

Questions from the March 08 *Guideline*

The March *Guideline* generated a large number of responses. Thank you to those of you who took the time to respond. In answer to the points raised:

- **Clearance to particleboard** – the specific NZS 3604 reference to the 550 mm minimum height above ground for particleboard flooring is clause 4.3.4.2. Clause 6.14.4 gives a comparable dimension derived from the crawl space requirement and the minimum floor joist size allowable in the selection tables.
- **Minimum floor levels** – above ground are a Building Code requirement. Where access for people with disabilities is required to a public building, the detail at door thresholds must be supplied with the consent application and show that it meets the performance requirements of Building Code clauses D1, E1 and E2. Where level access is provided for domestic buildings the designer must show how the requirements of Building Code clauses E1 and E2 are to be met.
- **Lowest sanitary fixture** served by the drainage system – the lowest sanitary fixture is that which is most likely to discharge water into the building if a sewer drain blocks. In most cases it is usually a shower tray and therefore the overflow level is the point at which water would drain from the shower onto the adjacent floor (for a formed shower tray it may be 50 to 100 mm above the floor level). For a European style level floor shower or for a room with a floor waste gully the overflow level is at floor level. However, where a building has only a toilet pan on the lower floor the overflow level may be some 400 mm above the floor level.
- **Gully trap set out heights** – under G13/AS2 at least one gully trap must be provided to allow wastewater to spill out onto the ground and to prevent it from back flowing into the building if the main drain becomes blocked. To prevent water from a blocked drain flowing back inside the building the spill level of the gully trap must be at least 150 mm below overflow level of the lowest sanitary discharging into the drainage system. The gully trap must also be sufficiently below the traps fitted to the sanitary fittings to allow sufficient gradient on the waste pipes, and have a spill level that is above the outside surface to prevent ground water draining into the gully. Gully trap dimensions and details are given in G13/AS2 section 3.3 (Figures 2 and 3).
- **Compliance documents** – we offer explanations or clarifications of compliance documents but designers can always propose an alternative. If they do this they must supply sufficient information to show the consenting authority that the performance requirements of the specific code clause will be met.
- **Wall underlay and unlined gable end walls** – for buildings that have an unlined gable end wall with a ceiling space behind, the wall underlay will need to perform the function of an air barrier – that is, it must meet the specific requirements for an air barrier given in Table 23 of E2/AS1.
- **Wall underlay and direct-fixed metal wall cladding** – for buildings that have direct-fixed metal claddings Table 23 of E2/AS1 requires the use of a paper-based roof underlay. Where the metal cladding is fixed over cavity battens a synthetic wall underlay may be used because the cladding is not in contact with the wall underlay and there is cavity drainage and ventilation to remove any moisture that might be present. However, the metal must have an isolating layer between it and any batten that is treated with a copper-based treatment system.

Less well known Building Code clauses

Designers have focussed over the past three years on ensuring buildings are properly detailed for weathertightness. However there are a number of Building Code performance requirements that often fall below the radar of both the designer and the consenting authority. Examples of common omissions are:

- E1 Surface water – not showing the calculation of gutter sizes for location-specific rainfall intensities and roof catchment area
- E3 Internal moisture – not specifying the impervious surfaces to prevent moisture absorption in wet areas such as bathrooms and laundries
- G3 Food preparation – not specifying the materials to be installed for kitchen work benches and surfaces around bench tops to ensure food can be hygienically prepared

- G7 Natural light – not specifying the surface reflectance where the sky is not visible from within a habitable space
- G10 Piped services – not specifying the sleeving of pipes through a foundation wall.

Using polythene (polyethylene) as temporary cladding

We have heard that a number of BCAs are allowing a building to be temporarily clad with polythene sheet to allow the interior of the building to be completed before the real cladding is installed.

BRANZ cannot support this practice, as:

- the polythene can easily be damaged or torn by wind and allow water into the insulation and framing
- it is difficult to maintain the effectiveness of the polythene as a weather barrier while it is removed to allow the cladding to be installed – the materials will be wetted if rain occurs during the cladding work
- the polythene wrapping will prevent the dissipation of construction moisture as it is released e.g. from a concrete slab-on-ground floor. Wrapping the building with the polythene will effectively hold in the moisture and allow it to be absorbed by other dry materials such as kiln-dried framing, insulation and lining materials.

Key reference documents for designers

There are three key references which all designers of timber framed buildings must have. These are the latest versions, with all amendments, of:

- NZS 3604:1999 *Timber framed buildings* with Amendment 1 (December 2000) and Amendment 2 (May 2006)
- NZS 3602: 2003 *Timber and wood-based products for use in building*
- *E2/AS1 Third Edition*: 1 February 2005 – Acceptable Solution to Building Code Clause E2 with Amendments 1 and 2 (July 2005) and Amendment (3 June 2007). Note that Amendment 4 has been published and becomes effective from 1 May 2008.

Stucco

Did you know that dirty sand, containing too much clay and silt, can reduce the strength of stucco by up to 40%, double its shrinkage and increase the risk of cracking by 400%?

From the archives

In *Guideline* September 1996 we wrote: 'another remarkable specification from outside the Wellington area demanded that all work be done in accordance with the Wellington City building by-laws'. Those effectively ceased to exist once the Building Act came into effect on 1 July 1992! Unfortunately we are still hearing about construction documents which are not referencing the latest versions of standards and compliance documents.

New publications from BRANZ

BRANZ has just published the first four titles in the LEVEL sustainable building series – titles available now are *Passive Design, Energy, Floor Coverings* and *Windows*. Order online at www.branz.co.nz

BRANZ Seminars

The first of three in our Sustainable Design Series, this seminar will build on the information available on our level.co.nz website and our recently published *Energy* publication. Presented by Andrew Pollard from BRANZ and Albrecht Stoecklein from Right House, attendees will have the opportunity to consider real-life examples and hear how the designer achieved high levels of energy efficiency. There will also be an opportunity to apply the processes and concepts outlined to improve given designs. Venues and dates for May are 5 Dunedin, 6 Christchurch, 7 Auckland, 8 Hamilton and 9 Wellington.

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

Webstreaming

Watch this space for details of a new service from BRANZ which will allow 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. We expect this service to be available late next month.