



codewords

SmarterHomes – helping New Zealanders build, and live, more smartly

A new website designed to help New Zealanders live in healthier, cosier and more cost-effective homes is up and running.

Whether you're building your dream home, doing up an existing one or looking for easy ways to improve your quality of life, the *SmarterHomes* website offers advice on how to have a home that's 'smarter' in every sense of the word.

Tips on smart design, building and the way you live in your house will give you the benefits of a healthier, more energy-efficient and cheaper-to-run home.

Smart homes sell

Smarter homes are the way of the future. Increasingly, home buyers and renters are demanding homes that are energy-efficient, comfortable, healthy and enjoyable to live in. By understanding what home owners and occupiers are seeking, you'll be setting your business up for a more prosperous future.

WHAT IS A SMART HOME?

A smart home creates less waste, uses less energy, costs less to run and is warmer, drier and healthier to live in. Smart homes are a good investment and will last well into the future while being kind to the environment.

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Smart homes need not cost more or be less comfortable. In fact the opposite is true. For example, orienting a new home to capture the free heat and light of the sun is a simple and cost-free thing to do at the design and construction phase. Adding insulation when re-lining walls during renovation will add little to the total cost of the work, but will reduce annual heating bills and increase the warmth of a home for years to come. Features like double-glazing or a solar hot water system are more expensive initially, but these costs can be recovered through lower energy bills over time.

It's also hard to put a dollar value on the improved comfort, warmth and health that can result for New Zealand families.

WHY SMARTERHOMES?

Everyone wants to live in a healthy, warm and dry home that's affordable to run. And we all want to play our part in reducing environmental impacts.

The sheer variety of available information in the marketplace means we often don't know where to start. Choosing the smartest products, systems, procedures and practices can be challenging. And of course, each home is as different as the needs, interests, values and priorities of the people who live in them.

SmarterHomes has been designed to cut through all the information clutter when making decisions about building, renovating, buying or renting a home. The website provides authoritative, objective advice, enabling people to make the choices that are right for them. It includes a HomeSmarts Calculator so that users can customise their searches and information needs according to budget priorities, current renovation or building projects, and major problems they want to solve in their homes. The calculator also allows users to prioritise these issues and problems by running a simple home health check.

WHO IS SMARTERHOMES FOR?

SmarterHomes is for anyone who owns or rents a home, is looking to buy or build a new house, or is renovating their existing home. It provides authoritative and objective information to help in decision-making when selecting materials or choosing a new home and provides links to information that will help with the technical details involved.

WHAT INFORMATION DOES SMARTERHOMES PROVIDE?

SmarterHomes provides information on energy efficiency, water efficiency and passive design solutions to make the most of the sun's free heat and energy. It offers advice on how to design a healthy home that has lower energy bills each month, selecting water and energy-efficient appliances and heating systems, and reducing moisture (hence mould and mildew) in the home. It provides wide-ranging tips from simple things people can do to improve their home at little or no cost, to easy fixes and worthwhile investments that need the input of building professionals. The site also gives advice on landscaping, selecting materials and construction methods.

There are plenty of examples, case studies and tools to help people make the right choices for their specific projects.

SmarterHomes

(www.smarterhomes.org.nz) was developed to form a wider resource in combination with two other websites:

Consumer Build

(www.consumerbuild.org.nz), a one-stop shop for consumer advice on building, renovating and maintaining homes; and **Level** (www.level.org.nz), a more technical resource for industry professionals.

Letter to the Editor

Smart homes are good for the environment

Housing significantly affects the environment. Residential buildings in New Zealand consume 12 percent of the nation's total energy and a large proportion of water. The materials used in homes, from framing timber to carpets, draw on natural resources – the manufacture, transportation and eventual disposal of these materials all place pressure on the environment.

Smart homes are kinder to the environment. If we save energy in our homes we reduce the demand for electricity, so that less needs to be made from burning fossil fuels such as coal (a process which emits the greenhouse gas carbon dioxide into the atmosphere, leading to climate change).

If we use less water in our homes, this helps to protect waterways and reduce the need for new dams and reservoirs.

Smart homes are also designed well and use sustainable building materials, so that they are less wasteful and less harmful to the ecosystems around them.

Smart homes are better for our health

New Zealand houses are well-known for being colder than the recommended temperatures for a healthy living environment. Warmer homes are much better for our health, and heating your home doesn't have to cost the earth if you do it smartly.

A recent Wellington School of Medicine study confirmed cold homes affect our health and that warmer homes create a far healthier environment.

The study looked at people living in uninsulated houses who had recent symptoms of respiratory illness and measured the impacts after some of their homes were insulated.

The people living in insulated houses reported feeling generally better, took fewer days off work or school, had reduced coughing and wheezing, and made fewer visits to their doctor. The study also found that insulated houses were significantly warmer and drier and used nearly 20 percent less energy than uninsulated homes.

QUESTION

Weathertightness requirements for garage doors

In the February 2007 edition of *Codewords* (Issue 018), in the article *Weathertightness requirements for garages*, you said that:

garage door-to-frame details are not included in E2/AS1 and must be considered separately. Such considerations would be limited to ensuring any leakage around garage doors does not result in damage (deterioration) to the garage or house, or dampness in the house.

Question: Does this mean that only the most weather-resistant garage doors should be used, or should we just screw garage doors shut to avoid them being left open?

ANSWER

The Building Code Clause E2.2 states '*Buildings shall be constructed to provide adequate resistance to... moisture from the outside.*' The performance requirement E2.3.2 requires (garage doors to) '*prevent the penetration of water that could cause undue dampness or damage to building elements*'.

The word 'undue' is important here. Weathertightness for many situations does not need to be to the same levels required for health in habitable spaces.

Garage doors must be considered suitable for Building Code purposes if they adequately prevent moisture from deteriorating the surrounding framing (or if the framing has enough compensating durability) and any water that gets past the doors cannot migrate to places where it could cause dampness or damage.

Under the Building Code, it wouldn't matter if a small amount of water splattered through a garage door onto the car or the floor of the garage in normal circumstances, as this would be unlikely to result in undue moisture for the garage.

As far as we are aware, most proprietary garage doors are capable of adequately meeting Building Code requirements in normal situations. However, in some special situations (for example, garages above habitable spaces), more careful weathertightness of the garage might need to be considered.

Weathertightness of garage doors is simply a question of what is appropriate. This is something designers must assess, and officials be satisfied of on reasonable grounds.

Building consent authority scheme updates

ACCREDITATION ASSISTANCE PACKAGE

More than \$1.3 million has so far been allocated from a \$3 million government fund to help territorial and regional authorities (councils) prepare for accreditation as building consent authorities by 30 November 2007.

The most common projects for which councils have sought external assistance and support have related to:

- how to customise systems and processing documents
- how to undertake competency assessments
- exchange of information and support between councils
- examples of competency frameworks and technical libraries
- guidance on transferring or contracting options for councils that want to participate in alternative arrangements to accreditation (for example, transferring their statutory functions).

Some councils have used the assistance package for project management and guidance.

The package, administered by the Department of Building and Housing, is also being used to support training workshops to explain accreditation requirements and to support the use of case advisors to help councils assess what they need to do, and what help they may need, to achieve accreditation. Ten workshops were held in the first round from March to May. A further series began in mid-June, focusing on information-sharing, particularly in terms of process requirements for accreditation.

The Department has established a list of providers available to help councils to prepare for accreditation. Knowing who is available around the country to do certain types of work is expected to streamline the process for councils needing help but having trouble finding the exact service they want.

The list is available from the Department's case advisors, though it is councils' responsibility to check the credentials of any provider they are considering engaging.

Local Government New Zealand (LGNZ) has set up a web page where councils can share information and project reports about accreditation preparations – <http://www.lgnz.co.nz/projects/building-consent/AccreditationResourceKit.html>

ZONE MEETINGS

The Department's Chief Executive, Katrina Bach, and the Deputy Chief Executive Sector Capability, Bruce Girdwood, have attended four LGNZ zone meetings covering five zones to talk to council chief executives, mayors and councillors about the accreditation process.

They stressed the importance of senior management taking

a leadership role in their council becoming accredited and offered the Department's assistance in any way possible. The main issues raised at the zone meetings were:

- where liability rests if councils transfer some or all of their building control functions
- a lack of understanding, or misunderstanding, of initial accreditation requirements
- whether International Accreditation New Zealand (IANZ) has the capacity to undertake all assessments and accreditation in time.

The Department has been in constant contact with councils to address these issues. Senior management have also been visiting councils that are working hard and making progress towards accreditation, but may have some challenges achieving it, to see what further help the Department can provide.

APPLICATIONS FOR ACCREDITATION

Sixty-nine councils had applied to IANZ by early July for assessment for accreditation as building consent authorities.

IANZ is working through the assessment process with them, beginning with an off-site review of their documentation, followed by site visits for formal assessment and identification of corrective action. When IANZ is satisfied with the corrective action, it makes a recommendation for accreditation to an internal review body.

Several councils are close to being accredited. ANZ provides feedback on its assessment processes for common and regulation-specific issues, which the Department disseminates to councils via workshops, case advisors and building control updates to help them prepare for accreditation.

CONSULTATION ON REGISTRATION STANDARDS AND CRITERIA

Submissions on proposals for regulations to set standards and criteria for the registration of building consent authorities are now being analysed.

Submissions on the consultation paper *Building Consent Authority Registration Standards and Criteria Proposals* closed in early June.

The paper focused on requirements that applicants for registration be 'fit and proper' to undertake building control work. The requirements will cover both councils and private building consent authorities. However, the latter will have to provide more information than councils, reflecting the fact that councils are already well-established and have building controls experience. The focus in considering private organisations for registration will be on whether they operate their businesses in ways that provide a high standard of consumer protection.

The proposals include a fee of \$5,570 (GST exclusive) for private organisations to be registered. The major part of this cost is specialist expertise to check whether private organisations fulfil the Building Act requirement that they have 'adequate means' to meet civil liabilities. The estimated \$21,000 cost of registering all councils will be absorbed by the Department.

When the submissions have been analysed, the Department will make recommendations to the Government on regulations setting out the standards and criteria for registration, the form and content of registration application forms, and the registration fees.

Subject to parliamentary processes, the Department is working towards having the regulations in place by October 2007.

Dam safety regulations being developed

Regulations are being developed for a dam safety scheme as part of the wide-ranging reforms of the Building Act 2004.

The scheme seeks to ensure that dams are kept safe, the need for which is highlighted by New Zealand's seismic instability and the possibility of increased flooding as a result of climate change. The greater the potential impact, in terms of the dam's size and proximity to where people live, work and play, the more stringent safety compliance will be.

Dams will be categorised as low, medium or high potential impact, with medium and high potential impact dams requiring a dam safety assurance programme.

About 1150 'large' dams will be affected. 'Large' will be regarded as having a capacity of 20,000 cubic metres, which is about the size of eight Olympic-sized swimming pools or a rugby field with water up to the crossbar. Councils own about 700 of these dams, about 50 are owned by power generation companies and the remaining 400 or so are on rural properties.

A summary of submissions received to a consultation paper *Regulations for the Dam Safety Scheme: Discussion Document* is being prepared for sending to the 58 individuals or organisations that made submissions, and to other interest groups.

Submissions are being taken into account in the development of regulations setting out the fine print of the scheme and its technical detail.

The major change proposed as a result of consultation is for a 2-year lead-in time, rather than the originally proposed 3 months, before the regulations take effect. This will give dam owners, the engineering profession (particularly the Institution of Professional Engineers New Zealand) and regional councils adequate time to prepare for the scheme. It is proposed that dam owners will have 3 months from that date to meet the requirements of the scheme in terms of having their dam's potential impact level certified.

The Department is targeting providing draft regulations to the Government for consideration in August/September.

Technical reviews of territorial authority

Technical reviews of territorial authority building control units are one of the ways the Department of Building and Housing fulfils its responsibility for monitoring and reviewing how territorial authorities and building consent authorities perform their functions, duties, and powers under the Building Act 2004.

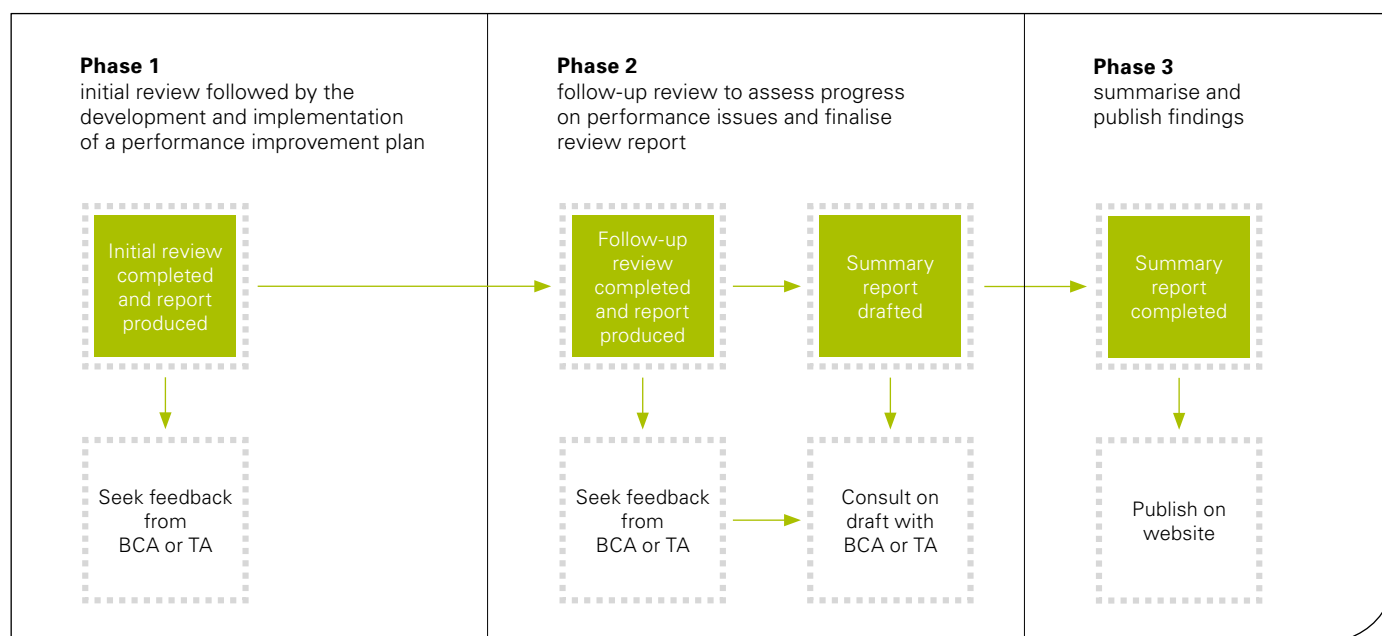
Technical reviews are also undertaken to help these organisations improve and fulfil their obligations under the Act. They are a key tool to assist organisations to:

- enhance the performance of their building control activities
- implement appropriate systems, processes and resources, so they can carry out their building control operations effectively and more efficiently
- effectively fulfil their obligations under the Building Act and building regulations.

Technical reviews usually involve a three-phase process designed to help territorial authorities improve their regulatory building control

operations. They are carried out by the Department's Consent Authority Capability and Performance Group and usually take about 18 months. Technical reviews examine a territorial authority's or building consent authority's building control operations under 18 broad terms of reference. This involves an initial visit and a follow-up visit about 12 months later. The final phase of the review process involves producing a public summary report identifying the main findings and recommendations, and the territorial authority's response to those findings, across all phases of the review. Figure 1 below summarises the technical review process.

Figure 1: Overview of the technical review process



FINDINGS OF RECENT TECHNICAL REVIEWS

During the past 12 months, the Department has conducted technical reviews of the building control units of six territorial authorities. The organisations reviewed reflect a mix of small, medium and large territorial authorities. They were:

- Wellington City Council
- Selwyn District Council
- Franklin District Council
- Waitakere City Council
- Porirua City Council
- Ruapehu District Council.

The technical reviews identified recurring issues, such as the challenges of ensuring building work complies with all aspects of building law, limitations in the collective technical skills and experience of building control units, resourcing and capacity concerns, and building control operational policy and quality control issues.

On a positive note, the technical reviews identified a number of improvements in building control processes in some of the territorial authorities assessed. These include a range of good practice initiatives, such as improved consent vetting, and improved policies and procedures to underpin building control work.

The reviews conducted over the past year also highlighted a number of recurring performance issues. In general, the councils assessed needed to:

- strengthen methods for assessing staff competence by developing a technical skills competency assessment system and matrix records
- strengthen the technical knowledge and expertise of building control staff by providing additional training and outsourcing work where the requisite in-house capability is unavailable
- implement quality assurance processes (such as peer review and internal audits of completed work) at all relevant stages of consent processing, approval and inspection
- employ additional building control staff to ensure that sufficient capacity is available in all operational areas to meet the demand for building control services
- ensure that adequate formal policies and procedures are developed to underpin all aspects of their building control operations
- ensure that compliance with the Building Code is consistently achieved at all stages of the consent processing and inspection, particularly in relation to fire compliance, and access and facilities for people with disabilities.

A number of performance shortcomings have often emerged where these issues have not been addressed by building consent authorities. These have included councils approving building work which does not meet all the clauses of the Building Code (and other legislative requirements) and consent applications with poor quality or incomplete supporting documentation (for example, missing the necessary weathertightness detailing).

Many of the key findings reflect challenges common to almost all council building control units. Other councils that have not recently been reviewed by the Department may find the summary reports of council reviews useful. These are available on the Department's website. The technical review process and review findings may also prove beneficial to organisations preparing for building consent authority accreditation.

The summary technical review reports of councils that have been reviewed are posted on the Department's website at: www.dbh.govt.nz/technical-reviews

New rules for timber framing for housing

On 1 April 2007 the Compliance Document for B1 Structure was changed. The new version cites Amendment 2 of the Standard NZS 3604.

Builders need to know about this change because it affects the type of timber that can be used in housing framing.

MAIN CHANGES

No. 1 Framing timber can still be used, but the required sizes, spacings and spans have changed.

It is now an option to use verified VSG or MSG timber.

There are three groups of timber grades:

- No. 1 Framing or MSG 6
- VSG 8 or MSG 8
- VSG 10 or MSG 10.

Both grades in each group are equivalent for the purposes of NZS 3604.

All timber sizes are now described by their actual size (eg, 90 x 45 mm), rather than the call size previously used (eg, 100 x 50 mm).

Wet timber is specifically mentioned for use in certain places, such as on decks.

Amendment 2 gives options for replacing larger member sizes with smaller ones (which are more commonly available). These options require either closer spacings or built-up members.

FOLLOW THE PLANS

This is the key advice for builders. You must follow the consented plans and specifications for a building project otherwise Code compliance may not be achieved, and the code compliance certificate (CCC) could be refused.

Plans and specifications must nominate the grade of timber, as well as show all other necessary information, such as size, span and spacings.

Verified timber must be marked with certain minimum information at 1500 mm centres, including the grade and the auditor. If the auditor's mark is not present, the timber is not verified – don't use it.

SWITCHING PRODUCTS

Switching products *within* a grouping (eg, using VSG 8 in place of MSG 8) is acceptable in terms of NZS 3604, and therefore would comply with the Building Code, but any substitution should be checked with the owner/designer first.

A further word of caution. The building consent authority can refuse to issue a code compliance certificate if the finished work does not exactly match what was consented in the original plans. So, check with it first, before making any change.

Switching products *between* groupings (for example using MSG 8 in place of MSG 10) is not acceptable without first obtaining approval from the owner/designer and the building consent authority. A change like this would require an amendment to the building consent.

PLANNING AHEAD

Designers should check the availability of particular grades of timber before specifying them on the plans and specifications. Because certain grades are not always widely available, it's wise to place orders as early as possible.

If the plans and specifications specify different grades in different places, be sure to keep these grades separate on site. Mixing them up could be costly.

If the building consent was granted before April 2007 and was based on Amendment 1, there is no legal need to upgrade the design to Amendment 2.

MORE HELP

For more information on the grading of timber framing call the Department's contact centre on 0800 242 243 or visit www.dbh.govt.nz

Durability vs warranty

A product warranty is usually a written promise to replace or repair a product or work, if necessary, during a specified period. Usually, the company manufacturing or selling the product provides the warranty to the buyer. Durability, on the other hand, is about people's reasonable expectations that, subject to normal maintenance, a product will last for a specified number of years.

Consider, for example, a motor car. New cars are usually sold with a 3-year warranty. This is the manufacturer's undertaking that it will accept responsibility for any faults that happen within that time. However, most people would expect a new car (based on how earlier models have performed, knowledge of the manufacturer, and the competitiveness of the marketplace) to still be on the road in 10 to 15 years, subject to normal maintenance. Therefore, 10 to 15 years is the expected durability of the new car.

In this article, we explain the difference between the Building Code durability requirements and two different types of warranties for building work – product warranties and implied warranties.

DURABILITY

The Building Code sets the required durability standard for building work. Clause B2 Durability aims to ensure that buildings are durable enough so all other objectives of the Building Code are satisfied throughout the life of the building without needing reconstruction or major renovation.

Required durability periods for building elements

To comply with the Building Code, building elements must, with normal maintenance, continue to satisfy Building Code performance requirements for the following periods (or the specified intended life of the building, if shorter).

The life of the building, being not less than 50 years, for building elements:

- that provide structural stability to the building (for example, floors, walls, and fixings)
- that are difficult to access or replace
- for which failure to comply with the Building Code would go undetected during the building's normal use and maintenance.

The life of the building, being not less than 15 years, for building elements:

- that are moderately difficult to access or replace (for example, the building envelope, exposed plumbing in the sub-floor space, and in-built chimneys and flues)
- for which failure to comply with the Building Code would go undetected during the building's normal use, but would be easily detected during maintenance.

The life of the building, being not less than 5 years, for building elements:

- that are easy to access and replace (for example, services, linings, renewable project coatings, and fixtures)
- for which failure to comply with the Building Code would be easily detected during the building's normal use.

Assessing building product durability

Designers and builders recommend the use of building products based on their opinions that those products will meet Building Code durability requirements. In assessing the durability of building products, regard should be given to:

- appraisals
- history in use
- manufacturers' technical literature
- reputation of the manufacturer
- the product's warranty (which may be provided by the manufacturer).

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A building consent authority may be satisfied that a product complies with Clause B2 Durability despite there being no product warranty. Although a product warranty can be considered (for example, if the manufacturer is willing to replace its product for a period equal to its required durability), a warranty cannot be the sole criteria for assessing durability.

Warranties do not ensure durability

The existence of a product warranty does not mean the product will necessarily be durable or last for a certain number of years. Rather, a warranty only helps to repair or replace the product when there are problems, or to compensate for any damage. Additionally, a warranty for several years is worthless if the company offering it goes into liquidation.

PRODUCT WARRANTIES

Product warranties only apply when voluntarily offered by the manufacturer, installer, or other business providing the product. These types of warranties are based on either representations made by, or a contract with, the person or company providing the product or service.

The party providing the warranty usually decides the warranty period as well as the terms and conditions for the warranty.

IMPLIED WARRANTIES UNDER SECTIONS 396-399 OF THE BUILDING ACT 2004

Implied warranties are different from product warranties because they are duties that can arise automatically without a guarantee ever being offered.

New consumer protection measures set out in sections 396 to 399 of the Building Act 2004 offer homeowners increased protection by ensuring various warranties are implied into certain contracts regardless of whether the warranties are specified in the contract.

The warranties are implied despite any provision to the contrary in any agreement or contract.

When do the implied warranties apply?

These 'implied warranties' only exist in certain circumstances. The warranties apply to two types of contracts for:

- building work on household units
- sale of household units by a residential property developer.

The warranties will only be implied into contracts of these types if the contract was entered into from 30 November 2004, the main commencement date of the Building Act 2004.

The contract need not be written for the implied warranties to apply. The warranties are also implied into contracts that arise from an oral agreement or understanding (for example, a verbal contract for building work on someone's house).

What are the implied warranties?

The implied warranties for products are:

1. All materials supplied for use in building the household unit:
 - will be suitable for the purpose they are used, and
 - will be new (unless otherwise stated in the contract).
2. If the contract states a purpose or result expected by the owner, the building work and materials will be:
 - reasonably fit for that purpose
 - of a nature and quality reasonably expected to achieve that result.

There are also implied warranties relating to the way in which building work is done. These are:

1. The building work will be done:
 - in a proper and competent manner
 - with reasonable care and skill
 - according to the plans and specifications in the contract
 - according to the building consent
 - according to all laws and legal requirements (this includes the Building Act 2004 and the Building Code).

2. The building work will be completed by the date specified in the contract (or if no period or date is specified, within a reasonable period).
3. The household unit will be suitable for occupation when building work is complete.

Claims for breach of implied warranties

The contractor (in a contract for residential building work) or the residential property developer (in a contract for sale of a household unit), is responsible for ensuring that he or she meets each of the implied warranties. Breach of the implied warranties would be considered a breach of contract.

The recourse for breach of contract depends on the circumstances of the particular case, but are likely to include monetary damages based on the nature of the loss suffered.

The period for an owner to bring action for breach of contract is 6 years from the date of breach.

Not only the original owner, but also future owners of the household unit to which the contract applied, are entitled to enforce the implied warranties as if they were a party to the original contract (section 398).

HOW PRODUCT WARRANTIES, IMPLIED WARRANTIES AND CLAUSE B2'S DURABILITY REQUIREMENTS INTERRELATE

Whether product warranties or implied warranties apply and how they relate to the Building Code durability requirements in any particular circumstance must be considered case by case.

However, the following points provide a useful general guide.

- The existence of a product warranty does not itself mean the product necessarily meets the durability requirements under Clause B2 of the Building Code. While the product warranty is something that can be considered when assessing durability, other relevant matters should be considered.
- A product warranty may help to repair or replace the product when there are problems, or compensate for any damage.
- Product warranties, which are voluntarily offered by a business, are different from the Building Act's 'implied warranties'. A contractor for residential building work or a residential property developer has no choice about whether to offer the implied warranties.
- If a product fails because it was used for the wrong purpose, it would not be a breach of the manufacturer's product warranty, but may be a breach of the contractor's or residential property developer's implied warranty that the materials used in building the household unit will be 'suitable for the purpose'.

- Where a product is faulty, as well as any claim under the implied warranties the product was not 'suitable for purpose', a homeowner may have a separate claim against the manufacturer under any manufacturer product warranties the owner relied on.
- If building work by a contractor or residential property developer does not meet Building Code durability requirements, the contractor or developer could also be in breach of contract for failing to comply with some of the implied warranties (for example, failing to do the work according to legal requirements, failing to do the work in a 'proper and competent manner' with 'reasonable care and skill', or failing to use materials that are 'suitable for the purpose they are used').

DISCLAIMER

This article is not a substitute for legal advice. This article is published as general guidance only. If you have questions about application of the law to a particular set of circumstances, the Department recommends that you seek independent legal advice.

Regulatory building control accreditation in the US

New Zealand is not the only nation to use an accreditation model to regulate building control functions: it is also used as a quality assurance mechanism in countries like the United States.

Since January 2005, the International Accreditation Service (IAS) has offered accreditation to building control departments of city and county councils in the US. The IAS is an internationally recognised accreditation agency for inspection bodies and laboratories, and its programme provides national recognition that building control departments are professionally qualified and competent.

Accreditation is voluntary in the US and is promoted as good business practice, especially given the more litigious system in which building control departments operate. This is a different driver from New Zealand (where building control departments are required to be accredited as building consent authorities under the Building Act 2004). Although the motivation for seeking accreditation is different, there are many similarities, especially in the accreditation standards and assessment process.

Accreditation standards and criteria

The IAS has a similar role to International Accreditation

New Zealand (IANZ), the statutorily appointed accreditation body for New Zealand's building consent accreditation scheme. Both assess applicant organisations against a set of standards and criteria: in the US it is the international standard ISO 17020 *General Requirement for the Operation of Various Types of Bodies Performing Inspection*. This standard has 74 criteria covering the following areas:

- administrative requirements
- independence, impartiality, integrity and confidentiality
- organisation and management structures and responsibilities
- quality assurance management systems
- personnel skills and technical competencies
- facilities and equipment
- inspection methods and procedures
- records management
- inspection reports and inspection certificates
- contracting
- complaints and appeals.

ISO 17020 was the standard originally proposed for New Zealand's accreditation scheme. However, after feedback it was tailored to the needs, capacity and capability limitations of the New Zealand local government sector.

WHAT CAN NEW ZEALAND LEARN FROM THE US EXPERIENCE?

Department representative Malcolm MacMillan, Manager Performance Monitoring and Review, visited IAS, Las Vegas City Council and Henderson City Council in December last year to look at the

US accreditation experience and bring the lessons learnt back to New Zealand.

Many of the accreditation issues in the US mirror those experienced by the New Zealand regulatory building control sector during the transition to the new scheme.

Timing

Las Vegas City Council and Henderson City Council found the preparation, assessment, and approval process for accreditation to ISO 17020 took several months. The work was substantial, and the initial assessments by IAS required the building control departments to make a number of corrective actions. It then took time to develop and implement the systems required by ISO 17020. Many of the 22 organisations now being assessed have had similar experiences. The lesson to be learned here for New Zealand's building control sector is get applications in as soon as possible so there is time to make corrective actions and achieve accreditation.

Benefit to be gained through accreditation

Accredited councils identified the following positive outcomes:

- increased and improved staff training and continuing professional development
- more workable budgets and better planning processes
- increased support and resources for management and staff, including additional staff
- improved documentation and technology
- an enhanced processing system that has resulted in an appropriate level of procedural requirements (rather than too many, or procedures that go beyond what are necessary)
- refined and improved risk management practices leading to improved confidence for organisational insurers, and a better way of managing potential legal action.

Key success factors to achieving accreditation

The relationship between the IAS and the organisation seeking accreditation underpinned many of the successful aspects of the scheme. Working as a team led to better accreditation outcomes. Specific key success factors included:

- carrying out any recommendations made by IAS during initial assessments before the on-site assessment visit (for example, that organisations began corrective actions as soon as these were identified)
- the high level of support offered by IAS to building control departments during the assessment process
- the developing trust between IAS and the building control department, which led to increased support for the changes requested by IAS
- providing additional training in operational systems and processes for employees and building control department contractors
- providing better technology to ease workloads and to cater for extra staff
- IAS maintaining support, guidance and advice to the building control department throughout the accreditation process.

MORE INFORMATION

More information about accreditation of building control departments can be found at www.iasonline.org

More information about New Zealand's accreditation and registration scheme can be found at www.dbh.govt.nz Alternatively, you can call the Department's Building Consent Authority Accreditation project team on 0800 242 243.

Changes to Building Code Clauses E2, F4, F6 and G13/G14

Several unrelated changes to Building Code Clauses came into effect on 21 June.

CLAUSE E2 EXTERNAL MOISTURE

The changes make weather-tightness requirements clearer. It is now clear that building elements close to the ground, and not only those in contact with the ground, must not absorb water likely to cause damage or dampness. Wall cavities now need to be constructed to prevent fungal growth as well as condensation and degradation. The clause now requires designers to also consider material variability and the way in which construction occurs so that weathertightness problems are prevented.

CLAUSE F4 SAFETY FROM FALLING

The clause now bans safety barriers that can be readily used as seats in public places.

CLAUSE F6, FORMERLY LIGHTING FOR EMERGENCY, NOW VISIBILITY IN ESCAPE ROUTES

The clause has been completely rewritten to make New Zealand building users safer in emergencies. It strengthens and clarifies the requirements for occupant safety in emergencies in line with international best practice. The clause now allows the use of the latest way-finding systems – photo-luminescent strips, directional markings and light emitting diode strips – as well as normal emergency lights. Way-finding systems have seen major technological advances in recent years and are used increasingly overseas.

For example, New York City now requires the use of mixed emergency lighting and way-finding systems because of the September 11 terrorist attacks.

Under the new clause, there must be enough visibility in the building when the main lights fail, for evacuation and to avoid panic amongst building users. The amendments mean building elements (stairs, doors, etc.) will need to be visible from 10 metres in an emergency.

CLAUSE G13 FOUL WATER AND CLAUSE G14 INDUSTRIAL LIQUID WASTE

Several minor technical updates have been made to the clauses, clarifying the performance requirements for on-site disposal of foul water (septic tank systems) and the storage, treatment and disposal of industrial liquid waste.

The details of the changes and the updated clauses are available on the Department's website, www.dhb.govt.nz

Building Standards 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

B1 Structure - Concrete Standards

Proposed citation of revised concrete Standard NZS 3101: 2006 in Compliance Document B1.
Stage: Preparing information for public comment.

B1 Structure - Loading Standards

Proposed citation of new loading Standards (AS/NZS 1170 Parts 0, 1, 2 and 3, and NZS 1170 Part 5) in Compliance Document B1.
Stage: Public consultation closed on 16 March 2007. Analysing public comments.

B1 Structure - Masonry Standards

Proposed amendment to Compliance Document B1 by updating the masonry design Standard to NZS 4230: 2004.
Stage: Public consultation closed on 3 April 2007. Analysing public comment.

C Fire Safety – Type 4 and 5 alarms

Proposed amendments to Compliance Document C, concerning the design requirements for alarm systems in certain buildings.
Stage: Public consultation closed on 13 April 2007. Analysing public comment.

C Fire Safety – Sprinkler systems

Joint public consultation with Standards New Zealand over proposal to reference NZS 4541: 2006 Automatic Fire Sprinkler Systems in C/AS1.
Stage: Analysing public comment.

E2 External Moisture

Amendments to Code Clause E2.
Stage: Changes to Code Clause E2 came into effect on 21 June 2007.

F4 Safety from falling

Amendments to Code Clause F4.
Stage: Changes to Code Clause F4 came into effect on 21 June 2007.
Amendments to Acceptable Solution F4/AS1, concerning barrier heights.
Stage: Published on 22 March 2007.

F6 Lighting for emergency

Amendments to Code Clause F6 and Compliance Document F6.
Stage: Changes to Code Clause F6 came into effect on 21 June 2007.
Amendments to Compliance Document for Code Clause F6.
Stage: Transitional Compliance Document came into effect on 21 June 2007.
Consultation on new Compliance Document closed on 21 June 2007.

F7 Warning systems

Proposed amendments to Compliance Document F7, concerning the design requirements for alarm systems in certain buildings.
Stage: Public consultation closed on 13 April 2007. Analysing public comment.

G4 Ventilation – Apartment ventilation

Amendment to G4/AS1, relating to the ventilation of apartments with one external wall.
Stage: Public consultation closed on 13 April 2007. Analysing public comment.

G6 Airborne and impact sound

A complete review of Code Clause G6 and Compliance Document G6. Proposals include new methods for measuring sound and new criteria for protection from environmental sound.
Stage: Preparing cost benefit study.

G13 Foul Water and G14 Industrial liquid waste

Amendments to Code Clauses G13 and G14
Stage: Changes to Code Clauses G13 and G14, a new Verification Method for on-site disposal (G13/VM4) and a new G14 Compliance Document. All came into effect on 21 June 2007.

H1 Energy efficiency

Proposed amendments to Code Clause H1 and Compliance Document H1, relating to insulation, solar hot water systems, and commercial lighting.
Stage: The Prime Minister and Minister for Building and Construction have announced the Government's intention to amend the Building Code for improved thermal performance of houses. Parliamentary Counsel Office is drafting amendments to Code Clause H1. Changes to related Compliance Documents are being finalised for approval, with anticipated publication from July 2007.

Proposed amendments to Code Clause H1, and Compliance Documents H1 and G12, relating to domestic hot water and commercial HVAC systems.
Stage: Proposals released for public consultation, closed on 29 June.

Determinations issued

DETERMINATION 2007/45

Refusal to issue a code compliance certificate for a garage workshop

The application arose from a dispute about whether a building, built under a 7-year-old building consent, complied with Clause B2 Durability of the Building Code.

The territorial authority refused to issue a code compliance certificate because, due to the age of the building consent, it was not satisfied that the building complied with Clause B2.

Background

The building consent was issued in August 2000 under the Building Act 1991. Construction appears to have started later in 2000 and extended over about 6 years until completion in late 2006. The inspection records were not submitted with the application but it appears the territorial authority carried out all necessary inspections of the building and undertook a final inspection on or about September 2006. The owners applied for a code compliance certificate in December 2006.

The building work comprises a single-storey garage workshop with a mezzanine floor. The building has a concrete floor slab, a timber-framed structure, aluminium window and door joinery, and is clad with battened-plywood and corrugated steel. The building is relatively simple in plan and form, with a double-pitched gable roof.

The submissions

The territorial authority said it had concerns about the building's durability given that the work began in 2000 but was not completed until late November 2006.

The territorial authority also said that agreement had been reached with the owners that a reasonable time for the building to have been regarded as completed was in January 2004. In a separate submission, the owners said the building was completed in 2006.

The determination

The determination considered a modification of the durability requirements of the Building Code, given the age of the building consent, and the age of the completed building.

The relevant provision of Clause B2 requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain durability periods from the time of issue of the applicable code compliance certificate.

These durability periods are:

- 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building
- 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
- the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace, or failure of those elements would go undetected during both normal use and maintenance.

If a modification of the durability provisions was to be considered, the durability periods specified above would be modified to commence from when the building was completed and when the code compliance certificate could have been issued, if it had been applied for, and not from the actual issue date.

However, in this instance, modifying the commencement of the durability period to 2006, or 2004 as proposed by the territorial authority, would have little effect on the commencement date of the durability provisions.

Continued on page 16

The view was taken that a modification of the durability provisions of the Building Code was not appropriate in this case, given the short time period between the building's completion in 2006 and the date when the code compliance certificate could have been issued.

The territorial authority's concern was acknowledged about the extended period of time between the issue of the building consent and completion of the work. However, a modification of the durability provisions cannot deal with this circumstance. A modification can only be used, where appropriate, to deal with excessive time gaps between completion of the work and the application for a code compliance certificate.

Had the building consent been issued under the Building Act 2004, the territorial authority would have been able to invoke section 93 to assist in these circumstances.

The decision

It was determined that the building work complied with all the relevant clauses of the Building Code, and reversed the territorial authority's decision not to issue a code compliance certificate.

DETERMINATION 2007/52

Refusal to issue a code compliance certificate because of concerns over internal moisture and durability for a 12-year-old earth brick and rammed earth house

The application arose from a dispute about whether:

- the interior wall surfaces of the house complied with Clause E3 Internal Moisture of the Building Code
- the 12-year-old building complied with Clause B2 Durability of the Building Code.

Because the territorial authority was not satisfied that the building complied with the two clauses, it refused to issue a code compliance certificate for the building.

Apart from the matter of the warranty period for the roof cladding (which was covered within the durability matters later in the determination), the repairs to the roof did not appear to be in dispute and were not considered further.

Background

The building consent was issued in 1994 under the Building Act 1991, and work completed early in 1995. The owner applied for a code compliance certificate in 2006. In support of that application the owner asked a consultant on earth-building to write to the territorial authority.

The building is a one-and-a-half-storey detached house of earth brick and rammed earth construction. The building work in dispute concerned the interior earth walls in the kitchen, bathroom, toilet and laundry area.

The kitchen is open plan to the living areas, and the bathroom accommodates a bath, shower and vanity unit. The toilet accommodates a toilet pan, cistern and wash hand basin. Glazed ceramic tiles are installed behind, and also extend past, the vanity unit. The shower area is fully tiled, and the tiles continue as a splashback behind the bathtub. The toilet has clear-finished timber boarding behind the pan and cistern. The laundry area is in a corner of the garage.

The submissions

The applicant noted that the matters for determination were the territorial authority's requirement to seal the earth walls in the service areas, and that the manufacturer's warranty for the butyl rubber roof was due to expire in 3 years' time.

The applicant provided a consultant's report on the condition of the internal walls of the service rooms in the house. The Chief Executive considered this consultant to be an expert in earth building construction.

Internal moisture

It was considered that the consultant's report established the good condition of the wall surfaces to the service areas of the house, and accepted that the surfaces currently achieve the objectives in Clause E3 in preventing moisture-related harm. There was no reason why the surfaces would not continue to meet the objectives of Clause E3.

The view was taken that adequate impervious surfaces were provided to areas adjacent to the sanitary fixtures and appliances. It was accepted that the impervious surfaces had proved effective in preventing moisture damage from water splash and, based on their current condition, the remaining walls showed that the earth surfaces did not require additional protection in order to prevent moisture damage.

It also noted the consultant's comments on the risks of sealing earth walls, and accepted that sealing this type of wall could result in condensation problems on the wall surface. It was considered that there were reasonable grounds to conclude that not all the interior surfaces of the service areas of this house were required to be made impervious in order to comply with Clause E3.



Durability

The final determination also discussed the issue of durability when considering the age of a building. The relevant provision of Clause B2 requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain durability periods from the time of issue of the applicable code compliance certificate.

A draft determination was sent to the parties for comment and for the parties to agree a date when the building was completed and could first have complied with the durability provisions of the Building Code. The parties agreed to a date in 1995.

It was concluded that:

- the territorial authority had the power to grant an appropriate modification of Clause B2 in respect of the building elements
- it was reasonable to grant such a modification, with appropriate notification, because in practical terms the building was no different from what it would have been if a code compliance certificate for the house had been issued in 1995.



It was strongly recommended that the territorial authority record the determination, and any modifications resulting from it, on the property file and also on any LIM issued for the property.

The decision

It was determined that the interior wall surfaces of the house complied with Clause E3 of the Building Code.

It was also determined that the building elements complied with Clause B2 on a specific date in 1995 instead of the date of issue of the code compliance certificate, and the original building consent was to be modified accordingly. The territorial authority was instructed to issue a code compliance certificate in respect of the building consent as amended.

To read all the determinations in summary or in full, go to:
www.dbh.govt.nz/determinations



Excellent response to **Codewords** reader survey

In the May/April issue of *Codewords*, we asked for your feedback on the publication. We received more than 200 completed surveys. Thanks to everyone who took the time to write to us. Your comments are much appreciated and will help us to make sure *Codewords* remains relevant to its readers.

The winners of our survey competition are:

- Alana Reid
- Alan Jillings
- Ian Godfrey
- Denise Civil
- Kurt Plank

Our winners will get a free subscription to the new Compliance Document website, as soon as it is launched.

In the meantime, we'll send them each hard copies of the recently updated Building Code and Compliance Schedule Handbooks, together valued at more than \$100.

RESULTS

Codewords Reader Survey Results

HOW DO YOU READ <i>CODEWORDS</i> ?	
<i>Codewords</i> have several sections. Which ones do you usually read?	
Determinations	94%
Cover Story	91%
Other Articles	84%
Building Standards Group – work in progress	68%
Learning Curve	60%
Do you keep back issues of <i>Codewords</i> ?	
No	14%
Yes	86%
Where do you get <i>Codewords</i> from?	
I borrow a friend's copy	1%
I read the office copy	12%
I subscribe online	12%
I subscribe online/I read the office copy	1%
I subscribe to the printed version	67%
I subscribe to the printed version/ I read the office copy	1%
I subscribe to the printed version/ I subscribe online	6%
HOW DO YOU RATE <i>CODEWORDS</i> ?	
How does the content relate to your interests? Is it:	
Highly relevant	63%
Not at all relevant	1%
Somewhat relevant	36%
Do you like the layout and design?	
Needs a complete makeover	1%
Ok, but could be better	10%
Yes, it's fine	89%
Would you recommend <i>Codewords</i> to other people?	
No	7%
Yes	93%

Learning curve



ANNUAL CONFERENCE OF ASSN CONSULTING ENGINEERS NZ

Napier

9–11 August 2007

PROGRAMME HIGHLIGHTS

Thursday 9 August

Optional Workshop:

Project Sustainability Management

8.30–5.00 Presented by John Boyd, and supported by FIDIC

- Registration Desk opens – at Memorial Centre
- Opening Of Trade Display – at Memorial Centre
- Icebreaker dinner (off site at Mission Vineyard)

Friday 10 August

- **The Future Of The Consulting Industry!** Roger Flanagan, University of Reading UK
- Economics and Sustainability, Rod Oram
- Panel Discussion: Sustainable Business – The New Zealand Outlook
Sustainability In The International Scene John Boyd (FIDIC) Golder Associates, Canada, and FIDIC President Elect
- Case Study: A Win-win Solution by Challenging Conventional Practices
- AGM and Members' Forum

Saturday 11 August

- **Addressing Challenges In Recruiting Managing and Retaining Talent in Today's Market** Katrina Troughton, IBM
- **Case Study: Implementing PSM to your Workplace** Kerry Griffiths, URS
- **Stepping Out: Non-traditional Leadership Skills,** Jolene Brown, USA
- *Afternoon* Optional Tours
- **Innovate NZ! Awards Dinner**

Enquiries to:

www.acenz.org.nz/



TRAINING

Site Safe has a nationwide training network and contracts over 70 Trainers. Our Trainers have been selected because they are all highly competent Trainers with a background in the construction industry and have extensive knowledge of the Health and Safety in Employment Act. Other industry Trainers are selected based on their extensive knowledge of workplace health and safety and relevant legislation.

The current training courses available

- Building Construction Passport
- Civil Passport
- Electrical Passport
- Maintenance Passport
- Supervisor Gold Card Course
- Supervisor Gold Card Update Course
- Working Safely at Height
- Store Safe Passport
- Construction Management Course
- Construction Industry Health and Safety Representative Training
- General Industry Health and Safety Representative Training
- Mobile Training Unit
- Workplace Safety Course
- Leadership in Safety Course

Enquiries to:

☎ 64 4 499 2509

Fax 64 4 499 2508

✉ comments@sitesafe.org.nz



CERTIFICATE IN APPLIED TECHNOLOGY (CARPENTRY)

Programme summary

Are you ready to start your apprenticeship in the building industry? Develop a sound knowledge of the carpentry industry, exterior wall and roof cladding, foundations, interior lining and finishing, and wall and sub-floor framing. Work together with your fellow students to build a three-bedroom house.

Do you want a career as a builder? Combining theory and practice, the Certificate in Applied Technology (Carpentry) teaches you how to carry out carpentry tasks within a variety of construction projects.

Gain fundamental construction skills required for a wide range of building construction tasks. Develop a sound knowledge of the carpentry industry, exterior wall and roof cladding, foundations, interior lining and finishing, and wall and sub-floor framing.

Learn to identify, select and correctly install the right building materials and fastening systems. Become competent in the use of hand tools, electrical portable tools and machinery, and acquire the skills to interpret building plans and calculate building materials.

You also become familiar with health and safety issues in the building industry, and increase your knowledge of building codes and regulations.

Courses

The following is a selection of the compulsory courses you need to study to complete this programme.

- BUIT4528 Exterior Wall Cladding^{TBC}
- BUIT4522 Foundations^{TBC}
- BUIT4529 Interior Lining and Finishing^{TBC}
- APPT3000 Introduction to Health, Safety and Professional Development^{TBC}
- BUIT4530 Introduction to Carpentry^{TBC}
- BUIT4527 Roof Cladding^{TBC}
- BUIT4526 Roof and Ceiling Framing^{TBC}
- BUIT4521 Site Preliminaries

Career opportunities

- Apprentice carpenter
- Assistant tradesperson

DIPLOMA IN APPLIED TECHNOLOGY (BUILDING)

Programme summary

Want a qualification to advance your building career? Improve your knowledge of building administration, building envelopment and building structures, as well as health and safety issues in the building industry. Classes are held once a week, so you can combine study with an apprenticeship in the building industry.

Are you already working in the building industry? The Diploma in Applied Technology (Building) helps you further your knowledge of the building trade and will enable you to complete your apprenticeship training.

Apply what you have learnt in a major industry project.

You also improve your communication, problem solving and project management skills.

Once you've successfully completed a minimum of 6,000 hours of theory and on-the-job practical experience, you will be eligible to graduate as a fully-qualified builder. You can also apply for entry into the third year of the Bachelor of Applied Technology, specialising in Building.

Courses

The following is a selection of the compulsory courses you need to study to complete this programme.

- APPT5010 Communication, Problem-solving, Health and Safety^{TBC}
- APPT5011 Self-Employment and Managing Projects^{TBC}
- APPT6012 Technology Project^{TBC}

Career opportunities

- Building certifier
- Construction manager
- Project manager
- Property developer
- Registered builder
- Self-employed builder

CERTIFICATE IN MULTI-SKILL BUILDING CONSTRUCTION

Programme summary

Want a career in the building industry? Develop an understanding of the basic principles and practices in carpentry, furniture making and joinery, plumbing, painting and plastering.

Are you interested in working in the building industry? The Certificate in Multiskill Building Construction prepares students who have not had previous training for employment in the building industry. Develop the skills to start your building career. Become knowledgeable about the basic principles and practices in carpentry, joinery and furniture making, plumbing, plastering, and painting and decorating. Apply what you've learnt in practical exercises.

Small classes ensure that you get plenty of one-on-one time with our industry-experienced staff.

Learning curve *continued*

Once you have successfully completed the Certificate in Multiskill Building Construction, you can move into the Certificate in Applied Technology (Boatbuilding), Certificate in Applied Technology (Carpentry), Certificate in Applied Technology (Furniture and Joinery), Certificate in Applied Technology (Interior Decor) or the Certificate in Applied Technology (Plumbing and Gasfitting).

Courses

The following is a selection of the compulsory courses you need to study to complete this programme.

BUIT2110 Core Carpentry^{TBC}
BUIT2130 Core Furniture and Joinery^{TBC}
BUIT2140 Core Painting and Plastering^{TBC}
BUIT2120 Core Plumbing^{TBC}

Career opportunities

- Assistant tradesperson

NATIONAL CERTIFICATE IN CARPENTRY

Programme summary

Want to take your building career even further? Advance your understanding of building calculations, the use of timber in construction, wall frames, exterior claddings, timber weatherboards, interior linings and trim, concrete masonry structures and construction equipment.

Have you already been working in the building and construction industry for a while? Do you want a carpentry qualification to further your career? The National Certificate in Carpentry is intended for people with a minimum of seven years' practical building experience.

Elective courses cover a range of topics that are relevant to the building and construction industry – from suspended concrete floor systems and sound insulation systems to pitch gable and hip roof framing, and the planning of demolition work.

You also improve your ability to deal with subcontractors.

To help you combine study with your work, the National Certificate in Carpentry is offered as a series of evening classes. You attend classes one evening per week.

Courses

The following is a selection of the compulsory courses you need to study to complete this programme.

BUIT U13001 Unit Std 13001
Demonstrate knowledge of building calculations^{TBC}
BUIT U13002 US13002
Demonstrate knowledge of timber used in construction^{TBC}
BUIT U13012 Unit Std 13012
Demonstrate knowledge of setting out and erecting wall frames^{TBC}
BUIT U13015 Unit Std 13015
Demonstrate knowledge relating to the work of construction subcontractors^{TBC}
BUIT U13017 Unit Std 13017
Demonstrate knowledge of fixing exterior claddings and timber weatherboards^{TBC}
BUIT U13022 Unit Std 13022
Demonstrate knowledge of fixing interior linings and trim^{TBC}
BUIT U13025 Unit Std 13025
Demonstrate knowledge of timber stair and ramp construction^{TBC}
BUIT U13027 Unit Std 13027
Knowledge of construction of concrete masonry structures and paving^{TBC}

Career opportunities

- Assistant tradesperson
- Carpentry apprentice
- Construction retailer

Contact: Course Information Centre

☎ 0800 10 95 10 or +64 9 815 2945
or +64 9 815 4321 ext 8498

✉ courses@unitec.ac.nz

Waitakere Course Information

☎ +64 9 836 7425

Postal address:
Unitec New Zealand
Course Information Centre
Private Bag 92025
Auckland

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 advisors.

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