

A Brief History of Vertical Gardening

Growing vertically has happened in nature as long as there has been something to grow up. Climbing plants we are all familiar with, roses, clematis, honeysuckles etc. But lots of other plants can be encouraged to climb with supports, cucumbers are now regularly trained so that their fruits are not sitting on the ground but dangling in the greenhouse.

When you look at country walls there are usually a selection of plants that have self seeded and flourish with virtually no soil at all. Campanulas are very good at this. As is Buddleia, which you can see growing out of the sides of derelict (and less derelict) buildings.

Over the past decade or so we have seen the growth in interest for greening up our environment with Green Roofs, encouraging birds and insects (especially essential pollinators) to populate these otherwise drab spaces. Green roofs can also provide the benefit of added insulation to your house. Alongside this is the development of Green or Living Walls. The primary driver of this movement is Patrick Blanc (born June 3, 1953, Paris). He is a botanist, working at the French National Centre for Scientific Research, where he specializes in plants from tropical forests. He is the modern innovator of the green wall, although some suggest that the vertical garden (aka. Green Wall, Botanical Brick) was invented by Professor Stanley Hart White at the University of Illinois Urbana-Champaign in 1938. Professor White patented the first known Vertical Garden, or "Vegetation-Bearing Architectonic Structure and System", as a treatise on modern garden design, predating Patrick Blanc's contemporary patents by nearly 50 years. Although Blanc did not invent the vertical garden, he is responsible for modernizing and popularizing the garden type. This type of achievement exemplifies Blanc's ideas as an ecological engineer and also the 15th target of the Haute Qualité Environnementale ("High Quality Environment") project, although the latter gives particular stress to use of more local species, at least outdoors.



His first installation of a green wall was in 1988 at the Museum of Science and Industry in Paris, and was followed a decade later by the Foundation Cartier (left) also in Paris.

One of my favourite examples is the Vertical Garden at the Pershing Hall Hotel (right) which brings a tropical rainforest to life in the centre of Paris!

More recent years have seen his work proliferate around the globe with Berlin, Dubai, Bali, London, New York, Singapore, San Francisco and Hong Kong.



Green wall tackles pollution



Nature's way to combat harmful emissions: The Edgware Road green wall

TRANSPORT for London (TfL) is using nature to help to improve the capital's air quality.

A 200 square-metre wall packed with emissions-trapping plants has been created on Marylebone Road next to Edgware Road Tube station.

As well as being an attractive, leafy addition to one of London's busiest roads, the 16 evergreen and perennial plant varieties that make up the wall have been carefully selected to absorb harmful particulate matter from exhaust fumes.

It is one of a variety of green projects now in place aiming to promote cleaner air in the capital.

Around 500 new trees and shrubs have been planted along London's streets, including 200 lime trees on

the A40, and 50 planted limes have been installed on Lower Thames Street.

Other locations that have gone green include Park Lane, Upper Thames Street, Western Avenue (A40), Old Kent Road (A2), Brixton Road (A25), Woolwich Flyover (at the rear of Tunner Avenue), and the A4 between Boston Manor Road and Ealing Road, plus the section close to Heston Road.

The initiatives are being funded by the Department for Transport's Clean Air Fund. The measures have been designed specifically to reduce levels of PM10, a pollutant coming mostly from traffic emissions, by between 10 and 20 per cent where applied.

Wider projects to tackle air pollution in the capital include introducing age limits for taxi and private hire vehicles, investing in cleaner buses, building more cycle lanes and tightening standards in the Low Emission Zone.

• Studies in Europe and the USA have shown the potential of using vegetation, including trees and plants, to trap pollution from traffic emissions.

In addition to their beautiful appearance & the fact that research shows how much better off emotionally and mentally we all are when we have green spaces and plants around us, these walls are becoming part of the lungs for our cities helping to process the pollution.

Blanc describes his vertical garden as follows:

“ On a load-bearing wall or structure is placed a metal frame that supports a PVC plate 10 millimetres (0.39 in) thick, on which are stapled two layers of polyamide felt each 3 millimetres (0.12 in) thick. These layers mimic cliff-growing mosses and support the roots of many plants. A network of pipes controlled by valves provides a nutrient solution containing dissolved minerals needed for plant growth. The felt is soaked by capillary action with this nutrient solution, which flows down the wall by gravity. The roots of the plants take up the nutrients they need, and excess water is collected at the bottom of the wall by a gutter, before being re-injected into the network of pipes: the system works in a closed circuit. Plants are chosen for their ability to grow on this type of environment and depending on available light. ”

However, this approach is very expensive and far beyond the capabilities or aspirations of most of us. In an era of increasing interest for growing vegetables having provenance for the food on our tables, more and more of us would like to have more plants and greenery at home. There are many ideas on the internet about ways to recreate Patricks green walls for yourself, but for the most part they are somewhat ramshackle and decidedly unattractive.

Most people dream of growing their own vegetables and becoming more sustainable; most households do not have the space to do so. Most of us have very little outdoor space and what we have is needed for multiple uses – safe play area for kids, hanging out the laundry, sitting with friends on a sunny day. Growing your own salad and vegetables would seem to need all the space all the time and as a result comes very low on the list of priorities. Another problem is that the wall you look at is very often not your own and so you are limited by what you can do with it.

So, what is Vertigro®?

Vertigro® Vertical Allotment is a vertical gardening system that enables you to grow your own vegetables, plants, herbs and flowers where ground space is limited. It can be either free-standing (with 3 tiers) or wall-mounted/hung on railings (single).

Most of us would like our own home kitchen garden, and the space-saving vertical design makes Vertigro® Vertical Allotment ideal for patios, courtyard, roof terraces and balconies, without sacrificing all your social area. It is designed to withstand the wind on a rooftop garden and is



made of Aluzinc which does not dull like galvanized steel or water mark or rust (10+ years) even in coastal locations. Its unique 'sandwiches' are designed to hang grow bags vertically from the frame. It uses standard grow bags, enabling you to grow a large number of plants in a very small area. For the urban gardener it is ideal, for people wanting to create a living green screen on a penthouse or a balcony allotment, it makes a fantastic addition to your urban rooftop garden. Combining good design with a strong contemporary architectural aesthetic, this is the vertical vegetable garden for the design conscious urbanite.

Quick to set up and easy to maintain, Vertigro® Vertical Allotment can be used all year round. Its robust build and weather-proof materials means you can 'grow your own' all year, for years to come. With no mess, no fuss, simply switch the grow bags and start your new crop.

Vertigro® is a pioneering new gardening solution for small outdoor spaces. Its innovative vertical design, rather than a traditional horizontal garden or raised bed, saves precious space. A clever combination of a self-standing module and grow-bags, Vertigro® can be easily assembled and constantly reused. Just plant your plug plants, into the grow bag sandwiches and with sufficient care and light, the plants will successfully grow.

Vertigro®'s clean design is perfect for balconies, roof terraces, patios, courtyards and small gardens. It can be placed anywhere and is robust and weather resistant. Its dimensions are H 165cm W 120cm D 60cm and it can be reused with no mess and no fuss – ideal for maximizing a multi-use area.

Primarily Vertigro® is designed to be used with plug plants - baby plants already with their proper leaves and a smallish root. You can grow your own from seed in propagators or buy them from nurseries and garden centres and many website on the internet. We are in discussions with a couple of plug plant suppliers to produce a specific "Vertigro® suitable" selection...more on that later.

How to plant your Vertigro®:

Cut a small crescent shape in the grow bag through the holes in the metal face of the sandwich, with your fingers move some soil around so there is room for the roots of your plug plant, and insert the roots carefully so that the plant is effectively lying down with its roots towards the base of the sandwich. This means when you hang the sandwich up on the frame, it will be upright and not hanging down. This can be seen quite clearly in the video. Try not to cut a hole or circle in the bag as this will encourage soil to wash out when you water it.

When looking at what to grow there are many things to consider - do you want to use Vertigro® as a vertical allotment or a beautiful wall of flowers? Either way there are clues of what will work best; "suitable for hanging baskets" "trailing" "compact" and "dwarf" are all positive signs you're looking in the right direction.

Recommended Plants

Fruit:

Strawberry "Symphony" & "Darselect"

So called "wild" strawberries work very well and have a divine aromatic flavour

Vegetables:



Tumbling Tomatoes (red and yellow)

Aubergine "Baby Doll"

Petit pois "Waverex"

Dwarf French Bean "Slenderette" (very successful last year)

Courgette - I haven't grown one this year as I have been taking the Vertigro to shows a lot and it needs to be in the bottom sandwich so it can sprawl and do its best triffid impression, however last year they were surprisingly abundant and suffered much less from stem rot than those in pots).

Spinach (perpetual)

Chard (a bit erratic, Chard "Bright Lights" bolted instantly)

Sorrel

Lettuces: assorted red & green "cut & come again" varieties including Lollo Rosso

Rocket (normal & wild)

Some Brassicas work very well, although they tend to get large and dominate the other plants. Don't go for "headed" varieties but kale and purple sprouting Broccoli can work very well if cropped regularly.

Celery leaf

Herbs:

Fennel - bronze & green

Coriander

Parsley - flat & curly leafed

Tarragon

Sage (although it's struggling)

Chives & Garlic Chives

Various Thymes (creeping & trailing)

Oregano

Marjoram

Basil



Chamomile

I also have a couple of Lavenders

Flowers

Trailing and compact, upright Petunias & mini Petunias

Trailing Geraniums

Trailing and upright lobelia

Alyssum

Dianthus

Trailing and upright Verbena

Nemesia

Pansies

Violas

Dwarf Chrysanthemums

Aubretia

Ivy (the small leaf, variegated kind thrive well)

In a shady area Ferns work well

I hope this is helpful and if you have any other questions please feel free to email us:

Info @[vertigro.co.uk](mailto:info@vertigro.co.uk)

A handwritten signature in green ink that reads "Claude".