November 2014

Fixing profiled metal wall cladding

Questions to the BRANZ Helpline have been asking for information on the fixing centres and fixing density for profiled metal wall cladding. E2/AS1 is not specific on the required fixing centres. As a general rule, fixings should be:

- vertical rows at 600 mm centres for horizontal profiled metal – where row centres of more than 600 mm are proposed, the ability of the framing to carry the additional wind (suction) loads will need to be verified by a chartered professional (structural) engineer
- horizontal rows at 1200 mm max centres for vertical profiled metal.

For the number of fixings in each row, E2/AS1 requires:

- generally a fixing at each side lap and then every second trough (or crest for vertical installations) – fixings should be evenly spaced across the face of the sheet
- for trapezoidal profile where the rib centres exceed 150 mm, at every lap and every trough (or crest for vertical installations).

Other E2/AS1 requirements include:

- from E2/AS1, for vertical profiled metal cladding, dwangs at 480 mm maximum centres for corrugate and symmetrical trapezoid profiles (clause 9.1.8.5)
- a minimum framing penetration of 30 mm for fixings.

Accurate setting out is required for crest fixings, as the lines of the fixings are more obvious.

Wet joists definition

Under NZS 3604:2011 *Timber-framed buildings*, a wet joist is one that is exposed to the weather and will be regularly wetted, such as a joist in a timber-slat deck. It does not apply to a green timber joist, which was traditionally described as wet.

When selecting wet in service timber use the (b) section of the bearer, floor joist and cantilevered floor joist tables. Timber must be treated to at least hazard class H3.2.

Edge distances for fixings for 140 mm wide cantilevered bottom plates

Edge distances for the location of bottom plate anchors relative to the edge of the slab are required to meet the fixing capacity specified in NZS 3604 clause 7.5.12 for lateral load, longitudinal load and uplift.

Where a 140 mm wide bottom plate is cantilevered 20–30 mm past the edge of a slab to allow the installation of slab edge insulation, the required edge distances given in NZS 3604:2011 for the bottom plate anchors can be achieved for cast-in fixings. For some proprietary bottom plate anchors, the edge distances specified by the manufacturer may not be achievable even with 110–120 mm bearing on the slab edge.

When using proprietary anchors with typical 90 mm wide bottom plates that are not cantilevered, check that the anchor manufacturer's required edge distances can be achieved.

Measuring rafter spans

In NZS 3604:2011, all rafter spans are measured along the line of the rafter, as described in NZS 3604:2011 Figure 1.3.

B1 compliance for existing buildings

Where an existing building is altered, it is recommended that the older parts of the construction be brought as close as possible up to current standards. However, for Building Code clause B1 *Structure*, the structural performance must be no worse than the original building after the alteration is made.

Where parts of the existing building remain as is, there is no statutory requirement to upgrade those areas.

Cladding junctions – dissimilar claddings

Details of junctions between claddings of the same type are in E2/AS1 for the cladding types that it covers. For details of cladding junctions between different cladding types, go to www.branz.co.nz/branz_details for a range of junction details based on (but more conservative than) those in E2/AS1.

MBIE *Codewords* 63 – Alternative branding for H1.2 treated framing

Pink-coloured framing is almost universal throughout building projects these days. Over time, the pink colouring fades, and end brand markers are removed during construction. This results in loss of identification on the timber for treatment type, hazard class and so on. (Colour fading does not affect the treatment level.)

More permanent treatment marking, such as continuous branding down the length of the timber, is considered a more reliable option.

The treatment standard NZS 3640:2003 *Chemical preservation of round and sawn timber* provides a continuous branding option (plus colour identification of pink in the case of H1.2 boron) for those suppliers wanting to use it. Table 5.1 states that timber framing can be branded either:

- at one end of each piece, or
- repetitively along the length at 1.5 m centres, or
- branded on a broad face 150 mm from the end.

Continuously branded timber without associated colour pigmentation is strictly outside the standard and Acceptable Solution at this stage. However, MBIE is of the view that continuous face branding alone (in accordance with Table 5.1 and clauses 5.1.3 and 5.1.4 of NZS 3640:2003) is compliant with the Building Code.

Attaching light timber structures directly to brick veneer

At least two industry resources for the installation of brick veneer that have been in circulation for some time include a detail showing a timber stringer or ledger directly supporting a roof structure attached to a brick veneer cladding, with a note to the drawing stating that the detail has been approved by BRANZ engineers. At BRANZ, we can find no formal record that indicates any BRANZ approval of such a detail. Also, the detail has no information regarding the capacity of the fixings, the mortar strength and how the veneer is attached to the building (old veneer was attached with galvanised wire and staples), no minimum size of veneer panel is stated and no wind zone is specified – all of which would be required to ascertain its suitability.

The BRANZ Good Practice Guide *Masonry Veneer* states in clause 4.12.2 states that 'loads from a deck, veranda or roof should never be carried by the brick veneer', and Figure 26 of the guide shows the use of a specifically engineered steel bracket attached to the structural frame and used to carry loads of an attached structure. The caption states that the bracket must not create a static or dynamic load on the veneer.

Second National Construction Pipeline Report

The second National Construction Pipeline Report released recently continues to forecast unprecedented growth in building and construction in New Zealand.

It predicts a minimum 10% increase in construction activity every year to 2017 and points to the longest, sustained period of growth in construction activity over the last 40 years, confirming the key findings of the first National Construction Pipeline Report released in December last year. View report

BRANZ seminar: *From She'll Be Right to Build It Right*

Legislative changes that affect how you work with your client and build safely.

BRANZ, in partnership with MBIE and WorkSafe, invite you to a seminar covering legislative changes that affect how you work with your client and build safely, running from mid-October to early December in 28 centres.

Building Amendment Act 2013 – Gain an insight into changes to the Act and how they impact you and the way you do business. If you are involved in costing and managing any type of residential building work, this seminar will help you get up to speed with the changes before they come into effect.

New consumer protection measures for residential building work come into effect from 1 January 2015 including:

- a requirement to have a written contract for building work over $30,000 (including GST)
- a requirement to give customers a building checklist as well as information about your credentials – skills, qualifications, licensing status and so on
- an automatic 12-month defect repair period when you will have to fix any defects the customer has told you about
- fines for not complying with the law.

Construction Contracts Amendment Bill – Be updated on progress with the Construction Contracts Amendment Bill, which now seeks to apply the progress payment, the adjudication framework and remedies for recovery of payment provisions to residential building as well as to all building industry professionals and materials supply.

Health and safety regime – Find out about the new health and safety regime and what the industry should be doing now to prepare for the changes. This includes the WorkSafe NZ philosophy and the 3 Es (educate, engage, enforce), the Preventing Falls from Height campaign and the Health and Safety Reform Bill.

This seminar will be a must for building contractors, builders and specialist trades and will impact on the work of architects, designers, engineers and building surveyors.

Remaining dates and venues are:

18 November	Hamilton	Claudelands Conference and Exhibition Centre
19 November	Auckland – North Shore	QBE Stadium (North Harbour Stadium)
20 November	Auckland – Mt Wellington	Waipuna Hotel and Conference Centre
24 November	Blenheim	Scenic Hotel Marlborough
25 November	Wellington	Mac's Function Centre
26 November	Kapiti	Southward Car Museum
1 December	Kerikeri	Turner Centre
2 December	Whangarei	Forum North
3 December	Auckland Central	Rendezvous Hotel
8 December	Gisborne	Emerald Hotel
9 December	Napier	War Memorial Conference Centre
10 December	Masterton	Gateway Motor Inn
11 December	Upper Hutt	Silverstream Retreat

Book online here.

MBIE Christchurch workshop – repairing and replacing piles in earthquake-damaged houses

Are you crawling under earthquake-damaged houses repairing timber foundations in Christchurch?

MBIE has a free workshop about repairing and replacing piles in earthquake-damaged houses.

This hands-on workshop with video clips will cover packing piles, aligning piles, fixing piles and timber seals. Places are limited to 80 participants per session.

All workshops run from 7.15am–9.15am. Workshop details are:

26 November	CPIT – Visions – Block U, 130 Madras Street, Christchurch
2 December	CPIT – D Block Lecture Theatre, 130 Madras Street, Christchurch
3 December	CPIT – D Block Lecture Theatre, 130 Madras Street, Christchurch

Register here.