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BRANZ

BUILDER'S MATE

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Timber-framed buildings – What's new

The Standard NZS 3604 *Timber Framed Buildings* is the biggie when it comes to building in timber. It sets out construction requirements for timber-framed buildings up to three storeys high. This key document has just been updated. Here are a few of the main changes you should know about.

- All the information relating to wall and roof underlays and claddings (including masonry veneer) has been removed. Information about claddings will now appear in the revised Acceptable Solution for External Moisture, E2/AS1, expected to be released in July 2011
- a new term, 'structural grade' (SG) timber, has been introduced to cover both visual stress graded and machine stress graded timber. (The terms VSG and MSG are not used in 3604.)
- LVL and glulam have been added as a direct substitution for the equivalent SG timber
- the use of the term 'No 1 framing grade' is removed
- new clauses have been added to cover the durability of fixings in ACQ and CuAZ-treated timber – you will be required to use stainless steel fixings with these two treatments >

INDUSTRY NEWS

New requirements on timber treatment

H1.2 boric treatment is now required for nearly all radiata pine and Douglas fir enclosed timber framing, where Acceptable Solution B2/AS1 is used to show Building Code compliance.

Up to 30 June 2011, both the existing B2/AS1 and the new B2/AS1 (with the new requirements) can be used as an Acceptable Solution for consenting purposes. (Note that the existing B2/AS1 will just point you to NZS 3602.)

From 1 July onwards, only the new B2/AS1 can be used.

You can get the details in a free DBH publication *Pink is Tough: A Quick Guide to Timber Treatment for Enclosed Framing*. You can read it online or download it at www.dbh.govt.nz

HAMMER 'N' NAILS

> Continued from previous page

- the requirement for extra roof framing fixings in roof edge zones has been removed
- a DPC is now required between all timber and concrete/concrete masonry
- bottom plate fixing details for cast-in anchors have been changed to:
  - reduce the maximum spacing from 1400 mm to 1200 mm centres; and
  - introduce a minimum edge distance to ensure that there is sufficient concrete cover to fixings. (Research has shown that some fixings were being installed too close to the outside edge of the foundation).
- for proprietary post fixed bottom plate anchors:
  - increase the embedment depth from 75 mm to 120 mm, and
  - reduce the maximum spacing where masonry header blocks are being used from 900 mm to 600 mm maximum

(We will cover the new bottom place fixing requirements in more detail in a future issue of Builder's Mate).

You also need to be aware of these changes:

- an extra high wind zone has been added, with a maximum design wind speed of 55 m/sec
- corrosion zone definitions have been revised. Geothermal zones now need specific design around the selection of metal components to resist corrosion
- there have been changes to earthquake zone boundaries
- there has been a reduction in the maximum permitted bracing units for wall bracing elements, and an increase in the minimum bracing requirement in internal and external bracing lines
- the 'default' timber grading in the span tables in the document is SG8. If you want to use tables for grades SG6 and SG10, these are in the appendices
- details are given about how 'good ground' is to be determined
- the relationship of a foundation to sloping ground has been amended – this changes how close you can build to a bank that slopes away.

These are just a few of the changes.

When does it apply?

Jobs you are working on now will have been designed in accordance with the 1999 version of the standard. But designs being started now should follow the 2011 version. This is in anticipation of the new version being referenced by the Building Code Compliance Documents in the near future, possibly as soon as July this year.

If you have been using the 1999 version, you'll need to buy a copy of the new Standard. It is a completely new document (not an amendment), with changes on many pages. You can't buy replacement pages. Visit www.standards.co.nz for details.

Dribblings from the Old Geezer

Recently I was told of a couple of instances of young builders showing thoughtful and mature attitudes to the hazardous nature of their working environment. Both related to using treated timber, showing a good level of knowledge about potential harm and what mitigating actions are needed.

One outcome was particularly pleasing. A young man, after learning through reading in an overseas publication of research done on raised levels of heavy metals and copper, chrome and arsenic being found in builders' bloodstreams, took himself off and got blood tests done. The good news was two-fold. Firstly he was able to report that if you suspect you have been exposed to harmful chemicals, your blood-tests are done free of charge. Secondly – and more importantly for him – his blood contained no harmful substances.

The second instance reported to me was more sobering. A group of fit young builders exposed to a particular batch of newly-treated LOSP-treated timber (that may not have been left long enough for the solvents to evaporate before use), all fell ill within a week of beginning to use it. They were using masks and gloves as recommended but still suffered. All but one suffered nose-bleeds, and one had sawdust get trapped in his gloves, which resulted in his skin being burnt because of the level of solvent still in the timber. The young man who related this case to me said he became so feverish that he slept in the bath with a blanket around him. I was told that wisely, the group refused to work further with the timber until the solvent had sufficiently gone, and all are now very cautious about safety warnings and hazard identification.

Des Molloy

SUPPORT FOR SAGGING CEILINGS AND ROOFS

It's not uncommon to see ceiling and roof framing sagging in older houses, especially houses with heavy clay or concrete tile roofs. Often, the framing is undersized compared with what would be used today, there may be be borer damage, or there may have been a defect in the original timber.

Severe sagging looks bad, and probably makes the house occupants feel uncomfortable. There are several ways you can fix things.

To straighten ceilings, you can install temporary props or use jacks to lift the ceiling closer to its original position, and then:

- Add solid timber, LVL or glue laminated beams, or structural steel, ceiling runners (the number depending on the areas to be reinstated), supported off existing loadbearing walls. The existing ceiling joists will need to be tied to the new runners to hold the ceiling in its correct alignment. For timber runners, this can be done with galvanised steel nail plates, straps (see Figure 1), or 50 x 50 mm timber
- where necessary, install new ceiling joists or rafters fixed alongside and nailed or bolted to the existing ones
- install new beam(s) and/or other supporting structural members as required to form a truss, if individual members are not strong enough.

To straighten roofs, new framing to support the rafters above could also be supported by a trussed beam (but not the ceiling runner) (Figure 2).

In some cases (and where practicable) it may be necessary to remove part of the exterior wall cladding to allow large structural members to be installed. Alternatively, it may be necessary to access the roof space by removing a portion of the roof cladding.

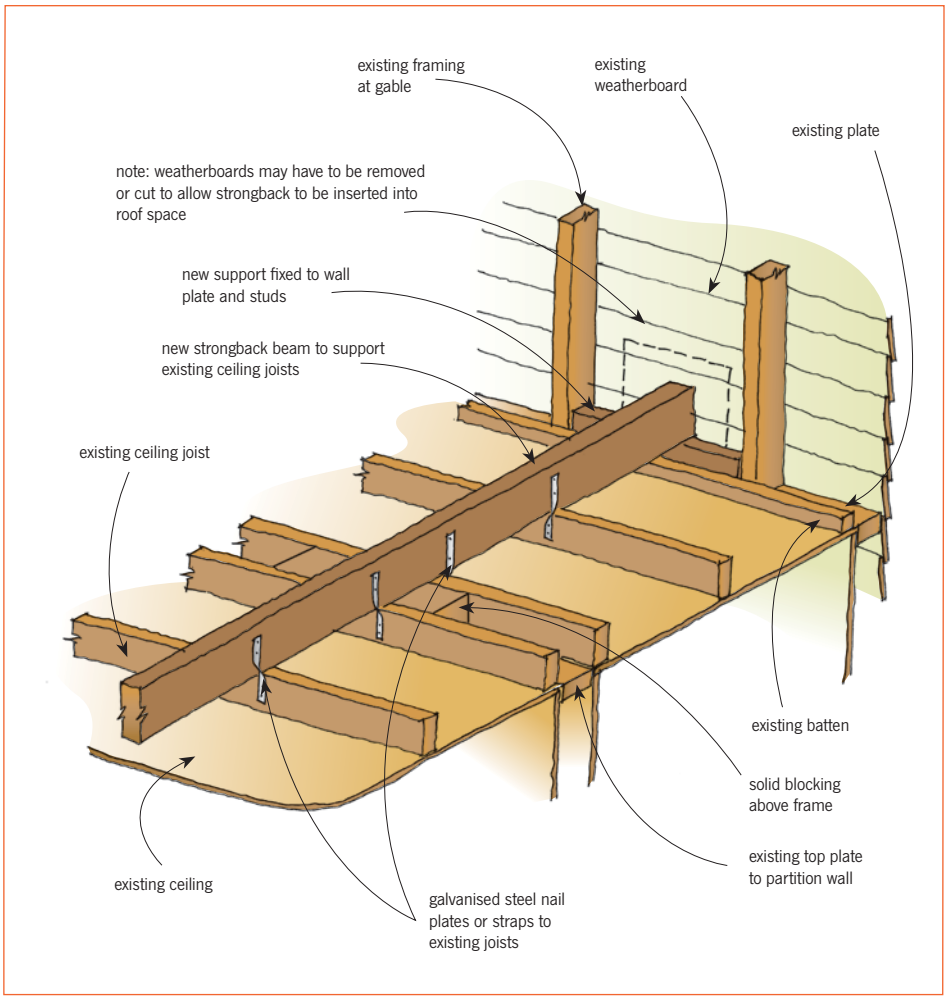

Figure 1: New timber runner added to an existing ceiling

Figure 2: New structure supporting existing ceiling joists and ridge.

COMPETITION
Win!

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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 right).

Send us your answer plus your name, address, telephone number and email address on the back of an envelope. Post it (you don't need a stamp) to: Builder's Mate 48, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50 908, Porirua City 5240. 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 1 July 2011. Details will be posted on the BRANZ Ltd website (www.branz.co.nz) and in the next edition of *Builder's Mate* due out on 1 August 2011.

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 1 July 2011. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

?

Here's a tool attachment. What is it?

The Tool Shed

BUILDER'S MATE WINNER

The winner of the BM 47 competition was Allen Vickress of Waipawa. The mystery tool was a skill saw, and the prize was a Galaxy Leveller 10 extension ladder.

BLOKES on the job

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