



# WHERE THE GRASS IS GREENER

LIVING NEUTRAL IN THE LOWER BLUE MOUNTAINS WITH VANTAGE RESIDENTIAL EVOLUTION WINDOWS HELP GIVE THIS PROJECT THE GREEN LIGHT



Smart, sophisticated, unpretentious – introducing what may very well be the future of sustainable housing in Australia. Located in Winmalee, in the Lower Blue Mountains, this single storey, timber-framed home has achieved an incredible 7.5-star energy rating and an enviable carbon-neutral status, recognised at the recent Master Builders Association National Awards Night. Balancing green credentials with lifestyle requirements Blue Eco Homes and Ross Young Architects have created a generous and beautiful family space where entertaining and lifestyle play an equally important role.

This project presented several challenges, not least of which was Blue Eco Homes absolute commitment to ensuring the house was as self-sufficient as possible with regard to energy and water use and the treatment of waste water. Right from the outset, the technologies required to achieve a carbon-neutral home could not be a mere afterthought. Instead, they had to be well integrated into the construction, and called for extensive collaboration between technology suppliers, the builder, his family and the designer.

Evolution Window Systems, an experienced manufacturer of Vantage Aluminium Joinery, were invited into the mix early in the process. Glazing was a critical element of this project and the careful selection of window and door systems and glass was necessary to respond to the varied challenges presented by the site.

The home's proximity to the bush meant it had to be built to strict bushfire-resistant standards. But the builder was adamant he wanted more than a simple protective bunker, and extensive clearing was out of the question. To create a fluid space that connected with its environment, the builder cleverly utilised a fire-resistant concrete base block, corrugated metal and compressed fibrous cement sheet cladding, and non-flammable external materials which are not only low maintenance but retain a sense of warmth which perfectly sympathises with the textures and colours of the outside world.



*Vantage Residential Aluminium Windows and Doors*

- Australian designed to deliver superior performance for the varied climates and environments around the country.
- Vantage delivers high performance window systems that offer enormous flexibility in design.
- The VANTAGE range of aluminium joinery includes basic 'Residential', high performance 'Designer' and innovative thermally broken aluminium window and door systems.
- All Vantage window and door systems can accept double glazing.

Vantage residential window and door systems were selected. Insulated glass units incorporating toughened glass on the outer layer were combined with stainless steel screening to ensure that the window units offer both strong fire protection and good thermal performance.

The gently-bending axis of the house works in synergy with the contours of the site, bedroom wings radiate from a main core, bold stacking sliding doors are used in the main living areas and children's bedrooms which open onto a large covered verandah and enjoy panoramic views of untamed countryside.

The home's west-east orientation enables passive design principles to be maximized. Extensive double-glazing is used throughout the home to keep the home warm in winter and cool in summer. Vantage Series 525 Louvres equipped with Low-E Glass provide cross-ventilation even at the height of summer.

Walls, ceiling/roof and floors are fully insulated, hot water is provided by roof-mounted evacuated tube collectors, supplemented by a gas boiler, and a roof-mounted 4.2kW photovoltaic grid interactive system generates all the house's electricity, with power left over to return to the grid.

The builder has achieved a warm and inviting living space utilising the latest technology in lamps and fittings, and cooking appliances have been chosen for their low energy use. Rainwater is collected in tanks which supply the whole house. Their massive 90,000 litre capacity means the water in these tanks is also available for fighting bushfires.

All waste water from the house is cleaned for use on lawns and gardens, the laundry, toilet flushing and general external use.

The end result is a house that not only looks great but represents a real step forward for sustainable housing.



Evolution Window Systems are leading manufacturers of contemporary architectural windows and doors. The Evolution team will provide you with technical advice, design expertise and quality workmanship to ensure the highest quality products for your project.



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**2D & 3D CAD FILES AVAILABLE**

Download the Vantage CAD & Revit 3D Files to use in your projects from the Vantage website: [www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)



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