

GREEN CAPPING urban spaces?

It's hard not to be seduced by a lush, green garden rooftop.

The Europeans have been doing it for thousands of years, inspired by the 'hanging gardens' of ancient Babylon and the turfed roofs atop the dwellings of the Vikings. Now, many German municipalities have mandated their use, while in Toronto a bylaw passed last year mandates a green roof for all buildings with a gross floor area over 54,000ft² (5000m²). And in the US, Michigan features the largest green roof in the world – a 10.4 acre meadow over the Ford Motor Company's assembly plant.

In Australia, the trend to green roofs is just beginning. Our climate renders much of the overseas research incompatible. In addition, a lack of clarity on cost, installation and maintenance together with the absence of government standards and policies makes for a degree of confusion.

Despite this, "the growth in Australia has been phenomenal – actually

quite scary," says the president of Green Roofs Australia, Sidonie Carpenter. "The technology is changing dramatically to reflect the push towards living roofs and walls."

Simply defined as the creation of 'contained' green space on top of a structure, a green roof or wall (a vertical garden) is typically either extensive (light enough to be retrofitted to an existing roof) or intensive (substantial vegetation but more expensive and heavy). As far as the buildings are concerned, a green roof adds insulation, reduces heating and cooling requirements, adds to the roof's lifespan, and also reduces stormwater run-off. But on a broader scale, green roofs increase biodiversity, and can actually help cool down a city, thus alleviating the 'urban heat island' effect.

In fact, researchers from the University of Toronto say ambient temperatures could be cut by as much as 2°C if 8% of rooftops were greened.

In Melbourne, the well-known Council House 2 (CH2) building – which has an intensive and extensive green roof – might soon be joined by CH1, a new project representing the way of the future: green roof food production. Its plans include a series of raised vegetable gardens, conversion of part of the plant room to a propagation house, and water storage on the roof for use as community gardens, staff gardens or even by commercial organisations.

City of Melbourne Senior Architect, Ralph Webster, says that the project is currently subject to a feasibility study. However, he sees it as representing the push towards roofs becoming active spaces, and valuable real estate in an ever denser city. "We want people to see green spaces not just as a bonus or an aesthetic embellishment, but as essential. And veggie gardens on roofs are all launching pads for what's coming next," he says.

It's a point not lost on the residential market. Sydney's M Central project in Pyrmont features a green roof, while a vertical wall by Patrick Blanc was installed at the Fender Katsalidis-designed Trio apartment building in Camperdown. Meanwhile in Melbourne, architecture firm Rothe Lowman takes it a step further in one of three green roof projects it has planned. As part of large-scale residential complex for the banks of the Yarra River in Victoria Street, Abbotsford, residents will be offered their own plot in the rooftop community vegetable garden.

Even more revolutionary are designs by Sydney-based architects Mark Gazy and Neil Haybittel of Tzannes Associates, who have been developing a concept called Skyburb. Observing the qualities that attract people to the suburbs, Skyburb introduces these qualities into denser urban environments.

Managing Principal, Kim Lowman, says that the drive to bring the community together through shared green roofs will become stronger, especially in higher density areas. "That visual respite or aspect looking out is fantastic. The opportunity to access these spaces will also provide visual interest at various heights in the city," he says.

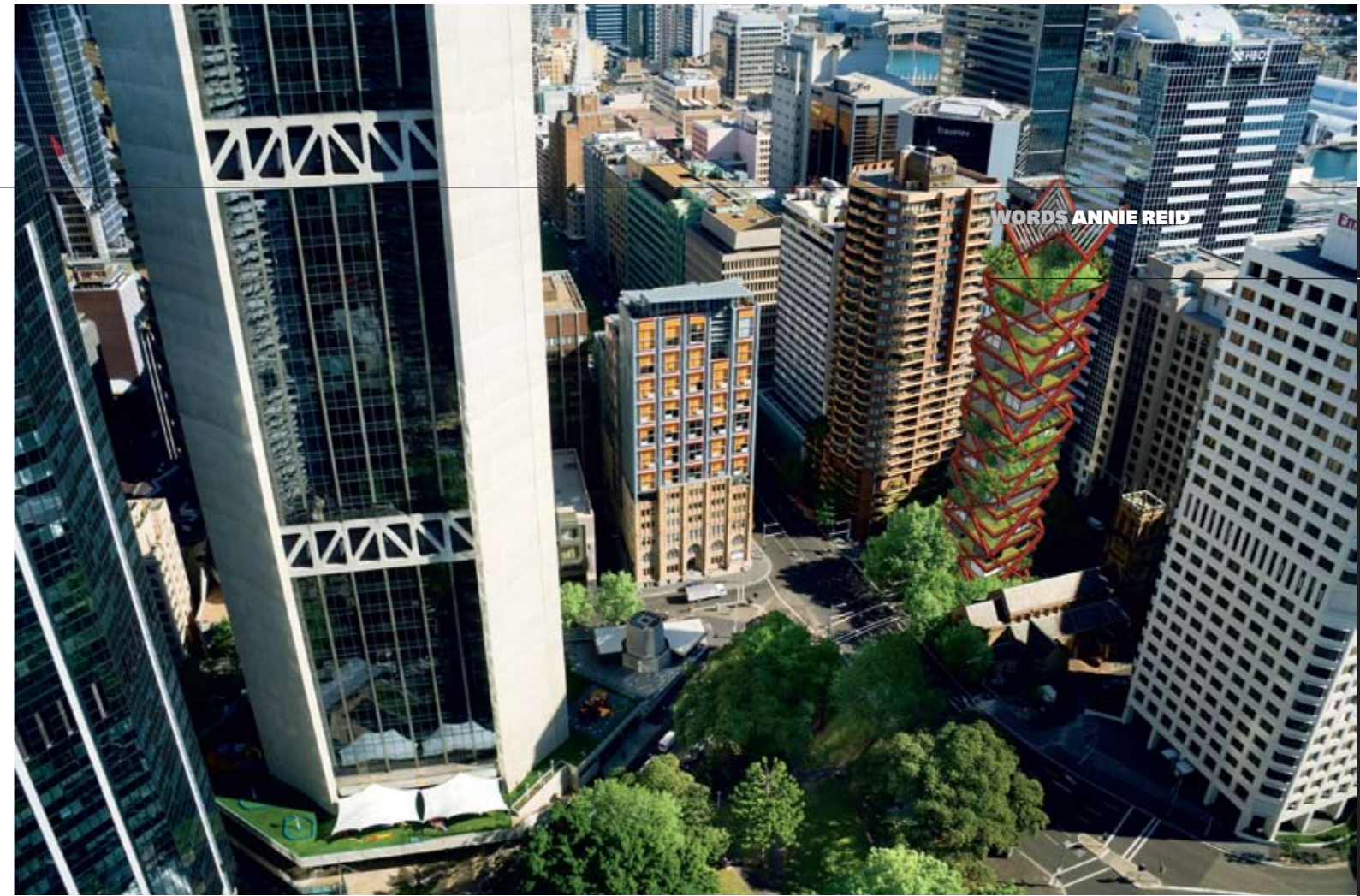
Green roofs and walls are gaining popularity as commercial entities in the corporate world, too. HASSELL Architects has built green roofs and walls on a number of buildings in Melbourne's Docklands, including the newly completed ANZ building, which has both. It recently finished a large green roof as part of the Harbour Family and Children's Centre, located on the rooftop of the largest supermarket in the Melbourne Docklands. With more than 200 plant species – including 50% native to Victoria – and numerous nature-based play spaces, the rooftop garden is operated as a business while providing a new natural learning environment in the city.

While there are rumours about other companies following the trend, including Big W and Bunnings, for many, a green wall rather than a roof is the best option. Jock Gammon, Principal of Junglefy, is involved in a number of innovative projects, from a green wall in a tunnel next to a freeway, to one over a four-storey staircase, to a double-sided green wall in an office in Melbourne.

Junglefy also offers its own modular green wall system, ecoVert, which uses recycled plastic modules that can be handled by one person. "Growing food on walls and roofs is a big area for the future. It is very satisfying to grow your own food and get back to nature, and the feeling of greenery is good for the mind and soul," he says.

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OPPOSITE The Harbour Family and Children's Centre by HASSELL Photo: Andrew Lloyd
TOP The Skyburb is a green vertical village designed by Mark Gazy and Neil Haybittel of Tzannes
ABOVE AND RIGHT A vertical wall by Patrick Blanc on Trio Camperdown Photo: Paul Lovelace
LEFT A green wall in an office interior by Junglefy

