



**OFFICES, MELBOURNE,
AUSTRALIA**
ARCHITECT
MICK PEARCE/DESIGN INC

If the direst warnings about climate change come to pass, then Australia will be at the sharper end of things. The continent's geography and climate make it especially vulnerable to the effects of the predicted eco-cataclysm and should global warming continue unchecked, then Australia will ultimately shrink, scorch and die. Rising sea levels will overwhelm its populous coasts, while the vast, parched interior, already verging on the inhospitable, will become a broiling moonscape.

Faced with such an apocalyptic scenario, the raft of protocols, emission targets and general eco do-gooding might seem as much use a chocolate fireguard. Yet as we inch incrementally towards the brink, the odd alternative way of doing things occasionally suggests itself. As it does here in Melbourne, with a new office building so radically and profoundly immersed in sustainable technologies that it aims to go beyond being another well-mannered exemplar and instead redefine preconceptions about how buildings are designed, serviced and used.

The brief is unexceptional – a 10 000 sq ft office building for Melbourne City Council on a tight, downtown site. Not an obvious context for an architectural epiphany. Local firm Design Inc worked with Zimbabwean architect Mick Pearce, whose credentials for evangelical environmental design were firmly established with a mixed use development in Harare (AR September 1996). Rejecting an aggressively technological approach, Pearce's Eastgate development employed passive means of environmental conditioning, imaginatively reworking vernacular and even organic precedents.

The CH2 building (Council House No. 2) extends and refines this approach. Though less complex in plan – being essentially a column-free floorplate stacked ten storeys high bookended by cores of public circulation and services – it directly articulates its environmental control strategies through a series of bold moves that bring a rustic vibrancy to the corporate *politesse* of Melbourne's CBD. From its main



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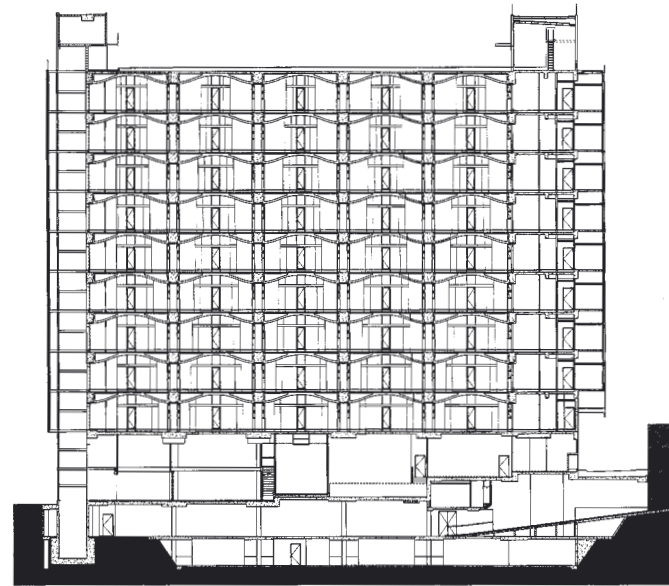
GREEN GAUGE

These civic offices in Melbourne provide a radical new paradigm for green buildings.

- 1 A timber skin, 'shower towers' and yellow wind turbines mark the CH2 building out in downtown Melbourne.
- 2 Responding to the sun, timber louvres pivot open and closed.
- 3 The north (sunny) facade will eventually be covered in greenery.



3



long section

public facade of recycled timber louvres to the sculptural yellow wind turbines that adorn the roof, like giant chess pieces or crazed church spires, the building is not a static entity – it lives, moves, breathes and will evolve over time. Powered by photovoltaic cells, the louvres pivot vertically in response to the sunpath, and on the long north (sunny) side, a network of climbing frames and balconies provide a convenient armature for an emerging screen of greenery. On the cooler south side, 'shower tower' ducts resembling waste disposal chutes feed chilled air and water into the lower floors cooling retail spaces at ground level.

Natural ventilation is a key part of the building's passive environmental control. Hot stale air rises by the stack effect into horizontal ceiling voids integrated into vaulted structural floor elements and then up through chimneys on the north facade, dramatically crowned by the wind-driven exhaust turbines.

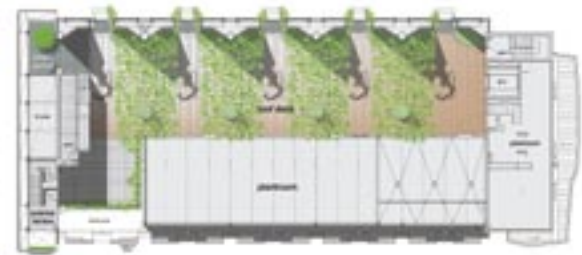
Cooling loads form the main energy demand, met exploiting the building's high thermal mass, a chilled ceiling system, night time flushing and PCM cells (phase change material) for storing

'coolth'. Rainwater is harvested and both black (lavatory) and grey (washing) water purified and recycled. Though such principles are not new in themselves, their level of integration aspires to a new ideal of architectural bio-mimicry, where the whole building organism is greater than the sum of its parts.

Clearly, monitoring will be needed to properly evaluate energy saving claims – 85 per cent reduction in electricity consumption, 87 per cent reduction in gas and 72 per cent in mains water supply when compared with a conventional building. Beyond this, on an experiential level, the architects predict that a healthier environment will also reduce staff absenteeism and cut costs. Towards the end of this year the first hard data on the building's operation and staff productivity will be available, hopefully vindicating (if vindication were required), the rationale behind such a singular vision of a new bioclimatic architecture.

CATHERINE SLESSOR

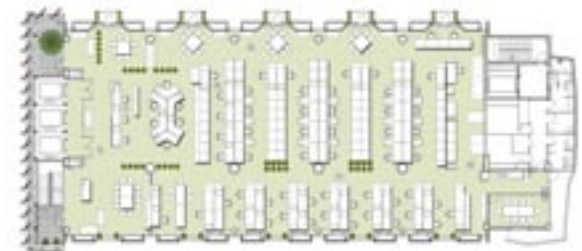
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Mick Pearce/Design Inc, Melbourne
Photographs
Dianna Snape



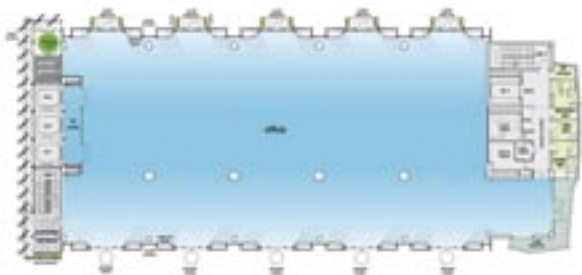
tenth floor (roof deck)



seventh floor



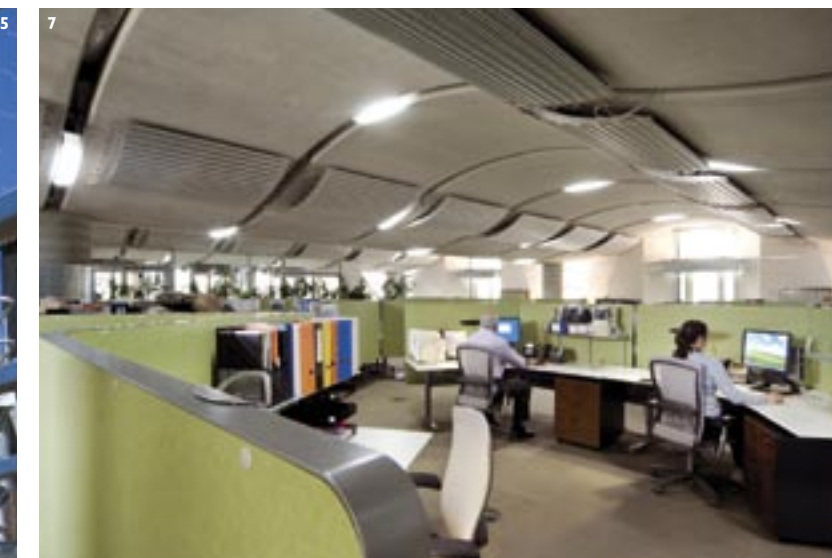
sixth floor



typical office floor



ground floor plan (scale approx 1:500)



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4 Entrance lobby for civic offices, with hull-like reception desk.
5 Roof garden animated by sculptural yellow wind turbines.

6 Balconies and climbing frames form an armature for planting.
7 Typical open plan office, with undulating concrete ceiling.