

BRANZ research shows that dry bedding of tested brick veneer ties is OK

The NZBC Compliance document E2/AS1 states that masonry veneer shall be attached to wall framing by wall ties and that their spacing and embedment shall be in accordance with the requirements of NZS 4210 *Masonry construction: Materials and workmanship*. NZS 4210 states: "Wall ties shall be installed so that they are contained within the mortar bed over the full contact length, with a layer of mortar both above and below the tie."

BRANZ understands that full embedment of ties is seldom used by bricklayers, as it is fiddly and wet mortar is not a good companion for the workings of an electric screwdriver.

BRANZ recently completed a series of tests of ties with dry bedding, and full tie embedment was also tested for comparison. This work is reported in BRANZ Study Report SR258 (2011) [*Critical properties of mortar for good seismic performance of brick veneer*](#).

Only brick ties that have been tested and evaluated to AS/NZS 2699.1 may be used in New Zealand brick veneer construction. BRANZ tests show that ties that meet the requirements of the AS/NZS 2669.1 can perform satisfactorily when installed using dry bedding.

SR258 concludes that dry-bed embedment is the industry norm, and provided the installation recommendations in the study report are followed, it can still achieve the required bond strength of the veneer ties. While wet-bed embedment undertaken in laboratory conditions does perform slightly better, it is unlikely that this will be achieved in practice, especially where the bricklayer fixes a long run of ties and, in effect, has a dry bed by the time they return to place the next course of bricks.

Changes to Building Code fire safety (clause C) documents

There have been a number of changes to Building Code clauses (C1–C6 *Protection from fire*), Acceptable Solutions and Verification

Methods for protection from fire. The changes came into effect on 10 April 2012.

Transition arrangements allow the previous Building Code fire safety clauses C1–C4 to be used until 10 April 2013. Note that the new version of the Acceptable Solutions can only be used with the new Building Code C clauses.

There are now seven Acceptable Solutions – C/AS1 to C/AS7. Each one applies to a risk group, which is based on the risk presented by the activities carried out in a building or part of a building. Simple building designs are covered by new Acceptable Solutions C/AS1–C/AS7, provided they do not have complex features. The changes are included in the latest edition of the protection from fire supporting documents, which can be downloaded from

www.dbh.govt.nz/compliance-documents#c.

Risk group	Acceptable Solution	Summarised description of building (or building part) use
SH	C/AS1	Detached houses and buildings subdivided into multiple dwellings, provided that they are a maximum of two units high. There is no limit on the number of units side by side, provided each dwelling has its own independent escape route to a safe place.
SM	C/AS2	Permanent accommodation such as apartments and temporary accommodation such as hotels, motels, hostels, backpacker and education accommodation.
SI	C/AS3	Institutions, hospitals, residential care, retirement homes, medical day treatment (using sedation), detention spaces in police stations and courthouses.
CA	C/AS4	Halls, recreation centres, public libraries (with less than 2.4 m high storage), cinemas, shops, personal services, schools, restaurants and cafés, early childhood education centres.
WB	C/AS5	Offices (including professional services), laboratories, workshops, manufacturing (excluding foamed plastics), factories, processing, storage units capable of less than 5 m high storage.
WS	C/AS6	Warehouses (capable of 5 m or more storage), coolstores, trading and bulk retail (with 3 m or more storage).
VP	C/AS7	Vehicle parking within a building or a separate building.

There is also a new Verification Method (C/VM2) for protection from fire, which is suitable for use by design professionals with specific fire engineering expertise, such as Chartered Professional Engineers. Verification Method C/VM2 can be used only with the new Building Code C clauses. The new document can be downloaded from www.dbh.govt.nz/UserFiles/File/Publications/Building/Compliance-documents/c-vm2-protection-from-fire-1st-edition.pdf. Commentaries for the revised C/VM2 and C/AS1–C/AS7 will be available from the DBH shortly.

Building Code clause F8 Signs and Acceptable Solution F8/AS1

Minor changes have been made to the Building Code clause for signs include updating references to the Building Act 2004 including the requirement for accessible routes to be identified with the international symbol for access. The changes also align clause F8 with clause F6 *Visibility in escape routes*. Changes made to Acceptable Solution F8/AS1 include:

- inclusion of a greater range of signs including pictograms alone or with text in English and other languages or with Braille
- inclusion of photoluminescent signage
- referencing additional standards for safety colours and an updating of cited standards
- removal of the solution for self-luminous signs
- referencing the Responsible Care (formerly NZ Chemical Industry Council) handbook (CoP 2-1 09-04) for hazardous substances and processes.

From 10 July 2012, only the new Code clause and Acceptable Solution F8/AS1 apply. Up until then, either the existing Code clause and Acceptable Solution or new Code clause and Acceptable Solution may be used.

DBH terminology change

In DBH information regarding the changes to the clause C documents, the term 'supporting document' is used to describe compliance documents such as Acceptable Solutions and Verification Methods.

BRANZ seminars 2012

Lightweight Steel Framing

While many of us may have seen a steel-frame building being erected, most of us are unfamiliar with lightweight steel as a framing system, as we have not worked with it. This seminar will outline design and construction

information specific to steel framing for designers, builders and building consent authorities (BCAs) to make attendees more familiar with the requirements of lightweight steel framing. Buildings covered by this seminar fall within the design parameters of the NASH standard *Residential and low-rise steel framing – Part 1: 2010 Design criteria*, which is cited as a means of compliance for Building Code clause B1 *Structure* in compliance document B1/VM1.

Topics that this seminar will cover include:

- statutory requirements relating to the consenting of lightweight steel-framed buildings
- applicable standards
- what is lightweight steel framing?
- factors that influence the use of lightweight steel framing
- steel framing systems currently available
- materials and profiles used in lightweight steel framing
- why thermal breaks are required, suitable materials, where they must be installed and their installation requirements
- incorporating drained and vented cavities with thermal breaks
- application of E2/AS1 details to steel framing
- installation requirements specific to lightweight steel framing
- thermal insulation of steel frames.

Seminars will be presented by Trevor Pringle ANZIA (author of *Building Basics: Steel Framing*) and run from 1-4 pm:

Location	Date
Dunedin	Monday 30 April
Queenstown	Tuesday 1 May
Christchurch	Wednesday 2 May
Wellington	Thursday 3 May
Tauranga	Monday 7 May
Hamilton	Tuesday 8 May
Auckland – Albany	Wednesday 9 May
Auckland – Ellerslie	Thursday 10 May

See www.branz.co.nz/seminar_register.

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