# Living walls or vertical Garden



## **EMPHASIS** LANDSCAPE & DESIGN

We undertake Landscape Design, Development, Vertical garden, Terrace garden, Consultancy, Orchard development, Supply of Indoor & Outdoor plants, Organic Manure, Tools & implements, etc.

No 318, 16<sup>th</sup> A Cross, 1<sup>st</sup> A Main, Behind Kanti sweets Yelahanka Newtown, Bangalore-560065 Tel No. 080-41572703 Mbl No: 9972590092, 9900111176, 9980960940 Email ID: <u>info@eldindia.com</u>, Website: www.eldindia.com





# Benefits of Vertical Garden

Green walls are found most often in urban environments where the plants **reduce overall temperatures** of the building. "The primary cause of heat build-up in cities insulation, the **absorption of solar radiation** by roads and buildings in the city and the storage of this heat in the building material and its subsequent re-radiation

The plants may purify slightly polluted water (such as grey water) by absorbing the dissolved nutrients. Bacteria mineralize the organic components to make them available to the plants. Living walls are particularly suitable for cities, as they allow good use of available vertical surface areas.



# **Components of Vertical Garden**

- Fabrication: SS/Aluminium/MS Fabrication structure to hold the Module.
- **Modules**: Vertical Modules OR Biowall to hold the planting media and plants.
- Irrigation system: to water the plants
  - a. Main Pipe
  - b. Lateral pipe
  - c. Micro tubes
  - d. Drippers

• **Plants :** Selection of plants depends on Site conditions like Sunlight, Air circulation and the interest of Clients on color, form, scale etc



## WHAT DO PLANTS REQUIRE ?

BASIC FACTORS RESPONSIBLE FOR SUCCESS OF THE VEGETATION

- LIGHT: NATURAL OR ARTIFICIAL
- GROWTH MEDIUM OF RIGHT QUALITY
- MOISTURE LEVELS NEAR ROOT ZONE
- ENOUGH DEPTH FOR ROOTS TO ABSORB NUTRIENTS
- ROOT ZONE TEMPERATURE
- AIR QUALITY
- WATER QUALITY



## UNDERSTANDING MICRO CLIMATE

## BASIC FACTORS RESPONSIBLE FOR SUCCESS OF THE VEGETATION

A.UNDERSTANDING SITE SPECIFIC MICRO-CLIMATIC FACTORS.

1. LIGHT INTENSITY, AVAILABILITY AND DURATION

2. HUMIDITY

- 3. NEARBY FIRE PLACE / CHIMNEY
- 4. DIRECTION OF GREEN WALL- FACE
- 5. AVAILABILITY OF LIGHT: OPEN TO SUNLIGHT, SHADE, SEMISHADE, AIRCONDTION
- 6. OTHER STRUCTURES, TREES & OTHER ELEMENTS THAT CAN AFFECT MICRO CLIMATE
- 7. WIND VELOCITY

8. NEARBY INDUSTRIAL ESTABLISHMENTS CAUSING DIFFERENT TYPES OF MICRO-CLIMATIC HAZARDS LIKE DUST, SMOKE, FUMES, GASES & OTHERS.

9. WATER QUALITY



## DIFFERENT TYPES OF VERTICAL GARDEN



# OPTION 1: OMNI GREEN WALL SYSTEM, PATENTED PRODUCT AND SUSTAINABLE











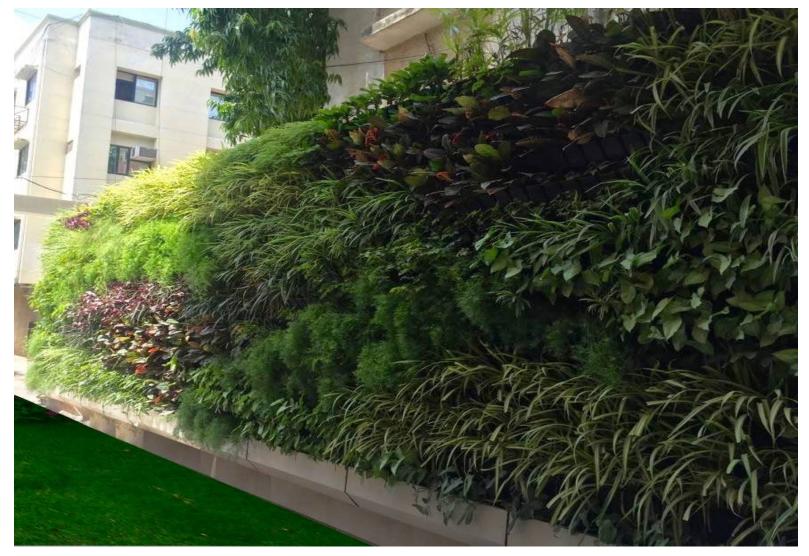


Back support member for OMNI Green vertical garden system



















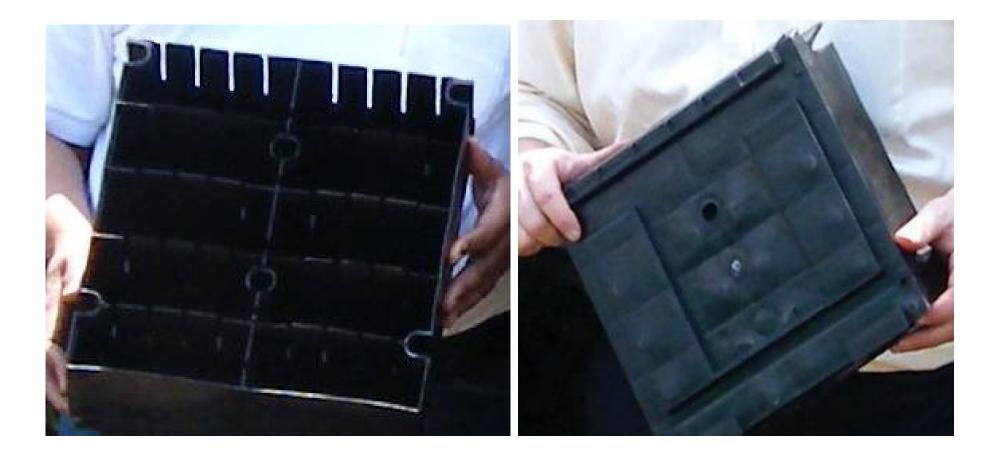




## OPTION 2: LIVING WALL SYSTEM, , PATENTED PRODUCT AND SUSTAINABLE



## **OPTION 2: LIVING WALL SYSTEM**

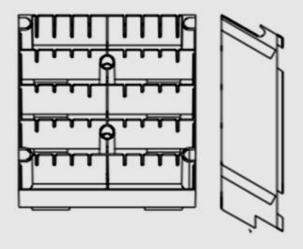




## LIVING WALL SYSTEM

#### **ELT Living Wall System** FEATURES:

- Modularity for easy installation & handling.
- Recyclable polypropylene copolymer material with longer life expectancy.
- Size 300 mm x 300 mm x 100 mm.
- Provision for screwing the panels to mounting strips.
- Individual cells for water retention & plant support.
- · Panel spacers on the back to keep panel away from wall & allow for an air space.
- · 2 Mounting channels across the back, support weight across the whole panel.
- Top collection chamber for irrigation emitter line.



- · Water management incorporated into design with the notches.
- Drain window for each comprtment to drain water into catchment area of lower panel.
- · Unique Z pattern of nesting help to transfer water and provide stability to the Green wall.
- · Drain tray is provided at the base of the Green wall to collect excess water.



## LIVING WALL SYSTEM











## LIVING WALL SYSTEM











# OPTION 3: BIOWALL MODULE, LOCAL MADE NOT SUSTAINABLE. MAINTENANCE AND MORTALITY OF PLANTS IS MORE

# NOT RECOMENDED



## **OPTION 3:BIO WALL**



#### BIO WALL SIZE- 6INCHES X 18INCHES



HOOK POTS







#### 100ft Htx 50ft wide



Brigade opus, Kodigehalli gate, New Airport road





Musigma Movable vertical garden with wheels





ATOS



Mr.Anand , Rose bay villa







**Mercedes Benz** 







Visa







CNW

## DIFFERENCE BETWEEN BIOWALL MODULE AND LIVING WALL

PARTICULARS	BIOWALL	LIVING WALL	OMNI GREEN	
MODULE	3 POTTED SYSTEM NOT PATENTED	PATENTED PRODUCT	PATENTED PRODUCT	
PLANTING MEDIA	BIODEGRADABLE	NON BIO DEGRADABLE	NON BIO DEGRADABLE	
VISIBILITY OF MODULES	YES	NO	PARTIAL	
MORTALITY OF PLANTS	8 TO 10% PER MONTH	1 TO 2% PER YEAR	2 TO 3% PER YEAR	
WATER DISTRIBUTION REQUIREMENT	UNEVEN AND MODERETE REQUIREMENT	EVEN AND VERY LESS REQUIREMENT	EVEN AND VERY LESS REQUIREMENT	
WARRANTY FOR PLANTS	NO WARRANTY	1 YEAR, *CONDITIONS APPLY	6 MONTHS, *CONDITIONS APPLY	
WARRANTY FOR MODULE	1 YEAR	5 YEARS	5 YEAR	
MAINTENANCE COST APPROX 100SFT	Rs.6000 PER MONTH	Rs.2500 per month	3500 Per Month	







## MOSS VERTICAL GARDEN FOR INDOORS











## MOSS VERTICAL GARDEN FOR INDOORS

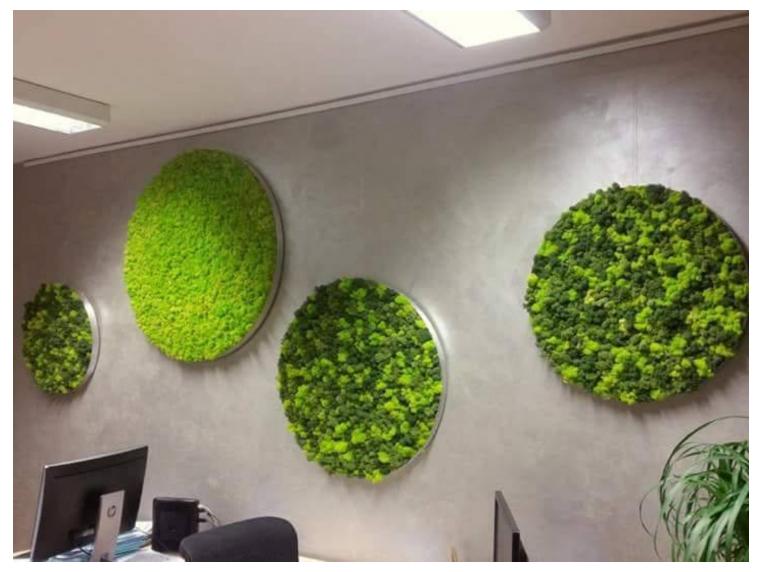






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## MOSS VERTICAL GARDEN FOR INDOORS

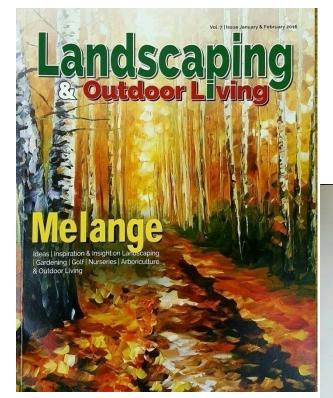




#### BEST VERTICAL GARDEN AWARD BY MYSORE HORTICULTURAL SOCIETY LALBAGH, BANGALORE HELD ON 13-08-2018 AT Dr.MARIGOWDA MEMORIAL HALL, LALBAGH







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Emphasis Landscape & Design is a Partnership firm, Owned by Govindaraju L.R. Chidananda K.R. & Ravi R.K.

Services We are a professional garden design consultancy and development fem we dire Limkey services to public residential and commercial cleants across flada and outside India. It is our gast to provide a unified and balanced retainsomb between people and environment: We firmly believe that the solutions we provide should achieve a directe balance between

Even the smallest space can become

Even the sthatest space can become an oasis of tranquistly in the right hands. Our responsibility, therefore, is not merely to provide you with solutions for today, but solutions that will be effective, efficient and aesthetically pleasing even In times to come. The landscape architects and the landscape design engineers of



our company come with more than a decade's experience in Garden and Landscape design. Emphasis's staff has built a reputation for attention to detail, customer satisfaction and fiexible Add on Services We emphasize, as our title (tag line)

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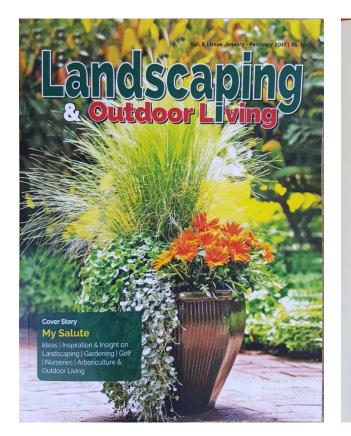
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suggests, providing high quality service at an affordable price. Working within your budget, you are ensured a unique



#### Emphasis Landscape & Design



Our emphasis, as our tile (tag line



of Landicace within your budget, you are on survices design specific to you reas include proferly and your needs. Some of our Services include Ventical gardening is a fun, cre to mataliation.

to grow plants in urban spaces. As long as you've got a blank wall or bare fence that needs beautifying, you can tend edibles, annuals, even perinnials with vertical garden products. Our vertical gardens will turn your bare spaces into gorgeous living walls inductors and nut

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plant multiplication unit. Shade house and Poly houses are built to produce large scale Vertical garden plants and also to promote different links of modern and imported plants to meet the customer

We have standardized the planting media with different combination of natural materials to prove that the plants grow best of its growth and for satisfactory results.

and Developers are interested to buy from us to avail prompt supply and services.

Our Major Clients are:-Larsen & Toubro, VISA, Brigade

developers, Prestige builders, Sobha developers, Divyashree developers, Bagamane Developers, DELL, Bosch Rexroth etc



with the increased interest in urban to 10 memory and interest are growing bardware and growing that and the increase and the

with drop impation and retrizer systems. LANDSCAPE DESIGN & BUILD Our highly create and incompleted. Like all four however, they fourth and design team intelligently outlines the important factors like water availability. PLANTS NURSERY:

allability etc., for the maximum benefit

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#### Architects & interior Designers are-Rapid Corp. DSP. Design, Space Matrix, Prospace, KK & GL, Nithin & Anand, Krafts, Woodkraft, Cherryhill Interiors etc.

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COOL HO







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# Thank you



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