FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

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Wall insulation fitted incorrectly

FIT FOR WARMTH

There are statutory requirements to insulate new houses under the New Zealand Building Code, but there are benefits of insulating walls (as well as floors and ceilings) to more than the minimum requirements, and retrofitting insulation to existing buildings.

These include:

- minimising heating costs
- enhancing indoor comfort levels by minimising heat loss through the floor, roof, walls and windows and reducing mould risk
- improving the building's potential resale value.

But although adequate insulation may be designed for, poor installation can mean significant losses of the R-value of the completed construction. What's more, if the R-value of the insulation installed doesn't meet the Building Code requirements or the installation is poor, the BCA may require it to be taken out and done correctly, wasting time and money.

It's important that builders know how to do it right first time – whether they're installing the wall >

INDUSTRY NEWS

9 stars for energy efficiency

A cottage in Golden Bay has recently been awarded a 9 star Home Energy Rating (HERS) rating from the Energy Efficiency and Conservation Authority (EECA). This is only one step away from being a zero energy house (the rating scale is between 1 and 10) and yet is a mid-cost design, achievable for many New Zealanders. EECA assessed the design as having an annual heating demand about 85% lower than for an average new home built to Code-minimum requirements and noted that it demonstrated international best practice, being a highly energy efficient and future-proof Kiwi home design using products and techniques that are readily available in New Zealand. Find out more at http://goldenbayhideaway.co.nz/blog#20090515.

Inside:

Win!

A Hitachi CR13V Sabre Saw

Worth $360!

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insulation or supervising the work of specialist insulation fitters.

Use the right tools

Make sure you have:

- safety equipment – gloves, overalls, dust mask, goggles
- box cutter or craft knife with a long blade
- tape measure
- scissors
- stapler
- brush
- good lighting
- ladder.

Install the insulation correctly

- Store the insulation bales in a dry place.
- Clean away all wood shavings and sawdust from the area to be insulated.
- Release the insulation material from its packaging to allow it to expand for at least 15 minutes. (Shake wool insulation to help it regain shape.)
- Ensure the material is the correct thickness for the wall framing depth, e.g. 90 mm max. thick for a 90 x 45 mm wall.
- Cut glass wool, polyester and wool material approximately 5–25 mm larger than the space in both directions.
- Insulation must fit firmly to framing and to other segments. Any gaps between the framing and the insulation or between segments can reduce the construction R-value by up to 50%.
- Press the material into place without creasing, folding or compressing it. It should just touch the wall underlay but, where there is a drained and vented cavity, the wall underlay must not be pushed into the cavity space.
- Where make-up pieces are needed, it is better to fit them above the larger piece and make sure there are no gaps between segments.
- Make sure the insulation fits tightly around electrical boxes.
- Where necessary, secure insulation in place using a vertical PVC strapping between studs stapled to the horizontal frames. Wool insulation panels can be held in place by fixing to the horizontal framing with three staples at the top.
- On completion, sweep up and remove all insulation offcuts.

build

Do you get your **free** *Build* magazine?
All building contractors who are in the business of building and have paid a Building Research Levy in the current year can receive BRANZ's *Build* magazine for free. This Levy is paid as part of the building consent fee on all construction projects over $20,000. If you are missing out on your free copy of *Build* call 0800 80 80 85 (press 2) or email verachan@branz.co.nz.

Dribblings from the Old Geezer

So who's steering the ship? And who should steer the ship anyway? Thinking of our construction as being a magnificent once-in-a-lifetime voyage, then it is important that the right person is at the helm. Often they aren't! However, there's no point in having the wonderfully qualified, mega-experienced, super-competent, beautifully uniformed captain spinning the wheel and shouting down the voice-tube if that person doesn't know where the passenger/client wants to go. We don't want our Picton ferry arriving in Nelson, do we? Sadly, this is often what seems to happen in our world. The designer sometimes seems to think that he or she knows best and Nelson is a far better destination then Picton.

Of course, as bad as this scenario is, the alternative – where the passenger takes the wheel – can also end in disaster as they usually lack the knowledge and competency needed to navigate the treacherous waters that construction and construction contracts can be. OK, so they can take their little tinny out fishing, but can they – or should they – do more than that? You can see that both sides really do need to know their roles and communicate accurately. The captain should also remember that, unless he or she owns the ship, he or she is just an employee. Skilled and vital maybe – but still an employee.

Des Molloy

HOW MUCH IS YOUR BUSINESS AND REPUTATION WORTH?

One day, working on site, you find the designer hasn't provided a flashing detail you need, and it wasn't picked up during the consenting process. It's happened before and it's always a bit of a hassle to ring up the designer, so you decide that you know what is wanted, and you get the flashing made and install it. A few weeks later, you finish the job and sleep happily.

Over the next 4–5 years, the jobs are pretty straightforward and they're completed on time with no apparent issues. But then you start one where the construction has a wide range of materials, some of which your regular supplier doesn't stock. The contract clearly says what you should be using and what was consented, but you think it will be hard to get some materials and the project's running late, so you decide to use something else. The first of the substitutions is the flexible wall underlay. After all, the materials you substitute are pretty much the same, you think, and they'll be hidden once the job is completed. Who will notice?

But at the pre-clad inspection, the building official does notice that you have not followed the consented documents and have not applied for an amendment to the consent for the materials you chose to use. They put a stop work on the job.

The designer who was supervising then comes along and issues a notice that you are in breach of contract because you have not installed what you had contracted to do and that what you have installed is an inferior cheaper product that does not give the level of performance required.

Unfortunately, some of the cladding is already on, and the designer instructs that it be removed and the correct wall underlay be installed. The BCA is happy, but it costs you a lot of time, effort and money. You decide it's unwise to make the other substitutions you had planned (changing the insulation and plasterboard to the ones your supplier has in stock) and take steps to ensure the specified and consented materials are installed as you had planned to.

And just when you thought it couldn't get any worse, you get a letter from the Weathertight Homes Resolution Service. You've been named in a weathertightness claim for the job you did 4 or 5 years ago where you designed the flashing that was not detailed. You are now likely to be in the gun for the cost of repairs because the flashing you took upon yourself to design and some of the other unauthorised changes you made to details are considered to have let water into the building. A claim is being made against you for the cost of the repairs – said to be in the order of $180K. You will have to be able to defend your design decisions. You also start thinking about all those other jobs that you thought went smoothly as you come to the realisation that – on all of them – you made a number of design decisions.

So what are the lessons from this little tale for all builders?

- Don't take on the designer's role – if a detail is not provided, ask for it to be supplied to you. If it's a design and build, be very careful if you don't have the formal qualifications, as a mistake can be costly.
- Amendments to the consented documents must be formally approved – if this is not done, work can be stopped or the Code Compliance Certificate might not be issued.
- You have a contractual obligation to your client to build what was detailed – any changes must be approved by the client (in writing), hopefully with the approval of the designer.

Your reputation and business are at stake.

AT A GLANCE

Fitting insulation around service wires and pipes

Do not distort or compress the material to fit it around service wires and pipes.

To avoid compression, slit the material part way through on the line of the wire or pipe and insert it so that the service fits into the slit and arrange the material around it.

Alternatively, cut separate pieces to fit tightly on either side of the service.

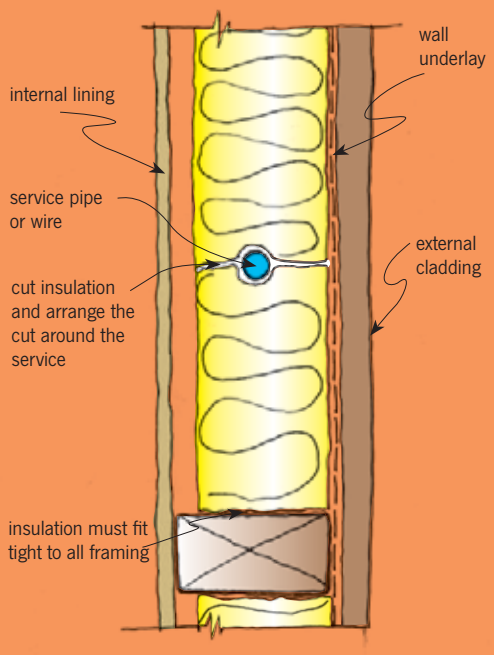

Figure 1: Cutting and installing insulation around a service pipe or wire. 115 mm wall framing shown with 90 mm thick insulation. Installing thicker material would have been better.

COMPETITION Win!

A Hitachi CR13V Sabre Saw Worth $360!

This beauty cuts up to 300 mm in timber, 130 mm in steel pipe or 19 mm in steel plate. It has a powerful 1010 watt motor, features tool-less blade change and rubberised non-slip housing and comes in a handy carry case.

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 37, 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 21 August 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 28 September 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 21 August 2009. 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

Photo: Shannon Craft, the winner of the BM 35 competition, receives his prize from Donna MacGillivray, Team Leader at The Tool Shed Taumaranui.

BUILDER'S MATE WINNERS

The winner of the BM 36 competition was Anthony Dower of Henderson. The mystery tool was a cordless pipe cutter, used for cutting copper pipe. The prize was a DeWalt DW384-46: 210mm heavy duty circular saw.

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

AMANI MCINTYRE
Apprentice building in Greymouth

Favourite tool
Dogyu bar.

Favourite tip
Obey your boss ... and when he says jump, reply "How high?"

REIHNARD WIRTENBERGER
PVC window installer, Christchurch

Favourite tool
The beast – sabre saw.

Favourite tip
Builders, please install the flexible flashing tape correctly.

GRANT COLLINGS
Builds in Canterbury and Golden Bay

Favourite tool
Wolf screw gun.

Favourite tip
Think like water under pressure and you'll have no problems with weathertightness.

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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