Offcuts

Issue 37

Editors Comments

Apart from the horrendous weather and flooding, this year is off to a good start with a steady flow of building consent applications. The boom appears to have levelled to a more manageable state of affairs.

This month we highlight some of the changes that have resulted from the two revised standards NZS 3602:2003 and NZS 3640:2003 relating to the use and treatment of timber in construction. These standards are a bit of a minefield for the unwary in places, and the ramifications of getting it wrong could be far reaching, so please read the articles carefully.

The 'Monolithic Claddings' training evening held at council earlier this year was immensely popular with more than 100 people cramming in. Thank-you to all of you who turned up. The only disappointment was that only one plasterer was in attendance. At least we now have 100 more people helping us keep an eye on them.

New Building Inspector

Due to our increasing workload, we have just appointed Garry Edlin to join our ranks as a building inspector. Garry is well known to most of our customers as the man behind the Environmental Services counter. Garry has been appointed because of his excellent administrative skills as well as his in-depth knowledge of the building industry goings-on here in Wanganui. Garry served an adult carpentry apprenticeship with Gemini Peppers and has been the "factotum del la cita" (the guy who *really* runs the place) for Council & ESBU for the past 8 years.

Garry takes up his new role at the beginning of April and is looking forward to coming to work without a tie on.

Water Supply Pressure tests

Plumbers beware. New pipe installations need to be tested to 1500KPa . This pressure is a lot more than the normal working pressure the pipes will normally be subject to and is right at the design limit for some materials. For this reason, the pipes should be 'pumped up' about 30 minutes before inspection and no longer. The practice of leaving the pump on overnight has been known to deform pipe work!

New Timber Treatment Grades

The timber treatment hazard categories have been upgraded and the changes will take effect on April 1st this year. Hazard categories rate the ability of the timber to resist decay from fungal or insect attack. The new ratings have been developed to better reflect the different treatments on the market now (such as LOSP), and also to bring NZ into line with our cousins across the ditch in Oz. The following table compares the new rules with the old. The important issues to note are the division of the H1 and H3 categories into H1.1 and H1.2, and H3.1 and H3.2 categories respectively.

The new treatment requirements are better detailed in the two updated standards; NZS 3640:2003, 'Chemical Preservation Of Ground Sawn Timber', and NZS 3602:2003, 'Timber And Wood Based Products For Use In Building'.

Old Hazard Category		**New Hazard Category**	
Category	**Use**	**Category**	**Use**
H1	Elements in dry situations but some limited protection to decay. (Wall and roof framing)	H1.1	Elements in dry situations only. Borer protection. (Internal wall & roof framing (except skillion roofs) and external wall framing behind Brick Veneer)
		H1.2	Elements in dry situations but with a possibility of moisture. (External wall frames, Skillion roofs)
H2	Used in Australia for termite protection. Not applicable in NZ.		
H3	Elements exposed to the weather but not in ground contact. (Posts, decking etc)	H3.1	Elements exposed to occasional wetting but not in ground contact and with no risk of moisture entrapment. Will require paint protection. (Cladding, fascias, joinery etc)
		H3.2	Elements exposed to occasional wetting with a risk of moisture entrapment and not in ground contact. (Decking, structural posts etc
H4	Elements in ground contact but not requiring a 50 year life (fence posts)	H4	Elements in ground contact but not requiring a 50 year life (fence posts)
H5	Structural elements in contact with ground requiring a 50-year life. (Piles, retaining wall posts)	H5	Structural elements in contact with ground or in fresh water, requiring a 50-year life. (Piles, retaining wall posts)

Council requires that the treatement grades to be clearly specified on the plans or scheduled in the specification.

Timber treatment warning.

H1.2 will be colour coded in either pink for boron treated timber, or otherwise blue. Trouble is, Radiata is a yellowy colour and the blue dye often ends up looking green, which is the colour for H3.1 or H3.2. (You would think that some one at Standards NZ would have thought of that!) Anyway, don't get it mixed up. Just because it is green it doesn't mean you can use it outside any more.

To add to the confusion, H3.1 and H3.2 are both coloured green. For those of you who are chemists, you can tell the difference by spot test. Yes sir re! You can apply an ammonia solution and rubeanic acid (readily available in any builders toolkit) to a freshly cut surface. If it turns blue-black it has copper and is H3.2. Yeah right! If you're not a chemist the only way to avoid confusion and not use H3.1 where it should not be used, is to check for a stamp on the end grain or face.

The point is, ***don't rely on your old sense of colour because it may now lead you astray*****!** Always clearly specify the correct treatment grade when ordering your timber, and double check it when it is delivered on site.

BEWARE - Tanalised may not be H3!

'Tanalised' has become synonymous with H3 treated timber. If you wanted to use timber outside, you went down to the timber yard and asked for 'tanalised'. But, 'tanalised' is a treatment brand name that that may only be H1. Just because the treatment branding label (like the one on the right) says 'tanalised'- it doesn't mean you can use it outside. Always check the hazard class (in this case H1)

Use of Macrocarpa for building projects.

Macrocarpa is a popular timber species in Wanganui. We often get asked about it's use for building projects and often we discover it's *inappropriate* use on site and we have to ask for it's removal. Here are some general rules for the use of Macrocarpa.

1. Heart Macrocarpa is moderately durable and may be used externally in situations where a 15-year life is required such as weatherboard, joinery, fence palings, even decking and external stairs. But it will not give a 50-year life and so it ***must not*** be used in exterior structural

applications such as posts, bearers, beams, deck joists etc. unless protected with a 3 coat paint finish.

2. Macrocarpa sapwood may be used for subfloor framing (not in ground contact) but must be treated to H1.2
3. Macrocarpa for structural use must be graded and used in accordance with NZS 3604 (ie: Engineering, No1, or No2 grades). The grading must comply with NZS 3632:1988 'NZ Timber grading rules'. Because most Macrocarpa is milled from farm shelterbelts, grading is usually not adequate without excessive wastage.

To date, Macrocarpa has not been successfully treated to an H3.1 or H3.2 level. This is because the cell structure makes the absorption of the preservative difficult even under pressure. This means that paint on preservatives such as 'Metalex' cannot be considered as adequate.

Moisture Content in wall framing now 18%

The new NZS 3602:2003 now requires wall framing to be 18%. (It used to be 20%.) There is some leeway- lintels and beams can still be 20%, and 'wet framed' walls that only have a Gib finish of 0-3[1]. It will be difficult to achieve this in many cases- particularly in the winter months. Builders should take all steps to ensure that the framing stays as dry as possible. Builders should also specify that suppliers deliver all frames on site at less than18% moisture content. Wet frames should be rejected if there is little time available for them to dry out.

Note: Winstones Wallboards recommend that frames be 16% m/c before gib board is fixed to them.

Plaster board levels of finish range from 0-6 and are set by the Standard AS/NZS 2589.1. Levels 4 and 5 are those commonly specified for residential work.

Concrete Strength in floor slabs

We've had a couple of builders get this wrong recently. The required concrete strength for floor slabs to comply with NZS 3604 are as follows:

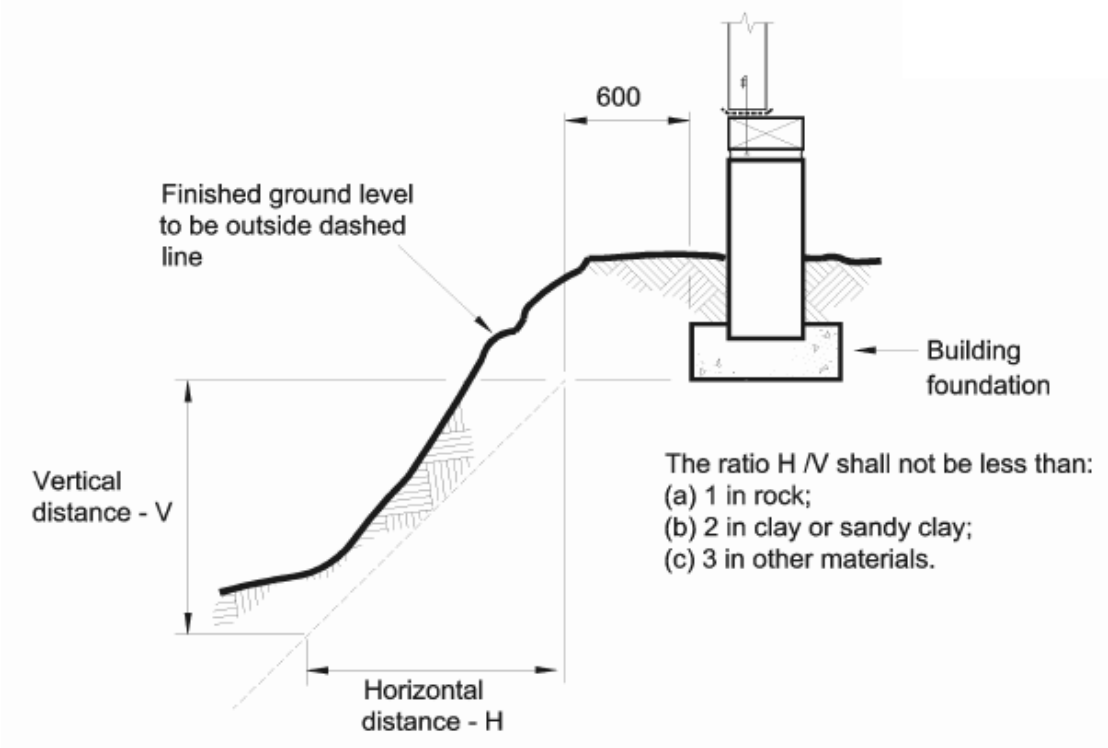
- 25MPa around the perimeter where the slab edge is exposed (ie: footings up to floor level and in a seaspray zone (within 500m of breaking surf).
- 20MPa around the perimeter where the slab edge is exposed and outside the seaspray zone.
- 17.5MPa for the rest of the slab.

Foundation depths on sloping sites

Steep sloping sites present special problems when it comes to foundation depths. Section 3.1.2b of NZS 3604 requires that the depth comply with figure

1

3.1 (reprinted below). This is to avoid the possibility of the soil slipping or falling away from under the footing.



This is why it is important that site levels are clearly shown on plan elevations and sections. Designers need to familiarise themselves with this provision. Often we arrive on steep sites to find the footings too shallow and a check of the plans shows a level site!

The levels also need to be clearly indicated to demonstrate compliance with height recession planes.

Your pool is probably a killer!

On new years day a toddler drowned in a Wanganui swimming pool. The pool was ‘fenced’, but the gate did not close and latch automatically and this lead to the death of the child. **If you own a pool, check the fencing now!** We have done a small survey of a range of pools in the district and found that only 1 out of 20 pools complied. In most cases the non-compliance was ‘minor’ but definitely enough to allow a tragedy similar to the one on new years day. Don’t risk putting yourself through what the owners of this pool are going through. The following is re-printed from the last issue of Offcuts. If you have any queries please call us immediately- don’t put it off.

Swimming Pool Fencing.

Once again, we remind all pool owners to check the fencing on their pool. Gate springs and latches have a habit of wearing out or becoming ‘oil deprived’. Below is a checklist of the basic requirements.

- Fences 1200mm high (min) with vertical palings or rods spaced no greater than 100mm apart.
- Horizontal members must be at least 900mm apart
- Gates must self-close and self-latch. The latch must be accessible only by reaching over the fence/gate, not by reaching though it. Otherwise at least 1.5m off the ground.
- Gates must open **outwards** from the pool area.
- Only the immediate pool area is to be fenced.

Soil stacks

We have picked up on a number of recent soil stack installations where the bend at base of the stack has not been formed correctly. In these cases a large radius swept bend, or 2/ 45 degree bends are permitted. 100mm or even 80mm elbows are not acceptable.

Also remember that no connections to the stack or drain can be made within the ‘positive pressure zone’