

# builder'smate



## All fired up

Building Code requirements around fire safety have changed. Here is a short rundown of the key things you need to know for simple residential buildings.

From 10 April onwards, the new version of New Zealand Building Code clause C *Protection from fire* must be used in new building consent applications. A new version of the Acceptable Solution has been developed to be simpler to apply and with a reduced scope of buildings and features than the previous documents.

The new Acceptable Solution is separated into seven individual solutions that each cover a specific risk group. Acceptable Solution C/AS1 applies to risk group SH – detached or single houses, townhouses and multi-unit dwellings no more than two units high.

Supporting the Acceptable Solution is a commentary document with useful background, scope and application information for all of the seven documents.

Here are some of the key requirements in C/AS1 for risk group SH:

- Where only a domestic fire alarm is fitted, the maximum allowable distance for an escape route with a single direction of escape is 25 m.
- Each household unit, including any garage and escape routes in multi-unit dwellings, shall >

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## INDUSTRY NEWS

### Boost for apprenticeships

A new apprenticeship scheme announced by the government will invest up to \$40 million in incentives for the first 10,000 apprentices and their employers who sign up after 1 April.

The \$2,000 subsidy is for both apprentices and employers in priority construction trades.

There is already increased demand for apprentices, especially in Auckland. The BCITO recently reported a 70% increase in employers looking for apprentices compared with the previous quarter.

### House consents continue to grow

The trend for the number of new houses consented has risen 50% since March 2011, says Statistics New Zealand.

New housing growth continued in January 2013, with a 9.6% increase in the seasonally adjusted number of new non-apartment houses consented compared with 12 months ago. All of this growth was from the North Island.

The regions with the largest number of new houses consented in January 2013 were:

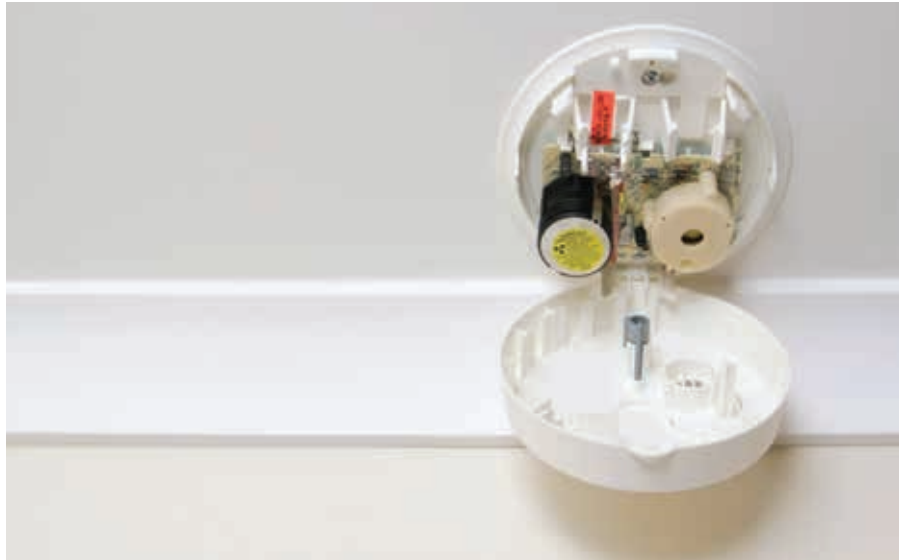
- Auckland – 372, up 140 from January 2012.
- Canterbury – 378, down 1 from January 2012.



have fire separation from other household units. (An attached granny flat is considered a separate household unit and must have a fire separation between it and the main dwelling.)

- Any escape routes with required fire separations must have a rating of 30 minutes – that is, the system has been shown in tests to remain standing and prevent flames, hot gases and heat getting through for at least 30 minutes (The manufacturer has information on what systems have been tested and have achieved this rating).
- Sprinkler systems are not mandatory, but where they are voluntarily included in the design of the building, there are reductions in some requirements.
- Except where the building is protected with a sprinkler system, external walls shall give the same 30-minute minimum protection described above:
  - with houses and side-by-side multi-unit dwellings if the external wall is less than 1 m from the boundary
  - with any other multi-unit dwellings where the external wall is less than 5 m from the boundary.
- There are still specific rules where foamed plastics or exposed combustible insulating materials form part of a wall, ceiling or roof system.

C1/AS1 also has sections on recessed downlights and chimneys for open fires.



Clause 7.1.2 modifies AS/NZS 2918:2001 *Domestic solid fuel burning appliances – Installation* (which is an Acceptable Solution for the installation of these appliances).

Detailed information on the changes is available at [www.dbh.govt.nz/compliance-documents](http://www.dbh.govt.nz/compliance-documents).

## Smoke alarms

All new houses and houses undergoing alterations that require a consent must also have smoke alarms installed – at least one alarm on or near the ceiling on each level of a household unit.

Smoke alarms should be either in every bedroom or within 3 m of every bedroom door. The alarms

must be loud enough for people to hear through closed doors.

The alarms don't need to be hardwired or interconnected, but the Fire Service recommends that this is done. With interconnected alarms, when one detects a fire, all the alarms in the house go off. Hardwired means the alarms are connected to mains power, which makes them more reliable (although they still have a battery back-up that will need replacing occasionally).

BRANZ recommends installing smoke alarms in every house, even in houses not being renovated or where renovations do not require a consent.



# Mouth piece

Construction has been identified by the government as one of the key sectors in which it wants to improve health and safety performance. Our statistics are not great, and the looming numbers of tradespeople that are destined for Canterbury, from here and overseas, add to the potential for those statistics to get worse. We have already seen initiatives from government to step in and try and improve things with the “working at heights” campaign, and there will be others.

But it should not be up to the government to do this. It is up to us, the sector. If we don't, then the government has no option but to step in – and we generally don't like that as it is often seen as being heavy-handed.

The formation of the Construction Safety Council (CSC) is the construction sector's response to this. The CSC has recently developed a health and safety (H&S) competency framework that sets the benchmark, at the entry level, for H&S competencies across all construction sites. It has identified all the

generic construction hazards and what competencies are required to address these.

Imagine a world where you knew that everyone on your site was competent to keep themselves and their mates safe irrespective of where they got their training from because it all met the same standard. People could move from site to site, and if they worked for a good H&S employer, would continue to be recognized without the need to retrain.

Well, watch this space, as the CSC will shortly launch this. We believe it has the potential to provide a step change in our H&S standards and provide confidence to all employers on the H&S skills of who they engage.

### Warwick Quinn

Chief Executive  
Registered Master Builders Federation  
Chair, Construction Safety Council



# Shaking up the numbers

Earthquakes, earthquake damage and the buildings at risk of earthquake damage are all measured and given numbers. These numbers hold some surprises.

Magnitude is a measure of the strength of an earthquake (the amount of energy it releases) at the point where it occurs. It is generally measured by the movement on a seismograph, corrected for the distance between the seismograph and the epicentre of the quake.

Magnitude is measured using the Richter scale. This is a logarithmic scale, which means that small increases in number can mean very big increases in strength. For example:

- a magnitude 5 earthquake releases 30 times more energy than a magnitude 4 earthquake

- a magnitude 6.7 earthquake releases over 900 times the energy of a 4.7 earthquake.

Intensity is different to magnitude – it is a measure of the effects of an earthquake on people and buildings at a particular location. The intensity at a particular site depends on the strength (magnitude) of a quake, how far the site is from the epicentre of the earthquake and the geology under the site – very soft soils can increase intensity.

Intensity is measured with the 12-point Modified Mercalli Intensity (MMI) scale. A classification is made by accumulating the results of many observations on the ground. The scale is linear, not logarithmic, which means that going up the scale is a gradual process – 1 is not felt by most people; 12 results in total destruction. The September 2010 and February 2011 Canterbury earthquakes (magnitude 7.1 and 6.3 respectively) are both classed as 9 on the MMI scale. At this level, there is panic, partial collapse of buildings and buildings thrown off their foundations.

## Buildings and earthquake risk

In simple terms, a building is described as earthquake-prone if it is assessed to have 33% or less of the strength of the same building built to current Building Code requirements.

A building is described as an earthquake risk if it is assessed to have between 33% and 66% of the strength of the same building built to current Building Code requirements.

In terms of its likely performance in an earthquake, a building assessed at 33% of new building strength has about 20 times the risk of failure compared with the equivalent new building, and a building at 66% has about 5 times the risk.



# build

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## ADVISORY HELPLINES

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For the homeowner and public enquiries:

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Calls cost \$1.99 per minute plus GST

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# Competition

Here's a tool. What is it?



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The prize is provided courtesy of The Tool Shed. All you need to do to win is tell us the name of the mystery tool (above).

Email your answer to [buildersmate@branz.co.nz](mailto:buildersmate@branz.co.nz). Put "April Competition" in the subject line. The message should include your answer, your name, postal address and phone number. One entry per entrant please.

Don't forget to tell us where you picked up your copy of *Builder's Mate*! The winner will be the first correct entry drawn at 9 am on Friday 3 May 2013. Details will be posted on the BRANZ Ltd website ([www.branz.co.nz](http://www.branz.co.nz)) and in the next edition of *Builder's Mate* due out on 1 June 2013.



Pictured is *Builder's Mate* 57 prizewinner Karl Paterson with his prize, a DeWalt saw stand, outside the Manawatu Tool Shed. *Builder's Mate* 58 prizewinner is Ron Bloomfield of Gisborne. He wins a Makita cordless drill/driver worth \$189. The mystery tool was a concrete vibrator.

## Terms and conditions:

Entry is open to all New Zealand residents except employees and immediate families of BRANZ and The Tool Shed shops. The competition will close on Friday 3 May 2013. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

# What's wrong in these PICTURES?



**1 SUBFLOOR FIXINGS**



**2 RECESSED DOWNLIGHT**

2. Insulation has been installed hard against this older style recessed downlight. This is a potential fire hazard as it could lead to overheating – the insulation should be 100 mm away from the fitting.

1. There is very clear corrosion in these subfloor fixings, a nail plate and z nail. This indicates a potential problem with excessive subfloor moisture, or a lack of subfloor ventilation. The cause of the problem needs to be addressed.

## ANSWERS

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Standards referred to can be purchased from Standards New Zealand. Tel: 04 498 5991 or [www.standards.co.nz](http://www.standards.co.nz).

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