BRANZ

April 2021

GUIDELINE

Welcome to this update on technical advice and information for the building and construction industry on issues relating to building controls and good construction practices.

Building Code changes proposed

Big updates for H1 and G7

On 6 April, the Ministry of Business, Innovation and Employment (MBIE) began its annual consultation on Building Code changes. Taken together, the changes in this round are the most significant proposed for several decades.

This year's proposals include:

- introducing new climate zones, with six zones replacing the current three
- increasing minimum insulation requirements for housing and small buildings with three possibilities - half-way to international standards (for countries with a similar climate), comparable to international standards or going further than international standards
- removing the separate minimum insulation levels for high mass walls such as solid timber, concrete or masonry from the Acceptable Solution
- different possible timeframes for implementation - 12, 24 or 36 months
- limiting the scope of H1/AS1 and H1/VM1 to housing of any size (including apartments) and small buildings (under 300 m²)
- new Acceptable Solution H1/AS2 and Verification Method H1/VM2 for large buildings
- increasing the minimum insulation levels for roof, windows, walls and floors for large buildings to give a reduction in energy use for heating and cooling of 10%, 20% or 25%, with implementation in 12, 24 or 36 months
- new Verification Method H1/VM3 for heating, ventilation and air conditioning (HVAC) systems in commercial buildings
- new Acceptable Solution G7/AS2 to ensure that higher-density housing in particular has enough natural light
- G7/AS1 reduced to cover only simple buildings up to 3 storeys in low-density developments
- updated Verification Method G7/VM1, now titled *Natural light for complex buildings excluding those with borrowed daylight*
- new Verification Method G7/VM2 *Natural light for all buildings including those with borrowed daylight*
- a new edition of E2/VM2 to reference BRANZ Evaluation Method EM7 *Performance of mid-rise cladding systems* (version 3, June 2020)
- amending referenced standards in the Acceptable Solutions and Verification Methods for clause B1 *Structure*, including new versions of AS/NZS 4671, AS/NZS 5131, AS/NZS 2327, the NZGS document *Field description of soil and rock*: *Guideline for the field descriptions of soils and rocks in engineering purposes*.

MBIE is also consulting on its role as the regulator in the upkeep and referencing of building and construction standards.

You can find more details here and see a YouTube video here.

The deadline for comments is Friday 28 May 2021.

Other MBIE consultations coming up include:

- Building for climate change - next steps
- Licensed Building Practitioners Scheme - licensing structure, supervision and minimum standards of competence
- proposed regulations to support building law changes - a new modular component manufacturer certification scheme, new building product information requirements and changes to CodeMark
- a new regulatory regime for engineers.

In this issue:

Timber supply shortage

Don't expect a quick solution to all supply chain problems

The shortages of construction materials and components in recent months took a major turn in late March when Carter Holt Harvey (CHH) advised it had critical supply issues and said it would halt timber supply to ITM, Bunnings and Mitre 10. CHH will continue to supply PlaceMakers and Carters. The curtailment of supply relates to around 10% of CHH's structural timber volume. The demand for timber has been considerably higher than forecast, and there are also longer-term issues having an impact on the domestic timber market.

Many of our radiata pine forests today have offshore owners. New Zealand exports over 60% of its harvest as raw logs - 80% to China.

An MBIE research paper says forest owners are selling logs at export parity pricing to domestic sawmills, which effectively means Chinese log buyers are setting the market price for New Zealand sawmills and prices are rising.

With supply of other goods ranging from tapware to timber treatment chemicals, part of the problem is shipping and port delays, which may eventually be resolved. Another issue is changes in shipping routes, which may turn out to be permanent. Some global shipping companies are reducing their routes to the largest ports, serving Australia but no longer continuing to New Zealand. Some shipping costs have also increased considerably - we have been told of 5-7 times increases, with some examples even higher.

Suspended floors, ground clearance and sheet flooring

Making sense of the numbers

When it comes to particleboard flooring and suspended timber floors, figures in NZS 3604:2011 *Timber-framed buildings* sometimes cause a puzzle. When the minimum dimensions of joists, bearers and pile heights are applied, the underside of the flooring will be 330 mm above the ground. Yet the standard sets a minimum clearance between the underside of particleboard flooring and the ground of 550 mm. What do you do if the clearance distance is between 330 mm and 550 mm? Can you still use particleboard if you lay a polythene ground cover under the building?

The simple answer is that an alternative material such as H3 CCA-treated plywood or timber strip flooring must be used. As well as appearing in NZS 3604:2011, the 550 mm minimum clearance requirement for particleboard also appears in the technical literature from product manufacturers. Laying a ground cover does not change this.

Another restriction on particleboard flooring applies to wet areas. Flooring-grade particleboard is not permitted as a new substrate in any wet area under the membrane manufacturers' *Code of practice for internal wet-area membrane systems* (which became the basis for E3/AS2 in November 2020). NZS 3602:2003 *Timber and wood-based products for use in building* recommends H3-treated plywood rather than particleboard in this situation.

Kāinga Ora now issuing building consents

The first nationally accredited building consent authority

The work is being undertaken by Consentium, a stand-alone and independent division of Kāinga Ora - the Crown entity that delivers public housing. Consentium will process national building consents for Kāinga Ora for public housing of up to four levels as well as provide inspections and Code Compliance Certificates. The process covers new builds, retrofits and any repairs and maintenance that require a building consent.

You can find more details on the Consentium website.

Rainwater run-off and material compatibility

Limiting the number of materials can help

The BRANZ helpline had a call about materials compatibility issues around rainwater run-off and materials in contact. The proposed detail sent in had quite a sequence of different materials (which the caller simplified at our suggestion), but a final check through still found a contact issue. There was a soft-edge flashing specified onto concrete roof tiles, and the roof tile manufacturer said they usually recommend soft lead. The flashing manufacturer pointed out that this would not be compatible with a proprietary profiled steel roof cladding that was also included in the detail. There was an aluminium soft-edge option available, however, and this solved the problem.

The lessons are to:

- keep junctions as simple as possible, using no more materials than necessary
- research the options - soft-edged flashings are often assumed to mean lead, but other materials are available
- check and recheck for compatibility, especially with complex junctions - it is not always easy to spot every cause and effect
- be specific in notes on working drawings - for example, rather than just stating "soft-edged flashing", specify the actual materials.

You can find more information about compatibility in Build articles here and here. You can also find help in E2/AS1 clauses 4.2.2 and 4.3.

Veranda rafter fixings

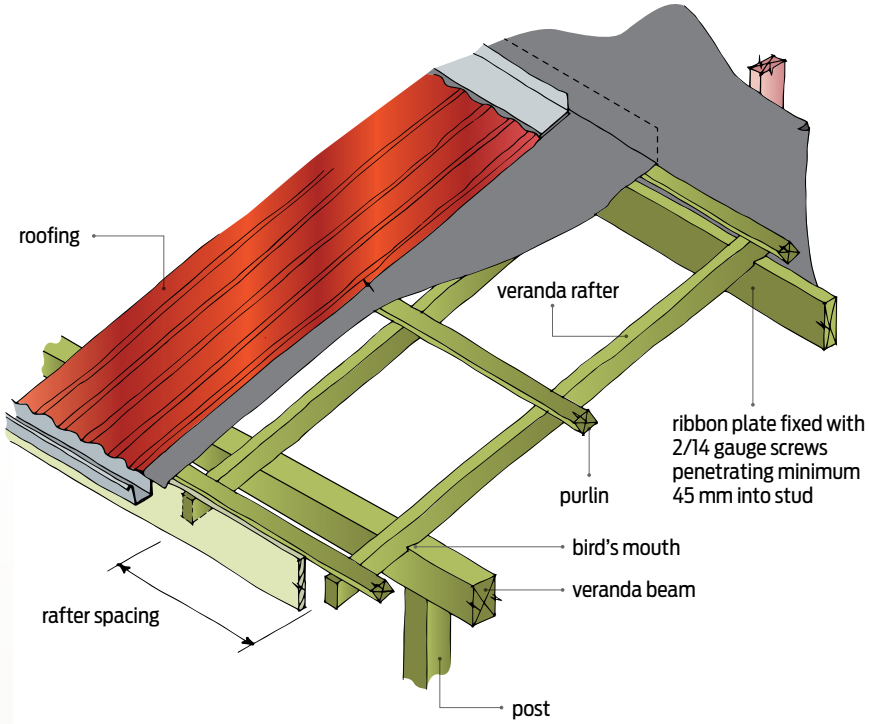
Rafters between ribbon plate and veranda beam

NZS 3604:2011 *Timber-framed buildings* is the go-to guide for most fixing questions, but it has some gaps. One of them is fixings for veranda rafters between a ribbon plate attached to the building wall and a veranda beam (Figure 1). You can't always use fixings for ordinary rafters because of the greater wind uplift forces under the veranda and on the top surface of the veranda roof.

Here is some guidance:

- If the veranda rafter spacing is less than 1,200 mm, use Table 10.1 from the standard.
- Where rafter spacing is 1,200 mm or more, use type F fixings to the veranda beam. An alternative fixing with a capacity of 7.0 kN would also be suitable.
- Rafter fixings to a ribbon plate can be the same as those in Table 10.1.
- The ribbon plate should be at least the same size as the rafter and fixed to each stud with 2/14 gauge screws. Screw length should be sufficient to pass through the ribbon plate and cladding and penetrate at least 45 mm into the stud.

Standards NZ has a project under way to update NZS 3604:2011.



Veranda rafter fixing to beam when rafter spacing is:
≥1200 mm – use type F rather than type E (NZS 3604:2011 Table 10.1) or minimum 7.0 kN fixing capacity
<1200 mm – follow NZS 3604:2011 Table 10.1

Figure 1: Veranda rafters between ribbon plate and rafter beam

Councils tighten consent application process

Incomplete applications are refused

We are aware of a few building consent authorities (BCAs) that are tightening their building consent application processes. Until now, some had accepted incomplete applications and issued requests for information (RFIs) for what was missing. They are now refusing incomplete applications. In at least one case, the change is a result of an IANZ audit.

At BRANZ, we often hear of significant numbers of RFIs that frustrate both the designer and BCA.

Many BCAs provide checklists of what is required in a residential building consent application. Using these checklists can avoid delays and make the process run more smoothly.

Some commonly missing information that we have heard about includes:

- record of title details that are too old or not provided because the new subdivision is incomplete
- PS1s that are missing technical calculations, not signed or dated or missing the legal description that identifies the property
- product manufacturers' literature not included - for example, for waterproof membranes
- geotechnical reports required but not provided.

We are also aware of applications that have not been accepted by a BCA because the font size was too small to be easily read.

Healthy homes standards tools

Check if a rental property complies

Many in the construction industry either own rental properties themselves or have close working relationships with people who do. With the healthy homes standards coming into force for privately owned properties in less than 3 months (on 1 July 2021), tools to help work out whether an existing rental measures up are very useful. There are two on the Tenancy Services website - one covering ventilation and one covering heating.

Owners must ensure that properties comply with the standards within 90 days of any tenancy that starts or is renewed after 1 July 2021.

News

$3.8b for new Housing Acceleration Fund

The government has created a Housing Acceleration Fund and committed $3.8 billion to it. The fund will buy and open up more land for housing development, help to fund critical infrastructure needed for the development and support a wider mix of affordable housing.

www.hud.govt.nz/urban-development/the-housing-acceleration-fund/

Huge growth in mortgage lending

New mortgage lending was up by more than 36% year on year in February. Total new mortgage commitments for the month were $7.6 billion, the highest for any February on record but below the all-time high of $9.7 billion in December 2020.

www.rbnz.govt.nz/statistics/c32

Unit Titles Act update open for submissions

The Unit Titles (Strengthening Body Corporate Governance and Other Matters) Amendment Bill is now with a parliamentary select committee. Submissions are being accepted until 29 April 2021.

www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/BILL_99361/unit-titles-strengthening-body-corporate-governance-and

Free training popular

Over 106,000 people, including more than 58,000 apprentices, have signed up for free trades training under the Targeted Training and Apprenticeships Fund (TTAF). One-third are in the construction sector. Introduced in July 2020, TTAF makes certain qualifications and all apprenticeships free until 31 December 2022.

https://www.beehive.govt.nz/release/more-100000-people-have-accessed-free-trades-training

Update on vocational training changes

BCITO has a useful page on its website about progress with the Reform of Vocational Education. BCITO has signed a Letter of Intent to transition its arrangement of on-the-job training to Te Pūkenga, the new national institute of skills and technology, by the end of 2021.

https://bcito.org.nz/news-and-publications/news/rove-update/

Auckland CCC stats booming but slow growth in land parcels

In the year ending January 2021:

- 12,220 dwellings in the Auckland region had a Code Compliance Certificate issued - up 16% in a year, 105% in 5 years and 225% in 7 years
- 17,113 dwellings were consented - up 14% in a year, 84% in 5 years and 171% in 7 years
- 7,860 new residential parcels under 5,000 m² were created - up 1.5% in a year and 27% in 5 years (7-year data was not available).

www.knowledgeauckland.org.nz/publications/auckland-monthly-housing-update-datasheet

Milestone reached for identifying earthquake-prone buildings

MBIE says that all priority earthquake-prone buildings have been identified by the 38 territorial authorities in high seismic risk areas. Buildings posing the greatest risk to public safety or other property have now been identified and will be remediated.

https://www.mbie.govt.nz/about/news/all-priority-earthquake-prone-buildings-in-high-risk-areas-now-identified/

Drinking water regulator's website

The website for the new drinking water regulator Taumata Arowai is now live. The new Crown entity will take over the regulatory work from the Ministry of Health in the second half of 2021.

www.taumataarowai.govt.nz/

Water performance data available

The latest National Performance Review comparing water, wastewater and stormwater service provision around the country is now available.

www.waternz.org.nz/NationalPerformanceReview

Court finding on Mainzeal directors

A Court of Appeal judgment in late March found directors of failed construction company Mainzeal breached section 136 of the Companies Act. The case now goes back to the High Court to work out what the directors have to pay. Over half the original outstanding claims by unsecured creditors were from subcontractors and tradespeople.

https://www.courtsofnz.govt.nz/judgments/court-of-appeal/