

GUIDELINE

Free monthly update on building issues prepared by BRANZ Ltd and funded by the Building Research Levy



SEPTEMBER 2007

H1

NZBC Clause H1 Energy Efficiency Third Edition was released on 17 August 2007 and is available for free download from www.dbh.govt.nz. The new requirements are complex, and if you are likely to be affected it is important to review the new Compliance Document and new Standards. This is a very brief summary of the changes.

NZS 4218 2004 replaces NZS 4218 1996. NZS 4243.1 2007 and NZS 4243.2 2007 replace NZS 4243 1996 (see www.standards.co.nz).

For housing and buildings under 300 m², the new rules in the Compliance Document commence on different dates around the country, but until then the old Verification Method continues unchanged. The new Verification Method will use a new Building Performance Index (BPI) that includes wall and floor area (previously only floor area). The Acceptable Solution has new tables for the Schedule and Calculation Methods to replace those in NZS 4218: 2004.

These new rules come into force (completely replacing the old rules) on the following dates:

Zone 3: (South Island and Central North Island plateau) – from 31 October 2007

Zone 2: (lower North Island) – from 30 June 2008

Zone 1: (upper North Island) – from 30 September 2008.

The changes include:

- a maximum skylight area of 1.2 m² when the schedule method is used
- allowance for the use of stained glass if less than 2.6 m² in area
- an increase in the minimum R-value for solid wall construction
- a suite of Schedule Method alternatives for solid timber and other solid wall constructions
- the Schedule Method for high mass walls (e.g. concrete, mud) requires that exterior insulation be used
- an increase in the schedule R-value for heated roofs, walls and floors.

For non-housing over 300 m², new lighting power density levels take effect from 31 October 2007.

Further changes are still expected for domestic scale hot water systems and HVAC (heating, ventilation and air-conditioning) systems in non-housing.

Even though these changes may not immediately affect you, future purchasers of a building may place a lower value on it if it does not comply with the higher levels of thermal insulation.

Keep an eye out for coming details of a BRANZ seminar in November and December examining the changes to H1.

DETAILED INFORMATION

We regularly get calls from builders asking how they should approach the construction of a particular building element when the details have been left out of the plans supplied to them. In a number of examples we are aware of, the omitted detail is related to code compliance. In one particular case, a long-run metal roof designed to E2/AS1 in a high wind area was consented without the drawings or specification calling for the eaves flashing that is required under the Acceptable Solution.

What should the builder do in this case? Should they:

- have the roof installed without the flashing, as detailed and consented, or
- just install the flashing anyway, or
- refer it back to the designer for a decision and have the consent amended?

Our answer is always to go back to the designer – it is their job to provide sufficient detail to allow the building to be consented and constructed. Where an item has been missed during the consent processing it is recommended that the correction be treated as an amendment to the consent.

BUILDING CODE REVIEW

A reminder that your review comments on the revision of the Building Code are to be submitted to the DBH by 28 September.

RENOVATIONS/ALTERATIONS AND BRACING REQUIREMENTS

With the passage of time, the parameters we design and construct to have changed. Two recent examples are timber performance and wind and earthquake loadings. While this is not an issue for new construction, it can be problematic for alteration or renovation work carried out on buildings built to (much) older standards or to meet lesser lateral loading requirements.

For an existing building, an assessment of the bracing provided may be done by using the generic values that were given in pre-1999 versions of NZS 3604, or by an assessment by a professional structural engineer. There was a change in design philosophy between the 1984 and 1990 versions of NZS 3604. However, use of generic values will provide at least equal strength.

For minor alterations such as removing an old diagonal brace to allow a window to be inserted, or removing a single length of internal wall, it might be as simple as adding in specific sheet bracing elements to compensate for the loss of the brace or wall. Note that a check must be made to ensure that the removal of the wall does not compromise gravity load support.

For work consisting of an addition with little or no change to the original building, the new work must be braced to meet current standards – in effect, treated as a separate building.

Where the alterations involve significant changes to the internal planning of the building or a major extension, particularly if it involves adding a floor, an engineering assessment will be needed, to:

- compare the level of performance of the existing building (resistance) provided with that currently required (demand)
- determine the impact of the proposed changes on the existing performance (resistance)
- reassess the bracing of the proposed building (resistance) against current performance requirements (demand).

When carrying out any work on an older building, the opportunity should be taken to improve bracing, particularly the sub-floor.

BRANZ SEMINARS

CLIMATE CHANGE

This seminar will outline the findings of a recent BRANZ research report into the implications for the built environment of the expected climatic changes for New Zealand through the 21st century.

Wellington: Wednesday, 12 Sep 2007 2 pm–4 pm

CHANGING HOUSING NEEDS

This one-hour lunchtime seminar will outline recent research findings identifying the changes that are most likely to affect residential building design over the next ten years and beyond.

Christchurch: Tuesday, 9 October
Wellington: Wednesday, 10 October
Auckland: Thursday, 11 October

This seminar has been accredited for 10 CPD Points by the New Zealand Registered Architects Board.

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

CITE COURSES

Don't forget that BOINZ are arranging the delivery of some CITE courses until at least the end of this year. For more information see the event calendar at www.boinz.org.nz or contact training@boinz.co.nz.



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