

Jenny Mills installed a vertical Fytowall garden to soften the impact of a concrete slab wall abutting her Richmond home. PICTURE: EDDIE JAC

Ongoing water shortages are limiting our imaginations where our gardens are concerned. We're struggling to get our heads around the idea that lawns and English planting won't work without an extensive network of tanks or grey water.

It's time to think about alternatives.

There's no doubt that near-city gardens are shrinking as quarter-acre blocks are carved up for townhouses. And count yourself lucky if your central city apartment has a balcony about the size of a double bed.

In the suburbs, McMansions straddle tiny blocks, leaving just enough space for the must-have outdoor kitchen and courtyard and less for greenery. So how do we satisfy that most basic urge to garden and grow our own produce if we live with a tiny, paved courtyard or 10 storeys up in an apartment?

It's enough to send you up the wall — and oddly enough, that's where the latest gardens are growing.

Inspired by French designer Patrick Blanc (see next page) who has greened walls from Paris to Tokyo, the idea of the vertical garden is catching on in Melbourne, where it's a clever, compact alternative for dense urban living.

Jenny Mills and Greg Fleming lived happily for several years in their three-level Richmond home. Their courtyard had a view of neighbouring apartments but they had a run of lusty trees along their back fence, so privacy wasn't an issue.

Things changed when a concrete slab wall with ugly seams went up right beside the courtyard where an apartment block was being developed. "We knew there was another stage of the complex planned but we thought there would be a lane between us and it," says Ms Mills.

The couple considered fences and screens to hide the wall, but they came across the Fytowall vertical gardens conceived by local company Fytogreen.

The modular vertical gardens have a series of foam panels wrapped in shade cloth with drippers installed every 500 millimetres. They are operated for about five minutes a day, even in summer, and use half the water of a standard garden. Moisture sensors in the panels feed to an automated control box. Nutrients are topped up once a month from a sachet.

"It's incredibly easy. It needs so little maintenance, we feel guilty," says Ms Mills, who travels extensively in her job as Australasian head of Bendon.



The garden, on a west wall, has liriopes interspersed with black and green mondo grass. It will eventually be lit with lights across the top. "It was hot before the greenery went in," says Ms Mills. "It's lovely to have something living and green and take the focus away from the apartments around us."

The plants sit in a biodegradable foam on a frame and are supported by a soilless growing medium, says Stuart Taylor of Fytowall. "Plant roots need air, water and nutrients but not necessarily soil. The growing medium has been used for 20 years in the hydroponic roof-garden industry."

Sydney landscape designer Charlie Albone, of Inspired Exteriors, has also developed his own vertical garden system as a response to the challenge of getting greenery into small courtyards. His use of a steel cage system with coconut fibre and additives as the growing media was demonstrated in a recent episode of the Lifestyle Channel show, *Selling Houses Australia*, where he is the landscaper. Albone designs panels to fit a site with timber surrounds so they look like picture frames. "If I use lots of little ones, I vary the depth for a three-dimensional look."

His creations are ideally suited to courtyard walls, he says, but he's also done installations in larger gardens with a series of frames in different sizes scattered through a bed.

He finds the gardens work best with epiphytic plants such as bromeliads and orchids that grow on or are supported by another plant.

South Yarra engineering and sustainability consulting company Umow Lai has found another use for vertical gardens — they have five in their offices to filter indoor air and remove airborne contaminants.

Lush plants in the bio-filtration walls sit in a layer of coconut matting sandwiched between two layers of a synthetic porous material, says sustainable

design engineer Shane Esmore. A dripper pipe runs through the structure to circulate nutrient-rich water. Time-clocked lamps encourage plant growth.

"We worked with the Canadian inventors, local associates and a horticulturist to develop the wall," says Mr Esmore.

Plants include maidenhair fern, bromeliads and tropical indoor varieties. Maintenance is minimal, involving checking nutrients in the water and trimming the plants.

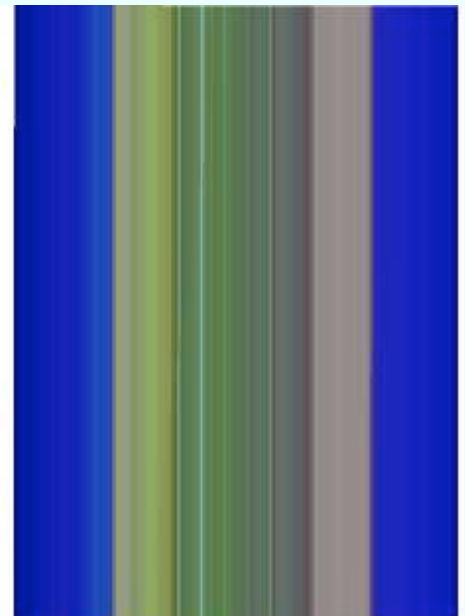
The growth medium is fixed to a number of perforated ducts through which contaminated office air is drawn past the plants' root system and recirculated back into the office. Leaves and micro-organisms that live in the roots clean the

air of volatile organic compounds. VOCs are harmful chemicals often emitted from solvents and other components of furnishings and are a major contributor to poor indoor air quality.

Exposure to airborne pollutants is believed to cause headaches, lethargy, sore eyes and respiratory problems.

Marketing co-ordinator Melanie Cheshire says she is sneezing less in the office and definitely feels better since the gardens were installed. The company is looking at putting the walls in schools and talking to architects about possible uses.

Fytowall 59780511. A wall planted and installed is about \$1800 a square metre. Inspired Exteriors, 0425365884 Umow Lai 92490288



Up, up and away: Umow Lai's bio-filtration wall, above left, and the vertical garden system designed by Charlie Albone, of Inspired Exteriors, above right.



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### **BLANC CANVAS**

A luscious man-made garden will transform Melbourne Central into a vertical, verdant field during the Melbourne International Design Festival. Created by renowned French artist and scientist Patrick Blanc (above) — famous for the walls he created for the Caxia Forum in Madrid (left) and the Taipei Concert Hall — the soilless garden injects biodiversity into the built environment in a burst of beauty. From July 17, Melbourne Central, free.



## BOWLED OVER

The canniest new garden doesn't need any outdoor space so it can sit on the kitchen bench or even in a cupboard. The AeroGarden looks a bit like a large electric wok with a lid and takes up about as much bench space as a bread box. You simply insert the seeds, add water and nutrients, switch it on, and watch them grow. The light is built into the lid and can be adjusted as the plants grow.

AeroGarden uses NASA-proven technology to create fresh produce all year in a dirt-free environment. The plant roots are suspended in air in the unit's humid, highly oxygenated growing chamber and bathed in nutrients, water and oxygen. A microprocessor adjusts nutrients and water and turns the lights on and off.

"Produce grows up to twice as fast in an AeroGarden as in a traditional dirt garden," says Greg Thomas, of Global Shop Direct.

The unit comes with gourmet herbs. Salad greens, tomatoes, peppers, petunias and a kit to propagate your existing plants are also available.

A silver Aerogarden costs \$279 from David Jones. It's also available [www.aerogarden.com.au](http://www.aerogarden.com.au). A replacement seed and nutrient kit costs \$29.95.

