

Roof framing design

When selecting the framing for a roof structure, particularly with skillion and low slope roofs, designers are advised to determine the levels of insulation required before selecting the framing size. With the higher levels of insulation required by NZBC H1, deeper framing than that required to accommodate the span may be required to accommodate the thermal insulation material.

Where the insulation is adjacent to a flexible roof underlay (building paper) a minimum gap of 25 mm is required to prevent contact between the underlay and the insulation material. Where a rigid sheathing or sarking is installed under the roofing, the gap is desirable but usually not essential, although do check with the supplier of the roofing material as some roof cladding types, e.g. asphalt shingles, require ventilation of the roof spaces.

Steel framing and brick veneer

Where steel framing is used to support brick veneer the detailing/construction of the cladding system must be specifically designed. This is to allow the thermal break to be installed to the outer face of the framing without compromising either the performance of the steel framing, the veneer tie connection to the steel frame or the cavity behind the veneer.

Downlights and ceiling R-values

Specifying CA rated downlights is recommended by BRANZ to avoid the need to provide clearance around the downlight and therefore an increase in the amount of insulation in the ceiling (where the number of open downlights is more than one per 5m²).

Where non-rated downlights are proposed:

- measure the ceiling area
- divide by number of downlights to get the area per downlight
- use Table 7 of the BRANZ *House Insulation Guide* third edition to determine the reduction in the R-value of the thermal insulation for the level of insulation proposed (vertical axis of the table) and the area per downlight (horizontal axis). Additional insulation must then be provided to compensate for the thermal bridging effect of the gaps around the non-rated downlights to meet the required R-value of the ceiling.

Carpenter's pencils

As we said in January Guideline, Carpenter's black lead pencils must not be used with any steel roofing products. A number of replies have asked us to give the correct methods of marking galvanised steel, zinc/aluminium alloy coated steel and factory coated steel. The answer is, use either:

- a pencil of any colour other than black (from the New Zealand Steel Installers Guide dated September 2003 page 5)
- a water-based (removable) felt tip pen.

R-value of windows

We have heard of instances where the R-value of the glazing is being promoted as the total R-value for the installed window. In reality, the actual R-value of a window is less than the R-value of the glass, as it is a combination of the:

- R-value of the glass
- R-value of the frame material
- window size (proportion of frame to the glass).

Appendix G of NZS 4218 – Glazing and the Window Energy Rating Scheme (WERS) gives an explanation of the method required to determine the 'whole of window R-value' for given frame types and glazing.

ALF 3.2

The BRANZ thermal design software ALF 3.2 should be available before the end of February 08 – watch the BRANZ website, www.branz.co.nz.

Masonry drying times

The old rule of thumb when allowing for drying times for concrete slabs on ground is one month per 25 mm of thickness under good conditions. This takes account of the fact that concrete can only dry from the top surface. However, how long does concrete masonry take to dry? Blocks are more porous than concrete, but the grout is often quite wet and walls may only be able to dry from one side.

Under AS/NZS 2311 Guide to the painting of buildings, recommended minimum drying times before painting concrete block are:

- for open-cell construction – latex paint 4 weeks, alkali-resistant solvent-borne paint 6 weeks, alkyd or oleoresinous paint 12 weeks
- for filled-cell construction – latex paint 8 weeks, alkali-resistant solvent-borne paint 12 weeks, alkyd or oleoresinous paint 16 weeks.

Some paint manufacturers recommend that concrete or concrete masonry is left for 28 days before painting with alkali-resistant paints (e.g. 100% acrylics), three months for PVAs and one year for alkyds.

BRANZ Seminars

Shortening the Odds – reducing your building risk is back on the road again in March 2008

Specifically for builders, this seminar focuses on practical building techniques for achieving weathertight construction and therefore reducing your risk of liability. We will complete our tour of the country in early March. The seminar, which has been rated highly by the 2007 attendees, provides solutions for a number of high weathertightness risk areas. Specific dates and locations for March are 3 New Plymouth, 4 Palmerston North, 5 Nelson, 6 Greymouth, 10 Tauranga, 11 Rotorua, 12 Gisborne and 13 Napier.

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

Better Building Business

This seminar is a joint venture between BRANZ and the NZ Building Subcontractors Federation. It is a must for anyone involved in the administration side of a building business, or intending to go out on their own. This seminar will be presented by Rosemary Hazlewood and will focus on practical tips and solutions for ensuring that you are getting the best out of the Construction Contracts Act. Attendees will be given templates and tools that they can take away with them and start using immediately. Dates and locations in March are 4 Dunedin, 5 Christchurch, 6 Wellington, 11 Auckland and 12 Hamilton.

CITE Courses

New and improved CITE courses will be available from mid-2008. The courses are being redeveloped and delivered through a partnership between BRANZ and a pre-eminent nationwide education provider. Available in a more flexible format they will be accessible no matter where in the country you are located. They will also require less time away from work – all while maintaining the quality and depth of education that the CITE courses are renowned for.