FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

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All Wrapped Up

Obtaining the specified flexible wall underlay, and installing it properly, helps keep a house dry and warm.

Wall underlay – the roll material installed to the outer face of wall framing – should be specified by the designer for each job. Don't just grab what is on special or the brand that your regular supplier stocks.

For New Zealand houses an underlay is required to allow any water vapour in the framing cavities to escape. Where a cladding is direct-fixed, underlay becomes a back-stop to prevent an occasional water leak reaching the framing and wall insulation.

Wall underlays also contribute to energy efficiency and building occupant comfort by reducing air flows through the wall insulation.

There are two main types of wall underlay – Kraft paper or synthetic material (the latter is usually translucent).

Synthetic underlays resist tearing better than Kraft paper, let light inside during construction, and being wider reduce the need for lapped joints. (However, for direct-fixed vertical profiled metal a Kraft paper roof underlay is required by E2/AS1.)

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INDUSTRY NEWS

More Eco Advisors

Eco Design Advisors provide free advice on energy, water and material-related building issues. They have a large network of specialists, design tools and material information.

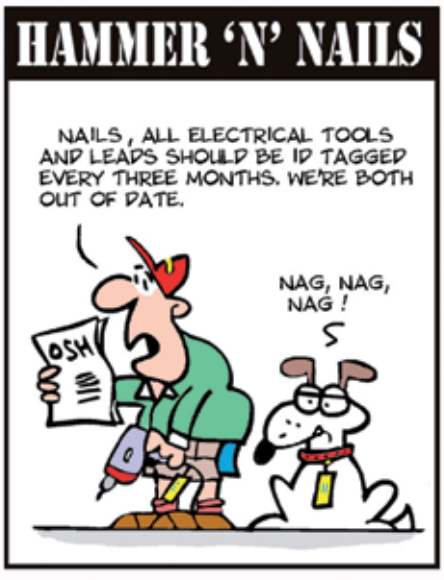
The service is already operating in the Waitakere, Hamilton and Kapiti Councils, and has just been expanded to Wellington City, Auckland City, Sustainable Wanaka/Queensland Lakes, Tauranga City and the Western Bay of Plenty District Council.

You can meet Advisors in council offices, or they can make a site visit.

National Apprentice of the Year

The National Apprentice of the Year for 2007 is Rhys Forsyth from National Park. Rhys wins a trip for two to an Australasian tradeshow with a travel package worth $3,500.

The competition recognises excellence among carpentry apprentices. It is supported by Carters, the Registered Master Builders Federation, the Building and Construction Industry Training Organisation and the Department of Building and Housing.



Inside:

Win!
A Makita rebate planer worth $500

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Underlays must meet the performance requirements of E2/AS1 Table 23. For direct-fixed claddings an absorbent wall underlay must be installed behind a non-absorbent wall cladding (metal or plastic).

For unlined gable-end walls and walls where the interior lining is not an air barrier (e.g. T&G boarding), the wall underlay must meet the air barrier requirements of Table 23. Not all currently available wall underlays do.

Under the Building Code, wall underlays must be durable for at least 50 years if the cladding is difficult to replace (e.g. brick veneer), or at least 15 years with other claddings.

Good installation is crucial.

Use continuous horizontal runs, not little off-cuts. Wrap around external corners, fold around framing at openings, and fix to the inner face. Cover from top of the top plate to 10–20 mm below the bottom plate, installing the windows and the soffit framing after the underlay. Repair damage before the cladding is installed. Check that the correct side is facing the framing – it usually tells you on the material if it is critical! For narrow width rolls requiring a horizontal joint, lap upper levels over lower levels.

In drained and vented cavity construction where the stud (and batten) spacing is more than 450 mm, the underlay must be supported to prevent it billowing into and blocking the cavity when the insulation is installed. This can be done using 75 mm galvanised wire mesh, tight polypropylene tape or galvanised wire at 300 mm centres, or by installing another mid-span batten.

Securely fix the material to keep it intact until the cladding is installed. Be careful when stapling with flick staplers that the underlay isn't cut – adding polypropylene tape along the fixing lines improves resistance to wind tear.

Tears or cuts or wind damage will reduce its effectiveness. Damaged underlay may allow the framing to get wet, and by allowing greater air flows inside the wall cavity can increase heat loss. Don't leave underlay exposed for too long – for some materials underlay exposed for more than 60 days must be replaced, but check as some manufacturers recommend 30 days.

Dribblings from the Old Geezer

One of the many advantages of 'buying into the mainstream' is that you are more likely to keep up with any initiatives that try to make our industry the safe, consistent, high-quality, proud world that it should be. You are also more likely to understand the infrastructure that underpins it.

I wonder how many of our workforce have access to all the Approved Codes of Practice (ACOP) that might apply to them? Do they know where to find them? Employers should be making these available to all of their staff … this presumes that they have them.

The Department of Labour coordinates the production of the ACOPs and they can be down-loaded from their website for free. On the list I can see ACOPs for demolition, excavation, management of hazardous substances, noise in the workplace, use of powder-actuated fastening tools, rigging loads, handling pre-cast concrete and scaffolding erection. Have you got access to them? You should have … and so should your workers as they're cheap enough. Go get them on www.osh.dol.govt.nz/law.

Des Molloy

At a glance

Stop-ends
to window head flashings

A visit to some building sites recently identified window head flashings installed without stop-ends in cavity construction, and with insufficient cross-fall to drain water.

Was this omission due to:

- stop-ends not being specified by the designer?
- cross-fall not being specified by the designer?
- the omission of the stop-ends and the insufficient cross-fall not being identified by the building consent authority (BCA) when the consent was processed?
- the builder or plumber not installing the stop-ends and ordering a head flashing without enough cross-fall (assuming they were specified and consented), and these omissions not being identified by the BCA during site inspections?

For designs to E2/AS1:

- stop-ends are required on all window head flashings installed in cavity construction. Their job is to prevent water that might get onto the head flashing draining off the end of the flashing and into the cavity
- a minimum cross-fall of 15 degrees is required.

This building has stop-ends, but the cross-fall may not be enough.

This construction has no stop-end and not enough cross-fall.

PRODUCT INFORMATION

Roof-top wind turbines being tested

Micro wind turbines which sit on the rooftops of domestic or commercial buildings could appear in New Zealand if current trials prove successful.

Infrastructure company Vector has set up trial turbines on the roof of the Waitakere City Building in Auckland and in Waitangi Park in Wellington. As visitors to the turbines will know, their operation is quieter than that of their large-scale cousins.

The turbines are likely to only produce a small proportion of a household's average energy use – from around 10–30%, according to UK commentators (the Swift turbine being trialled was designed in the UK). Vector says the rated output is 1.5 kW at a windspeed of 44.8 km/h; in fact, peak electrical output is capped at 1.5 kW.

Vector says the model it is testing is designed to connect to a building's meter box, supplying power directly to the electrical system, with top-up power being drawn from the grid. Unused power can be sold to the grid where permitted.

The turbine operates within wind speeds of 8–80 km/h, at which point the tail fin turns the 2.2 m diameter rotor across the wind to avoid damage. The rooftop unit weighs around 50 kg.

At this stage, Vector is not selling Swift turbines, but a key purpose of the trial is to assess the commercial and technical viability of the turbine in the New Zealand environment. Based on a 20 year estimated life, the machine would not be economically viable for property owners at the moment. But if a higher production output leads to lower cost, if electricity prices keep rising, and if a government subsidy is introduced to encourage their installation, that situation could change.

Vector's Wellington wind turbine.

COMPETITION

Win!

A Makita rebate planer Worth $500!

This 82 mm rebate planer has a powerful 1050 w motor with electronic speed control. It has a cutting depth of 4 mm, a depth adjustment dial with easy to read scales, and click stops. Chip ejection is adjustable to either left or right. An easy-to-operate, versatile tool.

The prize is provided courtesy of The Tool Shed.

All you need 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 27, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50 908, Porirua 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 11 January 2008. 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 1 February 2008.

Terms and conditions:
Entry is open to all New Zealand residents except employees and immediate families of BRANZ Ltd, BRANZ Pty, Building Research and The Tool Shed shops. The competition will close on Friday 11 January 2008. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

?

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

BUILDER'S MATE WINNERS

The winner of the BM 25 competition was David McDermott of Taupo. The mystery tool was a push stick, used for pushing timber through a ripsaw to protect your fingers from the blade. David won a BOSCH Rotary Hammer.

The Tool Shed

A seminar just for BUILDERS!

- **Do you worry about your liability if a building you worked on is later found to leak?**
- **Do you ever have questions about designers' details or building officials' requests?**

Visiting a centre near you over the coming months…

Shortening the Odds – reducing your building risk

This seminar will focus on weathertightness design principles and construction solutions for the riskiest areas of a building.

A must for builders, apprentices and building materials suppliers, visit **www.branz.co.nz** or call **04 237 1170** for more details and to book your place.

BLOKES on the job

AARON KING
Working on a new houses at Aotea, Porirua.

Favourite tool
Dogyu bar.

Favourite tip
Measure twice, cut once.

JOHNNY CHRISTENSEN
Working on a new houses at Aotea, Porirua.

Favourite tool
Impact wrench.

Favourite tip
Don't turn up to work later than the boss.

KERRYN STEWART
On the job at Whitby, Porirua.

Favourite tool
Drop saw.

Favourite tip
Don't rush quality.

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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