bills

CONSERVATION and environmental concerns prompted an academic to seek a passive solar design for his new home in the hills at Stoneville.

He regarded it as socially irresponsible to waste energy when, with good design, so much was available free from the sun.

His reward has been a dramatic drop of more than 80 per cent in his SEC energy bills, compared with a conventional design with the same accommodation. The highest two-monthly bill has been $26.

The owner had participated in a university extension course on solar housing design two years ago and, with a sympathetic wife, knew what he wanted in a retirement home. In fact, it was quite a specific brief on accommodation requirements and how they wanted to benefit from solar comfort.

The detail was even complete to the architectural image, a home in simple and natural colours to harmonise with the trees and soil of the block in Traylen Road. The site extends down to Jane Brook and has a magnificent valley and bush outlook.

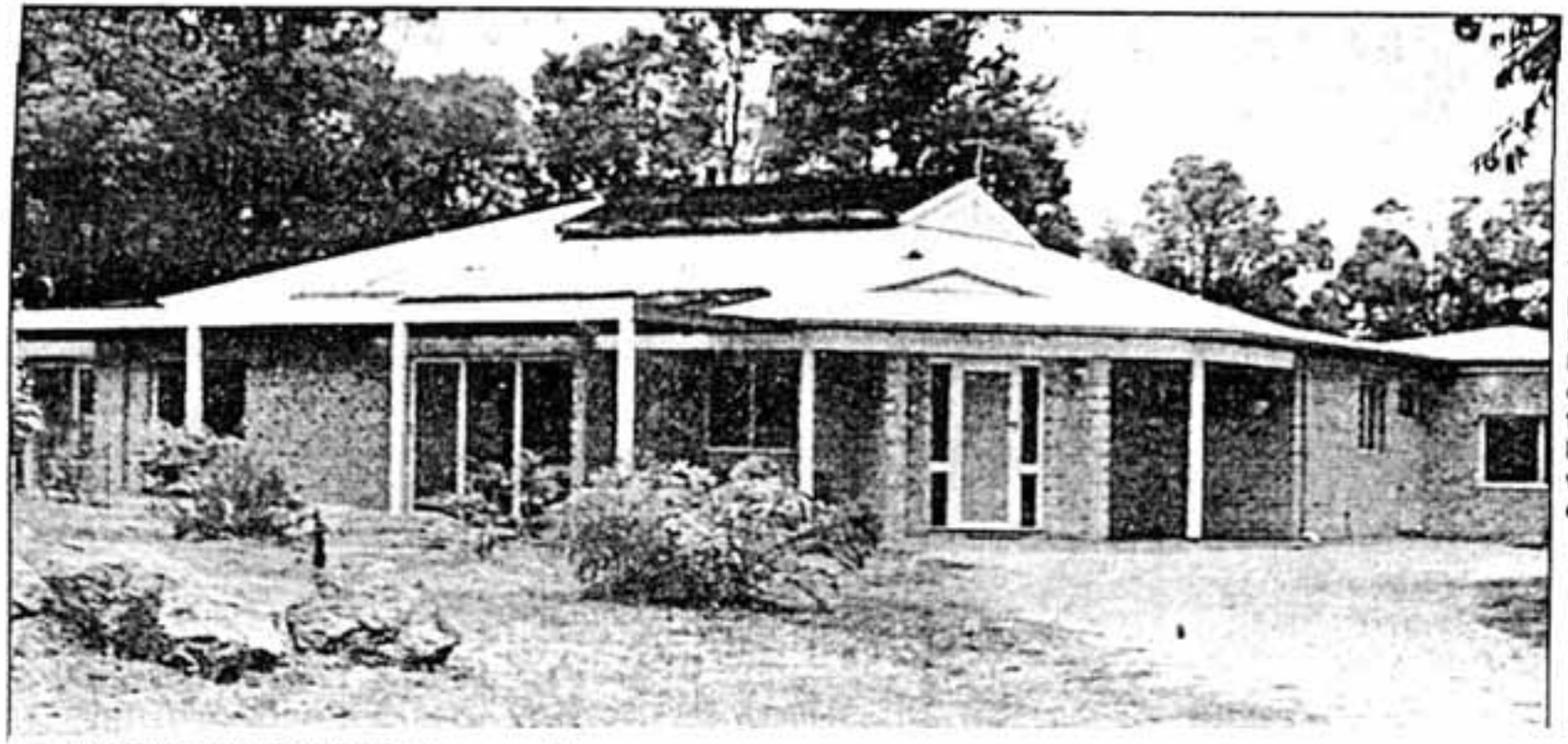
"They wanted a home in a traditional style, practical in all aspects and with low maintenance features," said architect Gary Baverstock, of Tecto Solar Corporation.

"But the solar aspects were paramount, with particular emphasis on coolness in summer and plenty of natural light. It is a big comfortable residence of about 240 sq m.

"The energy bill for June-July, the bleakest months, was only $24. This bill can be pushed up by a series of grey overcast days which result in the booster being activated for the solar hot water unit.

"The interior comfort has been carefully monitored and ranges from 18C to 24C in winter, while a heat wave will get it up to 28C in summer. There are no electrical heaters in the home, but a wood-fired space heater is appreciated on bleak days."

The house, built for Bernard and Philippa Catchpole, is very traditional, with its veranda effects, part -andled as special solar pergolas with blades angled about 35 degrees. This lets in the winter sun but excludes it completely in hot weather.



This passive solar home has been designed to harmonise with its environme

The same louvre treatment has been used to protect the skylights in hot weather, while still allowing soft diffused natural light to internal working and relaxing areas. The house is almost square in plan form and this has led to the squat, pyramid-shaped corrugated roof incorporating solar panels for the hot water and to the big skylights.

It is a secluded setting and well screened from Traylen Road as I found in almost driving past the entry gate which holds the owners' name. The focal point of the sweeping driveway is a big protective eucalypt that must be hundreds of years old.

With entry, you are immediately impressed by the spacious effect achieved by the open planning, also with the way the views have been exploited. Yet, overall spaces are well defined and have an acceptable level of privacy.

In the depth of winter the whole of the interior of the house is bathed in sunlight on fine days. The heat is soaked up by floors and walls and radiated back into the living areas at night.

This sunlight is now being gradually being cut out by the angled blades of the pergolas. All will soon be in shade for summer, with adjustable blinds minimising sky glare.

The design allows the owners to live in the whole house all the time and not confine themselves to an easily warmed room in winter. Extensive windows to the south are double glazed to ensure winter comfort while enjoying the valley outlook.

The big kitchen is the hub of the home, giving the cook an outlook in all four directions. It has almost 11m of bench cupboards and a pantry, naturally lit though a panel of glass bricks.

The owners have a choice of three meals areas indoors, plus pergola and veranda areas to the north and south. They work out where they would like to eat by the position of the sun.

The house has a "mud" room, a third bathroom with an external door for the benefit of people walking in from the paddocks of the 8.2ha site. They can clean up before going indoors.

The sleeping zone has the equivalent of three bedrooms and two more bathrooms. One bedroom is a study, the second with sun-room annexe is the master suite and the third is incorporated into a guests' suite.

The overall tranquility is captured with rabbits feeding only a matter of metres away from the master suite. The owners can spot them in the pastures with the first morning light.

The solar concept extends to an electric pump powered by two panels and this keeps a 20,000-litre tank full for reticulated flower and vegetable gardens.

The house can be seen only by appointment with the architect.