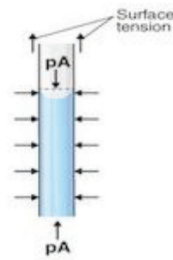
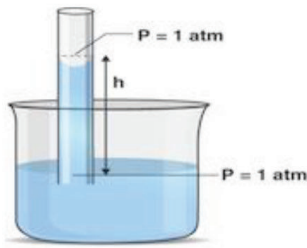


# Greening Australia Sustainably

## *Rethinking Irrigation from the ground up*

### **WaterUps® is the most reliable irrigation system in the market**

It requires no electricity and does not need to be connected to a water supply. It uses the phenomenon of capillary action to efficiently deliver water the root zone of the plants from the underground reservoir.



### **Wicking beds encourage deeper root growth in all plants as the roots search for water low in the soil profile.**

This is the opposite of plants grown with drip irrigation, which encourages roots to come to the surface. Deeper rooted plants are more resilient and better equipped to thrive in an exposed environment such as a roof top. With a reliable source of water, no need to limit plant selection to survive in less than favourable conditions.

### **Builds healthier soil that never dries out and ensures that plants always have the moisture they need to continually grow day and night.**

By providing a constant level of moisture in the soil, bacterial colonies vital for plant health, have an environment they can continue to grow and proliferate in. The daily cycle of flooding at the time of watering, followed by the period of perfect saturation and then the slow drying out until the following cycle of watering is a constant disruption to the bacterial colonies. With these bacteria only being active for a portion of the growing day and night. As plants do more growing at night than during the day, it is critical for plant growth and health that the right amount of moisture is available always. Almost all above ground irrigation systems are timed to water during the early morning to avoid evaporation and to give the plants the water they need for the day. Watering at night is universally discouraged as it encourages molds and fungal attack, often leaving plants to spend that part of their day when they do the most growing with the least amount of water.

### **WaterUps® Wicking system is not only a water delivery system, but also a water capture device.**

In a standard garden bed rain will water the soil, but any moisture that can't be held in the soil will drain away and be lost. The WaterUps® wicking bed system will capture, depending on the amount of water already in the reservoir, up to 100mm of rain before the system drains away any excess water.

### **The system has been rigorously tested in the field over many years and has shown to be 80% more efficient than drip and spray irrigation systems.**

Independent testing at the Northern Beaches Council facility, The Eco House, and Garden by senior ecologist Peter Rutherford, found that in side-by-side trials the wicking system used 253.5 lt /m<sup>2</sup> during the 9 week trial compared to the 1,296 lt /m<sup>2</sup> used by the automatic irrigation system. The WaterUps® system can be manually filled or connected to a solenoid valve and automatically filled up when it is almost empty. By allowing the water reservoir to become almost empty before refilling, you are extending the time between maintenance. This is a particular benefit in commercially maintained gardens. Also, the increasing air gap between the soil level and the water level in the reservoir has important aeration benefits for the growing medium. The wicking cells store 100lt of water for every square metre and will displace 1m<sup>3</sup> of soil for every 10m<sup>2</sup> installed. This will greatly reduce the cost and time to reinstate garden beds.

### **Preparation for the installation of the wicking system is the same as for a normal planter.**

Instead of the drainage hole being at the lowest part of the planter, the drainage point is 10cm above the base of the reservoir. This can be drained internally with the simple addition of a standpipe or drained horizontally. The WaterUps® wicking cell replaces the drainage layer in planter boxes. The soil cannot become waterlogged as with regular planter boxes as the wicking cell maintains a minimum of 20mm air gap between the bottom of the soil and the surface of the water. Furthermore, the entire surface of the garden bed is drainage, the excess water is removed at the overflow point. No solids can penetrate from the cell to the reservoir, so only water can get to the overflow point.

## Key features of WaterUps

- Everything is made in Australia and can be tailored to your design needs. All WaterUps® cells and pipes are molded from recycled plastic. Locally manufactured in Sydney.
- The system is modular and easily adapted to any shaped garden bed.
- Produces even and consistent growth across each garden bed.
- Stronger root development and healthier plant growth is achieved by providing the optimal growing environment of consistent low depth moisture.
- The time between maintenance is greatly extended. Depending on plant selection garden maintenance, including watering, can be reduced to monthly in summer and quarterly in winter,
- Once installed, the weight of the system is 15 - 30% lighter than soil alone.

## Hobart Airport Planter Project

The following images show the construction and growth of the planters outside Hobart Airport, Australia's driest state capital city.



Installed in March 2020

While drought tolerant plant species were used, these planters have only been watered twice in the year since they were installed.



Hobart Airport Planters in March 2021

This document has been provided by WaterUps for use by their distributors in educating the public and customers about the WaterUps wicking system. For further information and to discuss your specific needs, please contact Aqualess.



[www.aqualess.com.au](http://www.aqualess.com.au) [info@aqualess.com.au](mailto:info@aqualess.com.au) 1300844493

Published 9 April 2021