business of renovating and retrofitting houses. The presentation team will include a BRANZ staff member and a member of Salmond Reed Architects.

The following are the seminar dates and locations:

Tues 23 Oct	Palmerston North
Wed 24 Oct	Wanganui
Thur 25 Oct	New Plymouth
Mon 29 Oct	Napier
Tues 30 Oct	Masterton
Wed 31 Oct	Wellington
Mon 5 Nov	Invercargill
Tues 6 Nov	Queenstown
Wed 7 Nov	Dunedin
Mon 12 Nov	Whangarei
Tues 13 Nov	Auckland
Wed 14 Nov	Auckland
Thur 15 Nov	Auckland
Mon 19 Nov	Nelson
Tues 20 Nov	Blenheim
Wed 21 Nov	Upper Hutt
Mon 26 Nov	Timaru
Tues 27 Nov	Hokitika
Wed 28 Nov	Christchurch
Mon 3 Dec	Hamilton
Tues 4 Dec	Rotorua
Wed 5 Dec	Tauranga

Online registration and more content detail will shortly be available on the BRANZ website.

Purlin spans and spacings

Purlin span information in NZS 3604:2011 *Timber-framed buildings* Tables 10.10 and 10.11 gives maximum span, spacing and fixing distances to meet structural requirements. Tables for purlin spacing in E2/AS1 – Tables 11 and 12 for steel corrugate profiled roofing, Table 13 for trough profile and Tables 14 and 15 for trapezoidal profile – cover spacing required based on base metal thickness (BMT) and profile. This is what the roofing can span (not what the timber can span) so is about the spacing of purlins along the rafters.

The end span is the distance from ridge or fascia, and the intermediate span is for the metal roofing spans in parts other than at the ends. The tables also cover the required fixing pattern in various wind zones.

Before using NZS 3604 for purlin spacing, first check the proposed roofing metal thickness, as this dictates the maximum spacing of purlins, and then go to NZS 3604 to match the spacing required in E2/AS1 to calculate the size and orientation (on the flat or on edge) for the purlin required for the wind zone.

LBP points

Points for specific allocated activities previously approved by the LBP Registrar have been removed from the website of the Ministry of Business, Innovation and Employment (which incorporates the DBH, now known as the Building and Housing Group within MBIE). The maintenance programme hasn't changed – 1 hour of activity (reading, attending seminars and workshops and so on) still earns 1 point, which LBPs then enter into their records. This allows LBPs to participate in activities of their choice that are relevant to their licence. Skills maintenance activities are not required to be approved by the Registrar.

Braced pile systems

NZS 3604:2011 Figures 6.6, 6.7 and 6.8 all depict two piles, and notes in all three figures state "both piles are braced piles". This means that **each pair** in the given configuration qualifies for 160 bracing units (BUs) for wind or 120 BUs for earthquake (see clause 6.8.1.1). A braced pile system consists of two piles, each with 450 mm minimum deep footings. The width of footings is covered by Table 6.1 but is no less than 350 mm for square or 400 mm diameter for round piles. You need a pair of piles to create a braced pile system that qualifies for one lot of bracing units – it does not mean that the bracing allocation is doubled because there are two piles.

Thermal breaks for concrete slabs

Amendment 11 to Building Code clause B1 *Structure* requires that slabs are now attached to the foundation wall. Details depicted in Figures 2 and 4 of the *Build* 100 article Insulating slab-on-ground floors meet the requirement of B1 as amended in August 2011, but Figures 1 and 3 can no longer be used.

Lintels and Beams Calculator

When using the Lintels and Beams Calculator on the BRANZ website and choosing a foundation type to support the beam, if the building's foundation is piles (with no perimeter foundation wall), choose 'Isolated Pad Footing' from the options for foundation support. This option overrides the minimum size as prescribed in NZS 3604:2011 because it takes account of the wind uplift as well as gravity loading. Should the end of the beam be over a braced pile, use the plan area of the pile as required in the calculator and the depth as required in NZS 3604 (a minimum 450 mm deep).

Maximum height of slabs without specific design

This is governed by the height of granular fill in NZS 3604:2011 and NZS 4229:1999 *Concrete masonry buildings not requiring specific engineering design*. Clause 7.5.3.1 in NZS 3604 sets a maximum total depth of 600 mm and a minimum depth of 75 mm of granular fill to be placed and compacted in layers not exceeding 150 mm. Where granular fill is greater than 600 mm deep, specific engineering design is required. The commentary in clause 7.5.3.1 is a guidance note that alerts users that a geo-tech report is required to confirm that the land can support the added load of the fill. For NZS 4229, see clause 7.3.1, which has the same requirement.

New BRANZ book

The latest book in the Building Basics series has just been published. *Building Basics: Building Code Compliance* was published in early August and is now available for purchase online.