FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

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GETTING THE SEQUENCE RIGHT

Programming on-site building work, the work of subtrades and Building Consent Authority inspections can be a difficult task, but it's crucial. If you perform the sequence of operations on a job in the right order, you should end up with a high-quality job.

If work is carried out too early or too quickly, it can cause significant problems (such as weathertightness failure) or it may have to be removed to allow another trade to complete their part, which adds costs and delays to the job.

A common problem is surfaces of finished areas or materials being damaged by other work operations, such as paint or bitumen overspray, people walking over a finished surface (a finished surface that is being walked on should always be protected until hand-over), diggers operating, services access, backfilling, dropped equipment or materials, and unauthorised storage of materials on completed surfaces such as roof decks. >

INDUSTRY NEWS

New standard

In February, Standards New Zealand published NZS 3604:2011 *Timber-framed buildings*. You need to buy the new document as it has been completely revised. You will also need to keep your old one until current projects consented in accordance with the 1999 version have been completed.

BRANZ is running nationwide seminars on the new standard and timber treatment requirements, finishing on 12 May in Wellington. Full details and registration are now available on the BRANZ website www.branz.co.nz/seminars_on_now.

Be quick, as demand for places is heavy!

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The timing of wall cladding installation is also vital.

Penetrations before wall cladding

Penetrations through the wall cladding and framing need to be formed before the wall cladding is installed. This allows the penetrations (pipes, wastes, cables and heat pumps) through the flexible or rigid wall underlay to be correctly finished with flexible flashing tape before the wall cladding is installed. If a penetration is formed after the cladding is installed, it's impossible to apply the tape to maintain water drainage paths around the penetration.

Figure 1: Unsatisfactory detail of stucco cladding butted up to timber blocking with no attempt at waterproofing the junction between the wall cladding and the asphalt shingle roofing.

Wall cladding before linings

One unacceptable practice, particularly with brick veneer cladding, is relying on a flexible wall underlay or temporary polythene sheets fixed to the framing and hoping to keep the framing, insulation and linings dry while finishing out the interior of the building. No current synthetic building wraps or kraft building papers are sufficiently waterproof to keep out water, so if the lining and insulation are completed before the cladding is installed, the end result will be detrimental wetting of framing, insulation and linings. Note that a pre-line inspection should not be carried out before the cladding is completed.

Wall cladding before bargeboards and fascias

Subtrades often like to do their work in the minimum number of visits. Roofers, for instance, like to have all the bargeboards and fascias fitted so they can complete the roofing, ridges, barge flashings and spouting in one go. However, the risk of water entry is higher in buildings without eaves where bargeboards and fascias are fitted before the wall cladding is completed.

In many instances, the cladding ends up butted to the underside of the timber bargeboard or other trim timber, which leaves a line of potential weakness where there is no effective barrier against water entry.

For buildings without eave overhangs, any cladding immediately adjacent to a bargeboard or fascia should be installed and completed, including waterproofing, before the bargeboard or fascia is installed over the cladding.

Wall cladding before soffit lining

Wall claddings installed after the soffit linings are fixed can lead to a higher risk of water entry at the junction, particularly on sloping soffits. Because

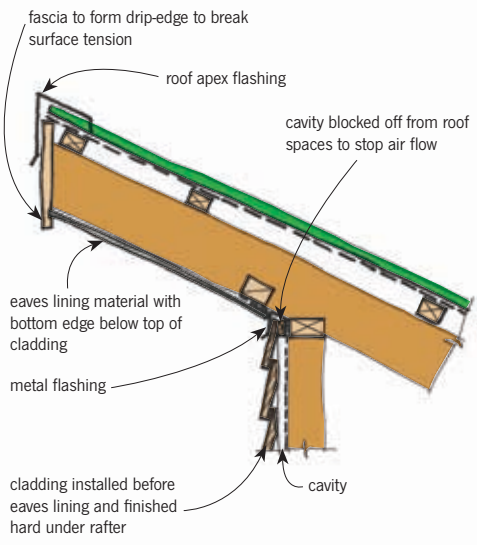

Figure 2: Recommended installation of reverse-slope eaves lining.

Dribblings from the Old Geezer

On 22 February 2011, we were shown the power of nature when it chooses to rage against us. This horrific and humbling event has affected us as a nation and will define the current era of our history. It should be a sombre, reflective time for us all. We need to be respectful towards those who have suffered the trauma of this event, and we should be trying to give them old-fashioned succour without the clamour of competing media.

It must be acknowledged that older masonry construction and a number of our more modern buildings have not performed as well as we would have liked, but with a very high peak ground acceleration of 2.2 times that of gravity, it is a wonder that any buildings built before the current Building Code survived at all. Overseas experts have given credit to our earthquake design standards and the high levels of adherence to the building codes mitigating the potential losses. Turkey also has stringent earthquake provisions in their building codes, yet their Izmit earthquake in 1999 killed tens of thousands of people because their levels of compliance were poor. The diligence of our whole industry can take some credit for minimising the extent of building failure and human loss.

It is the construction sector on whose shoulders the reconstruction will rest. We must now act thoughtfully and carefully. We do need to acknowledge the past and record the present, but it is our collective future we will be building. We must try and cover all the bases to protect the generations to come – to learn from the failures that have occurred. The wisdom of the saying 'make haste slowly' has never been more apt.

Des Molloy

the cladding is finished under the soffit, any water on the soffit surface may run behind the cladding through gravity or capillary action. The better solution is to install the wall cladding before any soffit lining.

This allows the finished surface of the soffit to be lower than the top of the wall cladding, improving the safety of the detail in terms of keeping out the water. It also means that a flashing can be installed before the soffit lining to further protect the junction with the cladding. Where a drained and vented cavity is installed behind the cladding, a continuous top batten or blocking (as shown in Figure 2) must be used to close off the top of the cavity from roof spaces above.

What else?

Other areas of construction that need careful planning to ensure work is done in the correct sequence:

- Datum point is identified to determine finished floor levels when setting out slab formwork.
- Time is allowed for concrete to cure (finish shrinking) and dry before laying floor finishes such as tiles or vinyl.
- Installation of services that need to be laid before the floor slab such as waste pipes, central vacuum systems and heating pipes.
- Wall underlays are correctly lapped over flashing upstands.
- Slab damp-proof membrane is installed before reinforcing.
- Piping and wiring (or sleeves) to concrete masonry walls is installed before the wall erection commences.
- All services are installed before linings are fixed to wall framing.
- Back flashings are installed before the cladding.
- Cut ends in timber and fibre-cement weatherboards are primed before installation.
- Edges and back faces of absorbent sheet claddings are sealed as recommended by the supplier before installation.
- All bolted connections are tightened before the junction is built in.
- Basement walls are fully waterproofed and protection board is installed before backfilling.
- Where a roof plane abuts a wall, the roofing and apron flashing are completed before the wall cladding system is installed.
- Roof penetrations for flues and ducts are framed out before the roof cladding is installed.
- Dwangs are installed within the wall to provide solid support where items such as wall lights, basins, heated towel rails and wall-hung vanities will be installed after the linings have been completed.
- Sufficient time is allowed for the application and curing of liquid-applied waterproofing roofing and under-tile membranes.
- The installation of floor joists is co-ordinated with the location of plumbing wastes to avoid the need to drill or notch members.

LADDER SAFETY QUIZ

Are you an expert ladder operator? See how you score...

You always:

☐ **Use a ladder designed for the job.**

Ladders for the construction industry have more rivets and stronger bracing than ladders for home use. Check out the colour of the rubber boots – industrial ladders are blue and domestic ladders are red. Also make sure the ladder meets AS/NZS 1892.1:1996 *Portable ladders – Metal*.

☐ **Check it's in good condition**.

At least twice a year, give it a good look over – look for cracks, treads that are bent or worn, loose rivets and rust – and keep it clean – cement spills can corrode the metal. Looking a bit shabby? Time for a trip to the building suppliers...

☐ **Set up the ladder carefully.**

Position it on flat, firm, even ground where it won't slip – don't put it on boxes or scaffold for extra height – and keep well clear of power lines. Use it at the correct angle – 1 metre out from the wall for every 4 metres of height. Tie off a straight ladder to something stable at the top so it can't slide. There should be 1 metre of ladder above the exit point when using it to access a higher level on a building site or to access a roof.

☐ **Keep three points of contact on the ladder at all times.**

When you're climbing, that means two hands and one foot or two feet and one hand. When you're working, that means two feet and one hand or two feet and another part of the body (e.g. thighs or shoulder) to brace yourself.

☐ **Work safely at the right height.**

Make sure other people know you'll be working up there. Face the treads when you're climbing up (and down), and don't work from the top two treads. (If you have to work off one of the top two treads, then the ladder is too short for the purpose.) Keep your waist between the ladder uprights – don't lean to one side – and climb down and move the ladder regularly to avoid over-reaching.

5 out of 5? Well done!

COMPETITION
Win!

A Galaxy Leveller 10 Extension Ladder Worth $449!

Factory-fitted automatic levelling device allows safe and quick access to heights from uneven terrain, 3.2 m extending to 5.0 m, anti-slip feet for added safety and stability and flat tread D-shaped rungs for surer footing.

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 47, 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 29 April 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 3 June 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 29 April 2011. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

?

Here's a close-up of part of a tool. What is it?

The Tool Shed

BUILDER'S MATE WINNER

The winner of the BM 46 competition was Michael Pearse from Masterton. The mystery tool was an impact drill, and the prize was a Hitachi G13SR3 125mm industrial angle grinder.

NZS 3604 seminar series

For more details to: www.branz.co.nz

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Favourite tool
Sabre saw.

Favourite tip
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WESLEY HUNIA
Building in Rotorua

Favourite tool
Bradder.

Favourite tip
Be safe.

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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