Department of Building and Housing
Te Tari Kaupapa Whare

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codewords

Improved energy efficiency in homes and buildings

Building and Construction Minister Clayton Cosgrove recently announced a package of measures to improve the energy efficiency of buildings. This will make New Zealand homes warmer, healthier and more comfortable, and reduce energy bills. The package is part of the Government's increased focus on improving energy efficiency and combating the effects of climate change.

The Department of Building and Housing has released a public discussion document containing three specific proposals stemming from the Minister's announcement.

The proposals are to:

- require better insulation in new homes
- increase the efficiency of lighting in commercial buildings
- make it easier and cheaper to install solar hot water systems.

The Department is seeking feedback on these proposals from the public and from all *Codewords* readers with an interest in energy efficiency. If adopted, the proposals will have major implications for how New Zealand buildings are designed.

The first proposal is that new homes will need to be better insulated. This can be achieved by putting better insulation in the walls, ceiling and floor, and using double-glazed windows. With better insulation it's more economical to heat homes to a healthy level.

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what's inside

Improved energy efficiency in homes and buildings *Continued*

The cost savings in energy, coupled with the health and environmental benefits of warm homes, would more than offset the initial costs of using better insulation.

Homeowners throughout the country would benefit, particularly those in the South Island. This change would also help New Zealand catch up with international best practice, and ensure that new homes can provide the benefits of energy efficiency to their owners for decades to come.

The second proposal is to increase the performance requirements for lighting in commercial buildings. This would recognise what is already established as design best practice, and has the potential to save as much as 1.89 GWh of electricity every year – enough to power more than 3000 family-sized refrigerators.

The cost to building owners would be negligible, with substantial running-cost savings over time. This is because modern lighting technologies (such as lights that do not dim over time, and sensors that adjust artificial lights in accordance with natural lighting) have made it possible to achieve good lighting levels more efficiently.

The third proposal is for the Department to publish an Acceptable Solution for solar water heating installations. This non-mandatory document would make it easier and cheaper for homeowners to plan, design and install solar water heating systems, and to obtain building consents for them. Currently, the set-up costs are a barrier to the widespread adoption of solar water heating technology, which can easily halve the average household's water heating bill.

The Department is investigating other energy efficiency measures, including those for domestic hot water systems and heating, ventilation and air-conditioning systems in large buildings. Further proposals for change will be made in 2007.

You can find copies of the discussion document and advice on how to make a submission on the Department's website: www.dbh.govt.nz/energy-efficiency

Submissions close on 22 December 2006.

Building Cod

In a recent discussion on the future of the New Zealand Building Code, the key recommendations were that the Code needs to focus on high-quality, energy-efficient buildings that last for generations.

From June to August this year, the Department sought public submissions on the discussion document *Building for the 21st Century: Review of the Building Code*.

WIDE RANGE OF SUBMISSIONS

The Department received a total of 265 submissions, two-thirds of which were online. Just under a third of the submissions were from industry professionals (such as builders, designers, architects and engineers). Local and central government agencies also made valuable contributions.

The submissions are supplemented by community feedback gathered from recent focus groups. These focus groups gave the Department an opportunity to understand what ordinary people want from their homes and buildings and the Building Code.

ANALYSIS OF SUBMISSIONS

The review of the Building Code will change what we build and the way we build. There was general support for change and an acknowledgement that the current Building Code could be improved.

e under review

Overall, submitters recognised the need to balance costs and benefits with affordability and long-term outcomes.

An analysis of the submissions has provided invaluable feedback for ensuring the review is on the right track. Some of the key themes and submissions are summarised below.

- Sustainability is a key concern. Many submitters want the new Code to ensure buildings are designed and constructed strongly enough to cope with the rigours of climate and weather change patterns. However, submissions also included the view that warning systems rather than engineering solutions would better address extreme hazards such as tsunami, volcanoes and wildfires.
- It was suggested that the design life of a building be increased (the current design life is a minimum of 50 years). To achieve a longer life, better materials are likely to be used, resulting in higher-quality houses being built.
- There was support for including sustainable development concepts for disposal of waste and water, such as space for waste and recyclables in multi-unit dwellings and commercial and industrial buildings.
- Submitters linked health outcomes to thermal performance and energy efficient design, and stated that the Code should set a level of building thermal performance that requires conscious consideration of energy-efficient design.
- Nearly all respondents supported the proposed objectives for fire safety. In addition, many submitters thought that hard-wired smoke detectors and sprinkler systems should be mandatory for all buildings.
- There was support for universal design/lifetime design principles (wide doorways, lever door handles, lever handles on taps), but as guidelines rather than Code requirements.
- Many submitters agreed that historic, heritage and cultural buildings need to be treated differently to preserve their value. A distinction was made between heritage/historic buildings and new buildings with cultural significance. Generally, submitters felt that new buildings with cultural significance should have no concessions for Building Code requirements.
- There was a view that the Building Code should fit better with other laws, particularly the Resource Management Act.
- On the structure of the Building Code itself, there was strong support for the Code to be organised by outcome. However, there was also strong support for the current structure of the Code (organised by building element).
- There was also strong support for a performance-based Code, but different interpretations about what this meant and the hierarchical level at which the performance should be stated. There was a range of views about 'best practice' and 'minimum acceptable practice'.
- 'Acceptable Solutions' for particular types of building were generally supported, and suggestions were made that the requirements within the Acceptable Solutions should be arranged by building element or trade.

NEXT STEPS

The Department wishes to thank all submitters and focus group participants for their input and feedback.

A detailed synopsis of the current round of submissions will be published on the Department's website (www.dbh.govt.nz) before the end of the year.

The comments made in these submissions and focus groups will guide the direction for a second discussion document, which is expected to be available for public comment in the first half of 2007. This document will give detailed performance criteria for the new Building Code.

The entire review is scheduled for completion by November 2007. The new Code is projected to take effect from 2008.

Product certification

Product certification is one of the elements in transforming the building sector, which includes:

- introducing builder licensing
- ensuring better outcomes for owners of leaky homes
- encouraging a better consent and inspection process
- investigating consumer warranties for building work.

The Building Act 2004 ("The Act") provides for the establishment of a product certification scheme to replace the accreditation arrangements managed by the Department under the former legislation.

Building product certification provides a way in which certificate holders can give independent confirmation that their products comply with the Building Code.

Certification is not mandatory, but it is an effective way for manufacturers and distributors to establish that their products comply with the Building Code. Widespread adoption of product certification would help building consent authorities make better decisions about consent applications. It will also help designers and builders identify products that have been proven to perform well if installed correctly.

The Act allows the Chief Executive of the Department to appoint a product certification accreditation body. This body will accredit suitable organisations as product certification bodies. These organisations will be responsible for evaluating and certifying building products and methods.

RELATIONSHIP WITH THE AUSTRALIAN BUILDING CODES BOARD

The Australian Building Codes Board (ABCB) has similar responsibilities to the Department, particularly in managing a product certification scheme.

Similar developments in the Australian building sector have provided an opportunity for trans-Tasman building industry groups to work together within an environment that increasingly relies on International Quality Standards to promote consumer confidence in the global marketplace.

In July 2005 the Department and the ABCB signed a memorandum of understanding to establish an aligned building product certification scheme, recognising compliance with the New Zealand Building Code and the Building Code of Australia in our respective jurisdictions.

INTERNATIONAL ASSESSMENTS

In recent years most World Trade Organization member countries have developed international assessment structures to determine whether or not a product or system conforms to a standard and/or complies with a regulation. An example close to home is the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

JAS-ANZ is a not-for-profit, fee-for-service organisation, formed under a treaty between the Australian and New Zealand Governments on 30 October 1991. As the peak accreditation body for both countries, JAS-ANZ accredits some 57 certification bodies, including those certifying products under the CodeMark scheme.

THE CODEMARK SCHEME

At present this scheme only operates in Australia, but it will be launched in New Zealand at some stage. There will be four groups of participants: the Department (the regulatory agency), the accreditation body, product certification bodies, and the holders of product certificates. Each group will have specialist roles, affecting their accountabilities (and liabilities).

The CodeMark brand has been transferred to the ABCB for use in Australia. Once the scheme is launched here, the Department and the ABCB will ensure the two countries operate their schemes in a consistent and aligned manner.

PRODUCT CERTIFICATION REGISTER

Under the Building Act, the Department is required to establish a public register of the names and contact details of accredited product certification bodies. The design and operation of this register will be confirmed in the near future.

CERTIFICATE HOLDERS

The holders of building product certificates could be owners, manufacturers, importers or suppliers of a product.

Certificate holders have a responsibility to ensure the certified product continues to be manufactured to the same standards, levels and quality as those against which it was assessed and certified.

The certificate holder must notify the certifier of any proposed modification to the product or the manufacturing process, and provide all necessary documentation.

BENEFITS OF THE SCHEME

Product certification helps ensure products are appropriate for their use and are used appropriately. The scheme provides independent and clear guidance on how to use a building product or method in compliance with the requirements of the Building Code. The scheme puts particular emphasis on how a product is to be installed so it is Code-compliant in practice as well as theory.

PROGRESS TO DATE

The ABCB has completed the domestic infrastructure for the scheme and launched it in Australia. JAS-ANZ is assessing product certification bodies in Australia, of which two have already been accredited and are now operating. Implementation in New Zealand has been a little slower. In recent months there has been significant progress.

In July 2005, the Department issued a consultation document on possible scheme rules, which described how the scheme might operate and the roles of the product certification accreditation body and the product certification bodies. It also proposed standards and criteria for the scheme. The consultation identified a number of issues requiring further work by the Department.

WHERE TO FROM HERE?

In November 2006, officials from the Department met with the ABCB and JAS-ANZ in New Zealand to discuss the framework of the trans-Tasman scheme. Also on the agenda was how to further harmonise the CodeMark scheme rules.

The product certification scheme must be set up in such a way that it has practical application in Australia and New Zealand. This means the terminology should reflect the legal jurisdiction in each country, and be relevant to both countries.

In the next few months the Department will be talking to industry and local government to ensure that key stakeholders are aware of progress with the product certification scheme and other initiatives, such as BCA accreditation, the licensing of building practitioners and the Building Code review.

The Department is aiming to complete these remaining steps by 30 June 2007.

Contact our call centre on 0800 242 243 for more information.

New Standard for pool safety

Child safety around swimming pools is covered by both Clause F4 Safety from Falling of the Building Code and the Fencing of Swimming Pools Act 1987 ("The Act"). The means of compliance for constructing barriers around pools is in the Schedule to the Act. Responsibility for administering this Act was transferred to the Department in October this year.

There has been a large increase in the number of spa pools. These are often located on a deck, where it is more difficult to provide adequate protection for children.

Continued on page 6

New Standard for pool safety continued…

Standards New Zealand, in conjunction with the Department and New Zealand Water Safety, developed a new Standard for protecting children around pools called NZS 8500: 2006 Safety Barriers and Fences Around Swimming Pools, Spas and Hot Tubs.

The new Standard has been designed to reflect modern forms of construction and the technologies now available. The committee that developed the Standard included representatives of the pool industry, child safety organisations and territorial authorities.

The Standard follows the Schedule for basic fencing requirements, but gives other options where a fence between the house and pool is not feasible.

Following a public consultation process, the Standard was published by Standards New Zealand in November this year. The new Standard will be useful as a guide for territorial authorities in enforcing the Act.

Accreditation scheme for

One of the initiatives introduced by the Building Act 2004 is an accreditation and registration scheme for regulatory building control providers. This scheme requires territorial and regional authorities to be registered as building consent authorities by 30 November 2007. In order to be registered, applicants must first be accredited against a set of prescribed standards and criteria.

The scheme is intended to strengthen the building consent, inspection and approval stages of the building control process. It will ensure those responsible for checking the compliance of buildings are able to perform their regulatory functions to a higher standard.

STANDARDS AND CRITERIA

In October 2006, the Government approved the policy content for the accreditation standards and criteria. These are outcome-focused and performance-based, and have been designed to encourage good practice and consistency among building consent authorities.

The Department is working with the Parliamentary Counsel Office to turn these standards and criteria into regulations. The standards will be phased in over a 6-year period.

STANDARDS RELATING TO POLICIES, SYSTEMS AND PROCESSES

Under the new accreditation scheme, building consent authorities will be required to have documented and effective systems, policies and processes. These will cover statutory responsibilities and other administrative and organisational activities that do not have a statutory basis, but affect the performance of building control functions (such as how alternative solutions are assessed).

Documented policies, processes, and procedures are an important mechanism to manage the way that building consent authorities operate, make assessments and decisions, manage risk, and achieve identified outcomes. This helps them monitor, review, and continuously improve their performance.

Effective record-keeping provides an audit trail, detailing decisions made about consents, inspections and code compliance certificates, and the rationale behind these decisions.

THE NEW STANDARDS FOCUS ON FOUR FUNCTIONAL AREAS

FUNCTIONAL AREA	STANDARD TO BE MET BY
Formal policies, systems, processes and procedures	30 November 2007
Skills and resources	30 November 2007
Quality assurance systems	30 November 2010
Staff qualifications	30 November 2013

building consent authorities

STANDARDS RELATING TO SKILLS AND RESOURCES

It is important that building consent authorities have the necessary skills and resources – internal and external – to fulfil their statutory responsibilities, and cope with the volume and nature of work they face.

It's essential that building consent authorities have systems in place to assess the competency of both internal and external human resources, to ensure they have the right skills and experience to carry out assigned work. Appropriate monitoring and review systems can identify collective skill sets and reveal areas of skill shortage. These should be addressed by training and professional development plans.

STANDARDS RELATING TO QUALITY ASSURANCE SYSTEMS

The new scheme will require building consent authorities to document, implement and maintain an effective quality-assurance system across all building control functions by 2010.

Critical to the success of any quality-assurance system is understanding and consistent application. Without this, quality can be compromised and the achievement of desired outcomes limited.

STANDARD RELATING TO STAFF QUALIFICATIONS

Under the new scheme, building officials will be required, by 2013, to hold either a nationally recognised qualification in building control or a recognised international equivalent.

Qualifications provide an independent assessment of a person's competency, and help develop a viable career path for young people wishing to become building officials. Qualifications are also valuable in helping building consent authorities assess the competency of their human resources to demonstrate organisational competence.

ONGOING CONSULTATION

In October this year, the Department released the consultation document *Proposals to Set Building Consent Authority Accreditation Fees and for Assistance with Accreditation.* This document seeks the building sector's views on the proposed fees for accreditation, and on the recently announced accreditation assistance package for territorial and regional authorities.

Consistent with similar schemes overseas, the proposed fees are based on a full cost-recovery approach. This means the total fees collected from building consent authorities would equal, as closely as possible, the total cost incurred by the accreditation body in providing accreditation.

The Building Act 2004 requires fees to be fixed amounts, so proposed fees are based on estimates of the average cost of different accreditation activities. Also, to allow for differences between authorities (for example, volume and complexity of building consent applications), a scale of fees would apply. This would vary according to the differing values of building work consented.

Building consent authorities can pass on accreditation costs through consent fees, which ensures that those who benefit most from accreditation services pay fees towards these services.

In October this year, the Minister for Building and Construction, Hon Clayton Cosgrove, announced a $3 million programme to help territorial authorities prepare for accreditation. The Department has sought sector feedback on how to best provide help. Possible options include:

- new and innovative 'tools' or 'prototypes' to help local authorities meet accreditation standards and criteria
- workshops, formal training events and other activities to inform and educate local authority building control staff about accreditation requirements
- support and advice to help authorities work collectively to meet accreditation standards and criteria. This would involve working with existing local authority cluster groups to identify specialist resources and advice that will be of the greatest assistance to them as collective or individual member authorities.

For more information on the scheme, see the Department's website (www.dbh.govt.nz) or contact one of the building consent authority accreditation and registration project team on 0800 242 243.

Support for plywood clarified

The Department has received a number of queries about installation requirements for plywood substrates under membrane roofs and decks, as outlined in Acceptable Solution E2/AS1, Paragraph 8.5.5.1. The main concerns are about sub-paragraphs (c) and (d).

These paragraphs state that plywood substrates need to be fixed according to the following requirements.

(c) The maximum span shall be 400 mm.

(d) Plywood shall be laid with the face grain at right angles to the supports.

In other words, **either** the primary or secondary framing supports must be at a maximum of 400 mm centres, and the plywood substrates must be laid with their grain or long dimension at right angles to the framing supports.

These requirements are illustrated in Figures 1 and 2 below.

In Figure 2 secondary supports, such as nogging or dwangs, need to be installed in accordance with NZS 3604 or to a specific engineering design.

Refer to E2/AS1 Paragraph 8.5 for other installation requirements for plywood substrates.

Figure 1

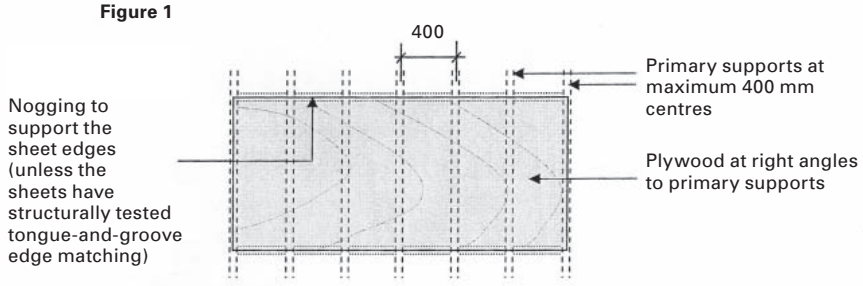
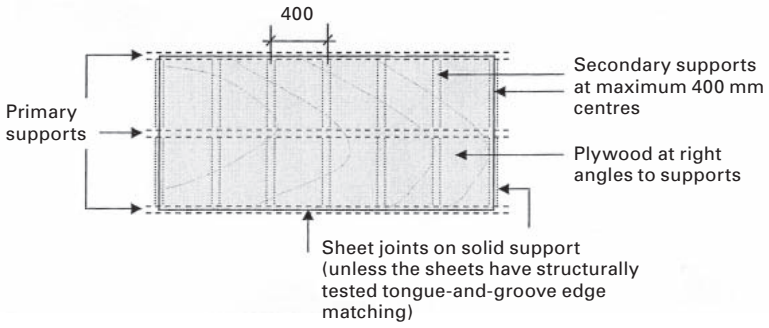


Figure 2



Determinatio

DETERMINATION 2006/73

Access for people with disabilities to the upper floor of a two-storey warehouse and office building

Background

A two-storey building was constructed in about 1960, as a warehouse with offices. Access between levels was by stairs only. In 2001 there was a change of use of the lower level for the purposes of a youth centre.

A new owner recently wanted to convert the building back to a warehouse on the lower level and offices on the upper level. The owner applied for a building consent for the alterations and advised the territorial authority of the proposed change of use.

The territorial authority refused to grant the building consent unless the building was upgraded by installing a lift. The owner disputed that decision and applied for a determination.

The matter for determination was whether the change of use meant that, under sections 112 and 115 of the Building Act 2004, a lift was required so that the building, in its new use, would comply as nearly as is reasonably practicable with the provisions of the Building Code for access by people with disabilities.

Consultation

As this was a disability issue, the Department consulted the Office for Disability Issues, in accordance with section 170(b) 'Requirements for a new building'.

There was no dispute that section 118 did apply to the building, and therefore, if it were new, it would have to include features to permit use by people with disabilities.

ns issued

As to whether a lift would be required:

- Clause D1.3.4(c) of the Building Code requires a lift if the building has 'a total design occupancy of 40 or more persons on the upper floor'
- Clause 9.1.3.2 of NZS 4121 requires a lift if the gross floor area of the upper floor is 400 m² or more.

The difference arises because section 119 provides that NZS 4121 'is to be taken as a compliance document', and section 19 provides that compliance with such a document must be accepted as establishing compliance with the Building Code.

In fact, the gross floor area of the upper level was approximately 480 m², so a lift would be required unless the design occupancy was fewer than 40 people.

Design occupancy

The design occupancy of any floor area is generally taken as being the number of people who can be expected to be present in that area. In practical terms, this is the same as the number used to design fire escape routes, which is usually calculated from the 'occupant densities' listed in Table 2.2 of C/AS1.

In this case, the calculation resulted in design occupancies of:

- 39 for offices or reception areas
- 79 for personal service facilities, workshops or workrooms.

Possible future changes

The owner proposed to let the upper level as offices and reception areas, and on that basis a lift would not be required.

However, as the Office for Disability Issues said: 'A common criticism made by disabled people … is that, over time, the actual uses to which buildings are put render them non-compliant with the Code …'

Account was taken of the fact that the owner (or a subsequent owner) could, for example, replace offices and reception areas with personal service facilities or workrooms, with no need to advise the territorial authority or to provide a lift, despite the increase in design occupancy.

That is because the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 provide that, for the purposes of sections 114 and 115 of the Act, there is a change of use only if there is a change from one to another of the uses specified in Schedule 2 to those Regulations.

In Schedule 2, 'use WL' (spaces used for working, business, or storage – low fire load) is specified as including, among other things, 'hairdressing shops, beauty parlours, places for provision of personal or professional services… business or other offices… places for small tool and appliance rental and service…'

It was therefore considered that, when calculating the design occupancy from C/AS1 for the purposes of Clause D1.3.4(c), the relevant design density would be the highest that could apply to the use WL. In this case, it meant a design occupancy of 79.

It was concluded that the building would require a lift in order to comply with the Building Code.

Compliance 'as nearly as is reasonably practicable'

However, because this was an existing building, the requirement was not that it must comply with the Building Code, but that it must comply 'as nearly as is reasonably practicable'.

This question involves balancing the benefits of any particular upgrade against the costs or sacrifices of installing that item. That approach has been discussed in many previous determinations and was approved by the High Court in *Auckland City Council v New Zealand Fire Service [1996] NZLR 330*.

The benefit of installing a lift would be that people with disabilities could work and visit the upper level. The sacrifices would be the cost of installing a lift and the loss of floor areas available for warehouse and office use. The only practicable position for a lift, without significant structural alteration to the main stairs, would be in a standalone lift shaft inside the building, making a significant area of the ground floor unavailable for warehouse or office use.

It was concluded that, on balance, the sacrifices of installing a lift outweighed the benefits. However, the balance was a fine one.

Continued on page 10

Decision

It was determined that it was not reasonably practicable to install a lift. Accordingly, the territorial authority's decision to refuse to grant the building consent was reversed.

DETERMINATION 2006/92:

Whether a compliance schedule was required for a new IHC residential home

Background

A new IHC residential home was a single-storey detached house with five bedrooms, a study, separate lounge and family rooms, a kitchen, two bathrooms and a garage. It had an automatic fire detection system and a domestic sprinkler system, which were 'specified systems' in terms of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005. The home was erected in accordance with a building consent, and the territorial authority issued a corresponding code compliance certificate.

However, the territorial authority also issued a compliance schedule of the inspection, maintenance and reporting procedures for the specified systems. IHC responded that a compliance schedule, and therefore annual building warrants of fitness, were not required for that or other IHC homes. The territorial authority disagreed, and the dispute was submitted to the Department for determination.

The matter for determination was the territorial authority's decision that a compliance schedule was required.

That decision hinged on whether, in terms of sections 7 and 100 of the Building Act, the home was a 'household unit' or 'specialised accommodation'.

Consultation

As this was a both a fire issue and a disability issue, the New Zealand Fire Service and the Office for Disability Issues were consulted, in accordance with section 170 of the Building Act.

Discussion

Comments from the Fire Service and the Office for Disability Issues illustrated the policy conflict between the need for buildings to do two things.

- Section 3(a) of the Act requires that 'people who use buildings can do so safely'. In some cases, this might require additional safety precautions for people with disabilities.
- Section 3(b) requires that buildings 'have attributes that contribute appropriately to the… physical independence, and well-being of the people who use them', or in the words of the Office for Disability Issues 'live ordinary lives in ordinary households'.

However, in this case the view was taken that the relevant provisions of the Act were clear and unambiguous. Therefore, there was no need to consider such policy matters, which should be discussed in the context of a possible Order in Council declaring certain buildings to be 'specialised accommodation'.

The section 7 definition of 'household unit' excludes 'a hostel, boarding house, or other specialised accommodation'. Specialised accommodation is defined as 'a building that is declared by the Governor-General, by Order in Council, to be specialised accommodation for the purposes of this Act'. No such Order in Council had been made, and therefore it was not possible to say that anything other than a hostel or a boarding house was 'specialised accommodation' for the purposes of the Act.

It was also decided that the terms 'hostel' and 'boarding house' could not properly be applied to the IHC house.

Conclusion

As the building could not properly be described as specialised accommodation, it had to be accepted as being a single household unit for the purposes of section 100 of the Act, and therefore would not require a compliance schedule.

However, although the building was not required to have a compliance schedule, it did need certain fire precautions, including certain specified systems. Regular inspection and maintenance of such systems was vital to ensure they could be relied on throughout the life of the building.

Decision

It was determined that the building did not require a compliance schedule. However, the decision must be read subject to any future Orders in Council declaring such buildings to be 'specialised accommodation'.

To read all the Determinations in summary or in full, go to:
www.dbh.govt.nz/e/publish/determinations_issued.shtml

New loading standard

The Department will shortly release for public consultation a proposal to reference the new joint Australian/New Zealand Standard AS/NZS 1170 Structural Design Actions in the Verification Method B1/VM1.

The proposed reference will replace the existing loading Standard NZS 4203. It will contain a number of further amendments to AS/NZS 1170 to make the new Standard suitable for use in the Verification Method. It is also proposed to remove the citation of some older Standards.

The proposed referencing of the new Standard AS/NZS 1170 recognises emerging information on hazards, particularly about wind and earthquakes.

In the 12 years since NZS 4203 was cited, knowledge of the hazard environment has developed greatly. For example, there are many areas in New Zealand where the most recent seismic data indicates that higher loads should be used in building design.

There is also better understanding of the wind environment and the hazards it presents, which is reflected in the new Standard. The new Standard also:

- increases some building design live loads
- increases traffic-barrier impact-design requirements
- simplifies wind zones in New Zealand, reducing them from seven to three
- revises specifications for snow and wind loads
- assigns higher seismic design loads for buildings of higher importance, such as hospitals and other buildings, that are expected to continue functioning after an earthquake.

The proposals include a requirement for chartered professional engineers to sign off designs based on the Standard. This measure would recognise the skills and experience that only professional engineers can bring to the building process. It is consistent with the principles behind the licensed building practitioners scheme.

The Department considers that buildings designed to the new Standard will better reflect New Zealand conditions.

The proposal is the next phase of an ongoing process for the revision of structural design requirements. Later phases will deal with design standards for concrete, steel, masonry and other materials.

The Department is seeking public comment on the proposal to reference AS/NZS 1170 in the Verification Method for Building Code Clause B1 Structure. Comments are invited from the general public, including engineers, designers, industry organisations and building users. Details of the proposal will be available on the Department's website (www.dbh.govt.nz).

Compliance Document CD-ROM amendments

The following amendments were made to the New Zealand Building Code Compliance Documents and Handbook CD-ROM for the November release.

Regulations

The following regulations have now been included.

- Building (Forms) Regulations 2004, including Amendment Regulations 1 and 2 2005
- Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005
- Building (Fee for Determinations) Regulations 2005
- Building Levy Order 2005 (PDF only)

References

The references have been updated to incorporate amendments to the C and B1 Compliance Documents.

Fire Safety (C)

The second set of 1 October 2005 amendments to C have been incorporated.

B1 Structure

The amendments to B1, effective on 1 April 2007, have been included.

Guidance documents

PDF files of a number of guidance documents published by the Department of Building and Housing have also been included:

- Constructing cavities for wall claddings
- External moisture – an introduction to weather-tightness design principles
- External moisture – a guide to using the risk matrix

LICENSING IS ON ITS WAY

To find out more or to register for the licensing electronic newsletter visit www.dbh.govt.nz

Infiltration of surfa

Surface water entering the foul water system through gully dishes can cause problems for sewer network utility operators in flood-prone areas.

Several parts of the Building Code and its Compliance Documents relate to this situation. Compliance with both E1 Surface Water and G13 Foul Water is required.

BUILDING CODE CLAUSE E1 SURFACE WATER

The Building Code Clause E1 Surface Water covers what is commonly called stormwater. There are two relevant parts.

- E1.3.1: Surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, shall be disposed of in a way that avoids the likelihood of damage or nuisance to other property.
- E1.3.2: Surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings. Performance E1.3.2 shall apply only to Housing, Communal Residential and Communal Non residential buildings.

For convenience, in this article we will call:

- an event with a 10 percent probability of occurring annually the '1 in 10-year flood'
- an event with a 2 percent probability of occurring annually the '1 in 50-year flood'.

ce water into the foul water system

E1 ACCEPTABLE SOLUTION

The E1 Surface Water Acceptable Solution E1/AS1, states:

1.0.1: This Acceptable Solution is limited to buildings and sitework having a catchment area of no more than 0.25 hectares and which are:

a) Free from a history of flooding
b) Not adjacent to a watercourse
c) Not located in a low lying area, and
d) Not located in a secondary flow path.

Comment:
Boundary fences and other site development must not significantly hamper the flow of surface water from the site.

E1/AS1 clearly states what is required to stop water entering buildings, within the scope of the Acceptable Solution that excludes flood-prone land.

2.0.1: Suspended floors and slabs on ground shall be at least 150 mm above the finished level of the surrounding ground immediately adjacent to the building, and:

a) For sites level with or above the road, no less than 150 mm above the road crown on at least one cross section through the building and roadway.
b) For sites below the road, no less than 150 mm above the lowest point on the site boundary.

The Acceptable Solution does not contain a solution for protection of other property, such as the sewer network utility operator's system.

G13 ACCEPTABLE SOLUTION

G13/AS2 states the following about surface water entering the foul water system.

3.3.1: All gully traps shall be constructed to prevent the ingress of surface water and foreign bodies likely to cause a blockage, shall be located within the legal boundary of the land on which the building is erected, and shall have:

a) The overflow level of the gully dish no less than:
i) 25 mm above paved surfaces, or
ii) 100 mm above unpaved surfaces

Comment:
It is imperative that the waste pipe connections to the gully trap remain watertight to prevent the ingress of ground/surface water.

The Department is consulting on an amendment to G13/AS2 3.3.1(a) as follows.

3.3.1: (a) The overflow level of the gully dish no less than the height required to prevent the ingress of surface water, resulting from an event having 10% probability of occurring annually, from entering and:

i) 25 mm above paved surfaces, or
ii) 100 mm above unpaved surfaces

Comment:
1. It is imperative that the waste pipe connections to the gully trap remain watertight to prevent the ingress of ground/surface water.
2. Gully dish height is required above the 1 in 10 year event to protect the network utility operator's sewer system from surcharge problems.

IN SUMMARY

All new building work must comply with the Building Code. In this case, both Clauses E1, Surface Water, and G13, Foul Water, apply.
To achieve this:

- the floor level must be as given in E1/AS1, providing the location is not within a flood prone area
- if in a flood prone area, E1/VM1 applies. Depending on circumstances, this requires the floor level to be 150 mm or 500 mm above the 1 in 50-year flood level
- the top of the gully dish must be above the 1 in 10-year flood level to meet E1.3.1. In addition, the Network Utility Operator may have further requirements to avoid damage to its network (see E1.3.3(e)).

Operations group work in progress

THE PUBLICATION PROCESS FOR:

BUILDING CODE CLAUSES

1. **Identify need for Clause change**
2. **Departmental analysis of options for change**
3. **Prepare proposal for public consultation**
4. **Public consultation**
5. **Consider comments received from consultation**
6. **Prepare Cabinet paper seeking approval of proposed change including consultation with other relevant government departments**
7. **Prepare drafting instructions for Parliamentary Counsel to draft regulations to make the change**
8. **Submit draft regulations to Cabinet for approval**
9. **Regulations made by Governor-General**

COMPLIANCE DOCUMENTS

1. **Identify need for change to Compliance Document**
2. **Appoint project manager and/ or establish working group**
3. **Prepare information for public consultation**
4. **Public consultation**
5. **Consider comments received from consultation**
6. **Prepare draft for Chief Executive's approval**
7. **Publication**

Clause B1, Structure, Concrete Standards
Stage: prepare information for public comment
Proposed citation of revised concrete Standard NZS 3101: 2006.

Clause B1, Structure, Loadings Standards
Stage: prepare proposal for public consultation
Proposed citation of new loading Standards (AS/NZS 1170 Parts 0, 1, 2 and 3, and NZS 1170 Part 5).

Clause C, Fire Safety – Type 4 and 5 alarms
Stage: prepare proposal for public consultation
Concerning the design requirements in relation to alarm systems for certain buildings.

Clause C, Fire Safety – Amendment to C/AS1
Stage: analyse public comment
Joint public consultation with Standards New Zealand to reference NZS 4541: 2006 Automatic Fire Sprinkler Systems.

Clause F3, Hazardous Substances and Processes
Stage: Prepare draft for Chief Executive's approval
Amendment to Compliance Document to comply with the HSNO Act covering the storage of hazardous liquids and gases in buildings.

Clause F4, Safety from Falling
Stage: Prepare draft for Chief Executive's approval
Amendments to Acceptable Solution F4/AS1 for publication including barrier heights.

Clause F6, Lighting for Emergency
Stage: Prepare drafting instructions for Parliamentary Counsel to draft regulations to make the change
Amendments to the Code Clause and its Compliance Document.

Clause G6, Airborne and Impact Sound
Stage: Re-drafting the Code Clause and Compliance Document to align with the Building Code Review project 8-tiered hierarchy format
A complete review of the Code Clause and its Compliance Document. Proposals contain new methods for measuring sound and new criteria for protection from environmental sound.

Clause G14, Industrial Liquid Waste
Stage: Prepare drafting instructions for Parliamentary Counsel to draft regulations to make the change
Amendments to Code Clause and Compliance Document: G14/AS1 and G14/VM1 altered, and a new Verification Method G14/VM2 for Foul Water: On-site disposal.

Clause H1, Energy Efficiency
Stage: Public consultation
Amendments include referencing AS/NZS 4859.1 for insulation materials.

Clause G1, Personal Hygiene
Clause G4, Ventilation
Clause G9, Electricity
Clause G10, Piped Services
Clause G11, Gas as an Energy Source
Clause G12, Water Supplies
Clause G13, Foul Water
Stage: Prepare draft for Chief Executive's approval
Amendments to the above list of Compliance Documents to update publications referenced and amend G1/AS1 for toilet numbers and line of sight provisions.

Learning curve

Wellington Institute of Technology
Te Whare Wānanga o te Awakairangi

Endorsed as the preferred provider of national qualifications for building officials by the Department of Building and Housing

Building Controls Legislation module now available

WelTec is currently offering a short module titled 'Building Controls Legislation'. The module will be delivered in distance learning mode with a 1-day seminar being run in eight regions around New Zealand.

Suited to existing and new building officials, the module will cover the principles and provisions of the Building Act 2004, the legal system as it pertains to local government, health and safety in the workplace, and the powers of a compliance officer. In particular you will learn how to:

- interpret the Building Act and Regulations and apply them to given projects
- understand the components of the building controls framework and their hierarchical position
- determine the criteria that will ensure construction methods comply with the intent of the Building Code
- identify the factors that influence the safety and health of building occupants
- outline the aims of the Resource Management Act in relation to building and land use.

Post-course assessments successfully completed will give credits towards the WelTec Diploma in Building Surveying (2005) and the new National Diploma in Building Controls when it becomes available.

Fee:
$731 including GST
Discount may apply to cohort enrolments
For further information contact
Weltec
0800 935 832

BRANZ, CONSTRUCTION INDUSTRY TRAINING ENTERPRISE (CITE)

2007 COURSES

Access, Egress & Barriers

This three-day course is designed to give you the technical skills to inspect and report on Clause D1 Access Routes, Clause C2 Means of Escape, Clause F8 Signs, and F4 Safety from Falling, for Building Warrant of Fitness purposes. This is an ideal course if you want to include these clauses on your current IQP/LBP registration or if you want to become an IQP/LBP.

Dates	Location
16–18 April	Auckland
6–8 June	Wellington

Cost: $1,540 including GST

Building Compliance for IQPs/LBPs

This three-day course will provide knowledge and understanding of the building controls regime for building warrant of fitness purposes. It will also outline the duties and responsibilities of an IQP/LBP and their professional relationship with building owners.

This course will provide evidence to territorial authorities that an applicant requesting LBP/IQP status has the requisite knowledge in building compliance to act competently and professionally as an IQP/LBP.

Dates	Location
7–9 March	Auckland
21–23 May	Christchurch

Cost: $1,540 including GST

Building Controls

This ten-day course is designed to provide those working in building controls, or wanting to go into building controls, with knowledge and understanding of the building controls regime, legislative background, duties, responsibilities and associated processes. This course is very popular with councils who see it as a beneficial and cost effective method for inducting new staff members into the job.

Dates	Location
Week 1: 19–23 February	Auckland
Week 2: 19–23 March	Auckland
Week 1: 14–18 May	Christchurch
Week 2: 18–22 June	Christchurch

Cost: $3,995 including GST

Domestic Sprinkler Design

This two-day course provides the skills necessary to design and oversee the installation and testing of a combination domestic plumbing and fire sprinkler system.

Certificate holders will be qualified to design combination domestic plumbing and fire sprinkler systems. They will be able to provide building consent authorities with producer statements for the design and installation of domestic fire sprinkler systems for building consents and code compliance certificates.

Certificate holders will be listed on the BRANZ website for homeowners considering installing a combination domestic sprinkler system.

Dates	Location
14 & 15 March	Wellington
18 & 19 April	Christchurch

Cost: $1,100 including GST

Fire Design

NZQA approved course

This eight-day course will provide students with the skills necessary to develop a fire design solution for any building that will comply with the Acceptable Solution for NZBC Clauses C1, C2, C3 and C4. It will also provide guidance on the limits of the Acceptable Solutions and enable the designer to seek advice from a fire engineer when an alternative solution might provide a more economic or practical solution.

Dates	Location
Week 1: 20–23 February	Wellington
Week 2: 20–23 March	Wellington

Cost: $3,945 including GST

Learning curve *continued*

Weathertight Design

Accredited by the New Zealand Registered Architects Board for 90 CPD points

This eight-day course will provide students with the skills necessary to design and/or assess alternative solutions for weathertightness that comply with the NZ Building Code performance requirements for E2 External moisture. It will cover the theory behind the solutions and how this may be applied to real building situations. Students will tackle real problems and be given 'hands on' instruction on whole or parts of buildings in order to design or assess weathertight and buildable details in a way that is sympathetic with the aesthetic intent of a building design. Those qualifying will meet the requirements of a 'weathertightness specialist' as required for specific weatherthightness design.

Dates	Location
Week 1: 26–28 February	Christchurch
Week 2: 26–30 March	Christchurch
Week 1: 7–9 May	Auckland
Week 2: 11–15 June	Auckland

Cost: $3,945 including GST

Further information

For further information please visit our website
www.branz.co.nz (CITE Industry Training)
branzcite@branz.co.nz
Natasha Breen
(CITE Administration Officer)
(04) 238 1291

SCHEDULE OF TRAINING SEMINARS – 2007

"The Accessible Journey"
Accessibility for all New Zealanders

Seminar type	Location	Dates
2-day Seminar	Tauranga	15–16 March
2-day seminar	Wellington	30 April–1 May
Refresher	Wellington	2 May
Refresher	Christchurch	23 May
2-day seminar	Christchurch	24–25 May
2-day seminar	Auckland	25–26 June
Refresher	Auckland	27 June
2-day seminar	Wanganui	19–20 July
2-day seminar	Nelson	13–14 Sept.
2-day seminar	Manukau City	19–20 Nov.

Cost of two and one day seminars:
Includes copy of Barrier Free NZ Trust Resource Handbook for Barrier Free Environments.

Seminar Type	Cost (excl) GST	Cost (incl) GST
2-day course	$400.00	$450.00
Specialist 1-or 2-day course	Rate negotiable with any interested organisation, company, territorial authority	
1-day refresher course	$226.00	$254.00

Refresher Courses: Three one day refresher courses will be held this year. Only BFAs and those who have attended a two day seminar will be eligible to register. These one day courses are up-dates on legislation and case studies.

Minimum Numbers: All Barrier Free Trust events require minimum numbers of attendees to be registered for a given location, 14 days prior to the event. If minimum numbers are not reached by this date a general email will be sent to all on our data base giving notice of possible cancellation. If minimum numbers are still not reached after one week and the event is cancelled potential attendees will be advised of this and options available at alternative locations or alternative arrangement will be made.

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04 915 5848 or 027 240 7502
Fax: 04 915 5849
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www.barrierfreenz.org.nz

Barrier Free
NEW ZEALAND
TRUST

Important changes to BIA website
The content previously available on the Building Industry Authority website (www.bia.govt.nz) is now located within the Department of Building and Housing website:
www.dbh.govt.nz

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 advisers.

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