

# Positive action

Discover a modular-housing option that makes living easy on you and the environment

WORDS JOANNE HAWKINS  
PHOTOGRAPHY TOM ROSS

**W**e may all think big is beautiful especially when it comes to the size of our houses – but a groundbreaking Victorian building and design company would like us to think otherwise.

ArchiBlox, which builds modular homes with an emphasis on sustainable design, has taken its environmental ethos one step further with the development of the world's first carbon-positive prefabricated house. The size has deliberately been kept to a minimum, resulting, says the company's co-director and architect Bill McCorkell, in a home that uses less energy and materials, yet doesn't feel cramped. ▶





Stylish and eco-wise design in the Carbon Positive Home (pictured main, above right and far right)

"We've put a lot of thought into the design to make the house as useful and practical as possible using the smallest footprint," Bill explains. "We worked a lot on the minimisation of circulation – or passageways – in the house, which can unnecessarily take up to 25 per cent of a home's footprint. If you've got well-insulated walls and recesses off the main living areas to give a sense of privacy, you don't need long passageways in a house, which is just extra space that you need to heat, cool and manufacture."

A host of clever design tricks – such as floor-to-ceiling windows, mirrors, and not extending some dividing walls up to the ceiling, allows the eye to travel over the top so the diminutive building feels a lot larger than it is.

The Carbon Positive House has been

designed to enable clients to rid themselves of what ArchiBlox calls "modern-day lifelines" (heating and air conditioning to you and me) with a plethora of innovative features.

These include in-ground cool tubes to help with ventilation, pulling cool air through the house from the south side, a green roof for added thermal insulation, and a buffer zone or conservatory, which separates the external environment from the internal, giving its occupants more control. This space, designed to face north, blocks the harsh summer sun before the radiation enters the interior. Conversely, when seasons change, it captures the winter sun.

ArchiBlox describes this zone as the "lungs of the house" and the house's "food basket", with garden beds to grow an assortment of herbs and vegetables within the conservatory.

Other green features include the use of sustainably sourced building materials and formaldehyde and VOC-free finishes, double-glazed windows, drying cupboards for laundry use, solar power and grey-water recycling.

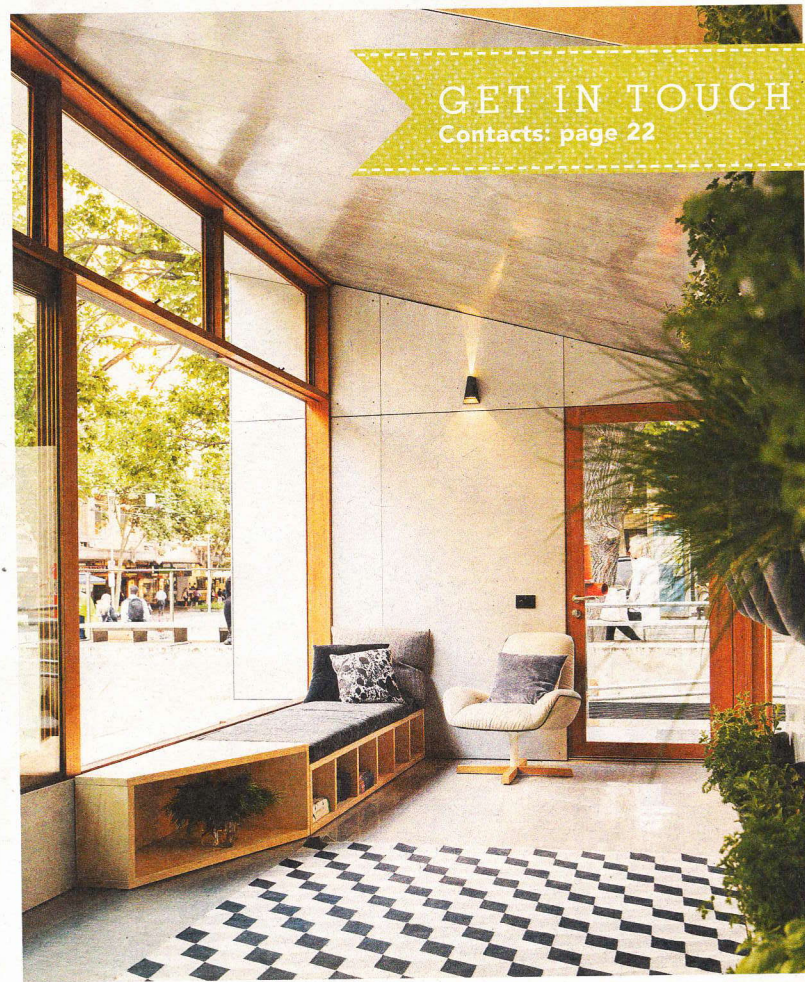
The house is also airtight, with the use of high draught-proof seals, saving energy and improving sound protection. "One of the preconceptions of pre-fabrication is how do you achieve good energy ratings when there is no thermal mass," construction director David

Martin says. "But one of the most important things is getting a really airtight house. It's like a fridge, no one is going to use one with a broken seal, and it's the same with a house."

The house is carbon positive because, put simply, it produces more energy than it uses. ArchiBlox estimates that over its life span, the building will emit 1016 tons of carbon dioxide less than average or standard buildings providing the same functionality. Put another way, this is equivalent to 6095 native Australian trees being planted, 267 cars taken off the road and 31 million balloons of carbon-dioxide gas removed from the atmosphere.


Bill also wanted to make sure the house was as beautiful as it was green. "There are a lot of good sustainable homes on the market but a lot of them are quite extreme and scream out they are very green-orientated, whereas we've tried to design this house to not only be sustainable, but architecturally and aesthetically fantastic," he says. "This should make them appeal to a broader section of the public."

The Carbon Positive House, which is built in ArchiBlox's factory in Wonthaggi, comes in four designs, ranging from a 53sqm one-bedroom, one-living-area house (from \$266,000) to a larger 88sqm three-bedroom, two-bathroom design (from \$446,000). The houses can be delivered Australia-wide. ■



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# Think outside the square

Good things take time, and it may have taken a while for the decision to renovate this bathroom but now that it's done, it's a sparkling success

WORDS **SUSAN MULDOWNEY** Herald Sun Home March 28 2015

