



THE PRESS

at home

A GUIDE TO CREATING YOUR
PERFECT HOME

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Energy-efficient, eco-friendly homes

Touch the earth lightly. — Australian Aboriginal proverb

Some old New Zealand homes may have been well built, but just about all of them are far too cold. Kiwis put up with freezing, unhealthy homes that simply would not be tolerated in other countries. WHO, the World Health Organisation, recommends a minimum indoors temperature of 18°C. Many of our thin-skinned, under-insulated homes, with no central heating, get far colder, falling to 12°C or below. In winter, ice can form inside. Brrr.

Not only are cold homes uncomfortable, they encourage the growth of mould and cause serious health problems, especially respiratory diseases. Sadly it's often the elderly, faced with limited incomes and rising electricity bills, who refuse to turn their heaters on to save money — and suffer.

The extent of this problem was the subject of a damning report by building research group Beacon Pathways in 2007. The conclusions are clear: we need warmer, more energy-efficient homes. Because New Zealand's climate varies so much, one size or design does not suit everywhere.

It is perfectly possible to make older homes warmer by installing extra insulation and energy-efficient appliances such as heat pumps. In Christchurch, the city council has a permanent, retrofitted energy-efficient show home that is open to the public and well worth visiting.

For anyone building new, there are compelling reasons to make energy efficiency a priority: it will make your house cheaper to run, more comfortable, and kinder to the environment.

EcoTrend Homes is determined to introduce more Kiwis to the benefits of eco-friendly design. Design consultant Sandy Eagle says many people are keen on the idea, but are put off by two factors: cost and complexity. But she says eco-friendly homes do not have to be expensive. 'A lot of the stuff is free. As long as you get your design right, it works really well. Your electricity, heating and water bills are lower.'

An eco home may cost a little more to build compared to a conventional house, but that extra cost is rapidly recouped in energy savings. Thereafter, these savings become dividends, or payback. As for complexity, many eco products are now becoming standard.

Architect Russell Devlin, a long-time advocate of energy-efficient homes, believes the word 'payback' is irrelevant. You have to spend money upfront to begin with anyway — even if you buy a conventional water heater, for example — so energy savings are a bonus. 'The idea of sustainable building is simple,' says Devlin. 'It's to minimise the effects of wasteful energy use, resource depletion and pollution through the design and construction of



▲► Economical yet effective: the Nelson home of architect Helen Richards, of Powered Living, maximises passive solar design. North-facing windows act as solar collectors, while concrete internal walls store and gradually release the heat. This approach to design makes a lot of sense, and is certain to become more widespread as the cost of energy becomes of increasing concern.

energy-efficient, passive solar and ecologically designed homes.

‘An ideal sustainable building is one that sits lightly on the land, requires little fuel to heat or cool, operates on little or no outside electricity, and is healthy to live in.’

For Nelson architect Helen Richards, whose company Powered Living specialises in energy efficiency, the reasons are crystal clear: ‘Because buildings worldwide contribute around 50 per cent to total CO₂ emissions (and houses are not a small chunk of this). Because building a home can be one of the most resource-

