



codewords

Guidance on garage classification

The Department of Building and Housing has moved to clarify the classification of freestanding, uninhabited garages.

Classification of these garages had been ambiguous, as they are not explicitly mentioned under any importance level. The Department now considers that such garages should be classified as Importance Level 1 (low consequence of failure).

Building importance levels reflect the balance of a variety of factors, including consequences of failure and the cost of designing buildings to withstand applied loads.

This guidance is issued under Compliance Document B1/VM1 and AS/NZS 1170: 2002.¹

This Standard, like the previously referenced NZS 4203, differentiates buildings based on the risk that their failure would present to the safety of people, as well as any social, economic and environmental consequences that might arise.

The importance levels which express this differentiation include:

Level 1 (low consequence of failure)

This level is defined as low risk of loss of human life, and/or small or moderate economic, social or environmental consequences.

Continued on page 2

what's inside

02 Weathertight claims: the 10-year eligibility rule

Correction: Structural fire endurance (S) ratings for single-storey buildings

03 Minimum ground snow loads clarified

04 Determinations issued

06 Standards New Zealand update

07 Learning Curve



It covers minor structures where their failure is not likely to endanger human life. Examples include structures smaller than 30m², farm buildings, isolated structures, towers in rural situations, fences, masts, walls and in-ground swimming pools.

Level 2 (ordinary consequences of failure)

This level is defined as medium risk of loss of human life, or considerable economic, social or environmental consequences. Examples include single-family dwellings and car parking buildings.

After considering each of the criteria used to establish the importance level, the Department has concluded that the collective economic, social and environmental consequences of freestanding, uninhabited garage failure are lower than those of a dwelling.

The Department has considered the risk of loss of life in this context, recognising that, while cladding materials could be blown around in an inhabited area in very high winds, the level of risk is still low.

The Department considers that the low risk posed by the failure of these garages does not justify the added cost of constructing them to Importance Level 2.

Therefore, in the Department's view, freestanding, uninhabited garages should be classified as Importance Level 1 for the purpose of applied design loads.

1 This advice is issued as guidance under section 175 of the Building Act 2004. AS/NZS 1170 came into effect in December 2008 as a cited reference in the Compliance Document B1/VM1 Structure.

Weathertight claims: the 10-year eligibility rule

Only homes built or altered in the last 10 years are eligible for compensation through the Weathertight Homes Resolution Service. This means that many homes built in 1999 are about to become ineligible, and those built in 2000 will become ineligible during next year.

It is important to inspect your property for weathertight problems, especially if your property was built using monolithic cladding,

has untreated timber framing, lacks a cavity within internal walls, has areas with no eaves or has a design that includes parapets, balconies or a complex design.

If you own a home that is or may be subject to weathertight issues you need to take action now. You can get more information about making a weathertight claim by ringing 0800 32 44 77 or by visiting our website at: www.dbh.govt.nz/bringing-a-whrs-claim

Correction: Structural fire endurance (S) ratings for single-storey buildings

A *Codewords* article in December 2007 addressed whether S ratings should be applied to large, unsprinklered single-storey buildings. The article included an interpretation that S ratings be required in single-storey buildings remote from boundaries.

However, the original intention was that single-storey buildings remote from boundaries could still be unrestricted in floor area, and not require elements of construction that are designed with an S rating.

The current Compliance Document does in fact permit non-rated construction in single-storey buildings remote from the boundaries, and the floor area of such buildings may also be unrestricted.

Minimum ground snow loads clarified

The impact of heavy snowfalls on buildings at low altitudes in the central and southern South Island led to the Department setting a minimum ground snow load in the Compliance Document for Structure (B1). The following technical guidance on how this minimum ground snow load should be applied is for engineers and designers.

The Department has received questions about the minimum snow load on the ground (s_g) specified in the amendment to Compliance Document B1/VM1, and whether this applies to both the Ultimate Limit State and the Serviceability Limit State.

The snow load on the ground value (s_g) is the base value used to determine the design snow load in accordance with AS/NZS 1170. The amendment to the Compliance Document states: 'For Regions N4 and N5, the minimum value of s_g must be taken as 0.9kPa'.

The minimum value specified in the Compliance Document is intended to be for strength, ie, an Ultimate Limit State value only. The Standard's normal provisions are intended to be used for Serviceability Limit State load cases.

At the next opportunity, the Department will amend the Compliance Document to read: 'For Regions N4 and N5, the minimum value of s_g for the *Ultimate Limit State* only must be taken as 0.9kPa'.



HOW TO DETERMINE THE GROUND SNOW LOAD

For the Ultimate Strength Limit State, the value of s_g in the N4 and N5 regions would be calculated in accordance with Clause 5.4.3 of AS/NZS 1170.3. A probability factor (k_p) would be used that corresponds to the appropriate Annual Probability of Exceedance (APE) value from Table 3.3 of AS/NZS 1170.0. The s_g value to be used is the calculated value or 0.9kPa, whichever is greater.

For the Serviceability Limit State, the value of s_g would be calculated from Clause 5.4.3 of AS/NZS 1170.3 using a probability factor of 0.84. This is the k_p value corresponding to an APE value of 1/25.¹ The value of s_g to be used is the calculated value – no minimum would apply.

¹ Note that Table 3.3 of AS/NZS 1170.0 requires an APE value of 1/25 for the Serviceability Limit State. Table 5.1 of AS/NZS 1170.0 does not have a k_p value for an APE of 1/25 so the k_p value is therefore determined by interpolation between the values for an APE of 1/20 and 1/50.

BACKGROUND

The minimum strength value of 0.9kPa was introduced after considering snow data in regions N4 and N5. This included data from the snow storm of June 2006 where a snow load considerably greater than the design snow load was measured.

The change to the Compliance Document was made because it appeared that AS/NZS 1170.3 significantly underestimated the snow loads at low altitudes in these regions.

The investigation revealed that little relevant data existed. As a result, the Department commissioned NIWA to gather data from extreme snow events in regions N4 and N5. Once sufficient data has been collected, it is intended that the current Compliance Document provision will be reviewed.

Determinations issued

DETERMINATION 2009/6:

Regarding the issuing of a code compliance certificate for a house constructed of pre-cast concrete panels



This determination arose from the decision of a building consent authority (BCA) to issue a code compliance certificate (CCC) for a house built of pre-cast concrete panels. The BCA applied for the determination because it wished to withdraw the CCC as it no longer believed the work was Code compliant. The other party was the owner; the builder was included as a person with an interest in the matter.

Background

A building consent was granted for the house and the BCA completed various inspections during construction. The builder issued an undated producer statement for construction review, which included the construction of the pre-cast concrete wall panels. The statement, which was accepted by the BCA, said that the pre-cast panels, among other items,

had been constructed in accordance with the building consent. The BCA then issued the CCC.

The owner subsequently noticed a number of defects in the pre-cast panels and other parts of the house, and engaged a number of experts to inspect it. Both the owner and the applicant accepted that the house did not comply with the Building Code.

The power to withdraw a code compliance certificate

The determination considered whether a BCA had the power to withdraw a CCC, or whether this power could be exercised only by the Department by way of a determination.

The determination cited a recent High Court case in which a territorial authority purported to withdraw a CCC. The Judge in that case said 'there is no provision in the Building Act 2004 permitting the rescission of a [CCC].' While this was an observation made by the Judge and not a binding statement on the Department, it was taken account of in the determination. The determination took the view that the only way a territorial authority, or BCA, could withdraw a CCC was by way of a determination.

The compliance with the building consent

The building consent required a registered engineer to observe the construction of the pre-cast panels. This condition was not met, as the producer statement was issued by the builder. While producer statements can assist BCAs to assess Code compliance,

such documents have little value unless they are provided by a suitably qualified person with expertise in the field to which the particular producer statement relates.

The determination noted there was no dispute between the parties that elements of the building were not Code compliant, and it was clear the house did not comply with the Building Code. Further, there were various differences between the consent documents and what was built, especially with respect to the pre-cast panels. The determination noted that these inconsistencies should not have gone undetected by the BCA.

In summary, the determination found that the CCC was issued for work that was neither Code compliant, nor built in accordance with the building consent. The BCA should not have issued a CCC for the house.

The decision

In accordance with section 188 of the Act, it was determined that:

- a) the BCA's decision to issue a CCC for the building was reversed, and
- b) the house did not comply with the building consent, nor with the Building Code.

DETERMINATION 2009/1:

The Code compliance of alterations to a private hospital building

The matter for determination was the Code compliance of alterations that changed the use of a day-stay hospital. The parties were the building owner, the building consent authority (BCA), the New Zealand

Fire Service, and the tenants who run the hospital and who commissioned the alterations. The building owner applied for the determination.

Background

The alterations established a ground floor theatre suite, a recovery area, an administration area, ancillary spaces, and a first-floor plant room over the theatre suite ('the tenancy'). The BCA issued a building consent in 2001, and later a code compliance certificate, for the alterations on the basis that the building would be used for day-stay patients only.

In 2006 the tenants advised the BCA that it wished to operate the hospital with overnight stay. Following extensive discussions between the tenant, the building owner, and the BCA, supported by numerous consultant reports, the BCA issued a building consent in 2007 that required the fire systems to be upgraded including the installation of a sprinkler system.

The building owner objected to the issuing of the 2007 building consent on the grounds that the building fell short of complying 'as nearly as is reasonably practicable' with the Building Code with respect to fire safety. The building owner's main areas of concern were the:

- use of evacuation slings as a secondary means of escape from the theatres
- theatres not being fire or smoke separated from each other and the plant room
- recovery areas being in the same firecell as other use areas

- requirement that a 12-patient limit be placed on the tenancy.

Discussion

The determination accepted that a sacrifice/benefit analysis needed to be conducted about whether the tenancy complied 'as nearly as is reasonably practicable' as required by the Building Act and considered the areas of concern raised by the building owner.

Secondary means of escape from the theatres

The tenants initially proposed that evacuation slings be used for the emergency evacuation of patients from the theatres to overcome the lack of direct access to a place of safety (in this case the outside). The tenants then proposed an alternative method using ambulance gurneys.

The determination considered neither method was acceptable and decided that the existing egress route must be altered to accommodate theatre trolleys. The benefits from the improved egress far outweighed the estimated cost for carrying out the work.

Fire separation within the tenancy

The fire separation between the theatres and rest of the tenancy was found to be adequate, and the improved egress from the theatres would negate the requirement to fire-rate the walls between individual theatres. While the fire separation of the plant room from the theatres did not achieve the required minimum, the other building features meant the separation was acceptable as an alternative solution.

It was accepted that sufficient time would be available to stabilise a patient for evacuation who was undergoing surgery. The determination considered the fire separation between the recovery areas and rest of the tenancy was adequate.

Twelve-patient limit

The tenancy had more occupants than previously proposed by the tenants. The determination considered it did not matter whether the occupants were able to walk or not, their presence alone exceeded the limits of the relevant Compliance Document (in this case C/AS1) used to design the tenancy's fire features.

Separation of the recovery areas into suites containing no more than 12 occupants (whether the occupants were in beds or not) was necessary to meet the requirements of C/AS1. The estimated cost to fire-separate the two recovery areas did not outweigh the benefits from the provision of fire separation.

The decision

It was determined that the tenancy, as presently constructed, did not comply as nearly as is reasonably practicable with Clause C of the Building Code.

These are summaries only. The full determinations (along with all other determinations issued) can be viewed on our website:
www.dbh.govt.nz/determinations

Standards New Zealand **update**

(The information in this update is reproduced courtesy of Standards New Zealand – www.standards.co.nz)

UPCOMING NEW STANDARDS

Standards New Zealand plans to release these revisions of existing Standards in the next month or two

AS/NZS 1547: 2008 On-site domestic wastewater management

AS/NZS 4455.2: 2009 Masonry units, pavers, flags and segmental retaining wall units. Part 2: Segmental pavers and flags

NZS 4219: 2008 Specification for seismic resistance of engineering systems in buildings

**Amendment 1 to
NZS 3116: 2002** Concrete segmental and flagstone paving

NEW AMENDMENTS

Free to download from Standards website: www.standards.co.nz

**Amendment 2 to
AS/NZS1170.1: 2002** Permanent, imposed and other actions (applies to Clause 1.1, Tables 3.1, 3.2, 3.3, and Appendices A and B)

**Amendment 2 to
AS/NZS 3662: 2005** Performance of showers for bathing

**Amendment 1 to
NZS 4510: 2008** Fire hydrant systems for buildings (aligns NZS 4510: 2008 with the Compliance Documents to the New Zealand Building Code and updates the referenced documents to incorporate the most recently published Standards).

STANDARDS IN DEVELOPMENT

Timber framed buildings Committee: P3604
Project Manager: Mani Taare
Estimated Publication Date: 2010
Comments: Formation of the leadership group is complete. The P3604 Technical Committee has been formed, and the first meeting occurred on 16 February 2009.

**Revision of
NZS 3122: 1995
and NZS 3123: 1974** Committee: P3122-3123
Project Manager: Mani Taare
Estimated Publication Date: August 2009
Comments: A project for the amendment of NZS 3122: 1995 Specification for Portland and blended cements (General and special purpose) and revision of NZS 3123: 1974 Specification for Portland pozzolan cement (type PP cement). The first committee meeting occurred on 12 February 2009.

**Code of Practice for
concrete structures for
the storage of liquids.** Committee: P3106 Phase 2
Project Manager: Hagen Kerr
Estimated Publication Date: June 2009.

**Thermal insulation –
Housing and small
buildings** Committee: P4218
Project Manager: Sonia van Ree
Estimated Publication Date: June 2009
Comments: Draft was open for public comment between November 2008 and February 2009.

**Revision of NZS 3404
Steel structures –
Phases 1, 2 and 3** Committee: P3404
Project Manager: Jono East
Estimated Publication Date: June 2009 (NZS 3404 part 1 only).

**WS-013 Review of
domestic wastewater
systems** Committee: WS-013
Project Manager: Jono East
Estimated Publication Date: April 2009
Comments: The committee is revising AS/NZS 1547 draft in light of comments received during the ballot stage.

Learning curve

BRANZ SEMINAR

'Compliance paths – getting alternative solutions consented'

BRANZ Research and helpdesk enquiries have revealed that designers and building consent authority staff need to clearly understand the range of options available to show Code compliance for consent documents that are outside the scope of an Acceptable Solution.

While the research was specific to renovation projects, a number of designers interviewed said obtaining approval for alternative solutions for all types of projects is one of their biggest causes of frustration. The reason is that the designer and the building control officials are often unsure of how to approach the submission and assessment of alternative solutions.

This seminar on compliance paths for consenting alternative solutions will address:

- what constitutes an alternative solution; in effect, almost all consents are in part alternative solutions
- how compliance can be demonstrated; what are the paths to follow, and options for presenting an alternative solution to the BCA

- the level of detail and supporting information required
- the use of testing, comparison with Acceptable Solutions, expert opinion, product certification and producer statements in support of compliance
- options to follow when using past in-service history to show compliance with current Code requirements
- options for assessing an alternative solution when received.

Having designers and BCA officers understand the same rationales for dealing with alternative solutions should significantly ease the concerns raised.

Audience: A must for builders, designers, architects, and building consent officials

Presenters: **Greg Burn**, NZCD (Arch) – Building Consultant, Structure Limited
Des Molloy – Building Consultant (BRANZ Builder's Mate 'Old Geezer')

CPD Points: 3 points

Investment: Seminar ONLY \$85.00

Date	Location
Monday 4 May	Dunedin Otago Museum
Tuesday 5 May	Queenstown Copthorne Hotel & Resort
Wednesday 6 May	Christchurch The Heritage Hotel
Thursday 7 May	Wellington Wellington Town Hall
Monday 11 May	Auckland The Heritage Hotel
Tuesday 12 May	Hamilton The Waikato Stadium
Wednesday 13 May	Tauranga Hotel Armitage
Thursday 14 May	Palmerston North The Coachman Hotel

Registration: Register online at www.branz.co.nz and go to seminars; or email: SeminarRegistrations@branz.co.nz




ORDERING COMPLIANCE DOCUMENTS

Victoria University Bookcentre is pleased to be associated with the Department of Building and Housing. We supply the Department's Compliance Documents in hard copy format, as well as the Building Act and Building Regulations which include the Building Code. We can also source technical and general books on your behalf.

**Victoria University Bookcentre, Gate 1, Student Union Building,
1 Kelburn Parade, PO Box 12337, Wellington.**

 www.vicbooks.co.nz

 sam.stanley@vicbooks.co.nz

 **Freephone 0800 370 370**

Learning curve *continued*

BARRIER FREE NZ TRUST

The Barrier Free NZ Trust aims to encourage and promote environments that are accessible and usable by everyone, including people with disabilities. Through training and education, providing technical advice, and overseeing the display of the International Symbol of Access (ISA), the Trust has established itself as a 'first port of call' for accessibility advice and information.

Our two-day seminar is divided into four Modules: Experience of the Accessible Journey, The Law, Design, and Assessment.

The Module 5 seminar is for people who would like to further their training to become a Barrier Free Advisor. Participants will learn in depth, how to give advice when they audit buildings or plans for access.

The Department of Building and Housing recognises the two-day seminar for the Licensed Building Practitioner Scheme (LBP). LBPs gain Skills Maintenance points for attending our training modules. The seminar is also recognised for Continued Professional Development Points by the NZ Institute of Architects (NZIA) and the Building Officials Institute NZ (BOINZ).



**Barrier Free
NEW ZEALAND
TRUST**

UPCOMING BARRIER FREE NZ TRUST SEMINAR DATES:

2-day Seminar (Module 1-4):

Location	Date
Invercargill	30-31 March 2009
Wellington	31 March-1 April 2009
Christchurch	5-6 May 2009
Rotorua	16-17 June 2009
Hamilton	11-12 August 2009
Auckland	15-16 September 2009
Wellington	14-15 October 2009
Christchurch	17-18 November 2009

Module 5

Location	Date
Auckland	29 April 2009
Wellington	20 August 2009
Location TBC	26 November 2009

Register online

<http://www.barrierfreenz.org.nz/index.php/training-and-education/registration>

Contact us

office@barrierfreenz.org.nz
or 04 915 5848.

Legality of Department of Building and Housing interpretations

Only the courts can issue binding interpretations of the Building Act 1991 and Building Act 2004 and Regulations. Indications and guidelines issued by the Department of Building and Housing, either in *Codewords* or other communications, are provided with the intention of helping people to understand the legislation. They are, however, offered on a 'no-liability' basis and, in any particular case, those concerned should consult their own legal advisors.

Editorial enquiries

☎ 0800 242 243
✉ codewords@dbh.govt.nz

Please copy – copyright waived

Articles in this newsletter may be freely reproduced, in full or in part, in other publications as long as *Codewords* is acknowledged as the source, including issue number and date. Disclaimers relating to the article must be included.

Subscriptions

Codewords is a free, monthly information service. To subscribe, contact the Department of Building and Housing by telephone, fax or email.

Subscriptions and general enquiries

☎ Freephone 0800 242 243
Fax (04) 494 0290
✉ building@dbh.govt.nz
🌐 www.dbh.govt.nz
✉ Level 6, 86 Customhouse Quay,
PO Box 10 729, Wellington 6143
New Zealand

Do we have your correct delivery and contact details?

Please phone 0800 242 243 to change your details.

Codewords March 2009 Issue 035

Published by the Department of
Building and Housing
Print run: 9,500

New Zealand Government