



Ask our experts



Dick



Damien

Your design, product and specification questions answered by our expert columnists.

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Q— *I have a double brick house built around 1937/38 in Hobart. It has a good floor plan and lots of sun. However the wind whistles through a vent high up in the walls in every room of the house. A builder recommended that I cover over each vent on the inside walls, leaving the vents exposed to the elements on outside walls.*

But another expert warned that if I close off the vents internally I may risk condensation, an even bigger problem. So now I don't know what to do. And I do want to improve the thermal efficiency of the house.

Anne, Hobart

A— The advice received from both builder and expert is correct! How can this be?

The vents were traditionally installed near ceiling level on external walls, corresponding to external vents in the outside skin, and often vents at about floor bearer-level in the outside skin only. These perform an important function in venting, and thus drying out, the wall cavity and the subfloor. They also provide a permanent internal air exchange, reducing condensation, and in the aftermath of the 1918 flu epidemic, significant health benefits. There is no need to change the external vents, unless you choose to insulate the cavity itself, which changes the way the building works altogether (with many benefits, but not discussed further here).

If you seal up the internal vents you need to re-introduce internal air management by one means or another.

It can be as simple as opening windows during the warmest (or least cold) parts of the day. This is easy in summer, but can be much harder in winter! But importantly, you only need to vent the house for a short period, so the internal thermal mass in the walls will not be lost.

Or you could install a heat recovery ventilation system, such as the Air Change ERV-IC 70 domestic scale unit), which force changes the air but also exchanges the heat energy on its way in and out, thus providing fresh pre-warmed air. This is assisted greatly if you have an effective and energy-efficient heating system.

www.airchange.com.au/products-projects/products/ventilators/erv-ic-70/

– Dick

Q— *We are currently renovating a heritage-listed home in Port Melbourne. We would like to install solar panels, which would be visible from the street. This seems to be a huge “no go zone”. Are there any panels on the market blending in with a grey tin roof? Is there anything we could/should do to change the possible disapproval of solar panels on heritage-listed buildings? Any hint, idea or advice would be highly appreciated.*

(We plan to install triple-glazed windows and an underground water tank – trying to demonstrate that inner city renovations can be done sustainably.)

Angelika, Bentleigh, VIC

A— If you have a grey tin roof it is relatively likely it's not the roof that is the basis for the heritage restriction, but another part of the building fabric/construction/design.

While all commercially available panels would be visible when placed on a grey tin roof, the visual impact should be much less significant than on a heritage-style tiled roof. And while the provisions of the heritage policy no doubt discourage changes to the street frontage-side of the property, it may well still be worth going through the application process and arguing along the lines of lack of visual impact.

Also, there is Victorian Civil Administrative Tribunal precedence of council-refused solar-on-heritage applications being over-turned on appeal – on the basis that the sustainability policies are equally as important as the heritage policies within the planning scheme.

I would also suggest trying to speak to a heritage or planning advisor at your council to get an understanding of the process and the types of things that they are concerned with before lodging your application.

In terms of low visual impact or roof-integrated solar products, there are few commercially available products at this stage, though there is ongoing research in the area. BlueScope is trialling integrated photovoltaic roofing technology on architect Tone Wheeler's home in Sydney.

– Damien