

New Homes Liftout

Fine mix



The passive solar home exploits contours and simulated limestone

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of solar planning and art

BELIEVE it or not, most engineers are greenies and they want to live in harmony with their environment.

This was mechanical engineer Harry Wylie's explanation for his passive solar house, built of simulated limestone blocks and exploiting natural contours.

He sees his house, in Debries Place, Bull Creek, as a combination of science and art. He had a fundamental understanding of passive solar principles and the concept of thermal capacity for year-round living comfort indoors.

Architect Garry Baverstock, of Climate Sensible Designs, came up with a practical and exciting home to maximise the solar benefits, a work of art that is in harmony with the sloping site. Its beauty is in the sculptural massing of masonry in a split-level design.

The owner, who was also the builder, combined so well with the architect that the house was the only winner from WA in the national James Hardie competition. It took out the prize in one of three categories for a double-storey home of composite construction.

Mr Wylie considered himself lucky in getting the block, which was smaller than average at 527sq m. But it was ideal for solar benefits with a long side orientation to the north to exploit the low angle of the winter sun.

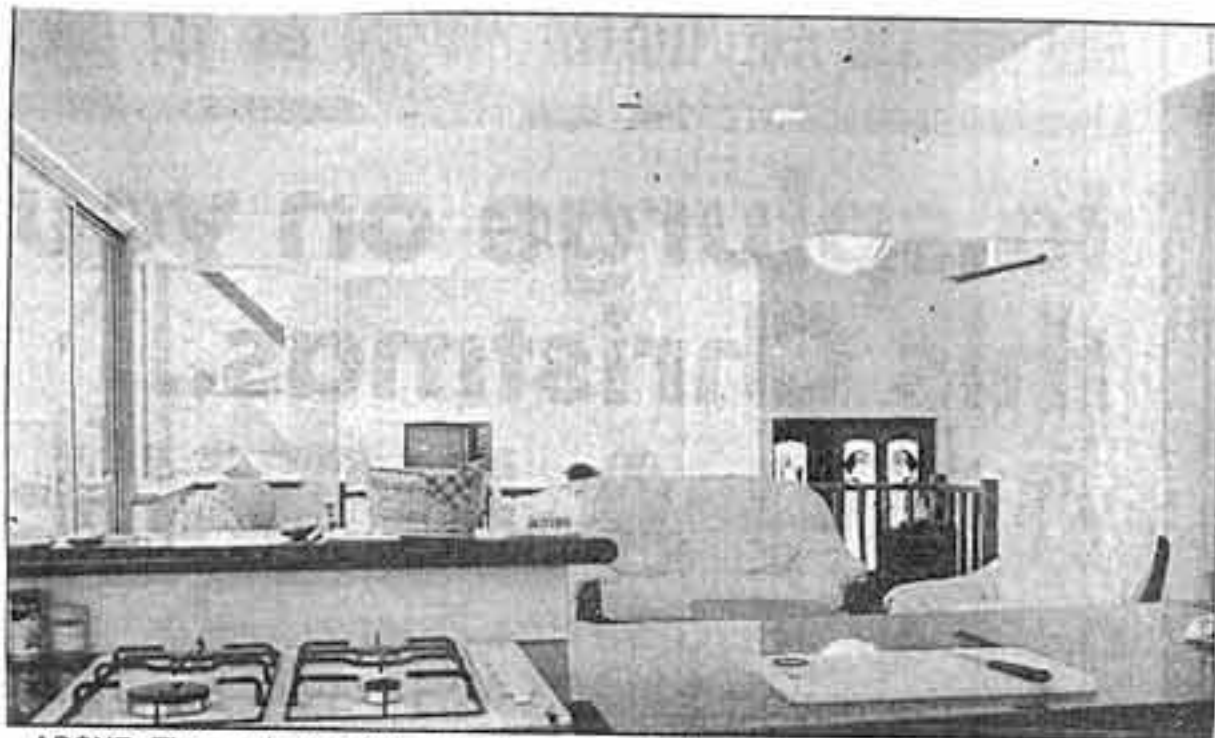
He was originally thinking of a two-storey design but quickly appreciated the architect's split-level concept which steps up in four stages. Living and meal spaces relate on the main level towards the rear, where provision is made for a winter court on the north side and a cool summer court on the south.

The window walling to the north and clerestory windows at the apex of the roof ensure the whole house is bathed in warm sunlight in the depth of winter. The floors and masonry walls soak up this heat by day and radiate it back into the spaces at night.

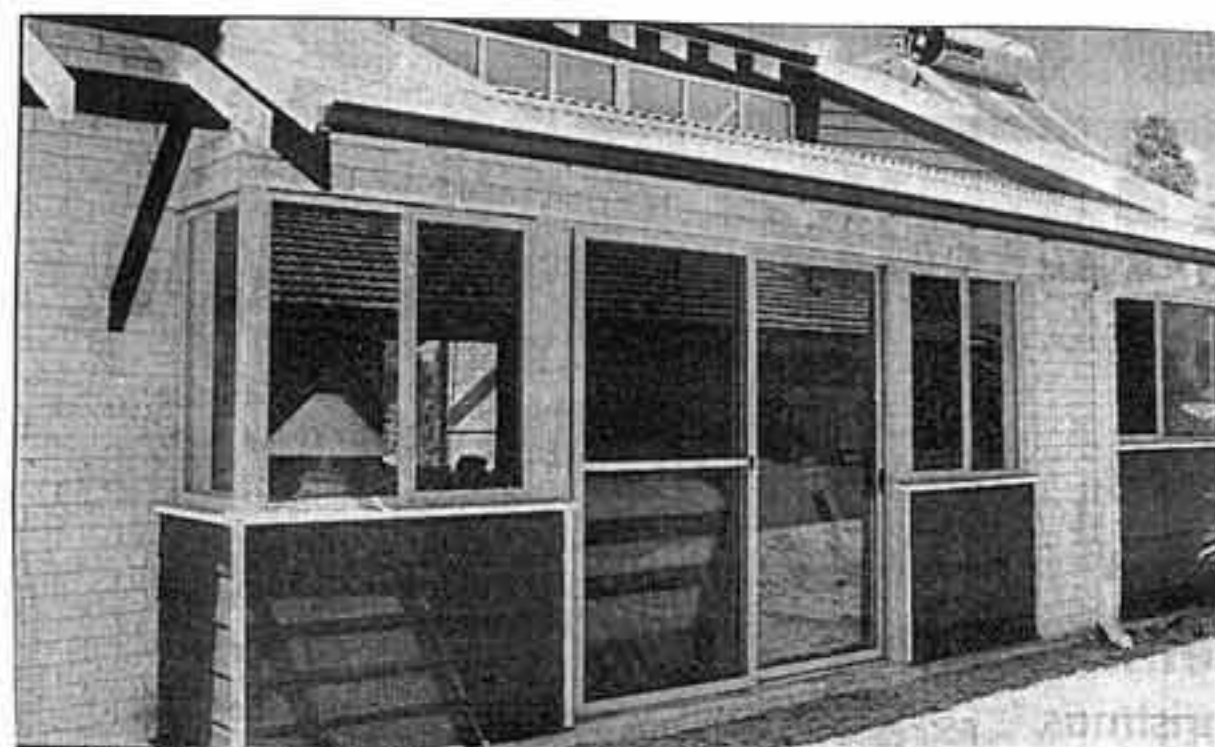
But it is the opposite now in summer, the roof overhang keeping the glass in complete shade. It is still a bright living zone with the natural light making much of the play of angles indoors, while ceiling fans add to the overall comfort.

"It is a great uplift in spirits to walk into this home, summer or winter," enthused Mr Wylie. "My former traditional style home was dark and cold in winter and very hot in summer."

"I went through the whole of winter here with only minimal use of the booster for the solar hot water system. The heat soaked up by the thermal mass in floor and walls maintained a reasonable comfort area in the expansive living zone and it will get even better when the curtains are fitted."



ABOVE: The cook can still relate to guests in the living area or to the television.



ABOVE: The glazing exploits winter sunshine but in summer, is in complete shade.

The owner asked for the equivalent of a bachelor pad with everything interconnected. There had to be accommodation for visiting family, his "part-time" children and friends.

He did not want formal and family areas but overall comfortable living, achieved with a sitting and meals area that is about 7.5m square and seems even bigger with integrated garden and court areas yet to be developed.

While working at the beautifully polished granite benches in the kitchen he is still involved in all that is happening, indoors and out, and can still watch television. Cupboards in this work area are solid jarrah in a period style and make their contribution to the overall decor and the careful use of timber.

The double garage had to be built first to get in the required retaining walls for the rest of the home. The facade has double-size blocks to corners for a distinctive quoin effect and there is a bulls' eye window illuminating the lofty foyer.

Leaves have been carefully calculated to maximise the solar benefits and achieve a frieze effect with the exposed rafters. The green corrugated roofing complements the limestone look for overall site harmony.

The composite construction can be appreciated on the north wall where simulated weatherboard panels have been used in a reverse, brick-veneer detail. The bricks on the inside wall contribute to the thermal mass for storing the winter heat.

The garage with electronic door is on the lowest level and has an internal stairway leading to the summer court. Up two steps is the porch protecting decorative stained glass doors to the foyer.

On the same level as the foyer is the study, an office cum library with computer facilities. With only a timber balustrade to the main level, it integrates well with the sitting area there.

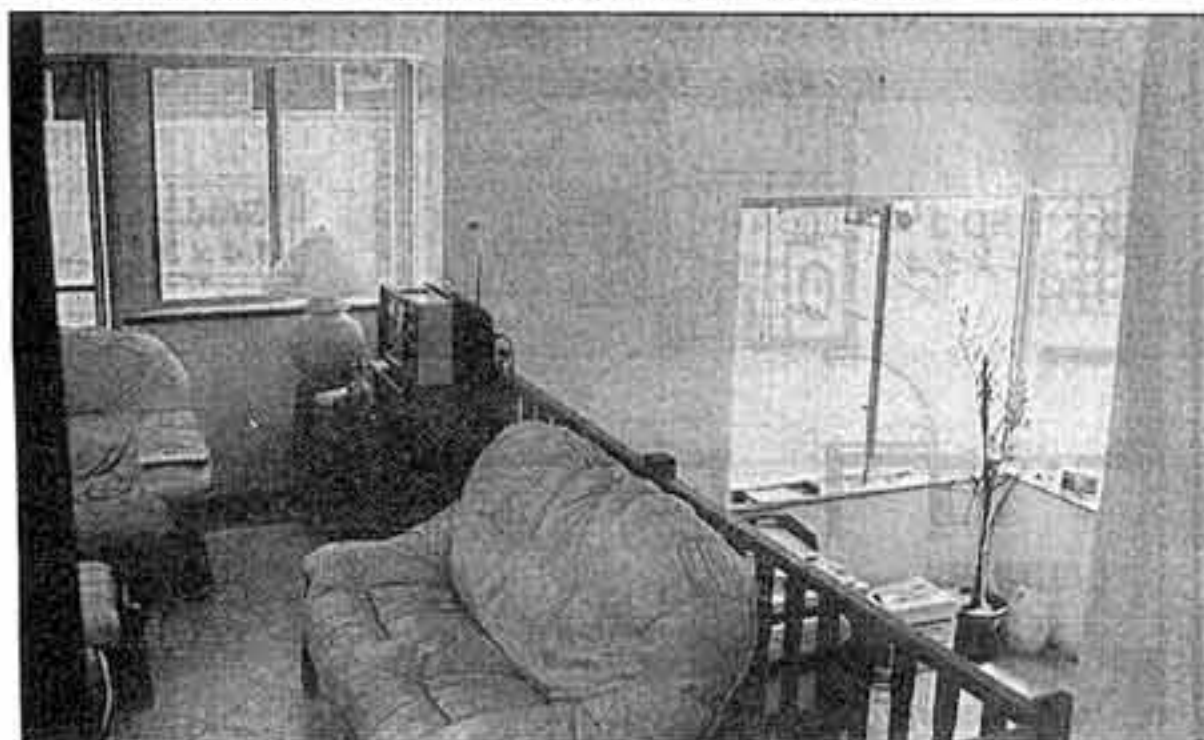
There is a clever play of spaces in this main zone where the ceiling is pitched at two angles to incorporate the clerestory windows at the apex. A stairway one end leads up to the master suite where the bedroom has an aperture tie with the foyer.

The suite has a corner window to the street and its own bathroom, complete with corner vanity cupboard, shower and toilet. The sleeping zone for visitors has a more traditional bathroom with the shower combined with a conventional bath and a one-piece top and basin to the vanity cupboard.

The home is not open for inspection but can be seen by appointment with the architect.

Frank Platell:

BELOW: Lounge and study relate but with good separation in the split levels.



BELOW: With a a bachelor pad called for, there is only the one meals area.

