

EDITORIAL

Hello and welcome to Wairoa District Council's March edition of the Building Sector News.

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Wairoa District Council's building control team, from left Bill Dickin, Margaret Kaimoana, Garth Duley and Corinne Hamlin.

WE'RE CELEBRATING – WAIROA DISTRICT COUNCIL IS NOW ACCREDITED AND REGISTERED AS A BUILDING CONSENT AUTHORITY (BCA)

Since 2006 we have been working towards attaining accreditation and registration as a BCA.

Accreditation is a system used to ensure that organisations and individuals are competent and can perform their duties to a particular standard. As well as all the work preparing, this involved an independent accreditation body examining and verifying our organisation's performance, systems, processes, technical competency and ability to undertake statutory responsibilities.

At times, this has put resources to the test, but has paid off as Wairoa District Council is now accredited and registered as a BCA, which means the control of building control functions remain in the district. If Council was not accredited we would need to transfer our building control functions to another accredited and registered BCA.

Unfortunately the celebration is short lived as we now need to maintain accreditation by demonstrating ongoing compliance. In addition Phase Two of accreditation is to be prepared for and must be implemented and successfully accredited against prior to 1 December 2010.

As we are on the lookout for continuous improvement we are always open to any suggestions or constructive criticism you may have that may improve our existing systems.

IS A CONSENT REQUIRED FOR WEATHERTIGHTNESS REMEDIATION?

On March 15, 2008, the Building Amendment Act 2008 came into force which revised the requirements for consent for Weathertightness repairs (Building Act 2004, Schedule 1 (a))

A building consent is required for:

- The complete and substantial replacement of a specified system
- The complete or substantial replacement of any component or assembly contributing to the buildings structural behaviour or fire-safety properties
- The repair or replacement (other than maintenance) of any component or assembly that has failed to satisfy the Building Code for durability (e.g. through a failure to comply with external moisture requirements).

As a result, in all cases of Weathertightness failure and repairs such as the replacement of leaking cladding or rotted framing with the same or similar materials (a former "like for like" exemption), will require a building consent and the Land Information Memorandum (LIM) will be noted by Council as an alert to the Weathertightness history of the property.

DEPARTMENT OF BUILDING AND HOUSING SAFETY REMINDER - DECKS, BALCONIES AND BALUSTRADES

The Department of Building and Housing reminds owners of dwellings that decks and balconies supported by untreated kiln-dried timber may pose a safety risk, particularly in those situations where water pools rather than draining away. The Department reminds territorial authorities, designers, builders, building consultants and other building professionals to pay particular attention to this risk whenever they are onsite.

Certain types of decks and balconies do have a risk of rotting when water has leaked into them, potentially leading their underlying structure to decay. In extreme cases, this can lead to collapse.

Safety check – enclosed decks, balconies and balustrades

All types of deck, balcony and balustrade must be designed and constructed to meet the requirements of the New Zealand Building Code and be maintained throughout their lifetime.

The main concerns about leaking are with certain types of timber construction. There is potential risk of decks leaking where the timber balustrades are enclosed within claddings or the floor is covered with a waterproof surfacing, with or without tiles laid on it.

Unless correctly designed, constructed and, most importantly, properly maintained, water may leak in behind the cladding or through the waterproof surfacing and create conditions that encourage timber to decay and fasteners to corrode.

If the property has a balcony or deck, consider these risk factors:

- Has untreated kiln-dried timber been used for structural support?
- Is the balustrade clad with lightweight materials with a plaster finish?
- Are there any holes or cuts in the waterproof floor surfacing?
- Is there flat access, with no step, where the deck meets the building doorway?
- Does water pool on the surface?
- Do cantilevered joists (or other joists that penetrate the exterior wall) lack flashings?
Look at the barrier or balustrade. These factors all pose further risk.
- Is it clad with lightweight material with a plaster finish?
Does it lack a waterproof capping?
- Does it have a flat top where water sits?
- Does it have a railing where water is able to leak down screw holes?

Warning signs:

- Balconies and decks that move when walked on.
- Damp spots or stains where the balcony, balustrade or deck joins the main part of the building.
- Cracks, particularly near junctions, joints and corners.
- Balustrades or railings that wobble.
- Balustrades where damp spots or stains can be seen on the cladding.
- Interior water damage or any visible change to interior finishings adjacent to, or directly beneath the balcony or deck.
Open timber decks constructed with durable treated timbers are less likely to be of concern. However, these are things that should be checked.
- Look at where the deck meets the wall of the house. Is there anywhere that water can sit or track into the house? Do the flashings take water away from the house wall and allow it to drain away? If the cladding relies on paint to keep the water out, is that coating continuous or is there any point where water might penetrate?
- Is there any sign of timber beginning to decay? For example, is there any sign of excessive cracking or 'softness'?
- Is there proper waterproofing around the cantilevered joists or around other joists that penetrate the house wall?
- Are the balustrades or posts correctly connected to the deck or balcony structure? They should not wobble.
- Check the tightness of bolted connections, especially on balustrades and handrails, to ensure nuts are secure.
- Check that galvanised steel connectors are not corroding.

Does work on a deck or balcony require a building consent?

A building consent is not required for decks and balconies where it is not possible to fall more than 1m should the structure collapse. However, all decks and balconies must be built in accordance with the Building Code to ensure they are safe for people to use.

Where necessary, the building work owner should apply for a building consent when constructing a deck or a balcony. The consent will give assurance that any safety concerns with the deck are addressed, as a building official will have inspected the

work after it has been completed to certify that it meets Code requirements.

Building owners and building professionals should discuss this with their local council.

ACC – THINK SAFETY FIRST

The ACC's message is to promote safety in the workplace. It is everyone's responsibility to ensure that they follow safe work practices. Time off work due to an accident is not beneficial to anyone.

Make sure you and your workmates stay safe onsite, always think safety first. For more information see www.acc.co.nz



ACC article: concrete – the hard facts on safe handling

Concrete has long been the Kiwi builder's friend. In the residential construction industry, concrete is the staple material of many a driveway, path and house foundation. The short of it is, if you're a builder, you can't avoid working with concrete. But although most builders are used to handling it, not all are aware of the health hazards that come with it.

Wet Cement – Minimise Contact

An ingredient in cement called hexavalent chromium can cause a severe allergic reaction in some people. Even if you aren't allergic to cement, particles of wet cement and sand can still irritate the skin and lead to dermatitis. Skin affected by dermatitis usually looks red and scaly, and can feel either itchy or sore. Wet cement can also cause burns to the skin and affect your vision if splashed into the eyes.

To reduce these risks:

- Wear overalls, boots, gloves and eye protection when working with cement.
- Make sure sleeves come down over your gloves, and trouser legs cover the tops of your boots – this will help prevent wet cement getting trapped against the skin.
- Ideally wear well fitting, elbow length butyl or nitrile gloves (try to avoid wearing leather gloves, as they easily become saturated and also contain chromium, which can contribute to skin irritation).
- After work, remove overalls, boots and gloves outside the house, and shower and change into clean clothes.
- Clean gloves before and after use, and replace if they get too contaminated.

Cement Dust – Avoid Inhaling It

Breathing in cement dust when emptying bags or cutting concrete may expose you to silica which can irritate the nose and throat.

Safe work practices aimed at minimising your exposure to dust are the best way to manage this risk:

- Use ready mixed concrete if you can.
- Wet the cement before dust can become airborne.
- When sawing concrete, use saws that provide water to the blade.
- Wear a quality respirator, to minimise your exposure to any dust that does become airborne.

By following these precautions, you should be able to ward off most ill effects commonly associated with handling cement. This will ensure it remains your friend and doesn't become an irritant that affects your ability to do your job.

Bottom plates and a DPC

While it is not a requirement of NZS 3604, BRANZ recommends the installation of a damp-proof course (DPC) between all timber internal wall bottom plates and concrete floor slabs. The reason for this is that there is still a lot of water in the slab when the plates are put down and this can be absorbed into kiln-dried timber if the DPC is not installed. Similarly, the DPC is recommended where internal framing timber is being fixed to concrete or concrete masonry walls.

NO 95 – BUILDING CODE CLAUSES H1 ENERGY EFFICIENCY AMENDMENTS

From 1 February 2009, new Building Code (NZBC) provisions for hot water and HVAC systems came into force.

The Department of Building and Housing provides the following guidance to help designers and building consent authorities (BCA) interpret the new provisions relating to hot water and HVAC. BCAs, when issuing building consents, need to consider the provisions on a case-by-case basis.

Copies of the new NZBC clause H1 are available at:

www.dbh.govt.nz/energy-efficiency

Hot water energy efficiency provisions of the Building Code now include a new requirement for systems to “be constructed to facilitate the efficient use of hot water” (new NZBC clause H1.3.4(c)). This new provision only applies to buildings that are classified as housing (refer NZBC clause A1 for definitions). The existing Acceptable Solution for hot water energy efficiency, H1/AS1 5.0, states that “hot water systems complying with NZS 4305 satisfy the requirements of NZBC H1.3.4”. This Acceptable Solution remains in force for H1.3.4(a) and (b). However, in the absence of a new Acceptable Solution that expressly includes H1.3.4(c), NZS 4305:1996 can be used to interpret H1.3.4(c) as well.

Heating, ventilation and air conditioning (HVAC) systems are no longer excluded from NZBC Clause H1 after 31 January 2009, and a new performance (H1.3.6) is added as follows, H1.3.6 HVAC systems must be located, constructed, and installed to –

- limit energy use, consistent with the intended use of space; and
- enable them to be maintained to ensure their use of energy remains limited, consistent with the intended use of space.

H1.3.6 will only apply to buildings that are classified as commercial (refer NZBC clause A1 for definitions).

There is currently no acceptable solution or verification method for the new NZBC clause H1.3.6. Very little comment was received on the latest version of a proposed Acceptable Solution for HVAC released for public submission in October 2008. The Department has therefore decided to publish the main elements of this document as guidance rather than to publish a Compliance Document.

This will allow designers and Building Consent Authorities more flexibility and allow more time for further consideration before any Compliance Document is completed.

VERTICAL SHIPLAP CLADDING

For designs to E2/AS1, the Acceptable Solution allows board and batten to be direct fixed for building faces with a risk score of 12 or less, while vertical shiplap cladding is limited to a risk score of 6 or less. This assessment in E2/AS1 recognises the fact that the weathertightness risk with vertical shiplap is high and that it is greater than that for board and batten.

Where vertical shiplap is proposed for a building with a risk score over 6 it is:

- difficult to install with a drained and vented cavity because of the need to provide horizontal support to the cladding
- more prone to water entry as wind is able to drive water into the vertical lapped joint (this risk is likely to increase over time due to timber movement).

Use of vertical shiplap in a higher risk situation must be consented as an Alternative Solution where the designer must satisfy the BCA that the performance requirements of Clause E2 are likely to be met for that higher risk situation. Where the designer insists on the use of vertical shiplap the BCA may ask for an independent review of the details, by an expert they accept, which the designer will have to commission. Note that BRANZ does not offer a detail design or peer review service.

Clause 9.4.5 of E2/AS1 requires vertical shiplap and board and batten to be in continuous lengths over a storey height but does not give a detail for the junction at each storey height.

BRANZ recommends that a continuous horizontal flashed joint be used at each floor level with both shiplap and board and batten vertical cladding. A scarfed joint that can be used with end joints in horizontal boards under E2/AS1 is not recommended for end joints in any vertical boarding.

MIND THE GAP

Special care is needed when specifying the insulation material thickness for skillion roofs and low pitched roofs with a roofspace, in order to ensure the design R-value is achieved and that the insulation is kept dry. To do this, it is important to maintain an air gap between the top of the insulation and the underside of the roofing underlay, particularly around the edge of the roof within a roofspace.

A 25 mm gap is required to allow air to move between the underlay and the insulation, to remove any moisture from the roof cavity and to prevent any moisture on the roof underlay being wicked (through contacting surfaces) into the insulation.

The sizing of the rafter depth must take account of the span of the member and the final installed thickness of the insulation (all insulation is compressed into packs and may take some time to expand to full thickness after it is installed) and for any sag in the roof underlay. Once installed, insulation may expand to be thicker than the stated nominal thickness.

JOINTS IN TOP PLATES

NZS 3604 sets out specific construction requirements for joints in top plates. One of the options specified is to use metal plate

connectors with a capacity of:

- 3 kN for walls that contain bracing elements that provide less than 100 bracing units
- 6 kN for walls that contain bracing elements that provide 100 or more bracing units.

Designers should specify the capacity of the connectors they require. As it is not practical to show all joint locations on the drawings, the easiest option is to specify 6 kN connectors for all junctions as it is likely that most walls will contain a bracing element.

Descriptions of both 3 kN and 6 kN connectors and where they can be used are given in NZS 3604 Section 8; Figures 8.15 and 8.16.

ROOF FIXING

This might be stating the obvious, but metal roof fixings also require sealing washers. A recent insurance claim for damage caused by a leaking roof identified the cause of the leak as spiral shank nails having been installed without a washer.

Metal roofing product manufacturers have nominated fixing types with specific washer recommendations that should be followed when the roof is installed.

GOVT3 PROGRAMME

As of January 2009 new government buildings are required to use passive solar design and integrated whole building design principles. Information is available on:

- passive solar design guidance - commercial building focus
<http://www.mfe.govt.nz/publications/sus-dev/passive-solar-design-guidelines/index.html>
- integrated whole building design guidelines - mainly a commercial building focus
<http://www.mfe.govt.nz/publications/sus-dev/integrated-whole-building-design-guidelines/index.html>

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