

# 75pc cut in

**I**T WOULD have to be the dream home for an environmentalist, self-contained for all energy requirements and merging into a bush environment.

Structurally it is a veneer home but reversed from the traditional to have beautiful western red cedar planking to the exterior, while the same timber dressed is used for raked ceilings indoors. The interior walls are in a rustic brickwork, its earthy tones contributing to the overall harmony with the hillside site to the north of Waroona.

Rugged granite boulders with interesting variations in colour from brown to charcoal grey were collected on the site and used to plinth height, also for the rugged, open fireplace wall.

The main source of the energy is from banks of photo-voltaic cells that are rotated to make the most use of the energy directly from the sun. The output during the day is stored in battery banks and there is sufficient to run the appliances and the lights for the whole of the home.

In the event of dull days there is a reserve of power that can last two or three days. The hybrid power system also has the back-up of a wind-powered generator and this can take over the domestic load on most dull days.

The energy demand has been reduced by an average of 75 per cent over the usual family home because the residence fully exploits the passive solar principles for maximum comfort indoors in winter while excluding the direct sunlight in summer.

The site is in a remote bush area and not handy to power. In a cost analysis, it was found to be cheaper to go for an energy efficient design rather than pay for a diesel-powered generator, given the cumulative costs of fuel and maintenance.

"Owners Ken and June Spurge attended our climate-sensible home course at the Solar Energy Information Centre," said architect Garry Baverstock. "This confirmed their decision to build such a home."

"They asked for a character but earthy concept that fitted into the environment rather than fight it. The stonework, the browns of the timber and the mist green roof the shade of the eucalypts achieved this objective."

"The owner is an apiarist, has almost a spiritual love of the bush and is a dedicated environmentalist. On his big bush block there was just the one area that he felt was perfect, taking in a panoramic outlook over the coastal plain but still with a northerly orientation."

"There was minimal cut and fill in the quest for overall harmony with the hillside, the wide deck being cantilevered out on the bush poles. Extensive solar pergolas are over the deck for

**LEFT:** Passive solar principles are used to maximum effect to save energy in this house tucked away in the bush north of Waroona.



## demand for energy

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full sunshine in winter and solid shade in summer."

The actual house finishes up on the one level, for ease of mobility indoors while avoiding the risk of accidents as retirement years approach. It has just the one big, open sitting and dining area and this relates to a worthwhile kitchen.

Right in the middle of the open space is a big bush pole with just the bark removed, one of the most elementary and friendly structural components. People will lean on a bush pole, even prop their feet up on it, while children will happily swing around its base.

Kitchen cupboards all have jarrah-panel doors and a big curved log has been dressed as a breakfast bar, at the same time screening the sink from the living spaces.

Clerestory windows and skylights add extra light indoors to the entry and living area, ensuring a balanced ambience throughout the house. They also make best use of the low angle of the winter sun.

The home has the appearance of a weatherboard cottage but the main structural elements internally are the faced brickwork and the stone walls. The light-weight construction with the timber resolves any problems with treacherous clay soils and provides ample strength for any earthquake.

The stone plinth has a dual role, an obvious beauty statement, but also a protective barrier against scrub fires. It stops any fire from penetrating under the home, the major cause of a complete burnout.

Construction of the home was a team effort with project assistance from the architect helping the owner and trades people to get the desired results.

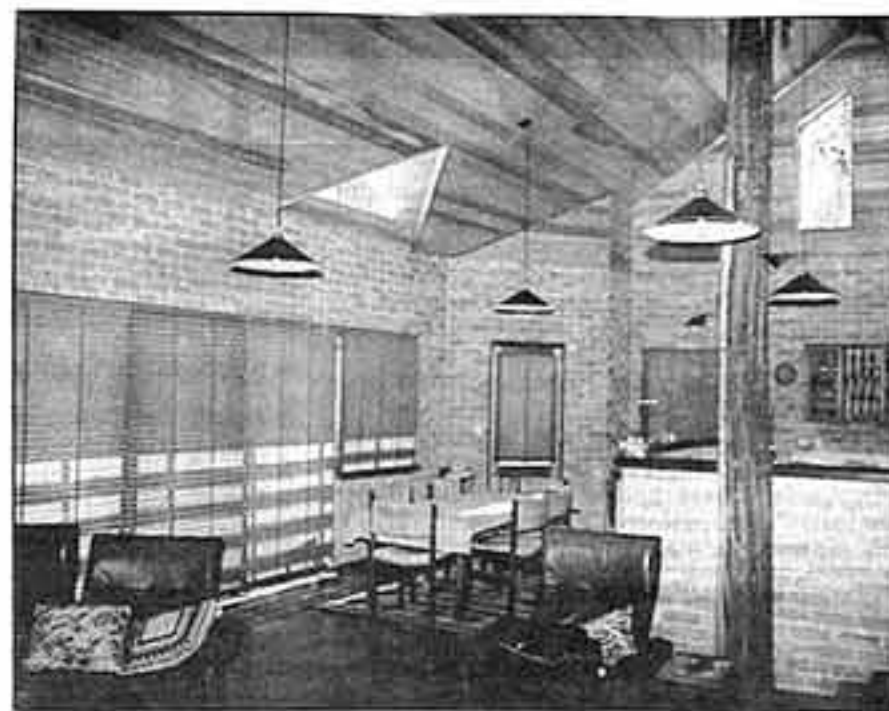
The owners now have their Shangri-La. It can only be seen by appointment with the architect.

**Frank Platell**



**ABOVE:** The living areas take up one big room space.

**BELOW:** Timber, brick and stone combine in the design.



The use of timber poles and timber ceilings is striking.

