

OUTSIDE IN

This home takes its connection and responsibility to the environment very seriously

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PHOTOGRAPHY AMBER CREATIVE

This home goes above and beyond in its commitment to sustainability. Making the most of a fairly uncommon, but highly sustainable building material called hempcrete, Envirotecture – the eco architects behind this home – showcase how an energy-efficient home can be comfortable, sophisticated and above all sustainable.

The home is what Dick Clarke, Envirotecture's principal, calls an "Aussie vernacular cottage evolved into a high-performance zero net energy home".

The home was built for Chris and Kerrie, a professional couple who were looking to create a space

to call their own. The idea was to build something that made the most of the beautiful view, while also creating an unparalleled connection to the outdoors surrounding the plot. "We were asked to take advantage of the view over creek and hills, pointing as many rooms as possible to face in this direction," Dick says. "The external environment is just another room of the house. And the house should look like it belongs in the bush, not the city," he adds.

The body of work included constructing a three-bedroom home, with a living/dining/kitchen area, bathroom and one ensuite all with exceptional





attention given to its environmental footprint. Given Envirotecture specialises in eco architecture, the homeowners were well placed to succeed.

The home works efficiently with rain water harvesting, it uses solar energy where possible and stands alone from the grid. It uses grey and black waste water management and works to use its building materials in the most efficient way possible.

"Environmental considerations in the design are many. The home has an extremely low impact on the environment, with a high operational performance, and a long life. The home utilises hemp masonry also known as hempcrete, which was specifically selected for its environmental credentials," Dick explains.

"My favourite part of the designed space is the hempcrete," he says, "which is a natural building product that has beautiful thermal and humidity control. This home showcases a build in the small but growing number of hemp buildings in Australia. Hemp is good for the land and for farm economies, good for carbon debt when building, and good for the performance of the building in terms of temperature and humidity control."

The build offers its homeowners the opportunity to be off the energy grid as well as being zero-net, meaning the energy produced by the building is the same as the energy consumed. The home has uncompromised passive solar performance. In terms of water consumption, it uses waste water making it off-grid in terms of water usage too.

It is not only sustainable on the exterior and in terms of building materials used, but also on the interior. The build uses zero-VOC finishes extensively, as well as a polished concrete slab floor, Rockcote renders, an insulated slab edge detail (Envirotecture's own product, which is published and freely available).

The home's layout was planned with expansion in mind, allowing it to develop with additional bedrooms in the future. "The colours we used were in response to the surrounding bush: browns and greys and flashes of silver after rain," explains Dick. "And in terms of materials we went for longevity and low

maintenance, and resistance to ember attack." The shade/fire shutters designed by Envirotecture are ember resistant.

For this project, Envirotecture had two men in the design office working collaboratively with two engineers and a builder. A project like this needs a good team of collaborative people to bring it to fruition with smoothness and ease. Hiccups were few and far between, with some surprises along the way regarding team. "The builder's renderer was a demanding soul, but who ended up producing some of the best finishes DC has ever seen," Dick says. "We also had to get the whole building re-engineered twice after the first engineer seemed to know more about complex mining structures than simple residential structures. Once this was fixed, all was good."

The home is a fascinating feat. Not only is it a shining beacon of environmental consciousness but it is also very real about its connection to its surrounding

environment, welcoming the outdoors in with large sliding doors that make the home feel utterly connected to the exterior. And if this also allows the odd wallaby and snake to wander in, too, well so be it, these are welcomed, too. 🐨

ARCHITECT Envirotecture
BUILDER AK Constructions

MATERIALS

Structure Hempcrete by Envirotecture

External and internal finishes Rockcote

Windows and doors Rylock

Window frames Aluminium

Retractable awning Eurola

Walls/facades corrugated iron/Colorbond steel, some timber inside, concrete

Floors polished concrete

Roof Colorbond