



Trevor Pearcey House

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Trevor Pearcey House is a 19 year old building in Fern Hill Technology park, Bruce ACT. The refurbished block E has become the new head office for Australian Ethical Investment and has been designed to be an exemplary 'green' building.

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Australian Ethical Investment (AEI) is an Australian investment company who specialise in environmental and socially responsible investment. It is a part of AEI's philosophy to promote ecologically sustainable and socially just enterprises through careful investment; and also to improve the ethics of corporate Australia.

Through a cooperative design approach the project has been sculpted into a high class sustainable building which is humane and liveable. It appeals to general instincts of how buildings should feel and look without resorting to gimmickry. The resulting form and appearance is a reflection of all the elements which interact on its design – structure, environment, people and location.

To give an example - coined by Howard Pender from AEI, "the building before the refurbishment was like trying to keep your milk fresh by storing it in a cardboard box ", the refurbished building is an esky.



Client
Australian Ethical Investments
Cost
\$1.7m
Structural & Hydraulics
Hughes Trueman
Mechanical, Electrical
Bassetts
Landscape
Red Box Design Group
Cost Planner
Wilde and Woollard

Sustainable Design

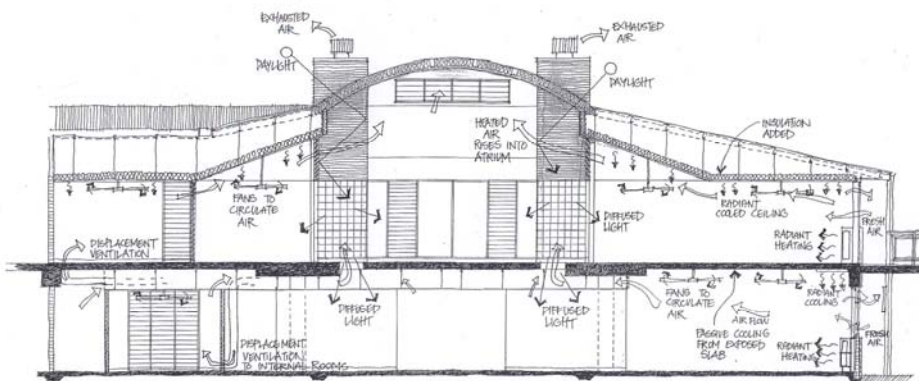
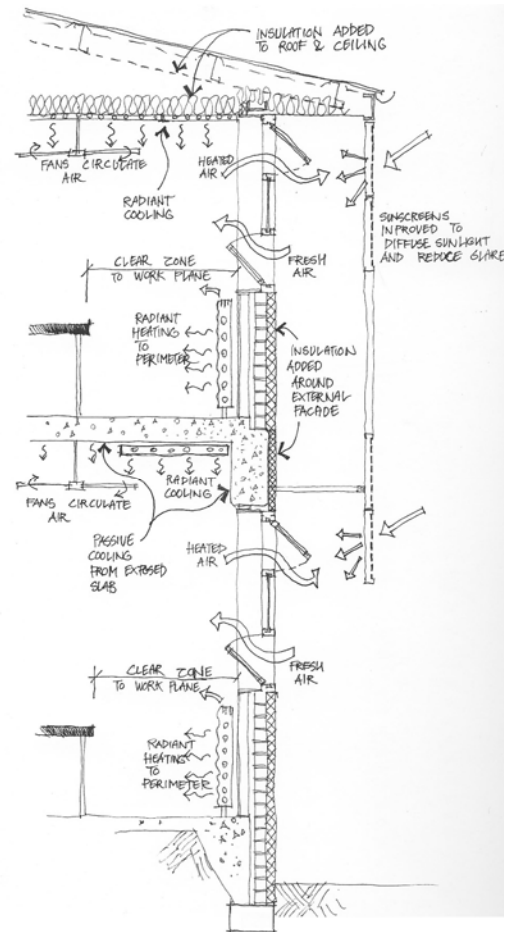
The building has been developed to maximise the potential for passive systems such as natural ventilation and lighting.

The atrium type area on the first floor in the building forms a control for ventilation, day lighting and activity. This atrium runs through into the existing barrel vault (originally unused) and includes light and ventilation columns (stacks) to the lower level.

This atrium type space tempers the air both in winter and summer to allow fresh air intake without mechanical ventilation into the first floor. Air is drawn into the building either through either manual operable window hoppers or mechanically using electrically operated windows or louvres controlled using a weather station. Winter temperatures are tempered by radiators around the perimeter walls or within internal rooms. In summer exposed concrete ceilings on the ground floor cool the air with ceiling fans providing extra air movement. A back up of air conditioning is provided on the first floor; however this is locked by a key and requires a consensus by staff before use.

Windows and air stacks are used in conjunction in summer nights to purge the building of hot air build up during the day – this is called a night purge.

The building shape and overall modifications to the building lends itself to good levels of natural light, supported by the atrium on the upper level. In all areas natural light will be able enter from two sides utilising both the atrium space on the first floor and the light columns (stacks) connecting through to the ground floor. Different forms of shading have been provided to each elevation to reduce direct solar gain while still obtaining indirect light.



As a base lighting system, office areas have been provided with high efficiency, low brightness, semi-specular, louvred luminaries with T5 lamps (low energy lights that use 40% of the energy of normal lights). Lighting to the perimeter and adjacent to the atrium are separately switched. This allows maximum advantage of available daylight. Lighting is also timer and occupancy controlled to allow lights to be switched off when not required. The base level lighting is low and supplemented with task light at individual work areas.

One of the most interesting features of the refurbishment has been the level of recycling and reuse of materials. The Architects and Construction managers (Cobul Constructions) worked collaboratively to ensure as many materials as possible were reused in the construction.

This included:

- ~ Electrical wiring ducted skirting, power point and switch face plates.
- ~ Partition wall studs, plasterboard and frames for windows and doors.
- ~ Internal doors, door handles, door stops and internal glass blocks.
- ~ Carpet tiles were reused and supplemented with more recycled carpet tiles.
- ~ Steel hanging frames and mesh found in the ceiling space and were reused to make a bike enclosure.
- ~ 90% of the joinery cupboards were made from old cupboards found in the building.
- ~ Recycled timber was used for feature floors and walls.

Some of the recycling led to inspired elements within the building such as two walls made from old timber palettes and, most notably, art work made from old computer floor tiles.



Photography: Ben Wrigley