

Extreme horticulture greens the city



[Image: The highest vertical gardens in the world are attached to the new Central Park development in Sydney. \(Ann Jones\)](#)

*Across the towns and cities of Australia, stick-to-the-wall gardens are gaining popularity, and a new development in Sydney has the world's tallest example. **Ann Jones** joins the men and women whose job it is to potter around the garden, 32 floors up.*

It's before dawn and the sound of the city is dampened by a low level cloud.

A silent lift whips me up over a hundred meters, then after climbing a concrete staircase there is a door, just like any other door, really. But this one opens up to another world.

It's very similar to other types of gardening, except here you're hanging thirty floors in the air sometimes.

Andrew Wands, vertical gardener

I'm on the roof of a 32-storey building with a group of horticulturalists: extreme horticulturalists.

They are just about to engage in high altitude gardening via a sort of reverse cherry picker called a building management unit.

They enter the little platform, clip themselves in, and drop. They are tending to the tallest vertical gardens in the world.

Below us, Sydney is still waking up. As the dark sky and bright lights trade roles, these gardeners use a pneumatic staple gun, felt, PVC and plants to create a new Hanging Garden of Babylon. Except it's in the Sydney suburb of Chippendale so the 'Hanging Gardens of Chippo' is probably more appropriate.

The development, Central Park Sydney, is still being built and will cover a six hectare site on the edge of the city when completed. In 2013, it was reported to be worth two billion dollars.

The first two residential towers have been completed. They are green, quite literally: there are plants all over their facades.

'The scale of One Central Park is unlike any others in the world,' says Jock Gammon, the Director of Junglify, the company responsible for the green walls on the part of the development called One Central Park.

'It's actually the highest green wall in the world, and at time of design it was the largest at 1200m², but that's just unfortunately been eclipsed by a project in Singapore at 5000m²,' says Gammon.

The walls were designed by [Patrick Blanc](#), whose technical specifications and sweeping aesthetic mark some of the larger and more prominent green walls across the world. Blanc's green wall system consists of three layers: one made of PVC and two made of specialised felt, with small pockets cut into the outermost layer. A seedling is taken out of its pot, placed into the small felt pocket and stapled in place.

The plants are sown in lightly swooping lines, like large brush strokes of foliage across a canvas. Yet contrasting colours and textures are only one of the criteria for plant selection; the plants must be able to withstand high winds, and must all have the same sun and watering requirements.

The irrigation of the seven kilometres of planter boxes and green walls at One Central Park is controlled by four pumps concealed in room deep in a basement level. They are the heartbeat of the garden. Each of the green walls has an irrigation dripper every four metres.

'At the top the drippers are 20 gallons an hour and lower down there 12 litres an hour, so we have good control at getting a wetting,' says Gammon.

'It's a hydrophilic fabric, so the moisture moves through it very nicely. It has nutrients in the water and those nutrients make their way through the felt. We've currently got it set at five times a day.'

'It's very similar to other types of gardening, except here you're hanging thirty floors in the air sometimes,' says Andrew Wands, who leads the teams who tend the wall and roof gardens.

Some plants naturally do better than others, however, and the technical aspects of the project have taken some nutting out too. Early on in the project, an irrigation pipe was mistakenly cut by a tradesperson, leading to the death of a large patch of plants.

'There was obviously teething problems, because no one has ever used this system before on such a grand scale,' says Wands.

'We have to be very eagle-eyed to make sure that everything is being watered. But in the future I don't think there'll be a problem; we've got it ironed out now.'

The green walls are equipped with an embedded alarm system, which alerts gardeners to the absence of water within minutes of it occurring.

According to the City of Sydney Council's Lucy Sharman, one of the beautiful things about green walls is that they can take so many forms.

'They can be anything from sticking a plant in the ground and growing a vine up it, so passionfruit for example, that's also considered vertical greening. Or these really extensive felt matting that's attached to the wall as well.'

'Probably one of the most common ones is really just buckets of dirt attached to the wall.'

'It really doesn't matter if you've got an expensive art piece of growing plants or you've just put something in the ground and grown it up—as far as I'm concerned, if it's got chlorophyll in it, it's a green wall.'

The walls, according to research compiled by Sharman, have many positive benefits: they clean the air, provide insulation for buildings, counteract the [Urban Heat Island Effect](#) and increase biodiversity.

What's more, Sharman's research indicates that people are very interested in growing plants, both to eat and for the psychological benefits.

Biophilia, says Jock Gammon, is people's innate attraction to plants. It's something that employers have started using to reduce absenteeism and increase productivity in the workplace.

'One client we have is a call centre and they have a high staff turnover. The cost to train up new staff is very expensive, so they've invested in green walls and games breakout areas.'

Proponents of green walls and roofs say that they are keeping humans happy, and other critters too.

As the outdoor vertical walls establish themselves, microclimates are generated between the plants, and mosses, liverworts and weeds appear.

The walls can attract bees and insects and later larger animals such as lizards, and there are even reports of birds nesting in Blanc's walls overseas.

'Green walls are an instrumental part of green building going forward,' says Gammon.