

Design on the sunny side

FOR tenacity in promoting a significant environmental issue, top marks must go to Perth architect Garry Baverstock.

It is almost 25 years since he decided that it was important to exploit solar principles in housing design.

Good design was all that required to provide year-round comfort, substantial savings in power bills and a significant reduction in the greenhouse gas emissions.

In this time Mr Baverstock has won many State and national awards for his energy-saving solar designs but it is only now that the public is beginning to grasp the importance and worth of the principles.

The passive solar benefits were first recognised here last century by pioneers who used dry seaweed for ceiling insulation but it was not until after World War II that any real attention was given to exploiting the benefits.

Even then it was only accepted by those who realised that it was environmentally and socially irresponsible to use big amounts of electricity for air conditioning and heating.

Mr Baverstock felt for a long time that he was only getting through to the converted with his lectures and talks on the subject but now governments and town planners are showing greater appreciation of the benefits of passive solar principles.

And his peers have also given him a stronger voice by electing him chairman of the environment committee, WA chapter of the Royal Australian Institute of Architects.

Mr Baverstock's interest was aroused in the 1960s when he became aware of the growing pollution problem in the cities of the world. It was further stimulated during the 1970s when the oil energy crisis developed.

He looked around and realised that little was being done about the environmental problems, especially within his profession.

Because he was looking for some direction in his profession, he thought design based solely on aesthetics was superficial and irresponsible but not what the public wanted — hence the need for education.

The same solar principles have also been applied to



Garry Baverstock

institutional and commercial buildings, where costs have put the power savings by almost 80 per cent, even peaking at more than 90 per cent on some days. It can be almost as good in residential architecture.

He still remembers the satisfaction he got from his first passive solar design, on the heights of Mt Nasura above Armadale. From this project he was able to refine the concept for greater efficiency, giving closer attention to areas of glass facing north and sun-control pergolas.

He has also been careful to maximise client input so every home is an individual design to meet lifestyle expectations and exploit the location.

His latest passive solar concept has been of significant interest, not a new home as such but the conversion of one that was heritage listed. It called for much care in maintaining the original aesthetics while introducing modern concepts such as bigger windows to the north, and open living in the Frank Lloyd Wright tradition.

Frank Platell

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Sunnyside up

IT WAS with much trepidation that architect Garry Baverstock approached his latest commission, to bring a heritage-listed residence into the solar and environmental age.

However, Mr Baverstock had one big advantage — the back of the Subiaco house faced north and could be exploited for the passive solar benefits. But every brick had to be looked at critically because the yesteryear charm of the 19th century home had to be preserved.

The work involved the complete demolition of the original kitchen and its replacement with a breeze-collecting courtyard on the western side.

This courtyard also provided a garden ambience to the main spaces, as well as exploiting the winter sunshine for year-round comfort. Battens to the pergola allowed the winter sunshine to penetrate up to 3m indoors while excluding it in summer.

The original masonry walls in the formal areas have a new role as thermal banks, soaking up the warmth of the winter sunshine by day to radiate it back into the spaces at night.

The original rickety, lean-to veranda at the back and its related timber deck were removed and a new wing was built facing the back gardens. This wing had the new kitchen, in turn related to family living and eating areas, plus a study.

A new, full-width back veranda off this wing has a sun-control pergola, where angled timber louvres let in all the winter sunshine but completely shade the window walls in summer. The timber decking here, rather than brick paving, adds to its potential for a year-round alfresco lifestyle.

This back wing follows the Frank Lloyd Wright tradition, being a bright expansive area but still with well-defined and easy to furnish spaces that relate

to the outdoors.

The country-style kitchen allows the busy chef to be part of family activities. Extensive built-in cupboards have timber doors in the traditional style of the original home.

The new wing has been built on a modern concrete slab, rather than have the old limestone footings. But it has an old world touch with timber parquetry flooring.

The previous renovated street elevation dictated the finish to the new wing, so that all is in complete harmony. The house looks good enough to provide a comfortable lifestyle into the next century, and more.

Interior temperatures should



range from a maximum of 18C, in winter to a peak of 28C, in a summer heat wave.

"I see this project as a good example of recycling an economical asset," mused Mr Baverstock, of Baverstock Murphy and Associates.

"Too much of our heritage has already been lost, residences that could be brought into the next millennium."

"It was cheaper to renovate and add to the Subiaco home, rather than demolish and rebuild. It proves our heritage is worth something in economic terms."

Frank Platell