

## HIGH-EFFICIENCY HOUSE IMPRESSES WITH SAVINGS

An award-winning house on the outskirts of Melbourne demonstrates how clever design and construction can provide ongoing savings for owners.

The house was specifically designed to incorporate energy-efficient and cost-saving features.

Environmental building consultant Jan Brandjes worked with senior project architect Bridget Puszka of BP Architects to design a home that is full of water-saving ideas, clever shading devices and a whole-house ventilation system.

The home in Sunbury won the 2002 Master Builders Association (MBA) National Building Environment and Energy Efficiency Award for Housing under \$300,000.

Puszka said lightweight building materials with low mass – such as roofing made from BHP Colorbond® steel – allow for a quick response to climatic changes, rather than retaining heat.

“Insulation prevents thermal bridging between the inside air temperature and the external environment,” she says. “Light-coloured Colorbond® steel – such as in the colour Surfemist – deflects large amounts of sunlight and heat to minimise heat entering the building via the roof space. We also chose to build with steel because there was minimal waste and it is recyclable down the track.”

Brandjes, of Enviro Brokers Australia, built the house to show how passive solar design and construction could result in ongoing cost-savings for home-owners.



Light-coloured Colorbond® steel deflects sunlight to minimise heat entering through the roof in this energy-efficient building.

He says the gas bill last year for this home was \$160 and the electricity bill only \$240. “For a family of five to pay about \$400 for a year’s gas and electricity is a remarkable saving on our energy requirements,” he says.