BRANZ

FREE TO ALL BUILDERS | ISSUE 98 | OCTOBER 2019

builder's mate

PROTECTING GLASS

New houses often contain a lot of glass, and it can be delivered to site when there is still a ton of other work to be done. Glass is easily damaged – and in ways you may not be aware of. Here are some tips on protecting it.

Glass on a construction site can be etched or stained from:

- run-off from concrete, fibre-cement, mortar or plaster – the lime in these forms an alkaline solution with water
- run-off from solvents, oils, plasticisers or pigments from sealants
- silicone sealant smears
- abrasive debris and dust.

To reduce the likelihood of damage:

- where possible, delay glass delivery to site until just before needed
- where possible, do not install glazing until all work with materials corrosive to glass (such as cement-based products) has been completed
- protect glass after installation
- ensure that all trades on site understand the need to protect the glass
- if glass is delivered with a protective film, leave it on for as long as possible (but remove production labels). >

INDUSTRY NEWS

Auckland housebuilding boom to continue

The recently released *National Construction Pipeline Report 2019* forecasts New Zealand-wide residential building activity to level out from 2020 to 2024, but Auckland's growth will continue. By 2024, residential building activity in Auckland is forecast to be 39% higher than 2018 levels. The report, released in August, can be found at www.mbie.govt.nz/assets/national-construction-pipeline-report-2019.pdf.

Photovoltaic installations approaching 25,000

By the end of July 2019, there were 23,038 PV systems on New Zealand houses, with the milestone figure of 25,000 fast approaching. Numbers have grown quickly – there were 19,173 systems installed 1 year earlier and just 3,719 5 years earlier. The cost of systems has fallen significantly in recent years.

Building envelope seminar

BRANZ is taking a seminar about the building envelope on the road to 21 centres in October and November. A key focus is weathertightness and wall claddings. Find out more at www.branz.co.nz.

Protect the footpath

A damaged section of footpath outside a Papatoetoe building site proved fatal for an elderly man when his mobility scooter hit a bump and he fell off and died. The companies involved had failed to manage the risks around heavy vehicles entering the site.

One of the companies involved then obstructed investigations into the accident. It was fined $500,000 for its role in the man's death and its total disregard for the man's family.

Work pressures and suicides

A Site Safe study of 300 coroners' files of suicides by people who worked in building found that work pressure was judged to be a factor in a third of cases. The stresses included:

- job insecurity or uncertainty
- the stress related to running a business
- pressure to deliver under deadlines
- juggling responsibilities
- dealing with an injury or illness affecting the ability to work.

Almost all (99%) of the 300 people were men, with 15% being 20–24 years old.

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Storing and handling glass on site:

- Stack sheets on the long edge on rubber, felt or soft plastic-covered supports.
- Do not stack more than six sheets deep without intermediate support.
- Store in a clean, dry, well ventilated space out of direct sunlight.
- Ensure the edge of the glass (particularly IGUs and laminated glass) is not immersed in water.
- Inspect regularly. If moisture is found between stacked glass sheets, separate immediately and dry thoroughly.
- Use an absorbent, non-alkaline (pH 5.5–7) packing between the sheets to help to prevent water from being drawn up by capillary action.
- Cover sheets.
- Store away from construction traffic and work such as welding, grinding or sandblasting.
- Protect against wind gusts.
- Use manufacturers' recommended carrying methods. Gently remove suction cup marks afterwards. If marks are hard to remove, use a pad with a little cerium oxide.

Cleaning glass

If you see glass has become dirty, gently clean it without delay. This is the general approach to cleaning glass on site:

- Start from the top of the building and the top of the glass and work down.
- Soak glass surfaces with clean water and mild detergent or proprietary window-washing solution. Never use abrasive solutions.
- Use a soft cloth in a circular motion and light pressure on the glass and frame, making sure there are no abrasive fragments on the cloth.
- Dry with a clean, grit-free squeegee and/or a soft cloth.
- Wash and dry all window gaskets, frames and sealants at the same time.
- Do not allow cleaning solutions/solvents on the edges of laminated glass or IGUs.
- Remove grease marks, glazing compounds and sealants before washing using isopropyl alcohol or a solvent recommended by the glass manufacturer. Test on a small area first.

Scraping glass with metal blades can easily result in scratching. If paint or other spatter cannot be removed by normal cleaning, use a new blade in one direction for spot removal only. Stop immediately if you see a scratch.

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Mouthpiece

Dust in the wind

Way back in the 70s, the rock band Kansas put out a song called *Dust in the Wind*. The hit song was about how short life is.

It's an appropriate song to play on dusty building sites because research is finding that dust isn't just a nuisance. Dust, particularly silica dust, really can shorten people's lives.

Silica dust is formed when working on concrete, bricks, fibre-cement and similar materials. It's a particular risk because the smallest particles can be breathed deep into the lungs. Like illnesses cause by asbestos, there may be no symptoms for a decade or two. In February, 99 people who had worked in manufacturing engineered stone benchtops in Queensland were tested and found to have serious lung disease, but most had no symptoms. The youngest was 23. For at least 15 workers, the disease is likely to be terminal.

A study of 250 construction workers in the Waikato found too many of them did not consistently use effective techniques to suppress or extract dust, particularly for demolition and woodwork. Clean-up was usually a sweep with a dry broom. Workers under 25 were less likely to use respirators.

Look after yourself and your team:

- Always wear a properly fitted mask or respirator on work that produces or raises dust.
- Wet dust before it can become airborne, and frequently clean work areas and equipment with water.
- Never sweep up dry dust – use a vacuum cleaner with a HEPA filter.
- When buying cutting and grinding equipment, look for a dust collection device or a water system to the blade.

BRANZ and WorkSafe have online resources:

- www.level.org.nz/health-and-safety/
- worksafe.govt.nz/topic-and-industry/dust-and-fumes/dust/silica-dust-in-the-workplace/
- worksafe.govt.nz/topic-and-industry/dust-and-fumes/dust/wood-dust-controlling-the-risks/

STRAIGHTENING A STUD

When you work with timber framing on a house build, it is not uncommon to find the occasional stud that bends. You can straighten these on site, within certain limits.

The rules are set out in NZS 3631:1988 *New Zealand timber grading rules* (for maximum allowable bends) and NZS 3604:2011 *Timber-framed buildings* (for straightening a stud).

For 90 x 45 mm studs, the maximum allowable bends are:

- up to 3.0 metres long – 10 mm
- up to 3.6 metres long – 15 mm
- up to 3.9 metres long – 20 mm
- up to 4.5 metres long – 25 mm
- up to 4.8 metres long – 30 mm.

Studs with bends greater than these measurements should be straightened or replaced.

Straightening is done by making a saw cut into the stud on the inside of the curve (Figure 1) no more than half-way through. Only one or two cuts are permitted in a stud.

Once the cut is made, a wedge can be carefully driven in it to straighten the stud, which can be pulled from the uncut side to the cut side if necessary. Once the stud is straight, nail 19 mm (minimum) thick timber fishplates the width of the stud to each side of the stud. These must extend 225 mm minimum above and below the cut(s).

The other general rules are:

- no more than a quarter of studs in a run of wall can be straightened this way
- you cannot do this to two adjacent studs
- cutting and straightening single or double trimming studs is not permitted.

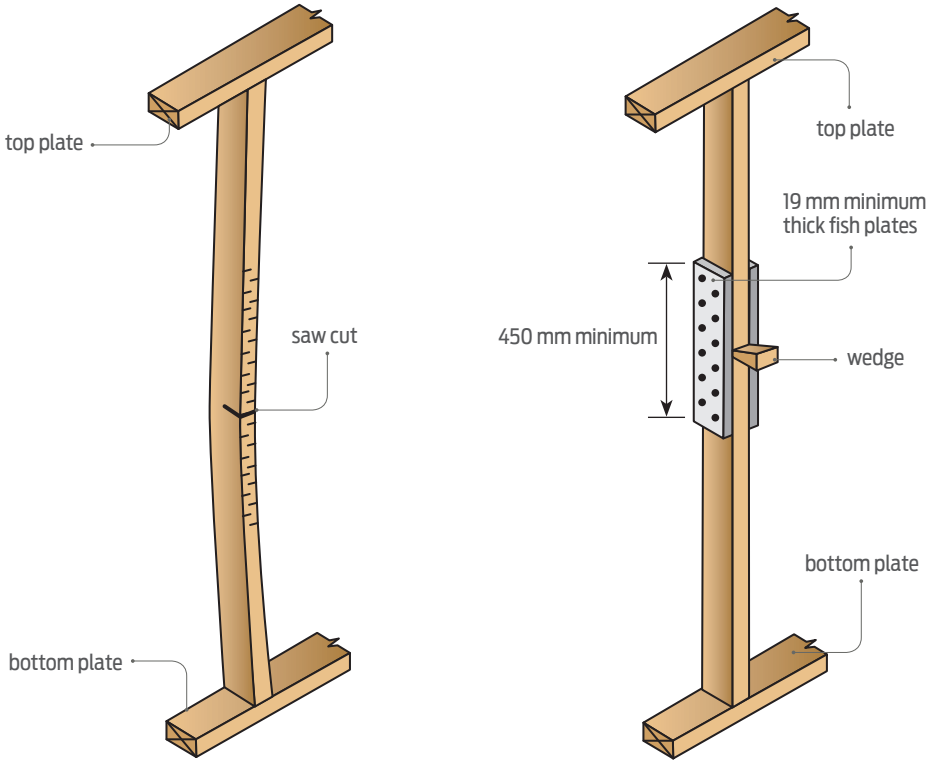


Figure 1. Using a saw cut and a wedge to straighten a timber stud (as described in NZS 3604:2011).

Competition

Here is a tool

What is it?

A Milwaukee hammer drill and impact driver kit worth $690!

This is the most capable and compact 12 V hammer drill driver and impact driver combo kit on the market. Included is the 13 mm hammer drill driver and the ¼" hex impact driver. Fast and versatile – a great prize to win!

The prize is provided courtesy of The ToolShed.

All you need to do is tell us the name of the mystery tool at the top of the page.

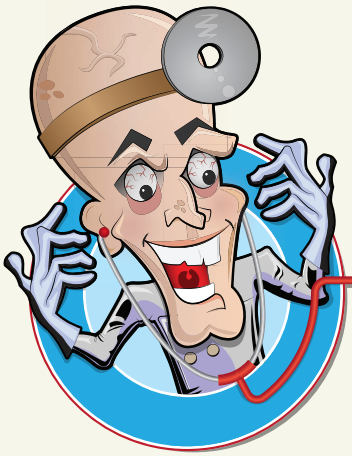
Email your answer to **buildersmate@branz.co.nz**. Put "October Competition" in the subject line. The message should include your answer, your name, postal address and phone number. One entry per entrant please.

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 15 November 2019. Details will be included in the next edition of ***Builder's Mate*** due out on 1 December 2019.

Winner of ***Builder's Mate 97*** was Paul Dunstan of Timaru. Paul wins a ToolShed compound cut mitre saw. The mystery tool was a mini block plane.

Terms and conditions:

Entry is open to all New Zealand residents except employees and immediate families of BRANZ and The ToolShed shops. The competition will close at 9 am on Friday 15 November 2019. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.



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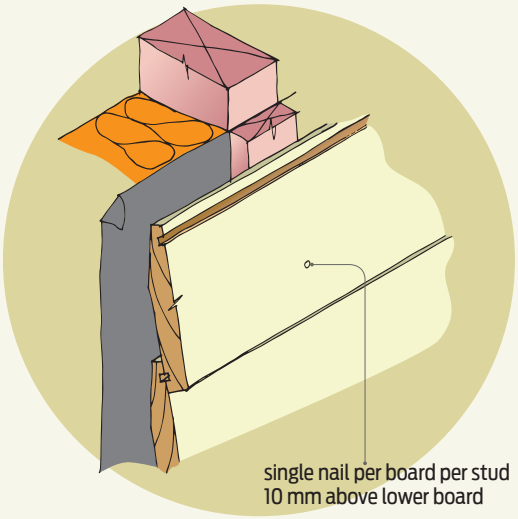

Fixing bevel-back weatherboards

Bevel-back timber weatherboard is enjoying a resurgence in popularity. Acceptable Solution E2/AS1 requires a single fixing 10 mm above the top of the lower board. Manufacturers typically require single nailing too.

Too often, weatherboards are double-nailed. Double-nailing and nailing through the overlap can lead to big problems such as:

- boards splitting because they are not free to move in extremes of heat and cold
- losing the manufacturer warranty because the installation does not match their requirements
- more work and paperwork needed to prove Building Code compliance as an Alternative Solution and possible delays in getting a Code Compliance Certificate.