

Passive solar design a winner

IT WAS a difficult brief for a passive solar concept, a duplex development for an East Victoria Park block with true north at 45-degrees.

A positive aspect was in having north to the back which allowed for the integration of private courts and decks, and a garden ambience throughout.

With cost a constraint it had to be a simple concept and easy to build on the rear-sloping site in Withnell Street.

Architect Garry Baverstock's solution was in two L-shape dwellings with splayed elevations to the back to make the most of solar benefits.

Because it was all a precedent for redevelopment in the old urban area, the decision was made for an Australian colonial look.

This, plus the careful retention of a big old eucalypt tree between the homes, gives it all that immediate harmony with the neighbourhood.

The front home with its bull-nose veranda meets the specific accommodation requirements of the owners, Bob and Ruth Whitney.

It has open living and dining areas plus quiet reading bay window integrated with a pergola-protected timber deck, a kitchen big enough for two, a luxury bathroom with step-up spa for two and just the two bedrooms, the second doubling as a study. The plot ratio of the 1000sqm block has been used to the full with a duplex rental investment at the back. The owners see this as part of their superannuation for the future.

The splayed rear elevations to both homes make the most of the passive solar benefits with the careful positioning of window walls which have been angled exactly to the north.

They collect the winter warmth with the sunshine penetrating up to 3m indoors in the coldest months.

At the same time roof overhang and pergolas ensure maximum shade to the glazing in hot weather.

The pergolas have angled louvres which

ON DISPLAY East Victoria Park

- Price: on application
- Address: Withnell Street
- Agent: Garry Baverstock, architect
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- Open: contact agent

exclude the sunshine in summer but allow for full penetration in winter.

This winter sunshine is soaked up by concrete floors and masonry wall which act as thermal banks and radiate the stored heat back into the main spaces at night, maintaining a 18C comfort zone.

At this time of the year the house is cross ventilated at night gets the indoor temperature down to within a degree of the 18.6C average minimum in summer.

The cool interior is easily maintained during the day with the insulated roof which has a reflected foil under the corrugated metal and R2-rated batts on the ceiling.

And it all works, according to the owners. There is no groaning now when they get a power bill, the last one being only \$54 — or a 60 per cent saving on what they had previously paid for a similar-size traditional home in Gosnells.

The owners' front duplex gets its Australian colonial look with the bull-nose veranda, the awning in the flush gable and walls of simulated limestone blocks.

The 45-degree angle to the front door creates a breeze trap for the sou-wester that cross ventilates the home in hot weather.

This angle is used extensively through the open-planned living and dining areas, also to the kitchen where it translates into a five-sided work area that both owners can use in harmony.

It has more than 6.5m of bench cupboards plus about 3m of wall cabinets and a real pantry.

Tasmanian oak has been used as a moulded fascia to work areas, also to the wide upstand that doubles as a servery to the meals area.

This dining area for all occasions can take a table setting of eight, even ten.

The central sitting area is integrated with the raised timber deck, a cool setting with the striated boards, pergola and perimeter gardens.

The reading nook has a bay window that also relates to this inviting outdoor space.

The main bedroom suite has been designed to exploit the sunshine of winter and the

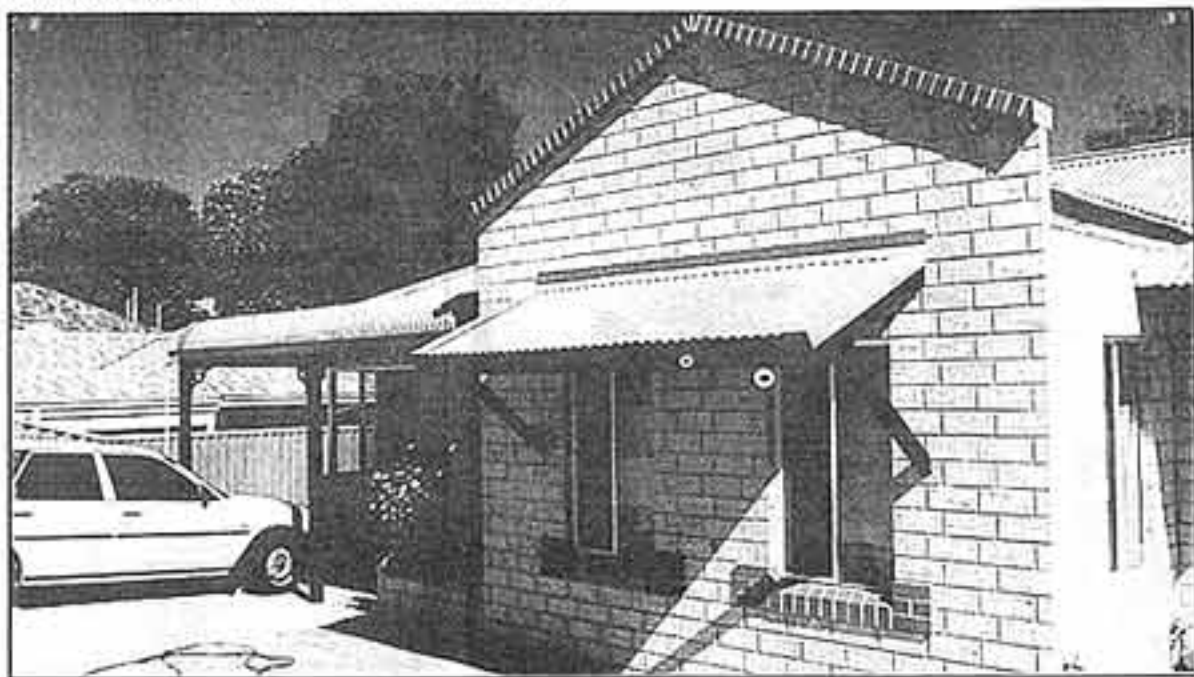
cross-ventilation from the cool breezes of summer.

An en suite effect is achieved with a door direct to the one big bathroom that has the step-up spa for two, combined with the shower and its flexible-hose fitting.

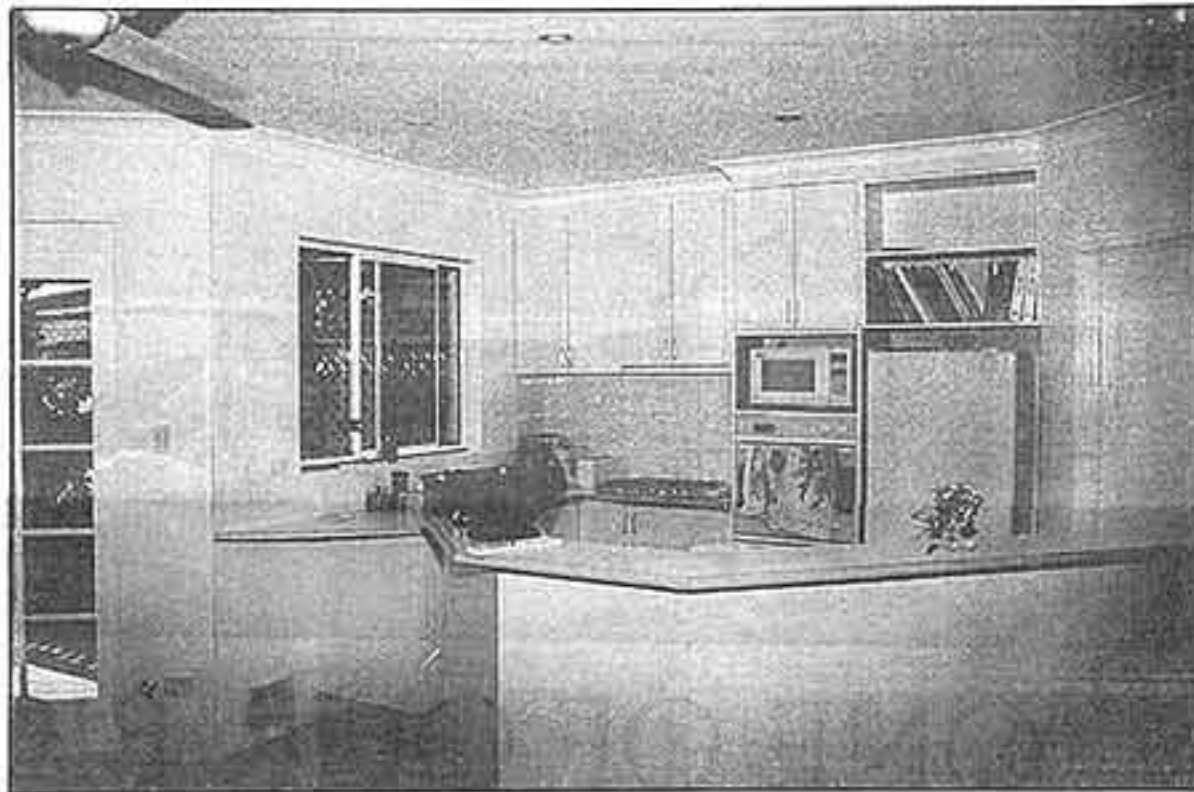
The well-appointed laundry in the middle of the sleeping zone has linen and broom cupboards.

The house is not open for inspection but can be seen by appointment.

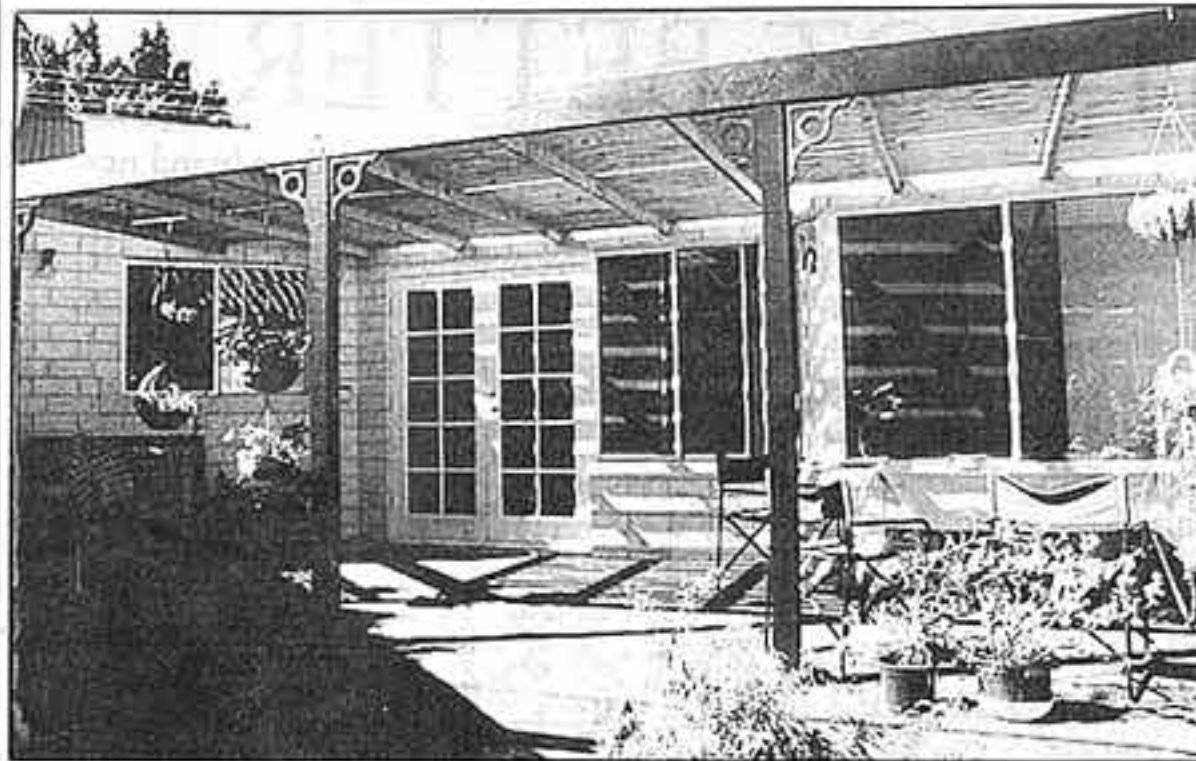
Frank Platell



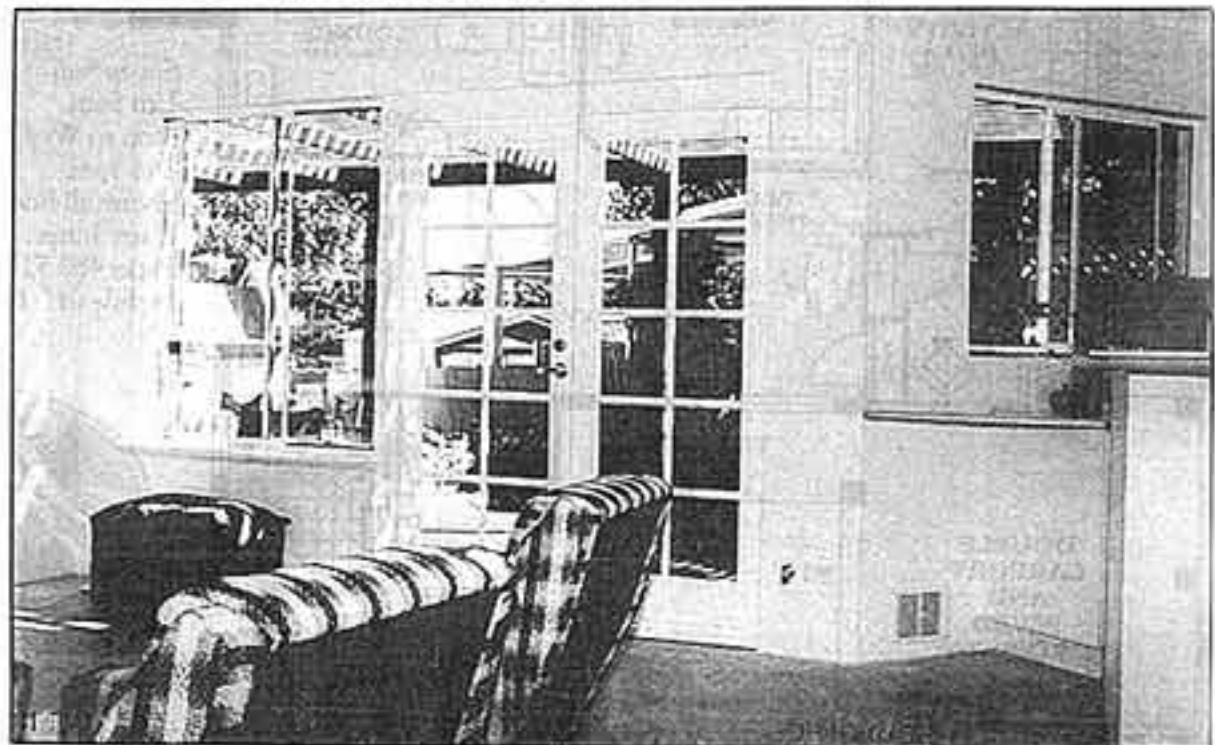
■ The colonial look comes from the bull-nose veranda and the window awnings.



■ RIGHT: The kitchen is defined by an angled bench on top of a half-wall.



■ LEFT: The back patio has an adjustable pergola for all-year comfort.



■ RIGHT: The family room is a bright area adjoining the kitchen.