

The Melbourne Times

#3 / JANUARY 24 / 2007 / FREE EVERY WEDNESDAY

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UP THERE FOR GREENING

GOING GREEN

from the top down

The grassroots greening movement is already popular, but a more recent trend looks at our environmental problems from the other end. DOUG HENDRIE reports.

■ BEN Nicholson has an unusual mission in life: to bring the country into the city.

If the 29-year-old Fitzroy resident has his way, Melbourne's inner city will meld metal and glass with trees and grass – way up on the city's rooftops.

"We should try to create an environment as close as possible to what was there before, just like lifting the land up," he says.

Nicholson dreams of merging Melbourne's network of parks with its buildings, making peace with nature by turning a concrete jungle into a real one.

The town planning graduate grew up on a farm near Orange before moving to Sydney for high school.

"I used to catch the train into the city and saw all the tiled roofs," he says.

"I thought it should really look more like the farm."

Exploring the idea, Nicholson came across the green roof movement, a trend in Europe and the US that is beginning to establish itself in Australia. Greening a city's roofs with grass and trees brings a raft of environmental benefits – the heat-island effect is muted, stormwater run-off is minimised and smog dissipates.

"Different experiments have shown green roofs can cool air temperatures by 5 degrees in cities. You can start to make an impact on photochemical pollution.

"The plants can trap particles. Green roofs slow the rate of stormwater flow and filter it," Nicholson says, who can rattle off umpteen benefits without drawing breath.

"Birdwatchers in London are finding a lot of recolonisation, because the birds can use the rooftops as stepping stones."

Growing rooftops stretch back millennia, but green roofs have not become popular until the past 20 years, pioneered by Green politicians in Europe before leaping to North America.

Chicago's revival has been attributed to a comprehensive greening program, with 200 buildings now boasting green roofs and 150 kilometres of new green median strips planted.

Greening has been good for business, with a housing and job boom following the beautification project.

Nicholson believes the green roof is long overdue in highly urbanised Australia, where energy costs are rising and climate change awareness is reaching critical mass.

He believes green roofs can easily overcome water shortages by using native plants and storing stormwater.

Nicholson has joined forces with ex-Victorian Geoff Wilson, who has single-handedly wrestled green roofs into public consciousness in Brisbane. Wilson founded Green Roofs for Healthy Australian Cities and is devoting his retirement savings towards Australia's first green roof conference next month.

His tireless advocacy has made converts of Brisbane's Lord Mayor and deputy mayor, who will speak at the conference about plans for six green roof demonstration projects. The two converts are encouraging green roofs on new and existing developments.

But Wilson does not think of government as the primary mechanism of change, preferring to focus on what he considers

the more dynamic sector: business. "The dollar drives things and that's where action will be taken," he says.

"I'm a great believer in the wisdom of the German philosopher Baron von Goethe, who said 'the role of good government is to teach us to govern ourselves'."

He estimates retrofitted green roofs boost house or apartment values 5 to 10 per cent and cites international research showing green roofs on hospitals have significant healing effects.

There's no time to lose for the energetic 70-year-old, a long-time agribusiness journalist who turned to "avant garde" technologies such as green roofs to drive change.

"The beauty of this is that there's existing infrastructure which can quickly adapt," Wilson says. "It's just a matter of realigning it slightly and taking expertise from overseas. All the hard yards have been done for us in Europe and North America."

Wilson's approach is a model Nicholson hopes to replicate in Melbourne, with less emphasis on lobbying government and more on appealing to business.

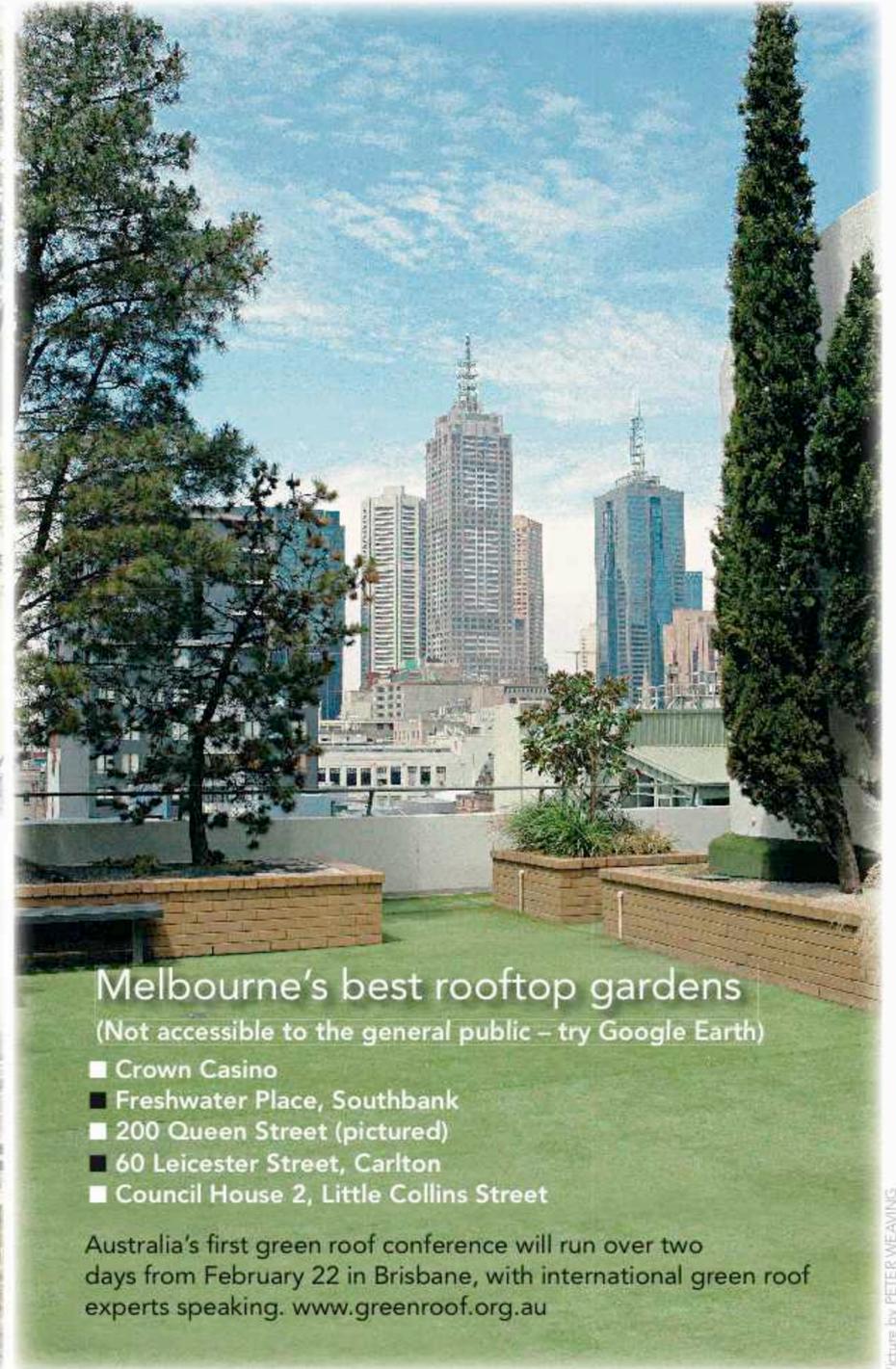
"In Germany in the 1980s and early '90s, the Greens were in the ascendancy and they introduced quite radical legislation. In 2005, about 1 million square metres of green roof were created.

"But in the absence of that popular model in Australia, we have industry starting to realise that they can market buildings as green," Nicholson says.

"If we don't have the planning controls, then the only reason for it is the developer thinks they will make money."



Picture by NIC KOCHER



Melbourne's best rooftop gardens (Not accessible to the general public – try Google Earth)

- Crown Casino
- Freshwater Place, Southbank
- 200 Queen Street (pictured)
- 60 Leicester Street, Carlton
- Council House 2, Little Collins Street

Australia's first green roof conference will run over two days from February 22 in Brisbane, with international green roof experts speaking. www.greenroof.org.au

Picture by DARREN JAMIES

Picture by PETER WEAVER

1 Ben Nicholson in his own private garden; 2 Fytogreen's plant-covered walls; 3 Melbourne City Council's Council House 2

The State Government is unfamiliar with the idea – Planning Minister Justin Madden and the Department of Sustainability and Environment have no plans to use rooftop gardens to further their environmental goals.

While Melbourne's new convention centre is gunning for the six Green Stars top rating from the Green Building Council of Australia, a roof garden is not part of the plan.

GBCA technical manager Elena Kosheleva says it is common for large developments to avoid roof gardens and go for better-known energy and water saving methods.

But she is confident that new health care and education rating tools will favour green roofs.

Kosheleva says the Green Star system does not prescribe building methods because that prevents innovation.

"When we set benchmarks, that encourages people to innovate," she says.

The American-Russian expat is convinced Australia still has a long way to go on green roofs and she, like Wilson, pins her hopes on bottom-up innovation.

"True innovation and leadership comes unregulated from industry and environmental non-government organisations," she says.

Melbourne City Council is narrowly ahead of the State Government after installing a rooftop garden in its world-leading green office building, Council House 2.

Lord Mayor John So said the council encouraged rooftop

gardens, but had no current planning regulations requiring their construction.

"With an increasing number of high-rise buildings in the city, it's becoming more and more important to consider the impact roofs have on our urban landscape," he says.

Nicholson says not one corporate rooftop garden owner interviewed for his recent thesis cited urban greening as the rationale. It was more a case of environmentalism by accident.

But he hopes the new prominence of climate change will shift mindsets.

Green roof building supplier Fytogreen is one of the new breed of small businesses taking advantage of environmental concerns.

Fulfilling Wilson's prediction, the Melbourne-based company has imported Dutch technology and adapted it to Australian conditions, manufacturing a light biodegradable foam able to store a month's supply of rainwater.

The lightness of the foam removes the need for major structural change to accommodate roof gardens, with as little as 50 centimetres of soil and 12.5 centimetres of foam enough for medium-sized trees to grow contentedly, 10 storeys in the air.

Victorian manager Stuart Tyler says his company has helped build about 8000 square metres of roof gardens in the past two years, the lion's share of Melbourne's small market.

Fytogreen will soon roll out what it believes is a world first: off-the-shelf, plant-covered walls.

"We've taken Dutch technology and added Kiwi can-do," the

feisty expat says. "It's a win for the economy and a win for the environment."

Carlton's 60L green building hosts one of Melbourne's rare environment-first roof gardens.

Project manager Alistair Mailer says the garden was designed to benefit the environment while providing a pleasant workplace and insulating the building.

For architects, roof gardens are moving into the mainstream.

But Tract Consultants director Mike Stokes says they inevitably involve trade-offs, as he found on a recent Docklands apartment project.

"It's a matter of the costs of doing these things versus the operational costs of keeping the building warm or cool. Roof garden projects are certainly happening more and more, but to keep (plants) alive, that's an issue as well," he says.

To deal with water restrictions, Stokes says his urban and landscape design consultancy is experimenting with water retention systems first developed in Europe.

There's also the issue of unfamiliarity. "Architects are generally not au fait with putting grass or shrubs on top of buildings," he says.

But while humans experiment and discuss methods of greening the cities, nature has quietly got on with the job.

While poring over aerial photos of Melbourne to map rooftop gardens, Nicholson discovered something remarkable – nine large expanses of moss garden sprouting without any human intervention.