

Concept Transforms Perth's Worst Energy Efficient Building

THE complete transformation of a Perth office building from a financial disaster into a bright attractive energy efficient workplace will be completed this month.

The building, formerly a total black glass faced multi-storeyed office block on the corner of Adelaide Terrace and Bennett Street, had for some years been costing the owners a fortune through inadequate energy systems causing declining tenancy.

The current owners, The W.A Pensioners' League, were forced to seek a solution to the building's costly faults.

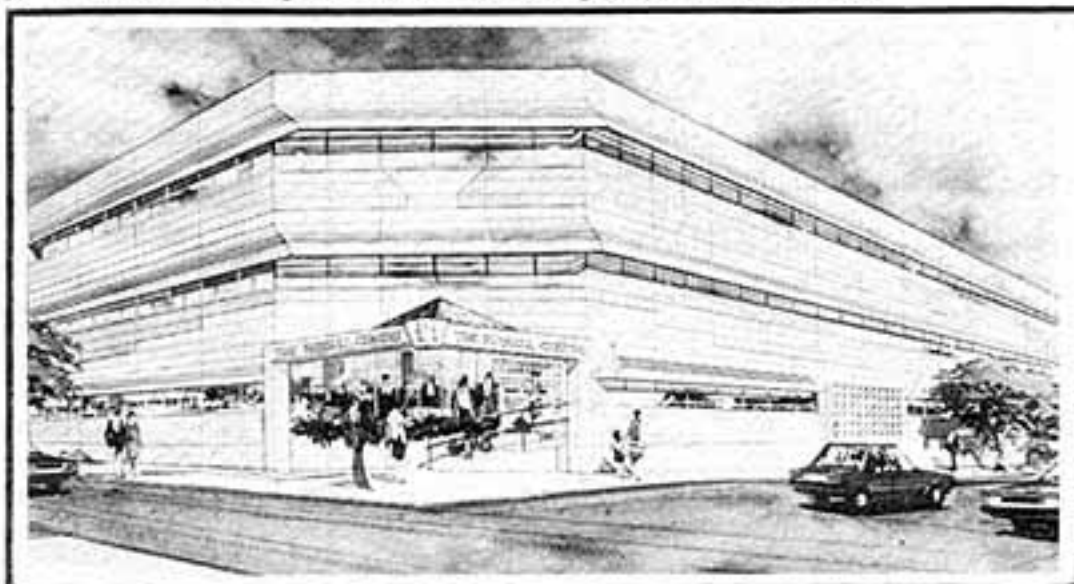
These included no shading and a complete curtain wall of black glass facade causing a shocking glare problem for perimeter tenants, no acoustic separation between renting tenants, a lack of privacy noise buffers between offices, and poor natural lighting for internal tenants.

The building had poor internal finishes with dark carpets, dilapidated ceilings which were a major fire risk.

Air conditioning loads, even in empty offices, were exorbitant and totally incapable of meeting comfort conditions for tenants.

The air conditioning system had poor control with no balanced use causing a severe waste of energy.

A further devastating building fault was the total lack of insulation between floors



around the perimeter structure making any control of energy totally impossible.

This building development was energy and economically audited, then designed, documented, costed and project managed by one company, Tectoprojects.

It is a multi-disciplinary approach which has extensively utilised computer technology.

The architectural results are due to the dynamic amalgamation between Tectoprojects and the established South Perth architectural practice of Garry Baverstock.

This combination is attempting to show the way with new methods in the design and construction industry.

South Perth architect Garry Baverstock was commissioned to completely retrofit the building.

Mr Baverstock told Building W.A. that this was the worst energy efficient building in the city, but still only one of many other similar major buildings in Perth.

He said that the owners were faced with a financial disaster if nothing was done to correct and change its structural faults.

Mr Baverstock developed a solution using a low-energy building design principle transforming this total management nightmare into a viable pleasant work place through long-term better utilisation of floor space.

The 2000 square metres of floor space now present current and future tenants with a modern office complimented by excellent working conditions, a recreational atrium and extensive views of the Swan River and

King's Park.

The building's external skin loads have been reduced by 90 per cent through the use of awning panels with solar pergola grill design.

These grill panels effectively keep the summer sun out of the building while allowing in adequate light and maintaining tenant views.

A by-product of the panels has been a big reduction in glare.

The area of glass also has been substantially reduced incorporating insulating spandrel panels.

All external glass is now fully reflective.

Highlights incorporated within the building have introduced improved natural lighting to the centre of the upper floor tenancies greatly helping to reduce energy bills.

An atrium has been developed within an area previously a light well with a glass roof.

Solar pergola shading has been installed for the summer sun turning the atrium into an excellent area for

tenant recreation and lunchtime use.

The building will be known as the Russell Centre, being named after Mrs Dora Russell, the current Australian Pensioners' League W.A. treasurer.

Mr Baverstock said that the owners could now look at a minimum 30 per cent energy savings on a normal building energy use and cost when in full occupancy.

Greater savings can be made when the building is empty overnight with an almost nil use and costing.

*Building WA
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