February 2014

Generic products are not all the same

Recently, BRANZ has been made aware of building materials being distributed through online channels stating that the product for sale is the same as existing product already in the market with an established reputation. In addition, we have found several instances where products are claiming to be tested by BRANZ or other independent testing authorities when this is not the case.

BRANZ advises architects and designers and specifies that all information or claims supplied about products purchased online should be checked for accuracy and currency and that the information supplied is directly applicable to the product being purchased. The performance data and installation details of one product are often being supplied as usable for other similar materials, which should not be accepted.

Stud lengths (some more)

When reading NZS 3604:2011 *Timber-framed buildings* Table 8.2, the table is broken into columns that apply for a stud length up to a maximum stud length. For example, if the actual stud length is 2.8 m (more than 2.7 m but less than 3.0 m), the user needs to read off the information for a stud length of up to 3.0 m.

Changing terminology

The amendment to the Building Act in November 2013 removed the term 'compliance document' that was used to collectively describe Acceptable Solutions and Verification Methods. The documents are now simply referred to as Acceptable Solutions and/or Verification Methods.

Under another law change, regulations such as the Building Regulations formulated under the Building Act are now called 'legislative instruments'.

Protection from fire C/AS1–C/AS7 and C/VM2

A new guidance document has been published for BCAs and territorial authorities (TAs) to help them decide what information on means of escape from fire to request as part of a building consent application to alter an existing building.

MBIE, with sector input, has developed practical solutions to remedy compliance issues that designers and councils are finding when they apply C/AS1–C/AS7 to building designs. The aim of the changes, which are effective immediately, is to simplify construction and reduce compliance costs while not reducing fire safety. Information sheets on the changes can be downloaded from www.dbh.govt.nz/c-fire-info.

Finding BRANZ bracing calculation sheets

The BRANZ bracing calculation sheets are accessed for free through the Toolbox on the BRANZ website – www.branz.co.nz/bracing_calculation.

Use of soaker flashings to roof penetrations

Metal soaker flashings are typically used where large diameter penetrations through a profiled metal roof occur. Details of these flashings are given in Figures 54 and 55 of E2/AS1 and in section 6 of the New Zealand Metal Roofing Manufacturers Code of Practice, available for download from http://metalroofing.org.nz/frontend/download%20the%20COP.cfm.

Light reflectance value (LRV)

Light reflectance value (LRV) is the total quantity of visible and useable light reflected by a surface in all directions and at all wavelengths when illuminated by a light source (as defined in British Standard BS 8300:2001/A1:2005). The LRV scale expressed as a percentage ranges from 0, which is the darkest or least

reflective, to 100, which is the lightest or most reflective – the LRV of the whitest white is approximately 85%, and the LRV of darkest black is approximately 5%.

E2/AS1 requires an LRV of 40% or higher for EIFS systems and fibre-cement sheets that have a flush plastered system. There are no requirements for stucco, but NZS 4251.1:2007 *Solid plastering – Cement plasters for walls, ceilings and soffits* recommends lighter colours to reduce the likelihood of cracking.

For timber or fibre-cement weatherboards and flat sheet materials, manufacturers may have specific LRV requirements for coatings applied to them, and some paint suppliers may have LRV requirements depending on the material the coating is applied to.

Timber generally requires an LRV of 40% or greater to minimise the amount of heat build-up in the timber and the resultant thermal movement.

Coating manufacturers have developed darker-coloured coatings that have a better ability to reflect and allow a darker colour to be used than would otherwise be possible.

Fixing at 600 mm centres maximum of top plates that support roofing members to studs, jack studs and lintels

Where rafters land on a top plate above a lintel, there are commonly short jack studs between the top of the lintel and the underside of the top plate. NZS 3604:2011 *Timber-framed buildings* has specific fixing requirements to the lintel and to the top plate for these jack studs to resist uplift depending on the

- wind zone
- loaded dimension of the wall
- roof weight.

NZS 3604:2011 Table 8.18 requires:

- for light roofs in medium or higher wind zones, 2/90 x 3.15 mm end nails and 2 wire dogs, except where loaded dimension of wall is 2 metres or less, then nails only can be used in medium wind zones
- for light roofs in the low wind zone, 2 wire dogs are required where the loaded dimension is 5 metres or greater
- for heavy roofs in high and above wind zones, 2/90 x 3.15 mm end nails and 2 wire dogs, except where loaded dimension of wall is 2 metres or less, then nails only can be used in medium and high wind zones.

A 4.7 kN rated fixing system can be used instead of 2/90 x 3.15 mm end nails and 2 wire dogs and a 0.7 kN rated fixing instead of 2/90 x 3.15 mm end nails.

More detail on the fixings of rafters and top plates is given in the *Build* 131 article on pages 16/17, To strap or not to strap?

ALF is NOT suitable for apartment blocks, multi-unit dwellings and semi-detached dwellings

ALF 3.2 is not suitable for use for calculating the Building Performance Index (BPI) where party walls form part of the thermal envelope, as outlined in comments under clause H1 *Energy efficiency* section 1.2.1 of the New Zealand Building Code. Non-detached dwellings should have their BPI calculated in an alternative program that has provision for modelling the effect of party walls, such as Hearne's AccuRateNZ (see *Codewords* Issue 32 from the Building and Housing Information Group of the Ministry of Building, Innovation and Employment). Check with your building consent authority to see which program's results they will accept as a means of demonstrating compliance with the Verification Method of clause H1.

Printing reports from the Annual Loss Factor (ALF) tool

When the inputting of the information into ALF has been completed, put the cursor over the 'View results' button (under the little house on the right side of the screen). Click on this, and it takes you to the 'Graphs' tab in the Results section.

The neighbouring 'Report' tab is where the documentation can be found for submission to the BCA for proving compliance with H1 *Energy efficiency* under the Verification Method. Note that all designs must

also comply with E2 *External moisture* requirements. Simply click on the 'Download PDF' link at the top of the page to download the pdf version of the report. You can then print it for inclusion in the consent application, and you may also choose to save the file for later reference.

Concrete driveways

When designing and constructing concrete driveways, the CCANZ information Bulletin 80 *Residential Concrete Driveways and Paths* is a good resource. The bulletin covers concrete thickness, suitable reinforcement, crack control and control joints, surface tolerances, construction, sub-base material and compaction, concrete placing, concrete compaction, surface finish options, curing and so on.

BRANZ seminars – *Getting to Grips with Prefab*

The aim of the first seminar of 2014, *Getting to Grips with Prefab*, is to provide a consistent understanding of the options and benefits of prefabrication such as:

- an introduction to a full range of prefabricated materials and techniques
- identifying risks and opportunities
- application of prefabrication options.

The guest presenter will be Dave Strachan of Strachan Group Architects (SGA) BArch 1979, Reg Arch. 1999, MArch (Hons) 2001, LBP 2009, FNZIA 2012.

SGA's Design Director, Dave has over 35 years' experience in the fields of building, interiors, teaching and architecture. Dave has a Master of Architecture Degree in Sustainable Design and is a 2002 graduate of the Newcastle University Glenn Murcutt Master Class. He is currently adjunct professor at Unitec School of Architecture and, as a licensed building practitioner, runs an annual design and build student programme. Enthusiasm, energy and experience are brought to the multi-award winning practice through Dave's commitment to creating an innovative contemporary sustainable architecture, appropriate to New Zealand and its unique landscape.

Location	**Date**	**Time**
Queenstown – Crowne Plaza	March 17	1–4 pm
Christchurch – Addington Events Centre	March 18	1–4 pm
Wellington – InterContinental Wellington	March 19	1–4 pm
Auckland North Shore – North Harbour Stadium Function Centre	March 20	1–4 pm
Auckland South – Waipuna Hotel & Conference Centre	March 21	1–4 pm

Online registration is now available on the BRANZ website.