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Achievable steps towards a more sustainable home

House proud

Creating sustainable housing is fast becoming a necessity rather than the feel-good option. Here's a look at how locals are being proactive, easy steps you can take now and what's in store for the future. By Linley Wilkie. Photographs by Steve Lightfoot and Stephen McKenzie

- Recycled existing bricks were used as a feature.
- Double-glazed windows were installed.
- A deck was made from sustainably harvested local timber. This deck receives afternoon sun, and a deck on the opposite side of the house takes advantage of the morning sun.
- Lawns are now watered using water from a 25,000-litre water tank.
- Slightly larger roof overhangs protect windows from harsh summer sun.

Remember a few years ago when the media took great pleasure in announcing green to be the new black? It was an exciting prospect that the green movement would be embraced by society at large, not just hippie tree-huggers.

How times have changed. Now (if you believe the fashion hype), camel is the new black, and "going green" is no longer just a catchphrase. It is fast becoming an essential way of Australian life.

Simone Schenkel has witnessed that firsthand, since moving to Melbourne three years ago from the more eco-savvy Germany. "What's really encouraging is to talk to so many people who are seriously interested in building green and sustainability," says Schenkel, designer and sustainability consultant for Brutal Art Design + Build. "What's really promising, as well, is a lot of them know so much about it."

Schenkel says there are many things that can be done around the house to increase its energy efficiency. One of the simplest is looking at your home's thermal shell. "Imagine the house's external walls as a continuous shell, and every little gap you have in this shell will result in heat loss, or the other way around in summer," Schenkel says. "Try and seal as many of the gaps as you can."

Think wall and ceiling vents, windows and doors. It's also worth installing self-closing exhaust fans and chimney dampers or balloons to eliminate draughts.

Schenkel also suggests creating an air lock in your house's entry area. "Try to introduce an extra door to close it off. In winter, the moment you open the front door the warm air gets sucked out and you have to start afresh. In summer it can be open all the time, but there should be a way in winter to close it off."

Consider installing windows with a low U-value – a measure of how well the product prevents heat from escaping. The lower the U-value, the better. Schenkel says typical aluminium windows have a U-value of about seven, but good double-glazed windows have a U-value of between two and three.

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Green reno a winner

The Koedyk family renovated their Surrey Hills home. The renovation was designed by Brutal Art Design + Build and won the 2008/2009 HIA Victorian Award for best renovation $350,000–$500,000.

Why ratings matter

From May 2011, all Australian houses on the market (for sale or lease) must disclose their energy-efficiency rating. This will give potential buyers and renters an indication of greenhouse emissions and energy and water efficiency.

Legislation was introduced in the ACT in 1999 to give houses a star rating from zero to 10. A subsequent Australian Bureau of Statistics report in 2007 found these ratings had a significant effect on house prices. According to the Brutal Art Design + Build website, the study found "if the energy performance of a house improves by one star level, on average, its market value will increase by about 3 per cent".

"If star rating does equate to value, this is going to become a much bigger issue in the minds of householders," says Bryn Dellar from Energy Makeovers. "At the moment when you talk about energy, pollution, star rating and comfort, for most people star rating doesn't rate with them."

He suggests now is the time for renovators to increase the rating of their houses, so if they later sell, they can disclose a higher rating.

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Lighting continues to be a hot topic, particularly when it comes to downlights. Schenkel recommends avoiding downlights or installing a false ceiling if you must have them. "Downlights always cause a problem, because standard versions get quite hot," she says. "When you install them, the electrician has to cut a hole in the insulation, and that pretty much undoes all of the properties of the insulation. So go for low-energy downlights – [but] they are more expensive than the standard ones."

Bryn Dellar, managing director of Energy Makeovers, says low-energy lighting has reached saturation point. "The next holy grail for lighting is the replacement of downlights," he says. "There are now new LEDs that fit into the existing fitting and work with the existing transformer that have a nice warm light. The price has recently come down by 50 per cent, so the world is working hard to get LEDs as downlights." That said, these lights are not quite ready for mass distribution.

Dellar recommends people visit the Essential Services Commission website (esc.vic.gov.au) to fully appreciate all the available options. "At the moment you've got weather sealing, glazing, lighting, shower heads and new fridges. For people who are interested, there's a shopping list of activities they can look at on that website."

And in the future? Dellar says there will be new eco-friendly alternatives available from next year, such as smart power boards and efficient televisions.

These are optional extras now, but there's no doubting the introduction next year of mandatory six-star ratings for new homes and major renovations, plus mandatory disclosure of star ratings, will make home owners sit up and pay attention. Sustainable housing will soon have an impact on the lives of all Melburnians. ■

Upgrade to save

Jon Kenfield's family home in Balwyn had a sustainability upgrade, completed by Energy Makeovers.

1. Solar panelling was installed, which cost about $12,000. The annual saving in energy bills is about $1350, with a payback period of nine years. The reduction in emissions is 19 per cent, with a 20 per cent reduction in pollution.
2. Improved thermal insulation in the ceiling results in a 4.3 per cent reduction in the house's carbon emissions.