

BRANZ H1 Support Page updated

Now that the new H1 Energy Efficiency requirements are in effect for all climate zones in New Zealand, we have updated the H1 Support Page so it deals only with the new rules. Whether you attended the BRANZ H1 seminar series (where you were provided with Checklist sheets) or downloaded formulae and/or work sheets from the BRANZ website, you should download a fresh copy of the updated information and disregard all previous information.

Bracing element fixings

Wall bracing systems are all proprietary and therefore the manufacturer's or marketer's installation instructions must be followed. In some cases the proprietors refer the specifier to NZS 3604 for the protection required for steel fixings and fasteners to meet the 50 year durability requirements of the NZBC.

The fixings for some wall sheathing products are specified as hot-dipped galvanised but where that sheathing also doubles as wall bracing the fixings must be stainless steel (or in some cases silicon bronze). Where the bracing element is either behind direct fixed cladding or in a cavity BUT is totally covered by a wall underlay then the bracing element is in a similar environment to the timber wall framing. In this situation hot-dipped galvanised fixings are (in BRANZ's opinion) adequate but again the proprietor's specification must be followed where it is given.

Note that in some situations fasteners such as hold-down straps are not enclosed or protected by a wall underlay or they pass through the floor and into the subfloor space. The weight of galvanising on fixings and fasteners is not always obvious so stainless steel is the safest specification. Another option is to locally line the underside of the floor to protect galvanised fixings and fasteners in the subfloor.

Those little spaces in wall framing

A good way to fill small cavities in timber wall framing, especially at corners between blocking, is to use polyurethane type expanding foam (with a low expansion rating) – the same foam type that is used around window openings as an air seal. Doing this will eliminate gaps in the thermal insulation of the external envelope.

Timber grade of 140 x 35 mm top plates clarification

In the May 2008 issue of Guideline we stated that the grade of timber to be used for top plate strengtheners must be the same grade as that used for the top plate itself. The reason for this interpretation is that when using 140 x 35 mm in addition to the 90 x 45 mm options given in Table 8.16 of NZS 3604 both are considered to be structural members therefore they must be the same grade (or the 140 x 35 may be a higher grade).

Definition of 'structural' grades (of timber)

The definition of 'structural' grades (of timber) is timber that has been graded, either visually or mechanically, and then assigned a suite of characteristic strength and stiffness properties (refer to NZS 3603). This excludes No. 2 Framing Grade which has no assigned characteristic strength and stiffness properties.

So what does all of this mean? Referring to NZS 3622:2004 Verification of Timber Properties gives two methods of grading:

1. Visual Grading for VSG10, VSG8 and G8; and
2. Machine Stress Grading for MSG15, MSG12, MSG10, MSG8 and MSG6.

NZS 3604 does not provide tables for MSG grades beyond MSG10 but does include a further visual grade of No. 1 Framing. In practice, then, between NZS 3622 and NZS 3604 there are nine structural grades for timber.

Installation of rigid under-floor insulation

There appears to be some misunderstanding circulating about the need or otherwise for an airspace between rigid under-floor insulation such as EPS and the underside of flooring. Whilst there are proprietary under-floor products that use built-in ribs to ensure there is a small air space (typically 25 mm) above the insulation, the air space is there for the sole purpose of increasing the thermal

resistance. The airspace adds approximately R 0.2 to the thermal resistance of the insulation which is equivalent to what would be achieved by increasing the thickness of the insulation by 7 mm. For example, 43 mm of EPS with a 25 mm air space above it has about the same thermal resistance as 50 mm of the same material without the air space. The air space is not there to provide ventilation to the floor and in fact increasing the height of the air space to, say, 150 mm would not significantly improve its thermal resistance, and may make it harder to seal the airspace to prevent ventilation undermining the thermal performance. It is important to remember that any gaps around the insulation could potentially negate the benefit of adding the insulation. The proprietary under-floor products that use the air space to enhance the performance use both a compression fit and the ribs to minimise any air leakage around the insulation. The ribs also provide a way to ensure a consistent airspace height.

BRANZ appraisals team

The BRANZ appraisals team is available to make presentations to any group of building professionals that may be interested as they travel around the country.

In the past 12 months, presentations have been made to 22 City and District Councils.

The presentation focuses on the rigours of the appraisal process and what lies behind a BRANZ appraisal. This is an opportunity to understand why a BRANZ appraisal can be trusted and to have your technical questions answered.

If you are interested in organising a presentation please contact Russell Clarke on (04) 237 1170

BRANZ Seminars

Timber on Tour – on the road now

Registrations are open for the final presentations of this seminar designed for architects, designers and builders who work with timber framing and cladding.

Issues surrounding timber grading, classification, treatment and cladding are consistently high on the list of future topics suggested by previous seminar attendees and callers to the BRANZ helpline. Timber on Tour is a nationwide seminar suitable for most sectors of the industry which will discuss:

- the reasons behind the changes in timber grading and treatment options
- the impact of timber treatments on other building components
- how to correctly identify timber grades and timber treatments
- the key reference documents
- where to access information on timber availability (for given sizes and treatments)
- the new BRANZ lintels and beams calculation tool.

Venues and dates for the 1 p.m. to 4 p.m. sessions are:

November		December	
24	Hamilton	1	Palmerston North
25	Tauranga	2	Kapiti
26	Rotorua	3	Wellington
27	Gisborne	4	Trentham
28	Napier	5	Maon

Visit our website, www.branz.co.nz for more details and to register online (click on seminars)

Webstreaming

This service from BRANZ allows you to view our past seminars online on a pay-per-view basis. Registered architects and Licensed Building Practitioners will be able to gain CPD points by taking an online quiz afterwards. Check out our online seminars now at www.branz.co.nz (and click on Seminars/Webstreaming).