



green wall
systems



TPR GROUP is the leading provider of healthy office environments. We add value to workplaces by creating healthy, happy and productive surroundings where people and business thrive.

TPR GROUP is an authorised dealer of GSky Plant Systems, Inc.







Green Wall Package

TPR GROUP's Green Walls are beautiful living works of art that clean the air you breathe. With five wall types from which to choose; **GSky Versa Wall™**, **TPR Pot Plant Vertical Garden Wall**, **TPR Cabinet Wall**, **TPR Custom Wall** and **External Wall**, you'll find a wall application specifically suited to your project. Our all-inclusive package provides you with peace of mind throughout each stage of the process, including planning and design, installation and ongoing maintenance - ensuring that your Green Wall is beautifully presented at all times.



design



install



maintain

design

Planning is key to a successful Green Wall. Clear and complete shop drawings, good coordination between all trades and consultants and a beautiful plant design will result in a successful and sustainable Green Wall with the 'Wow Factor'.

Concept Drawings

Plant design begins with a discussion with the Owner/Architect about their design intents. From there concepts with plant ideas are drawn up for their review.



Plant Selection

The selected concept is then refined and then final plant selection occurs. Final plant selection is determined by the availability of the plants and their current size.



Good Coordination and Design

There can be up to 10 different parties that need to be coordinated to bring an installation together such as the Owner, Architect, Building Engineer, Electrical Engineer, Interior Designer and trades. With many parties involved in a project, good coordination is critical to develop a design that specifies all parties' responsibilities in the construction of the Green Wall and determines its success.

install

Bringing thousands of live plants into a building requires special consideration during construction. Our processes, partnerships with certified contractors, and warranty on hard goods, irrigation and plants maintain the integrity of the Green Wall vision in the final product.

Setup

Setup includes material fabrication, plant acquisition, shipping to the nursery, and planting the plants into the panels or containers.

Hard Material

Install Hard materials include framing, trim, irrigation equipment, etc, anything required to be in place to keep the plants alive once they arrive.

Plants Install

Plants are only delivered after plumbing & electrical have been installed without chance of interruption and after any dusty work has finished.

Maintenance Startup

The transition to maintenance starts with on-site training of the technician that will be maintaining the wall going forward. Ongoing maintenance is a crucial component in ensuring that your Green Wall will be a beautiful and long lasting piece of living art. Should an enquiry arise between maintenance periods we will respond quickly.

maintain

TPR GROUP's ongoing maintenance program comprises: quality control; irrigation and lighting monitoring; dusting and cleaning of plants; pruning of plants to maintain form; control of pests and diseases; and replacement of plants when required. Please refer to our checklist below:

Inspection Items			
Immediately after Installation	Services	Check water supply	
		Check lighting (interior) and electrical	
	Structure	Check for physical system damage from trades	
		Check for physical plant damage from trades	
Plant Health	Check for excessive dust accumulation on leaves		
	Check for transplantation shock		
	Check for weeds growing among the plants		
Plants	General Gardening	Check the plants health and leaf burn	
		Check for dust accumulation on the leaves	
		Check for dead plants	
		Check for signs of disease or pest damage	
		Check growth medium (soil) for decomposition	
		Check growth medium (soil) bags for signs of wear	
		Check for uncontrolled or over-growth	
		Additional concerns?	
Structure Maintenance	Trim	Check for signs of damage, water seepage, etc	
		Check for plant encroachment	
	Water-proofing	Check for water seepage on back side of the wall	
Drainage and Irrigation Maintenance	Drainage	Check for accumulation of fallen leaves, mud, soil and weeds in the drain	
		Check for balanced water flow in drain pipes	
	Irrigation	Automated	Check for blocks or breakage in the supply lines
			Check the pump and solenoid valves
			Check the filters, PRV's and water temperature
			Check the timer, power supply and backup battery
		Manual	Check the irrigation schedule
			Check flow meter values for accurate monitoring
			Is the manual faucet operating correctly?
			Is the float valve operating correctly?



gsky™ **VERSA** WALL™



Flexible installation solutions enabling beautiful design possibilities



GSky Versa Wall™

Flexible installation solutions with a wide range of plant options make GSky Versa Walls perfect for interior Green Wall projects – they can be installed virtually anywhere! GSky Versa Walls are naturally beautiful, eco-friendly, customisable and durable. With TPR GROUP's all-inclusive package, you'll be able to focus on what is most important – creating a beautifully designed space for people to enjoy.

Reprinted with permission from GSky Plant Systems Inc.

Benefits

- A living work of art
- Brings nature indoors to you
- Creates a design anchor point
- Removes toxins from the air, cleaning the air that you breath
- Produces oxygen
- Reduces stress
- Enhances wellbeing & productivity
- Creates a festive atmosphere for the holidays with holiday accents
- Represents your companies' values
- Green Star credits
- Softens noise

Features

- Quick Installation
- Designed to be mounted on plywood attached to your structure
- Utilises 110mm potted plants
- Recirculating irrigation system provides 100% water efficiency
- Recirculating tanks can be filled by hand or connected to plumbing to auto-fill
- Remote irrigation monitoring available
- TPR GROUP's ongoing maintenance program ensures that your wall is always beautifully presented

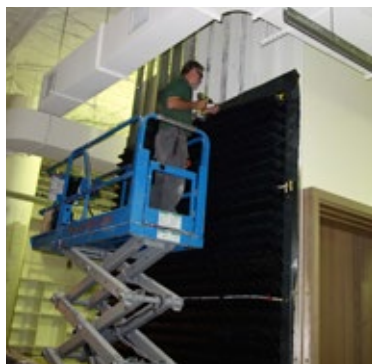


Construction of West Elm GSky Versa Wall™ Sydney, Australia



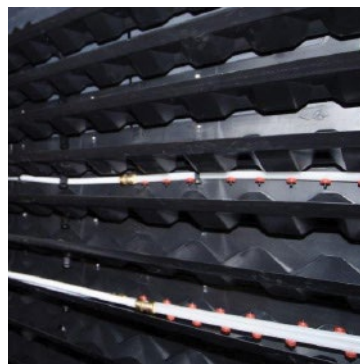
Moisture proofing the wall

Self-adhesive water proofing is attached the wall to prevent moisture from penetrating into the building.



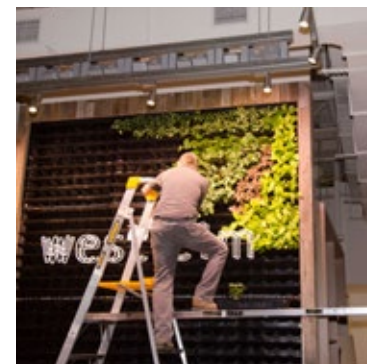
Framework constructed

The structure to support the plants is erected by a team of skilled professionals using specialised equipment.



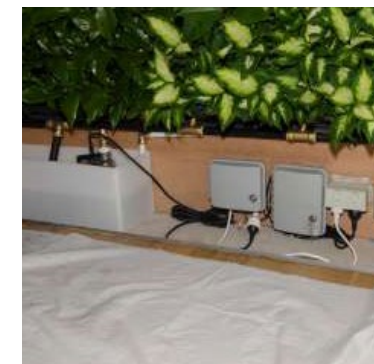
Versa Wall Detail™

Close up image detailing the cells that will support the plants and irrigation line that will facilitate watering of the plants.



Irrigation and Drainage

Irrigation lines are installed at even spacing to ensure adequate moisture to the plants throughout the entire wall.



Irrigation and Drainage

Compact systems programmed to automate watering and fertilising of the Green Wall are concealed behind a front panel.

Specifications		GSky Versa Wall™
Description		Patent protected tray design that holds and waters 110mm squat pots on the wall
Suitable Walls		Concrete, CMU, wood or metal Frame, structural steel
Mounting		17mm plywood mounted to the structure
Trays	Material	100% recycled polypropylene
	Growth Media	Typical nursery growth media
	Dimensions	8-Pot Tray: 120mm (h) x 1000mm (w) x 160mm (d) 3-Pot Tray: 120mm (h) x 375mm (w) x 160mm (d) 2-Pot Tray: 120mm (h) x 250mm (w) x 160mm (d) Corner 3-Pot Tray: 120mm (h) x 206mm (w) x 160mm (d) back wall surface dimensions

Specifications		GSky Versa Wall™
Irrigation	Dripline	Versa Wall™ Dripline 8-Pot, eight (8) 2.2L ph emitters on a 1000mm length poly pipe Versa Wall™ Dripline 3-Pot, three (3) 2.2L ph emitters on a 375mm length poly pipe Versa Wall™ Dripline 2-Pot, two (2) 2.2L ph emitters on a 250mm length poly pipe
	Controller	Timer, tel. or ethernet line, pumps (or valves), filter, regulators, UV filter
	Fittings	PEX, copper, PVC & ABS (varies based on scope)
	Tanks	Polyethylene tanks for recirculating all water installed either below or behind the wall
	Drainage	Free drain or piped directly to sanitary
Growth Time		Minimum order is 4 weeks depending on size and plant availability
Maintenance		Required, 1 year minimum. Maintenance access by lift or ladder must be planned for.
Warranty		Trays 5 years, Irrigation 2 years, Plants 100% under GSky Maintenance Contract



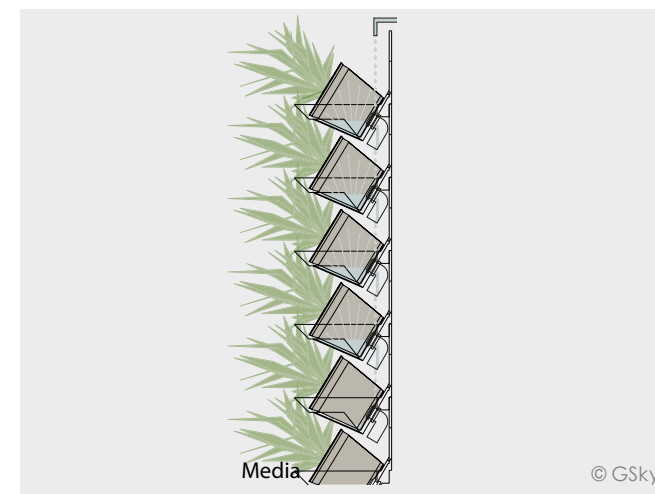
User-Friendly

GSky Versa Wall™ is user-friendly and easy to install and maintain due to the flexibility of 110mm squat pots that can be placed directly into the GSky Versa Wall™ tray without any replanting. In addition, GSky Versa Wall™ remains in season year-round, as plants are interchangeable according to the season.



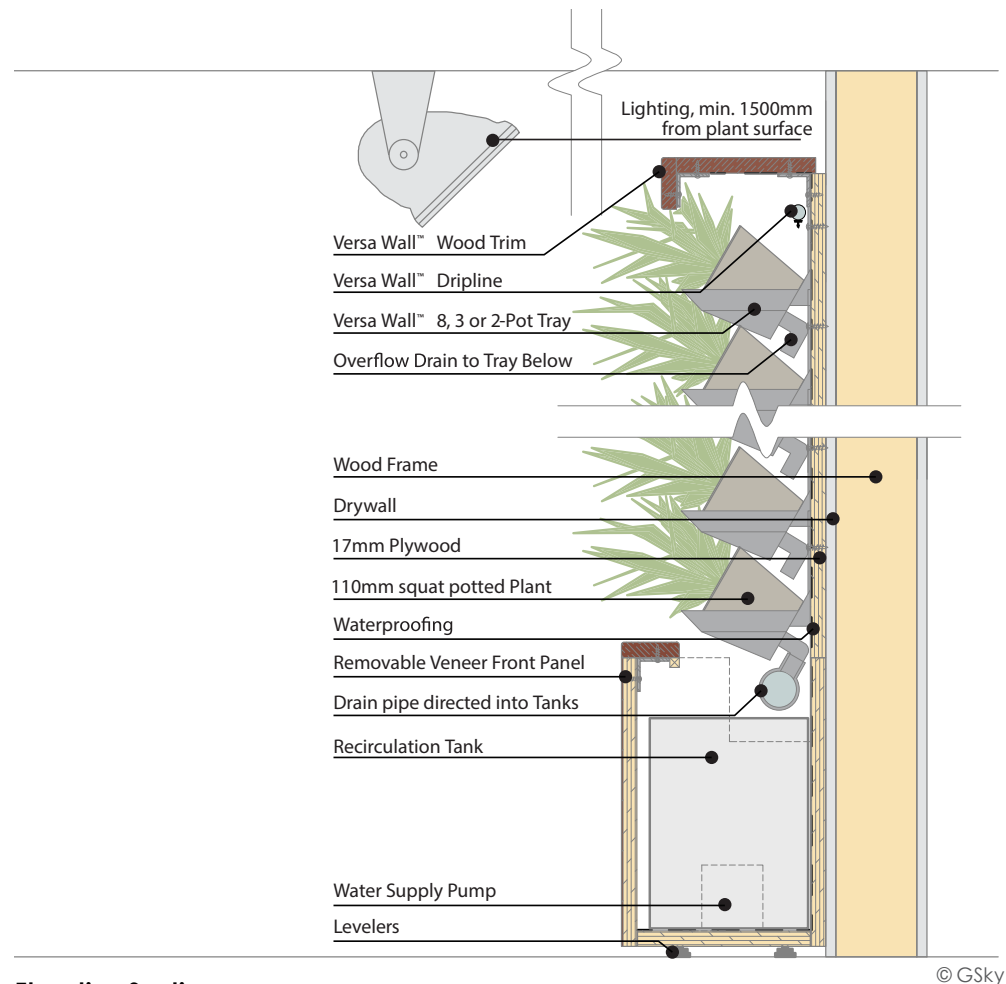
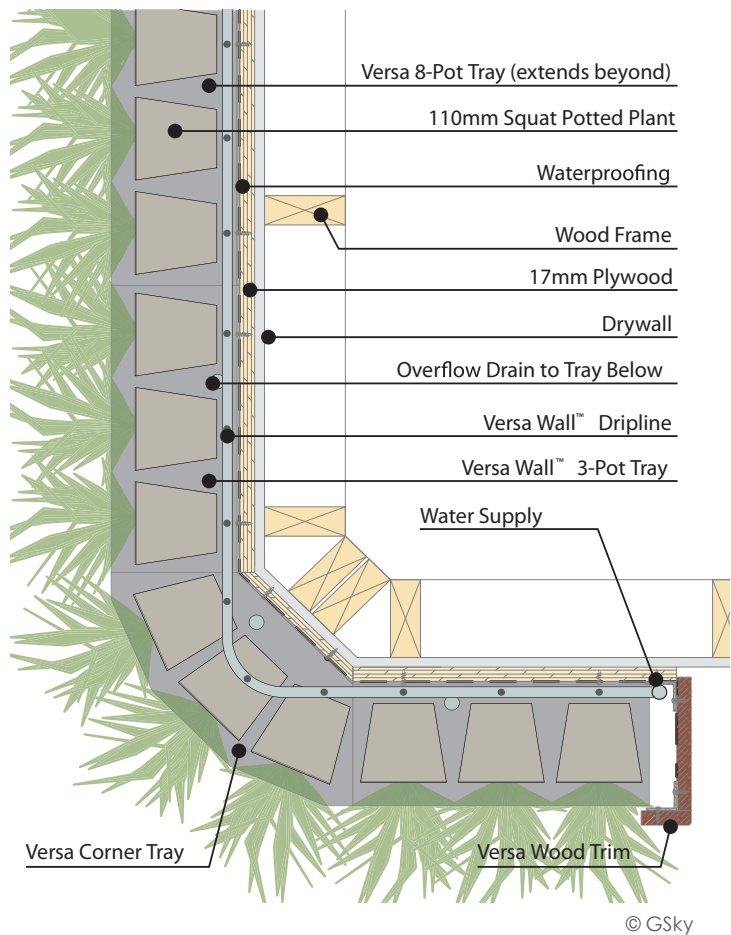
Water Efficient

GSky Versa Wall's standard design and installation method is to include tanks directly below or behind the wall to recapture and recirculate every ounce of water that you provide to it. The only water that is used in a GSky Versa Wall™ is that which is used by the plants or through evaporation, making it 100% water efficient.



Neat and Clean

GSky Versa Wall™ employs an indoor system that is completely self contained and in great condition at all times. This means no soil spills out of the wall and no water spills forward. Rest assured that the Green Wall will be neat and clean.



Plan Section

GSKy Versa Wall™ installations require plywood backing and waterproofing before the trays are installed on the wall. In new construction, the plywood can be fastened directly to the studs. On existing construction, it's typically applied over the existing surface as shown here. To install corners, minor alteration and rebuilding of the corners in existing construction will be required.

Another option is to fur out one of the adjacent walls.

Elevation Section

GSKy Versa Wall™ is typically installed with the recirculation tanks below the wall, as shown here. It can be installed without as well if there is no place for the tanks.

All the water is collected across the bottom row of trays and directed back into the tanks below.

There is a UV filter that cleans the water within the tanks to kill any algae. The water is then recirculated back into the wall by the water supply pump. Lighting is also shown, which is required on most installations. The type of plants installed will determine how much lighting is required.



Creating a living masterpiece
The largest single living internal green
wall in the Southern Hemisphere



Commissioned for the Royal Botanic Garden Sydney 200th Bi-centenary celebrations, The Calyx, a new world-class centre for horticulture, science and education, houses the largest living internal green wall in the Southern Hemisphere.

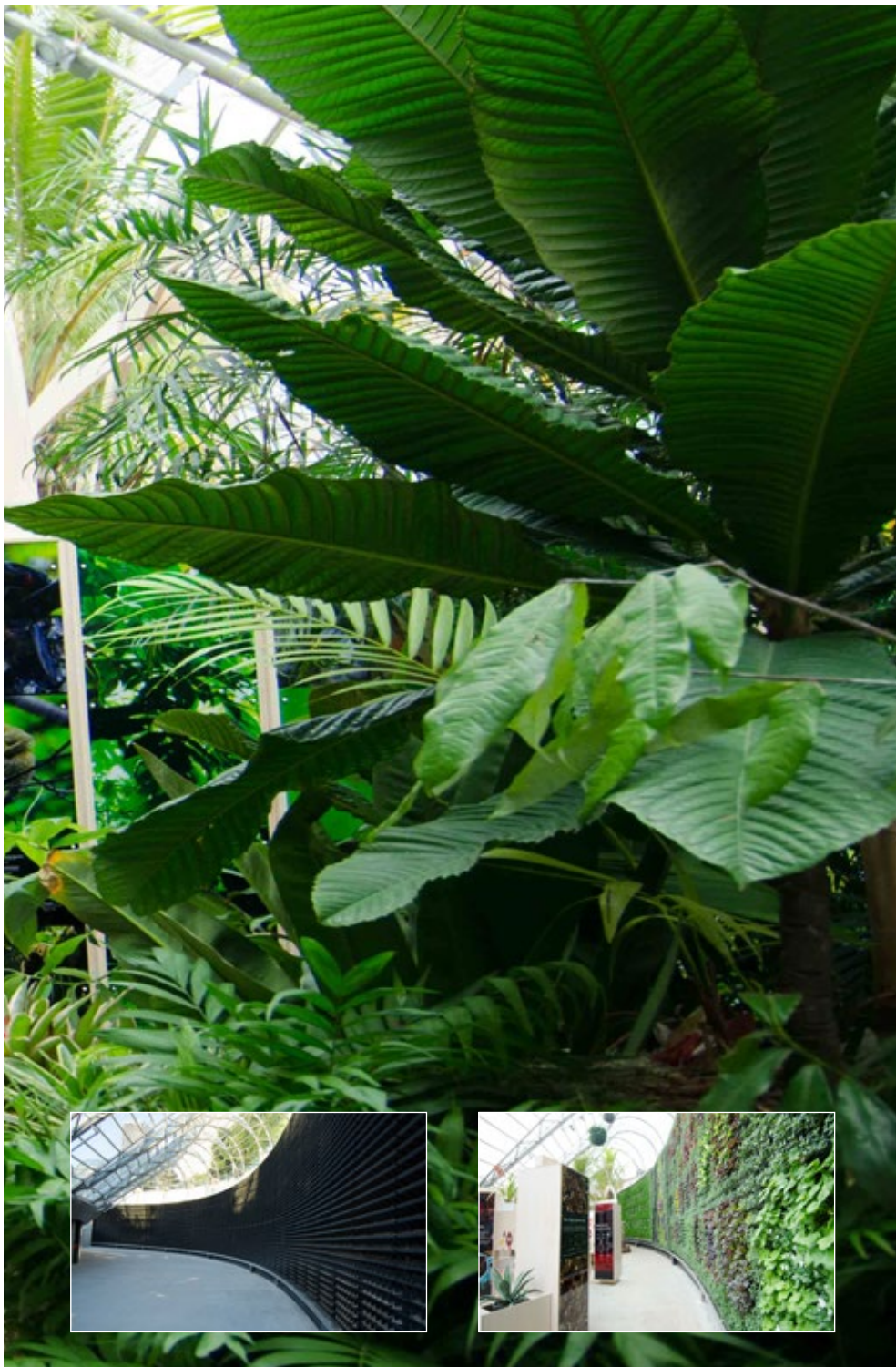
Constructed by TPR GROUP, the GSky Versa Wall™ measures a staggering 51 metres long by 6 metres high and comprises more than 18,000 plants, five independent irrigation systems with 5 independent stations per system, over 300 metres of irrigation line, and more than 2,000 irrigation drippers.

Construction of the project commenced on Saturday 19 March 2016 and involved 10 TPR GROUP staff and contractors and four scissor lifts with the bulk of the work being completed in three weeks.

“This has been an exciting project to work on with a client such as the Royal Botanic Garden Sydney who has both knowledge and vision on what can be achieved with plants”, said TPR GROUP Managing Director, Stuart Swaddling.

“The GSky Versa Wall™ provides flexible installation solutions with an extensive range of plant possibilities, making it ideal for interior green wall projects – they can be installed virtually anywhere. They are naturally aesthetic, eco-friendly, customisable and resilient”, said CEO of GSky, Hal Thorne.

“With the Versa Wall™ system, individual plants in 105mm pots are placed in the wall. With 64 plants being used per square metre, detailed and stunning designs can be achieved. Some of the plants used by the Garden might surprise you – parsley and chocolate mint are just to name a couple”, said Mr Swaddling.

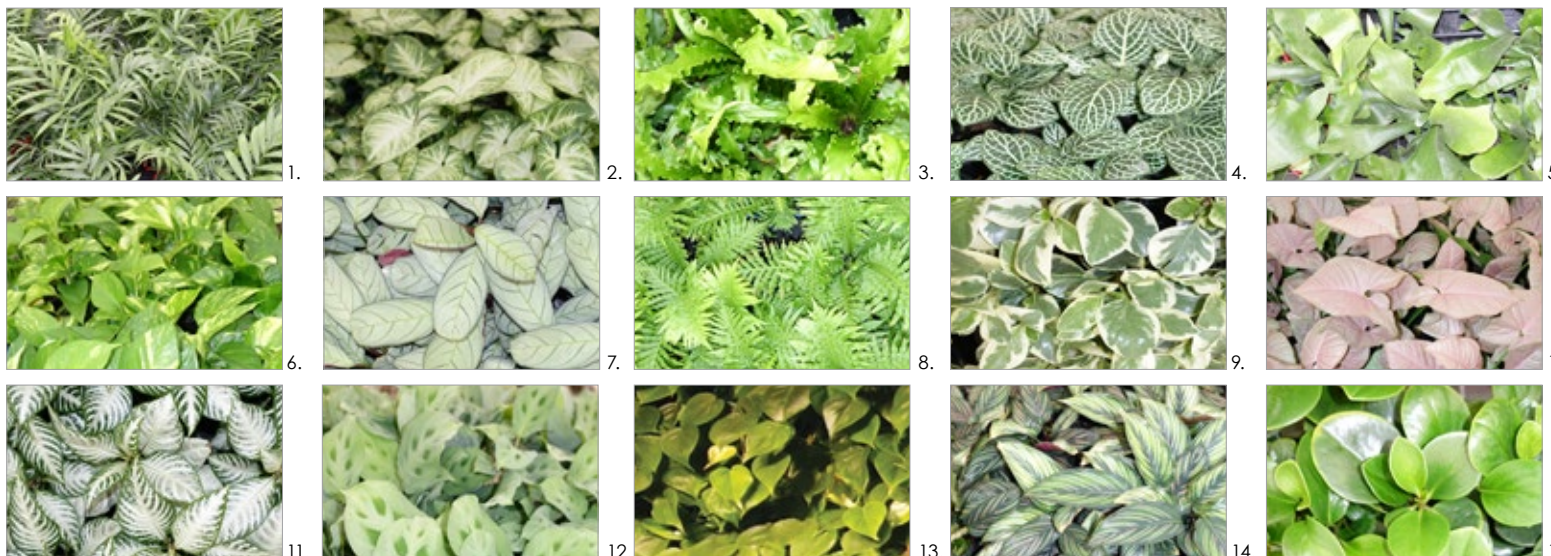




Cabinet Wall



TPR Cabinet Wall is ready built for quick and simple installation



TPR Cabinet Wall

TPR Cabinet Wall is perfect for indoor environments such as lobbies, hallways, and other places of high traffic.

Built for quick and simple installation, TPR Cabinet Wall is naturally beautiful, eco-friendly, durable and remarkably economical.

Several TPR Cabinet Wall can be placed in a row to create a larger Green Wall.

Key Benefits

- **Fully integrated design** – allows for placement anywhere, no need for a water or power connection.
- **Irrigation tank and pump** – water tank, pump and timer are integrated into the base of the system. Can be filled by hand.
- **Non-spilling** – no water ever falls forward of the system, no need to worry about mopping up a wet floor!
- **Design-ability** – a wide variety of plants can be used in the wall (depending on light) and various patterns can be created. You can place several Cabinet Walls in a row to create a larger Green Wall!
- **Colors** – several different colors to choose from.

Sample Plant Selection

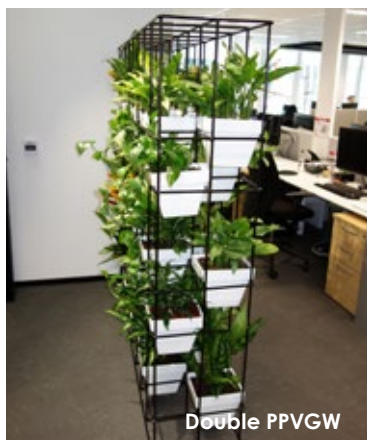
1. Parlour Palm
2. White Butterfly
3. Bird's Nest Fern
4. Nerve Plant
5. Elkhorn
6. Devil's Ivy
7. Amagris
8. (Blechnum) Fern
9. Peperomia Variegated
10. Pink Syngonium
11. Aphelandra
12. Prayer Plant
13. Cordatum
14. Ctenanthe
15. Peperomia Green



Pot Plant Vertical Garden Wall



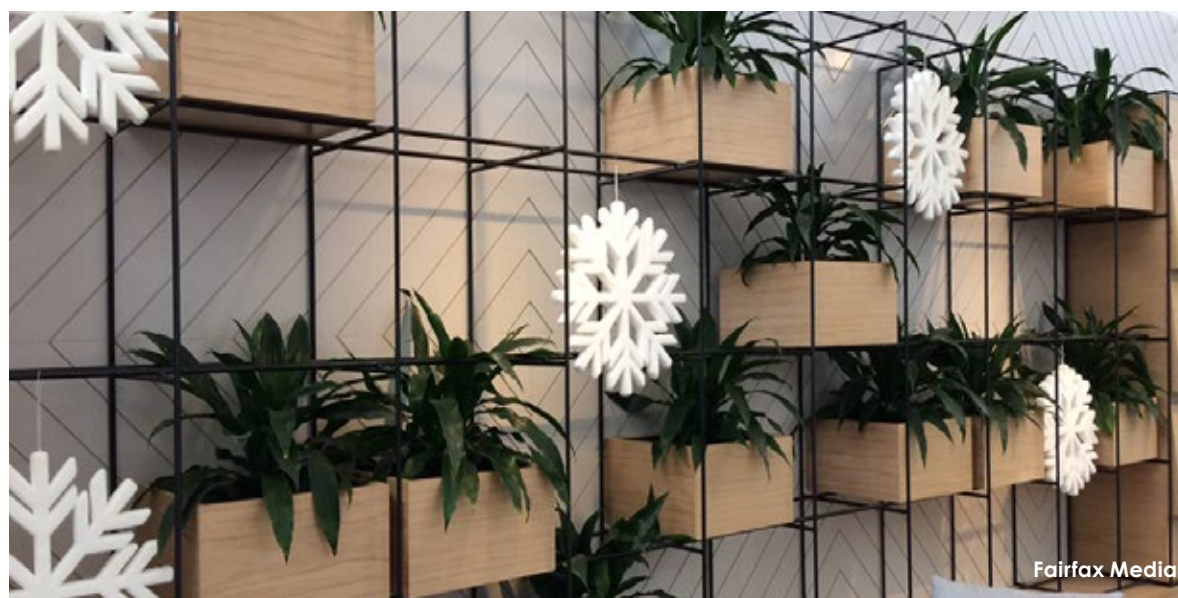
TPR Pot Plant Vertical Garden Wall is ready built for quick and simple installation



TPR Pot Plant Vertical Garden Wall (PPVGW) - 2 mesh sizes available

Simple, elegant and open in design the Pot Plant Vertical Garden Wall offers flexible solutions for bringing “green” into the workplace. Beautiful plants in contemporary fibreglass pots are displayed in a steel framework, enabling a high volume of plants per square metre – providing significant ‘clean air benefits’.

Designed and engineered to individual specification, the Pot Plant Vertical Garden Wall can be used as a room divider or discrete privacy wall, the open design showcasing individual plants without blocking out light in a room. Where space is limited, the Pot Plant Vertical Garden Wall can be even fixed to a wall.



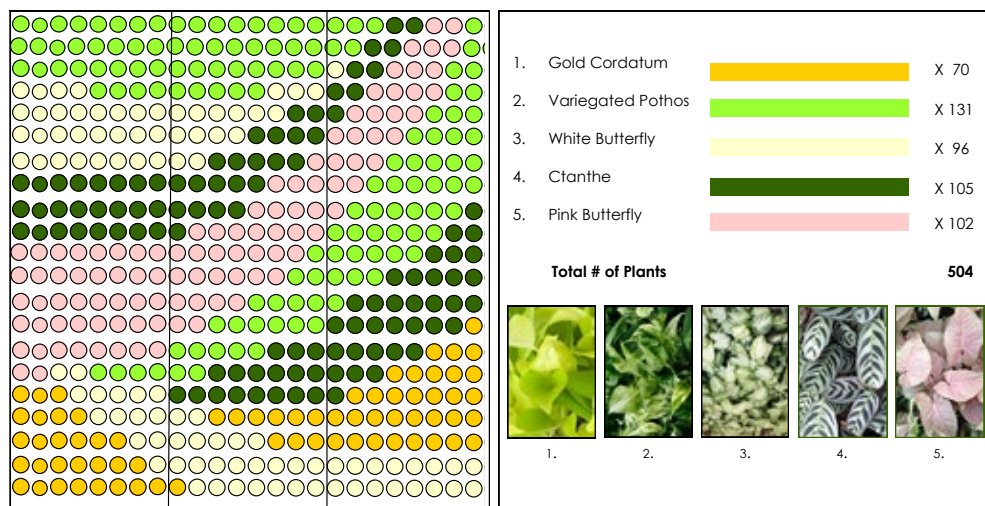


Custom Wall



Should your Green Wall requirements fall outside our existing Green Wall solutions we have a Custom Build Green Wall service where our team of designers, consultants and manufacturers will work together to construct the Green Wall you need – Narrow Cabinet Green Walls, where space saving is paramount, is just one example.

Garden Wall Plan



Designing your Custom Wall includes preparation of concept drawings and proposing a planting scheme for your review. Final Plant selection will be determined by the availability of the plants and their size



Bespoke your Green wall to suit your requirements





External Wall™



External wall options for all situations



External Wall

Flexible installation options with a wide variety of plants make the External Green Wall suitable for any installation.

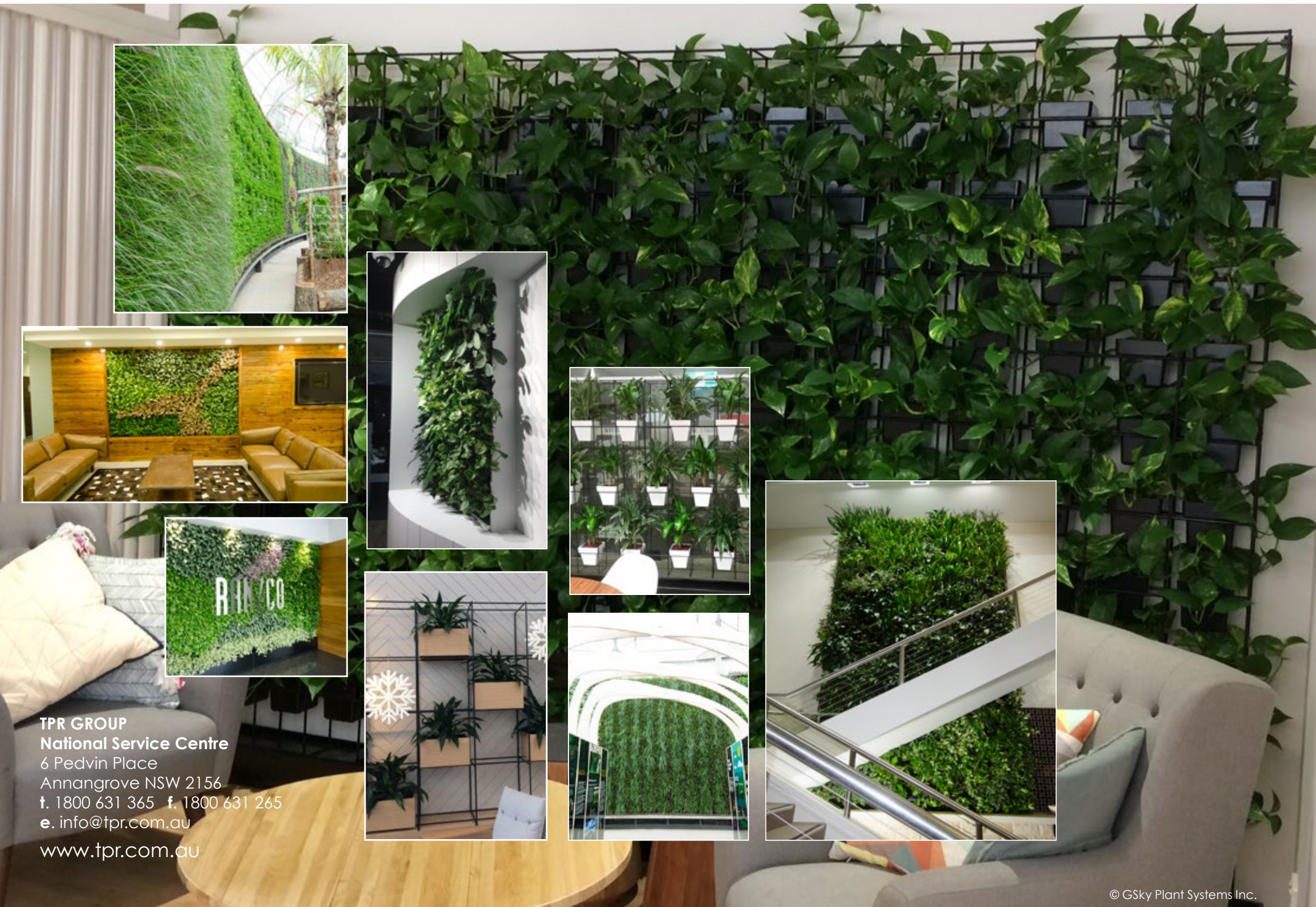
Our all inclusive package provides you with piece of mind so that you'll enjoy your green wall – hassle free.

Benefits

- Stunning designs with living plants
- Connect with nature
- On trend dramatic plantscaping
- Removes toxins from the air and produces oxygen
- Enhances urban environments
- Innovative branding opportunity
- Represents your corporate values
- Create seasonal atmosphere with festive accent planting

Features

- Quick Installation
- Designed to be mounted on steel frames attached to your existing structure
- Utilises 100mm potted plants



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