

Finished floor heights

There is a trend towards low floor levels for at-grade entry to houses, and the elimination of steps. A common question faced by BRANZ is "what is the minimum allowable height of the floor above ground level"?

There are three basic factors to consider: firstly, the clearance necessary to prevent surface water entering the building; secondly, the clearance required to prevent ground moisture damaging building elements; and thirdly, the clearance needed for maintenance access. The relevant references are:

- Acceptable solution E2/AS1 External Moisture Third edition paragraph 10.3.5 – concrete floor level above surrounding ground shall be: masonry veneer 150 mm, or 100 mm if ground paved; other claddings 225 mm, or 150 mm if ground paved
- for suspended timber floors NZS 3604:1999 Section 6.4 requires: tops of concrete piles 150 mm above ground; tops of timber piles 300 mm above ground or 150 mm with DPC; a crawl space under a suspended floor of 450 mm (the 450 mm does not apply to all of the framing timber provided it can be accessed for inspection – see NZS 3604 1999 Section 6.14)
- for particleboard NZS 3604:1999 – Section 6.14 requires flooring to be 550 mm above ground.

BRANZ's advice is that concrete floors should be at least 150 mm above permanent paving, otherwise 225 mm, and that there should be at least 450 mm clearance between the ground and the underside of timber floor joists.

If using G13/AS2, Foul water drainage, the Acceptable Solution requires that every building used for housing must have at least one gully trap to provide overflow relief to the drainage systems, positioned so that the top of the gully dish is no less than 150 mm below the overflow level of the lowest sanitary fixture served by the drainage system. This cannot be met if the finished floor level in a building which has a floor level outlet from a sanitary fixture such as a shower waste is less than 150 mm above an unpaved ground surface. Waste pipe outlets must be located at least 20 mm above water seal level, and at least 20 mm below the grating. To prevent surface water entering the gully trap an unpaved surface must be 100 mm below the overflow level of the gully dish (25 mm if paved).

Being specific, if the outside ground level is set too high, a drainlayer cannot achieve the minimum measurements required by G13/AS2 paragraph 3.3 for gully traps or AS 3500.2 4.6.6.6 and 4.6.6.7.

FIRE ALARMS TO NZS 4512

NZS 4512: 2003 introduced compulsory third party inspections for all newly installed fire alarm systems and in many cases, for upgraded or extended systems. The inspecting company must be an ISO 17020 Accredited Inspection Body. This of course supports the need of Building Consent Authorities to achieve sign off of completed Fire Alarms as part of the Building Consent Process. This change has been fully endorsed by the Fire Protection Industry who sees both the approval of contractors and compulsory inspection of systems as the best means of ensuring the ongoing quality of fire safety systems in New Zealand

Wall underlay

Some recent site visits have shown up a number of instances where flexible wall underlay has been poorly installed. The impression from talking to builders on-site is that we now have drainage cavities and therefore the wall underlay is only there to keep the builder and the framing dryish until the cladding is installed. Also in many cases the wall underlay material to be used was not identified on the drawings. So how could the BCA check that it was suitable and how did the builder know what to order (in most cases it seemed they just installed what the merchant supplied or used up all the off-cuts from previous jobs)?

In weathertightness terms a wall underlay is still one of the lines of defence against water entry, particularly if a direct-fixed cladding is being installed. For underlays it is essential that:

- the specific underlay to be used is identified in the consent documents
- the BCA checks that the underlay is appropriate for the situation and cladding

- the builder installs the specified material
- the installation of the specified material and the quality of the installation is checked off during a BCA site inspection.

Wall underlay must:

- extend the full height of the framing from a minimum of 15 mm below the lowest timber framing to the top of the top plate
- be taut and securely fixed – a number of wall underlays were observed flapping in the breeze due to inadequate fixing
- be installed horizontally to walls
- have all tears and rips that occurred during installation repaired or the damaged material replaced before the cladding is installed
- NOT be used as a weatherproof layer to allow the interior of the building to be completed before the wall cladding is installed.

BRANZ ALF 3.2

Unfortunately the release of the BRANZ thermal design software ALF 3.2 has been delayed – watch the BRANZ website www.branz.co.nz for availability details,

Good site records are cheap insurance

BRANZ receives dozens of calls from contractors called back to correct some apparent fault allegedly caused by their actions during construction. Many call-backs relate to shrinkage and movement of timber framing, and a common question is - "what was the moisture content at time of lining-out?" Similarly, a frequent question is – "was there a damp-proof membrane (DPM) under the concrete slab and was the reinforcing properly supported?" The answers to these basic questions should be easy to supply and could prevent hours of expensive argument or even court action. However, many contractors fail to insure themselves against litigation by not keeping adequate site records. A simple site diary and a few photographs taken at the appropriate time can save hundreds of dollars!

In a similar vein, how many times have you relied on the spoken assurance of a sales representative that the materials to be used met certain standards but this was found later to not be so? Usually the cost of the remedial work will not be borne by the manufacturer as they do not seem to remember the conversation unless you obtain from them written confirmation of their verbal advice.

BRANZ Seminars 2008

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. Final March venues and dates are: 10th Tauranga, 11th Rotorua, 12th Gisborne and 13th Napier.

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

Better Building Business

A joint venture between BRANZ and the NZ Building Subcontractors Federation, this is a must for anyone involved in the administration side of a building business, or intending to go out on their own. Presented by Rosemary Hazlewood it will focus on practical tips and solutions for getting the best out of the Construction Contracts Act. Final March venues and dates are 11 Auckland and 12 Hamilton.

CITE Courses

The CITE courses are currently being redeveloped for delivery via a partnership between BRANZ and a nationwide education provider. A more flexible format and improved accessibility will be features of the new courses, the first of which will be available from mid-2008

VACANCY – BRANZ Technical Adviser

Follow the link to the BRANZ home page for more details
http://www.branz.co.nz/main.php?page=BRANZ_Ltd_home