

GREEN LIVING

Green renovation wonders



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It started off as a typical inner Melbourne, single fronted cottage. Full of character, but its narrow layout, limited access to natural light, walls devoid of insulation and raised timber floor meant that it was cold and dark. While new regulations such as the move from 5 to 6 Star in May 2011 have focused on improving the energy efficiency of new houses, a large proportion of the existing homes, like this one, perform poorly when it comes to energy efficiency.

A renovation provides not only a perfect opportunity to give a home a new lease on life, it can also be the time to improve the livability and energy efficiency of the home by adding natural light and upgrading insulation.

Recently I visited a renovation completed by some of our Green Living Builders, Russell Cook and Cyrille Darrigrand from Designline Builders. They used a design by Craig Byatt from aCure Architecture. Together, this team provided an excellent example of how an ordinary, single fronted weatherboard home could be transformed by an excellent renovation.

They added a living area and modified the kitchen into a functional and refreshingly light filled space. The original house was built to the northern boundary, so no windows could be added to the walls. To compensate, clerestory windows were installed to allow the northern sunshine to enter. The windows were also designed with a roof overhang to provide shading from the summer sun and were set back from the boundary to prevent any shading from future second story extensions from the neighbouring site. Opening windows will allow hot air to escape as it rises and a highly efficient, evacuated tube, solar hot water system on the roof was positioned to prevent it from shading the windows.

Aircell Permifloor 500, under floor insulation was installed all through the original house. R2 insulation was added to the walls in the extended area of the house and R4 insulation was installed in the ceilings. Recycled messmate tongue and groove floorboards were treated with oil instead of a polyurethane coating. Formaldehyde free E0 hoop pine, plywood joinery was combined with Ironbark bench tops, finished in Tung oil. The paint used inside the house was all low emission Dulux Enviro2.

The laundry and toilet were also upgraded and supplied with a 5000 litre water tank. Hydronic heating supplemented by the solar hot water system will warm the home and ceiling fans were added to all rooms for cooling.

All the timber used in the framing was from Australian grown radiata pine. The cladding is FSC certified Ironbark shiplap from Australian Recycled Timber. Pine skirting and architraves were used in the extension and the decking and pergola are Black Butt from Shiver Me Timbers. The original pine weatherboards were reused on the existing part of the residence with new made of hardwood from Mckays Joinery. These were double glazed and argon filled to retain heat in the winter and deflect heat in the summer. Low energy lighting was installed throughout the home and a solar powered sub floor ventilation fan to help with air exchange.

The final result was an energy efficient, light filled abode with natural timber finishes that still managed to retain the home's authentic charm.



Typical terrace: The inner city, single-fronted house.



Open plan: The light filled kitchen and living area.



Blank canvas: The rear before the renovation.



Green features: Clerestory Windows and solar hot water.

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