

Biostructure-water **GreenWalls** System



**GreenWalls Bioengineering
(HK) Limited**

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 **GreenWalls**
GreenWalls Bioengineering (HK) Limited 綠牆工程(香港)有限公司

Installation and Fixing

Modular Panel Material:

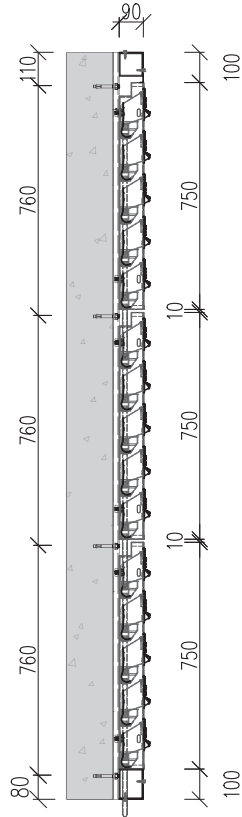
- GMS / Aluminum

Planter tray Weight with soil and plant:

- 60 kg /m2

Subframe Material:

- GMS



Section



Panel can be modified into small units for flexibility to fit different dimensions.



BD Submission

Water IN supplied by water tap and control by timer

No Pump Room & AC Room is required.



Trough overflow and water drain through the panels by gravity

No Irrigation System (both drip or spray) is required.



Capping Cover clicked on the panel unit to form a enclosed box for the water trough.

No ponding water exposure for mosquitos eggs laying.



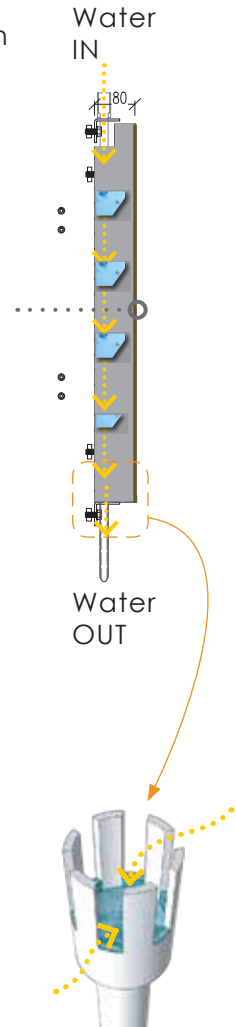
Water OUT direct to the drain point

No Gutter or Surface Channel is required.

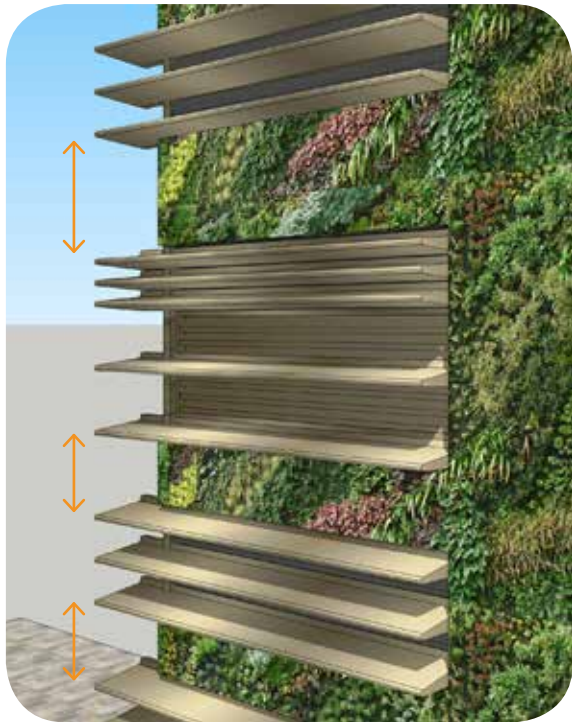


Small slots at the top of the pipe control the speed and maintain a **steady flow** of water.

Avoid turbulent generating **bubbles** which will be *trapped inside* and consequently *clog* the pipe.



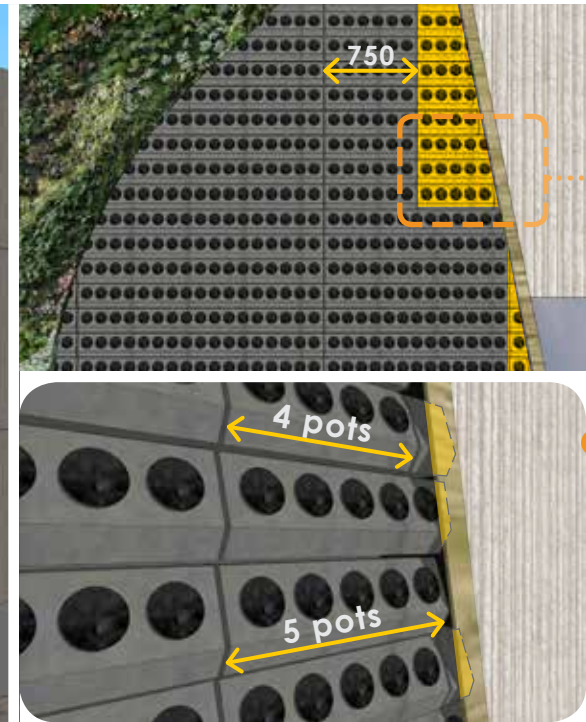
Configuration Flexibility



flexible height for variation

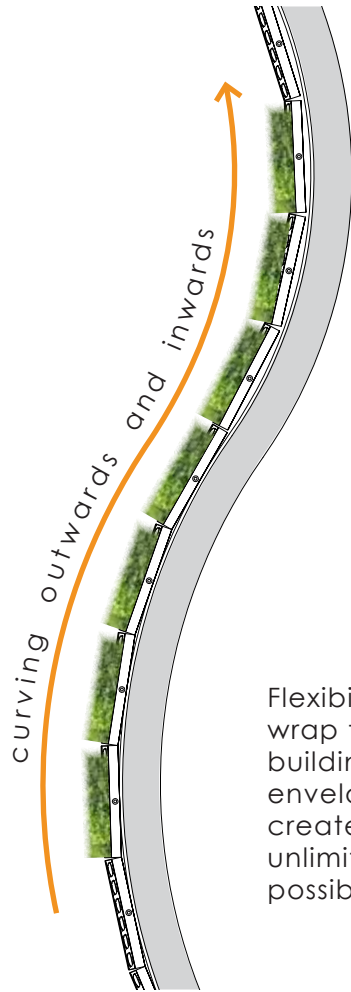


Intergrate with elements on elevation, blends well with facade design.

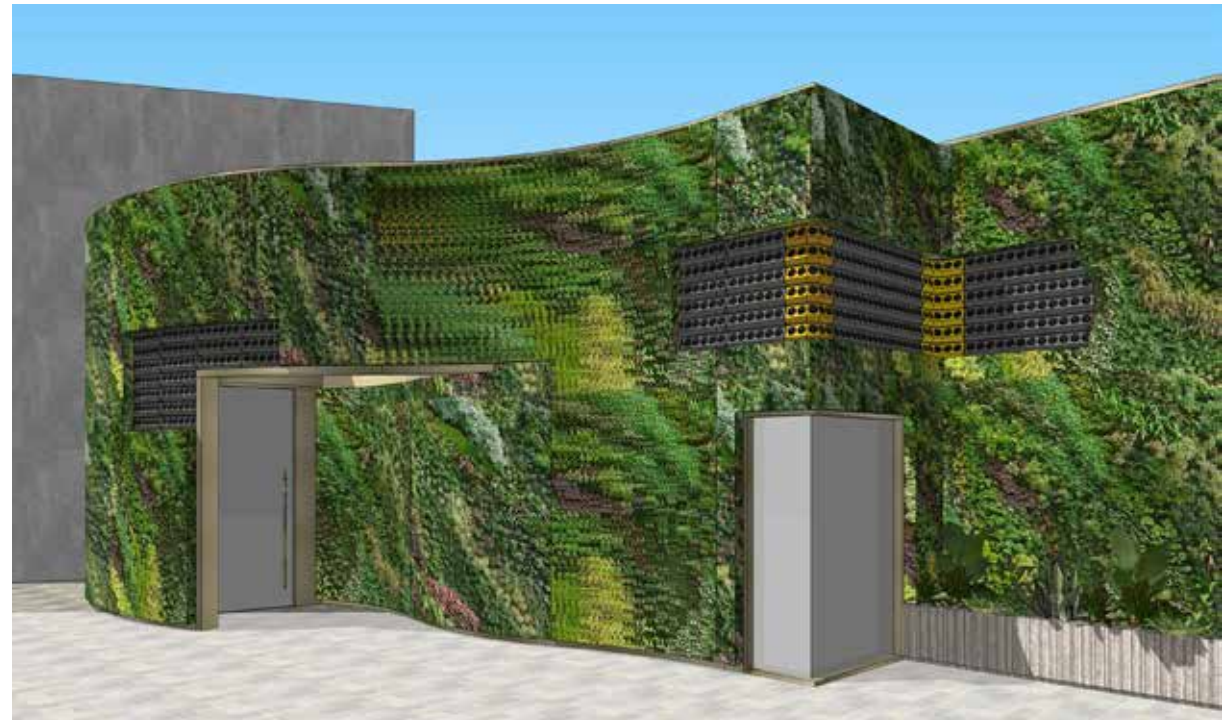


regular shapes with different modules and tailor made units

Perfect Wrap the Building Envelope



Flexibility to wrap the building envelope, create unlimited possibility.



Run along the curve



Turn around the corner

Programmed Water Supply

Option 1 **Digital Hose End Timer**

control the supply of water by programming features *instead of irrigation system*



- Installation of the Timer can be *any point of the building edge*
- Weather resistant



- Easy programming
- Watering duration from 1 minute to 12 hours 59 minutes in 1 minute intervals
- Seven day watering calendar
- Four start times per day



- Easy manual operations using **START** and **STOP** buttons
- Rain mode easily accessed by holding the **OFF** key for three seconds



- Low battery auto lock out to ensure that the timer valve will not open unless it can close
- *High water flow* at normal water pressures
- Battery life up to **one year** on *one 9-volt alkaline battery*



Programmed Water Supply

Option 2 **Bluetooth Hose End Timer**

features wireless technology combined with a full-function, waterproof timer



- Installation can be *any point of the building edge*
- Completely waterproof (IP64 certified) for operation in harsh environments



- Operates with any supported Android or iPhone smart device
- Programmed entirely using accompanying **smartphone app**
- Bluetooth communication range up to 15 m



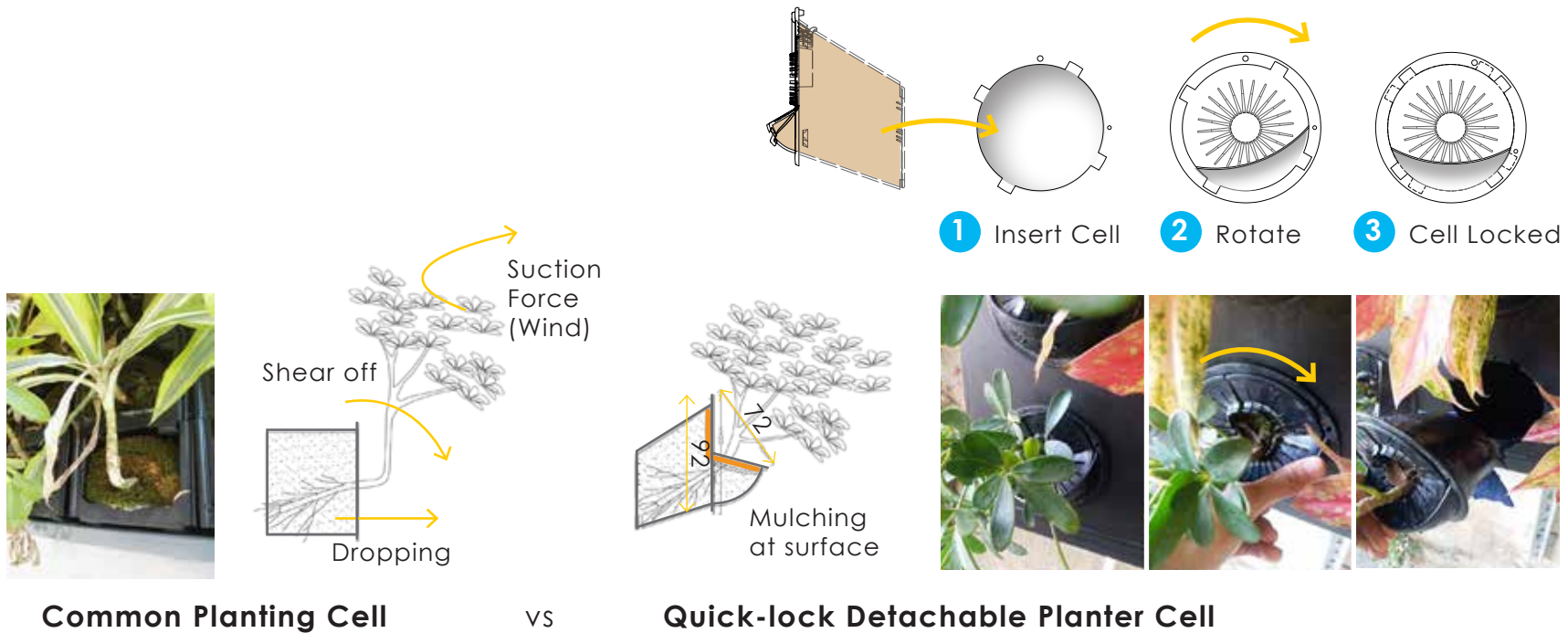
- Manual irrigation cycle can be performed *via the app, the timer's manual program button or via the solenoid*
- Semi-automatic, automatic or manual operation
- One button to reset the timer to factory defaults or to run manually without a smartphone



- Battery life up to **one year** on two AA alkaline batteries



Quick-lock Detachable Planter Cell



Common Planting Cell

vs

Quick-lock Detachable Planter Cell

- Root Anchorage
- **Anti-overturning Design:** 70mmØ Mouth to confine 92mmØ Rootball
- **Mulching:** to prevent weed invasion, soil erosion, raindrop compaction
- Low maintenance operation
(Individual detachable ET planter)

APM - Advanced Planting Management

APM is a *Bioengineering Greening Technique Key Components* that utilized the worldwide recognized environmental-friendly *fungicide, pesticide and insecticide* biotechnologies to facilitate the selected APM plants grow with advanced **2 months biological pre-treatment process**.

Key materials selected for APM process are:

- Chitin bio-pesticidal **fertilizers**, Chito-Power & CT-A
- Sterilization and disinfection **electrolyte water**
- Nano size food grade **insecticide** mineral oil



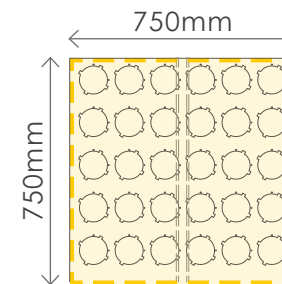
Building Department Submission



The system is **approved** by Buildings Department, HKSAR. Fixing Details of the System are ***not required for BD Submission*** as it fulfills the criteria stated in the Circular Letter issued by BD on 14 Feb 2019:

3. Nevertheless, structural details of the modular units are not required if the following criteria are met:

- (a) each modular unit is of a size not exceeding 0.75 m in height and width;
- (b) projection of each modular unit from the plane of fixing points does not exceed 0.2 m;
- (c) the highest point of the modular units is not more than 15 m above the adjoining ground; and
- (d) the VG system is a proprietary system.



Biostructure-water GreenWalls System

- *No Pump Room & AC Room* is required.
- *No Irrigation System* (both drip or spray) is required.
- *No ponding water exposure* for mosquitos eggs laying.
- *No chemical fertilizer* is required.
- *No gutter or surface channel* is required.
- *No intensive maintenance operation* is required.
- *Light weight: Saturated Loading* 60kg/m²

 thank you 



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