FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

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Under control

Uncontrolled stormwater from or across a building site can be illegal as well as being a nuisance, or even dangerous, to those on site and on adjoining property. It can make surfaces slippery, block council drains, or cause earth and cut faces to slip, damaging completed work or nearby property. There is usually a council requirement that run-off from a construction site, which is likely to contain silt and other fine material such as sand and cement, is not allowed to enter the council stormwater system or adjoining properties.

Putting stormwater and sediment control systems in place early in a project can save significant time and costs, and prevent rework.

How to minimise stormwater effects on site

- Check local and regional council requirements before starting work.
- Check council records or the project information memorandum to see if there are any existing stormwater systems or natural water courses on site.
- Limit the amount of natural ground that is disturbed during site works.
- Control vehicles on site.
- Create a working platform with site concrete or compacted basecourse rather than leaving

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INDUSTRY NEWS

Scary statistics

Recent research from the Department of Labour looked at 362 workplace fatalities in New Zealand from 2000–2005. It found that most deaths occurred:

- in summer (December–February)
- after morning smoko (10.30–12.30) and mid afternoon (2.30–3.30)
- after workers had come back from a long holiday.

Starter home design winners announced

The overall winning home design was by Stephen Smith from S3 Architects Ltd in Auckland. It will be built in Mangere by the Housing New Zealand Corporation and showcased to the public. The convenor of the judging panel, leading New Zealand architect Gordon Moller, says the overall winning design has a striking contemporary appearance, which means it will fit well into the local environment.

Inside:

Win!
A DeWalt DW384-46: 210MM (8¼") heavy duty circular saw
Worth $416!

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bare soil (it also helps keep completed floors cleaner).
- Place building materials (framing, bricks, fill, top soil) close to where they will be used.
- Cover building materials, such as sand, with plastic or polythene.
- Cover cut faces and banks with polythene/tarpaulins (in particular, until retaining walls are constructed and ready to be backfilled) before rain starts.
- Check adjoining properties and roads to ensure that there is no stormwater being directed onto your site. (Photograph the area to record how it looks before work begins in case of any subsequent claims.)
- Listen to weather forecasts.

Stopping water from leaving the site

Depending on the site and the scope of work, you may need to take greater steps to stop contaminated or silt-laden water leaving the site. This could include:

- laying perforated drainage pipe in a filtering sock in trenches and directing to a suitable sump
- early installation of the stormwater systems
- properly designed silt ponds/traps
- installing appropriately placed sumps
- backfilling retaining walls with free draining material, perforated pipe and filter cloth as soon as possible.

Keeping the water clean

Contaminated or muddy, silt-laden stormwater must not be allowed to leave a site without having some form of treatment to remove solids and get the water as clean as possible.

There are several ways to keep site stormwater relatively clean, and it is preferable to have the plan in place before rain starts:

- Lay site concrete with a fall to one point where a sump can be installed so water can be collected and disposed of easily.
- Turn up the bottom of tarpaulins/polythene when laying them over slopes. This will form a channel to stop water from spilling onto the ground. Water can then be directed to an on-site sump and discharged to an appropriate outfall.
- Ensure perforated pipes in trenches are protected with an appropriate filter cloth to stop large particles entering the pipe. This pipe should be laid to fall to the sump.

Dribblings from the Old Geezer

As one matures – in years, even if not in attitude and behaviour – there arise numerous opportunities to observe the young from a position of knowledge. For some, that enables the traditional venting of opinion, with commentary like, “In my day... ”. This hackneyed opening usually precedes a predictable, dull denigration of the young. I admit to being a stout defender of the young (one of the only advantages of being stout) and twice recently have witnessed a young apprentice going off from the provinces to the big smoke for his first trade block course. I enjoyed sensing the optimistic anticipation of both of these young lads. There was a predictable trepidation they weren’t letting on about, and there was the more obvious delight of not having to work for a couple of weeks, while still getting paid.

What the lads didn’t know was how this first, centralised block course would complete another step into adulthood. They would be meeting similar young men and women from all over, doing the same trade as they are. This would open up valuable contacts all around the country for when they do spread their wings and have a ‘road trip’ with their mates. These are their friends in Timaru, Tokoroa, Napier and Nelson etc. – not family connections. The personal ownership of that connection has no debt to anyone else. The friends they make are not as a result of proximity or family – they’ve been personally earned and should be treasured. Hopefully the relationships will be ongoing and sound. Good, eh!

Des Molloy

AT A GLANCE

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 be specifying the capacity of the connectors they require you to install. As it is not practical to show all joint locations on the drawings, the easiest option is to use 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. Also see Figure 8.14 for joining top plates in walls that do not contain any bracing.

A typical top plate joint where the joint is not centred on a stud. Such joints require blocking, but in this case, the laminated studs supporting the steel beam above are providing support to the joint. However, the number of studs laminated together is outside the scope of Section 2.4.4.7 of NZS 3604.

Retrofitting timber-framed windows for thermal improvement

Around one million houses in New Zealand have timber-framed windows, most with single glazing. These windows can have problems with draughts, poor thermal performance, soundproofing, poor solar control and excessive condensation.

There are several retrofit options for thermal improvement, but the increase in thermal performance varies with the option that is chosen. In increasing order of performance, the options are:

Replacing clear single glass with advanced single glazing

Existing single glazing in timber frames can be deglazed by removing the putty and brads, and replacing with a single pane of an advanced glazing (such as low-e, solar control, tint or reflective glass), but this does not give a great increase in performance for the cost involved. For example, low-e glass (which has a thin coating on one face that reduces the amount of heat that can be transmitted) can improve the thermal performance of timber-framed windows by 30%, i.e. from R 0.15 to R 0.195, but the coating can be easily damaged and therefore become less effective.

Installing secondary glazing

Secondary glazing is the installation of additional glazing on the inside of the existing glazing, which can improve the thermal performance of the window by 100% i.e. from R 0.15 to R 0.3. The three options (in increasing cost order) are:

- unframed glazing, where glazing material is connected directly to the existing timber sash rails and stiles, or between mullions and transoms (see Figure 1)
- spaced secondary glazing, which uses plastic rod or angles, magnetic strip, timber packers, or aluminium tubes or angles to space an additional glazing pane of plastic or glass off existing sashes
- framed glazing, where a separate aluminium frame is installed in the opening on the inside of the existing glazing (see Figure 2).

Installing insulating glazing units (IGUs) into the existing frame

Depending on the glazing configuration, thermal performance of IGUs ranges from R 0.22 to R 0.53. There are many ways of installing IGUs into timber windows. Four options (in approximate order of cost) are:

- installing an aluminium adapter to allow the installation of the IGU
- modifying the existing sash to accept the IGU
- removal of existing sashes and installing new timber sashes glazed with IGUs within the existing frame
- removal of existing windows and installing new timber windows glazed with IGUs into the existing opening.

When installing any type of double glazed unit to opening windows, the weight of the additional glazing may require the upgrading of the opening mechanism to support the added weight.

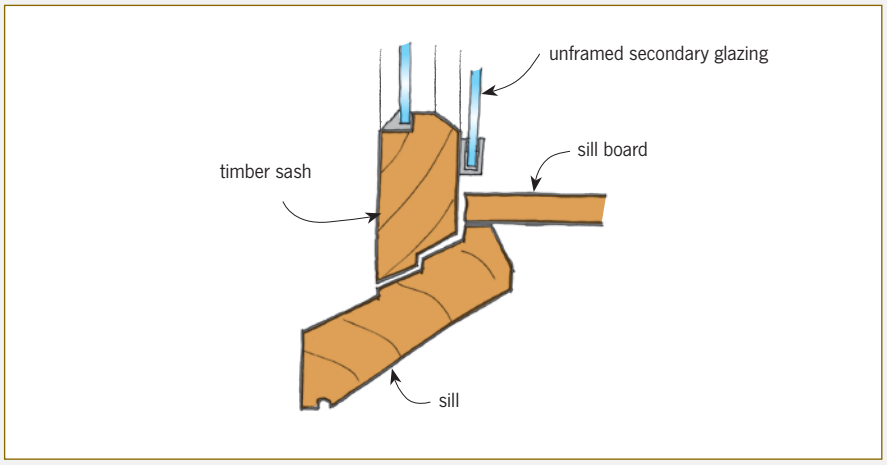

Figure 1. Unframed secondary glazing

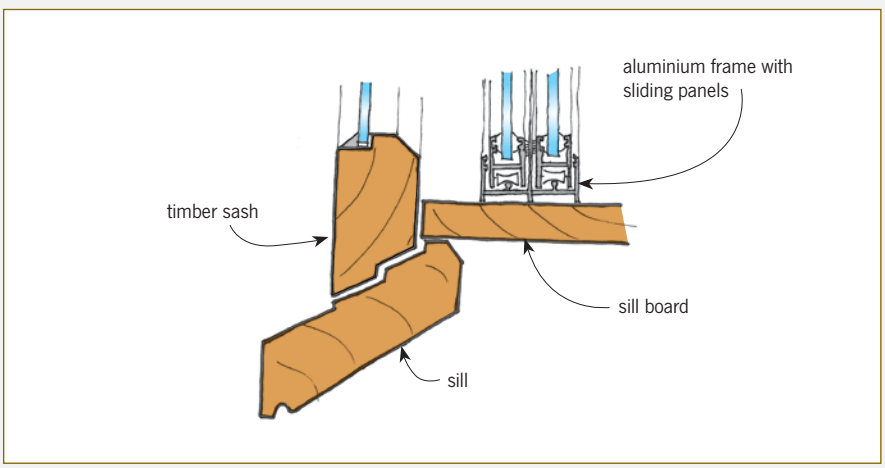

Figure 2. Framed secondary glazing

COMPETITION
Win!

?

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

A DeWalt DW384-46: 210MM (8¼") heavy duty circular saw Worth $416!

With a power input of 1800 watts, this DeWalt circular saw features a rear pivot shoe for ease of use, 50° bevel capacity, a strong lightweight alloy base for increased durability on the worksite and a spindle lock for fast blade change.

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) and what it's used for.

Send us your answer plus your name, address and telephone number on the back of an envelope. Post it (you don't need a stamp) to: Builder's Mate 36, 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 26 June 2009. Details will be posted on the BRANZ website (www.branz.co.nz) and in the next edition of *Builder's Mate* due out on 3 August 2009.

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 26 June 2009. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

the Tool Shed

BUILDER'S MATE WINNERS

The winner of the BM 35 competition was Shannon Craft of Owhango. The mystery tool was a rebar cutter, used for cutting reinforcing rod. The prize was a Bosch 10.8v Scorpion drill/driver kit.

Wet Areas SEMINAR

This seminar discusses the design and construction principles for wet areas to ensure houses are healthy, comfortable and safe to live in.

This seminar is essential for architects, designers, BCAs, builders, kitchen and bathroom designers, tilers, plumbers, waterproofing applicators and manufacturers.

The Wet Areas seminar series runs from 3 August to 8 September 2009, in 22 venues around New Zealand.

Only **$85.00** per person or attend the seminar and receive the new **Wet Areas** publication for only **$116.45**.

For more information on the seminar and to register, go to: **www.branz.co.nz**. Also check out previous **BRANZ Seminars** via webstreaming.

BLOKES on the job

BOYD NORGROVE
Whangarei.

Favourite tool
Gorilla ladder.

Favourite tip
Get the right nail – not the one on the thumb.

JACK BRADLEY
On a site above Taylor's Mistake, Christchurch.

Favourite tool
Nail gun.

Favourite tip
Measure twice, cut once.

ANDY CARMICHAEL
Stonemason, Christchurch.

Favourite tool
Trowel – of the best quality.

Favourite tip
Complete a recognised apprenticeship for your trade if you are serious about it.

Know someone on the job? Send us details of his or her favourite tip and tool and you could win $50 worth of BRANZ books.

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