

# Custom Built Mandurah

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## Solar benefits boost comfort

### FRANK PLATELL

Passive-solar benefits in a non-profit retirement village in Mandurah so convinced its owner/developer that he had to repeat them for himself.

The average energy savings in homes catering for all ages right through to high-care nursing had been well in excess of 50 per cent, helped by avoiding air-conditioning.

With the completion of Stage 3 of the village, he did not need more convincing and approached architect Garry Baverstock to give him the same lifestyle benefits. It was a total involvement, right from the start in the selection of a block.

They found one which was close to the estuary in a new estate, with a north-south aspect. Wetlands abutted the back boundary and the owner, being an environmentalist, had a protective attitude to the natural ecology of the area.

The home was designed as a simple, earth-coloured dwelling that would harmonise with its surroundings in an Australian-Mediterranean style.

It had to have spacious living areas facing north for the view, with the



The home, with its earth-coloured walls and metal roof, has an attractive frontage.

emphasis on big rooms and fewer of them.

Window walls for the view are protected by a wide veranda, louvres angled to let in winter sun but to provide solid shade and exclude it in summer.

At 4m wide, the veranda creates the ideal alfresco area for virtually year-round comfort outside. The shape of the house provides a wing to

the north-west as a buffer to any fierce storms coming from the sea.

The solar veranda allows the winter sun to penetrate up to 4m indoors. It is complemented by a clerestory in the roof that faces north and bathes the central kitchen in winter sunshine, an overhang keeping it out in summer.

In winter, the sun's warmth is soaked up by the concrete floors and

brick internal walls by day. These become thermal banks to radiate it back indoors for hours at night.

The beauty of the Mandurah climate is the consistent sea breezes of summer.

These are trapped in the late afternoon and at night, to drop the temperature down to within 2C of that outdoors, which would be to about 20C on most summer nights.

**In winter, the sun's warmth is soaked up by the concrete floors.**

It is easy for the home to ride through any heatwave by opening and closing doors at the right time. The front door is angled to the south-west and helped by a corner veranda to trap the sea breeze.

The main suite is linked to a study-retreat at one end and a long ensuite at the other. There is a second bedroom, plus a multipurpose room that can cater for an overnight guest as well as a storeroom adjoining the double garage.

According to Garry, to get the best solar benefits it is necessary to minimise windows to the east and west, a factor often overlooked. If forced to use one for planning reasons, a big overhang or a deciduous tree is a must.

There has been a conscious effort to have light colours on the roof and walls to reflect heat. Natural light has been distributed internally, even to the use of internal windows.

The home has been insulated in the roof and polystyrene sheet has been used in the brick wall cavities.

It is not open for inspection but details can be discussed with Garry Baverstock on 0419 965 227.