

Using the sun to advantage

IN A country where we have more than our fair share of light and sun, it seems odd that our housing heritage is one which can often lack both. Part of the reason is that in the past, European styles, designs and materials have heavily influenced our building industry — most of them being inappropriate to Australia's climate.

Another reason for gloomy interiors has possibly been ignorance of the full significance of passive solar considerations and the importance of opening a home to northern aspects.

John Dastlik is Director of WA/Asia for the Housing Industry Association. He says that 10 years ago there began a trend that has since grown in the WA housing industry. The trend has been for homes to relate to the outdoors, in terms of accessibility, and visually in the amount of glass now used in construction.

"The only problem is that blocks are not always aligned that way — a lot of the up-front design of land development makes it difficult for builders and designers, who are limited by the structure of the block, the way it faces, nearby roads and other factors," he said.

Mr Dastlik added that land developers are not required to take solar issues into account when developing land releases. He also didn't believe such environmental considerations were being taken into account.

Architect Robert Shand is a member of Archicentre RAIA who is based in Cottesloe and, having designed buildings in Africa, has had a lot of experience in his professional work with bringing light, and not heat, into homes.

One recent example here was to modify an unusual home in Mosman Park, constructed in 1979.

The previous owners were far from oblivious in terms of

Making

Plans

taking into account the home's site and position of the sun with the passing seasons. The house itself is a simple open structure which consists of a big double volume family room with a narrow mezzanine running down the south side.

The narrow frontage faces west — and therefore has little glazing which translates inside to a formal lounge on the left and a meals area on the right.

The lounge opens into a northern courtyard which also runs the length of the family room — a long glazed area, with a deep overhanging eave.

The meals area leads into the kitchen. On this side of the home is a bathroom and a bedroom. At the back (east facing) is another bedroom, an en suite, big storage room and laundry.

While the home has an advantageous siting, the main living area, which faces north, had its light drastically blocked by a neighbouring two-storey building topped by a square cupola. The design of the deep eave, or veranda, was also instrumental in cutting out desired northern light.

Further, the row of south-light windows to the mezzanine, brings in light but no heat and would, says Mr Shand, be a major source of heat loss in winter.

Archicentre provide a number of public services, one of which is a pre-purchase home inspection report — which the owners of this property requested.

In this report, Mr Shand outlined the above factors and suggested how to make the home a more pleasant place to live — including the need for more light in the bathroom.

The owners bought the property recently and followed up on the architect's findings.

Mr Shand has introduced two sizable strengthened clear glazed rooflights into the north slope of the existing tiled roof. These have a solar screen mounted on them, where the powder coated aluminum blades (the colour of a light summer sky and a material that will weather) are angled to allow winter sun but limit summer sun.

The screens also maintain privacy by cutting out the view the neighbouring building would have had into the home's main living area.

The original bathroom, which only had a small acrylic ventilated roof light and a dark blue decor (tiles and bath), was pretty sombre.

A bigger, deeper skylight using Solarcool reflective glass was installed and the bath, floor and wall tiling were replaced. The owners can now lie in the bath and watch the clouds drift by.

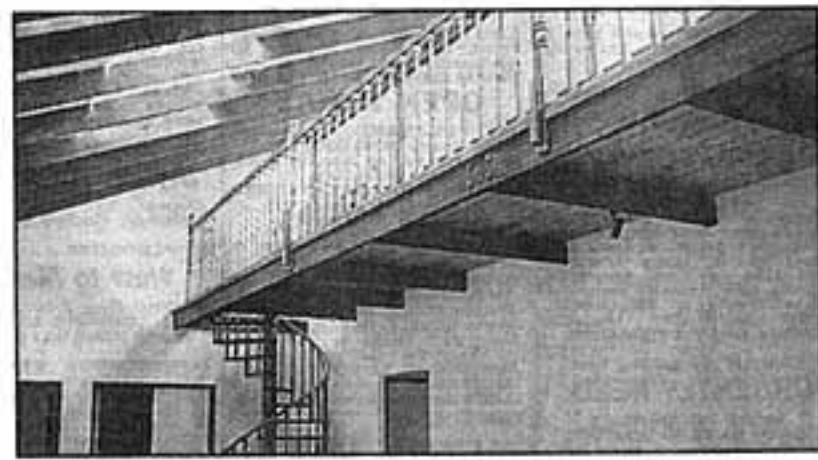
This project, carried out by Infratec Pty Ltd, was completed in one month for a cost of under \$25,000 — the bathroom being \$9,800 of the budget. Mr Shand is available to discuss the ideas in these plans and can be contacted through Archicentre RAIA (9481 8770).



◆ Light streams in to the top level.



◆ The panels keep a low profile on the roofline.



◆ The open living areas are transformed by light.