NOVEMBER 2006

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FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

A Tale of TWO TIMBERS

In the days when we used plain H1 and H3 timber in building, it wasn't hard to know what was what. One was always 'boric' while the other was simply known as 'tanalised' (although an old Dutch builder did always call it 'terrorised').

Figure 1 H3.1 may be dyed green or left uncoloured and continuously branded along the sides while H3.2 is not dyed. Both are required to have end marking. This structural use of H3.1 timber is acceptable as the framing will be protected from the weather.

Figure 2 Batten clearly identified by end marking. Every length of timber is required to be identified.

Things got complicated as timber treatments were changed or added to, expanding the hazard classes. In 2004 the Acceptable Solution B2/AS1 (B2 is the Building Code clause Durability) was amended to include NZS 3602:2003 *Timber and wood-based products for use in building*. Among other things this Standard introduced the hazard classes of H3.1 and H3.2.

It is important to know the difference between them. In broad terms, H3.1 doesn't protect against fungal decay as well as H3.2.

Where H3.1 timber will be exposed to the weather, only use it for non-structural applications and always paint it. All faces (including cut ends) must be primed and exposed faces must have two coats of alkyd or 100% acrylic paint applied. The non-structural uses suggested are weatherboards, fascias etc where there is a 15 year minimum durability requirement.

H3.1 can only have a structural use (50 year minimum durability) when it is protected from the weather. This means you can use unpainted H3.1 as framing in outside walls and other high-risk areas if it's enclosed. Refer to NZS 3602 for specific applications. In contrast, you can use H3.2 structurally in exposed situations without painting it as long as there is no ground contact and it's not continually damp in use.

How can you avoid confusing these timbers? H3.1 is usually dyed a light green (colour green 368). H3.2 has no dye, but is naturally a duller green from copper in the preservatives.

Continued overleaf

INDUSTRY NEWS

Eco help from councils

Builders, designers and homeowners in three regions will have local access to BRANZ sustainable design research in a new pilot scheme.

Waitakere and Hamilton City Councils and Kapiti Coast District Council will each host an eco-design advisor who offers practical advice on sustainability principles in housing.

The advisors will work from council premises and be available to make site visits to building projects. There is no charge for their service, and the scheme may be extended to other councils after the 10 month pilot. The project is jointly funded by the Ministry for the Environment, Building Research and the councils.

Research on homeowners' sustainability decision-making has highlighted that they tend to opt-out of discussions about eco-friendly construction practices. This places a large responsibility on the builder or designer to understand eco-design issues and options, but research has uncovered a lack of accessible technical information.

HAMMER 'N' NAILS

Continued from previous page

TABLE 1: USES AS GIVEN IN NZS 3602			
	Cladding, min 15 year durability	**Structural framing protected from weather but with risk of moisture penetration, min 50 year durability**	**Structural uses outside, no ground contact, min 50 year durability**
H3.1	Yes – but you need to paint the timber, including primer on all faces and cut ends	Yes – refer to NZS 3602 for specific applications	No
H3.2	Yes	Yes	Yes
COLOUR CODING AND BRANDING FOR H3.1 AND H3.2 TIMBER TO NZS 3604			
H3.1	Light green dye, distinctly different from the green of the preservative used in H3.2, plus end branding or continuous face branding *Or* No dye, but continuous branding repetitively along the length at 1500 mm centres on its face or one edge		
H3.2	No colour coding required. Can be identified by the darker green from the copper-based preservative, plus end branding or continuous face branding		

Both products must also have end branding with treatment plant number, preservative code and the hazard class or they can have continuous branding on one face. If H3.1-treated timber has continuous branding repetitively along its length at 1500 centres, then it does not have to be dyed green.

DRIBBLINGS from the Old Geezer

I've seen some bloody terrible work on site lately and it has spurred me on to another rant about this. What do you do when the trade before you hands over something that you don't feel is acceptable?

It is easy for me to say reject it. That is what I'd like you to do because once you take over the work, you've shown approval of it. But sometimes it is not practical to reject it outright. Just because there is a bit of bony concrete you wouldn't get a whole slab pulled up, but something should be done.

A cost adjustment is one option. If you have contracted to have one thing made for you and something else is delivered … pay something else. It might need repairs done before it is acceptable for your client. If so, the doer of the work should get first lash at it. Get them or their boss along and jointly decide if the work is good enough and, if not, how they will make it right.

Just mumbling about today's standards, then rolling over onto your back, is not the way of handling it. Be staunch; insist that their standards match yours.

Des Molloy, BRANZ Ltd presenter

PRODUCT INFORMATION

CAVIBAT is a new type of batten used between the external cladding and the framework. The batten can be installed vertically and horizontally and acts as a total moisture barrier because it allows drainage and ventilation through the batten.

For more information:
www.cavibat.co.nz

BRANZ ADVISORY HELPLINE

Call
EDDIE BRUCE

BUILDERS **0800 808085**

HOME OWNERS **0900 5 90 90**

(0900 calls charged at $1.99 per minute plus GST)

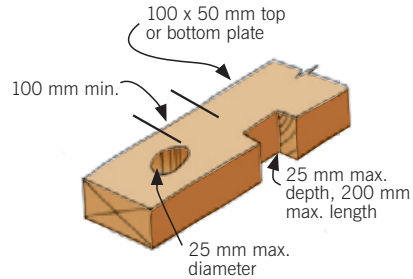
Notching and boring

It surprises some builders to learn that there are rules about notching and boring structural timbers. These figures summarise what is instructed in NZS 3604.

If you must go beyond what is shown here, NZS 3604 has further guidance in Clauses 7.1.7 (floor joists), 8.5.2 (trimming studs) and 8.7.5.2 (top and bottom plates). If they don't have the solution for you, you must have one engineered, and then accepted by your local building official.

TOP OR BOTTOM PLATE

Note:
100 mm offset between edge of holes and the notch



The Importance of UNDERLAY WITH METAL ROOFS

On still, frosty nights, infrared heat radiates off metal roofs into space. This causes roof temperatures to fall, often to many degrees below the ambient air temperature, and can lead to condensation forming on the metal.

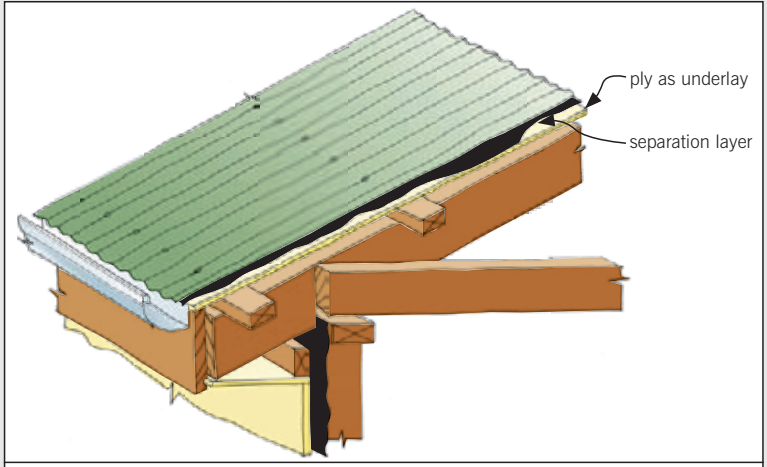


Figure 1 Plywood can be used as the absorbent layer under metal roofing in accordance with Table 23 of E2/AS1, but will need a separation layer between the metal and the ply if the H3 treatment contains copper.

Figure 2 Underlay is an important part of the roof installation and should be installed tightly over netting.

Three things are needed for this to happen:

- no clouds in the sky
- a roof temperature which falls below the dew point
- no wind – this would cause the roof temperature to match the air temperature, which is warmer than the dew point.

Clay or concrete tiles can absorb condensation without harm and evaporate it away during the day. But the temperature of metal roof cladding is virtually the same on the upper and lower surfaces so condensation forms on both.

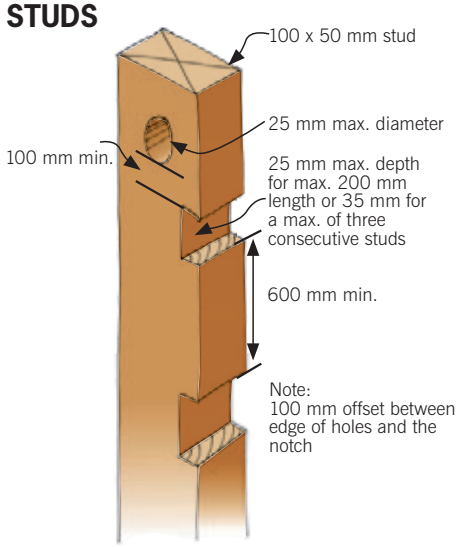
Condensation on top isn't a problem – after all, roofs are designed to keep external moisture out. But condensation underneath can be an issue if it drips into the roof structure, degrading the performance of insulation and potentially causing water damage to other components such as roof timbers and ceiling lining.

Always use an absorbent layer immediately below a metal roof. This absorbs any condensation that might drip down and holds it until daytime when warmer conditions allow the condensation to evaporate. The absorbent layer is commonly a roofing underlay or building paper, but occasionally it might be an absorbent rigid sheathing such as plywood. If plywood is used it must still allow any condensation to drain to the outside.

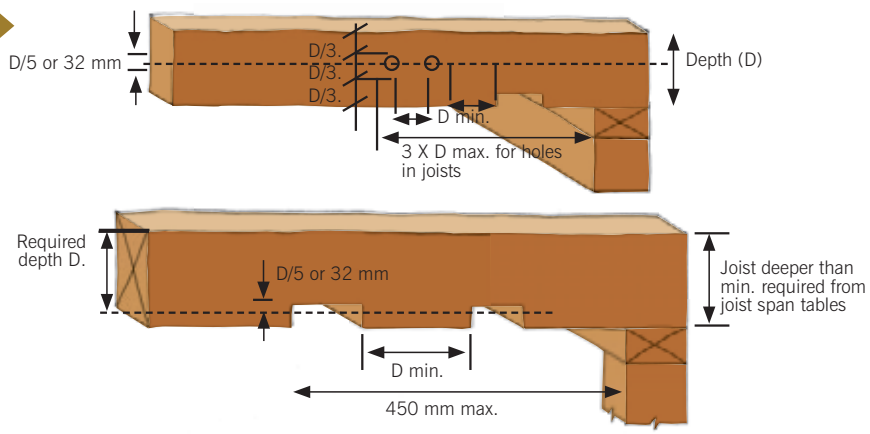
If the underlay is non-rigid in a skillion roof, there is a risk that if it sags when full of condensation, it might touch the insulation below and allow the condensation to wick into the insulation. Leave a gap of at least 25 mm between the insulation and the underlay.

Underlay is important … do it well.

STUDS



JOISTS (see Fig 7.8 of NZS 3604)



COMPETITION

? What is the name of this pictured tool and what is it used for?

Win!

230mm Makita angle grinder worth over $300!

This great angle grinder has a 2400 W motor, quality machine bevel gears, increased heat resistance and double insulation. A rubberised soft grip and vibration-absorbing side grip mean greater comfort and control.

The prize is provided courtesy of Makita and The Tool Shed.

1. All you need to win is tell us the name of the mystery tool and what it's used for.
2. Send us your answer (one entry per entrant please) plus your name and address on the back of an envelope and post it (you don't need a stamp) to: Builder's Mate 20, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50908, Porirua City.
3. 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 December 2006. 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 3 January 2007.

Terms and conditions: Entry is open to all New Zealand residents except employees and immediate families of BRANZ Ltd, BRANZ Inc, BRANZ Pty and The Tool Shed shops. The competition will close on Friday 1 December 2006. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into. BRANZ Ltd may, from time to time, send you information about our products. You can contact us at any time if you do not wish to receive this information.

BUILDER'S MATE WINNER Lesley Salmons of the Manawatu ToolShed hands David Hall of Wanganui his DeWalt cordless drill

BLOKES on the job

JACK HALSEY of Upper Hutt.

Favourite tool
Makita screw gun – good tool, does a lot of work.

Favourite tip
Only children and fools criticise half-finished work.

BRETT HAMER of Newlands, Wellington.

Favourite tool
Gib square.

Favourite tip
Always do what the boss tells you!

STEVE MURPHY of Petone.

Favourite tool
Pump-action Ramset gun.

Favourite tip
Get it right from the beginning – everything will flow a lot better if you do.