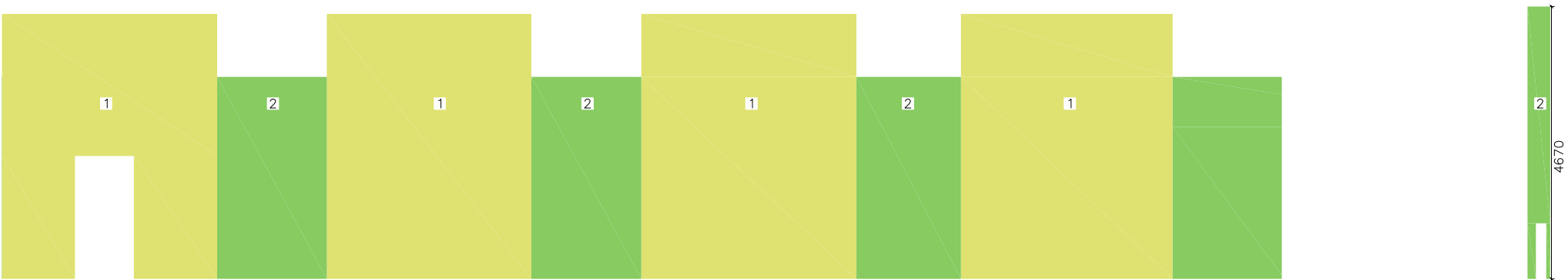




Introducing sustainable landscapes in the built environment to promote biodiversity, health and wellbeing.

Parliament Hill School– Green Wall Proposal

Planting Design Strategy: South East Wall



Extracted from Scotscape drawing 02.01 Living Walls-Elevation-18006_V1_pdf

Notes:
Plants subject to availability.
Plant images specified here are indicative and for the purpose of graphic information.

Dimensions and site survey information were provided by Scotscape Landscaping Ltd. Please refer to Scotscape drawing 02.01 Living Walls-Elevation-18006_V1 for more information. Appropriate care should be taken when handling any plant material. Contractors are not to scale dimensions from this drawing.

Plant Palette



Carex morrowii 'Ice Dance'



Carex oshimensis 'Evergold'



Euonymus fortunei 'Emerald n' Gold'



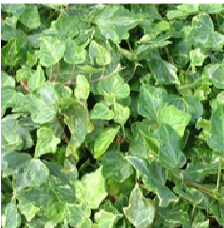
Euonymus fortunei 'Dart's Blanket'



Fragaria vesca



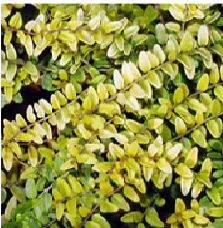
Geranium macrorrhizum



Hedera helix



Heuchera 'Plum Pudding'



Lonicera nitida 'Baggesens's Gold'



Polypodium vulgare



Vinca minor 'Bowles's Purple'

Planting Area	Plant Name
1	Carex morrowii 'Ice Dance'
	Euonymus fortunei 'Dart's Blanket'
	Geranium macrorrhizum
	Hedera helix
	Heuchera 'Plum Pudding'
2	Vinca minor 'Bowles's Purple'
	Carex oshimensis 'Evergold'
	Euonymus fortunei 'Emerald n' Gold'
	Lonicera nitida 'Baggesens's Gold'
	Polypodium vulgare
Accent	Fragaria vesca (randomly dotted throughout)

Planting Design Strategy

The design focuses on the form, colour and texture of plants in order to provide stripes, complementing the crenulated, architectural form of the building.

The living walls wrap around the corner of two walls, one south east facing and the other north east facing. In order to retain unifomity of design, plants with similar colours, form and texture have been used on each wall.

There are two main planting areas; 'Planting Area 1' is protruberant and is mainly of plants of varying tones of green, while 'Planting Area 2' is recessed and is of golden toned plants to provide a 'striped' effect.

Plants were chosen to suit site conditions of sheltered, full sun to partial shade. Plants were also chosen or their ecological value being native or wildlife-frendly. Edible Fragaria vesca, *Wild Strawberry*, will be planted throughout the south east wall as food for wildlife (and people).

To ensure there are no bare areas on the wall in winter,the plants are all hardy and mainly evergreen apart from the semi-evergreen Fragaria vesca, and have seasonal interest.

The colour palette is greens and golds with cream, pink and mauve accents.

Green Graphite
Landscape Design

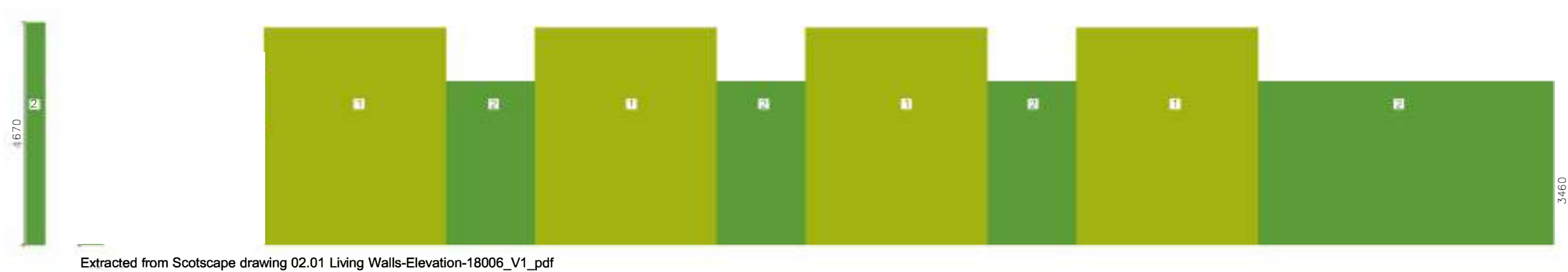
14 Smith Close
London
SE16 5PB
T:+44(0)20 7231 5344
E:info@GreenGraphite.com
www.GreenGraphite.com



Client
Scotscape Landscaping Ltd
Project
Parliament Hill School
Description
Living Wall Design
Planting Design Strategy
South East Exterior Wall

Status
For Approval
Scale 1:100@A3
Client Ref
Drawn SM
Job number 615-69
Date 02.05.18
Drawing number L101
Revision

Planting Design Strategy: North East Wall



Notes:
Plants subject to availability.
Plant images specified here are indicative and for the purpose of graphic information.

Dimensions and site survey information were provided by Scotscape Landscaping Ltd.
Please refer to Scotscape drawing 02.01 Living Walls-Elevation-18006_V1 for more information.
Appropriate care should be taken when handling any plant material. Contractors are not to scale dimensions from this drawing.

Plant Palette



Carex morrowii 'Ice Dance'



Euonymus fortunei 'Emerald n' Gold'



Galanthus nivalis



Geranium macrorrhizum



Hedera helix



Heuchera 'Plum Pudding'



Liriope muscari



Pachysandra terminalis 'Variegata'



Polystichum setiferum



Sarcococca confusa



Vinca minor 'Bowles's Purple'

Planting Area	Plant Name
1	Geranium macrorrhizum
	Hedera helix
	Heuchera 'Plum Pudding'
	Liriope muscari
	Sarcococca confusa
	Vinca minor 'Bowles's Purple'
2	Carex morrowii 'Ice Dance'
	Euonymus fortunei 'Emerald n' Gold'
	Pachysandra terminalis 'Variegata'
	Polystichum setiferum
Accent	Galathus nivalis

Planting Design Strategy

The design focuses on the form, colour and texture of plants in order to provide stripes, complementing the crenulated, architectural form of the building.
The living walls wrap around the corner of two walls, one south east facing and the other north east facing. In order to retain unifomity of design, plants with similar colours, form and texture have been used on each wall.

There are two main planting areas; 'Planting Area 1' is protruberant and is mainly of plants of varying tones of green, while 'Planting Area 2' is recessed and is of greens and variegated plants (creams and golds) to provide a 'striped' effect.

Plants were chosen to suit site conditions of sheltered, partial shade to full shade. Plants were also chosen or their ecological value being native or wildlife-frendly. Spring flowering bulb Galanthus nivalis, *Snowdrop*, will be planted throughout the north east wall as a source of early nectar for invertebrates.

To ensure there are no bare areas on the wall in winter,the plants are all hardy and mainly evergreen apart from the deciduous Galanthus nivalis, and have seasonal interest.

The colour palette is greens and golds with cream, pink and mauve accents.

Green Graphite Landscape Design

14 Smith Close
London
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Client
Scotscape Landscaping Ltd
Project
Parliament Hill School
Description
Living Wall Design
Planting Design Strategy
North East Exterior Wall

Status
For Approval
Scale 1:100@A3
Drawn SM
Date 02.05.18
Client Ref Job number Drawing number Revision
615-69 L102



SOUTH EAST ELEVATION
LIVING WALL:

LW 2: 13.95 m²
LW 3: 9.04 m²
LW 4: 16.30 m²
LW 5: 9.08 m²
LW 6: 17.14 m²
LW 7: 8.73 m²
LW 8: 16.84 m²
LW 9: 8.00 m²
TOTAL SURFACE: 99.08 m²

18006 LasVap PHS LIVING WALL - LONDON

MAY 2018

SURFACES & DIMENSIONS - S-E ELEVATION VIEW

01.01

S: 1/100

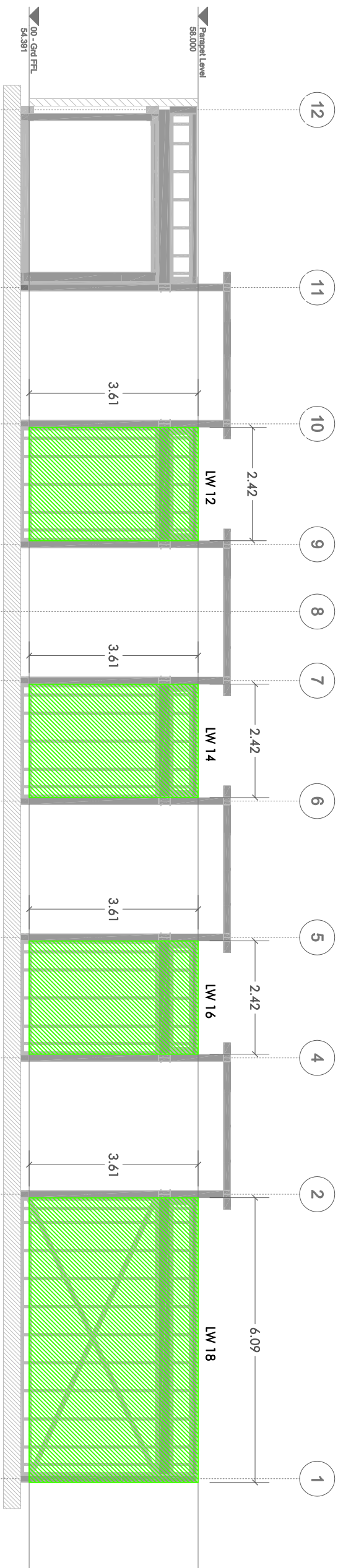
INSTALLER:

SCOTSCAPE
LANDSCAPING LTD

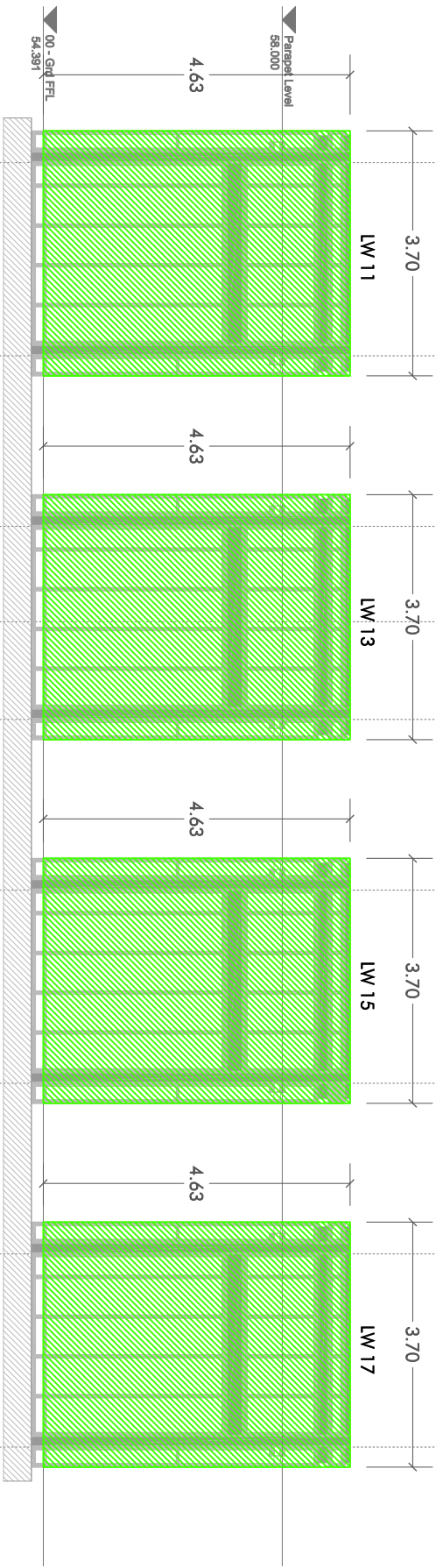
Terapia Urbana

CONSULTOR
Terapia Urbana S.L.
B-971880724.
c/ Factores Acc 12-14 Local 4D.
CP. 41015 Sevilla
+34 955 229 666

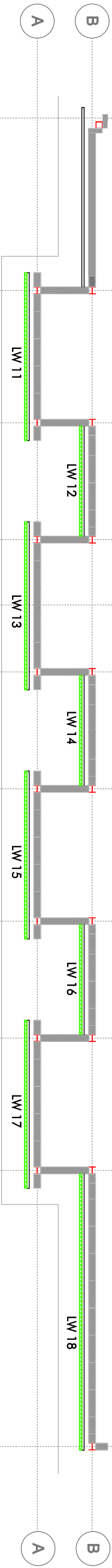
R2



N-E: INTERIOR ELEVATION



N-E: EXTERIOR ELEVATION



NORTH EAST ELEVATION
LIVING WALL:

LW 11:	17,14 m2
LW 12:	8,73 m2
LW 13:	17,14 m2
LW 14:	8,73 m2
LW 15:	17,14 m2
LW 16:	8,73 m2
LW 17:	17,14 m2
LW 18:	21,96 m2
TOTAL SURFACE:	116,71 m2

18006 LasWap PHS LIVING WALL - LONDON

MAY 2018

SURFACES & DIMENSIONS - N-E ELEVATION VIEW

01.02

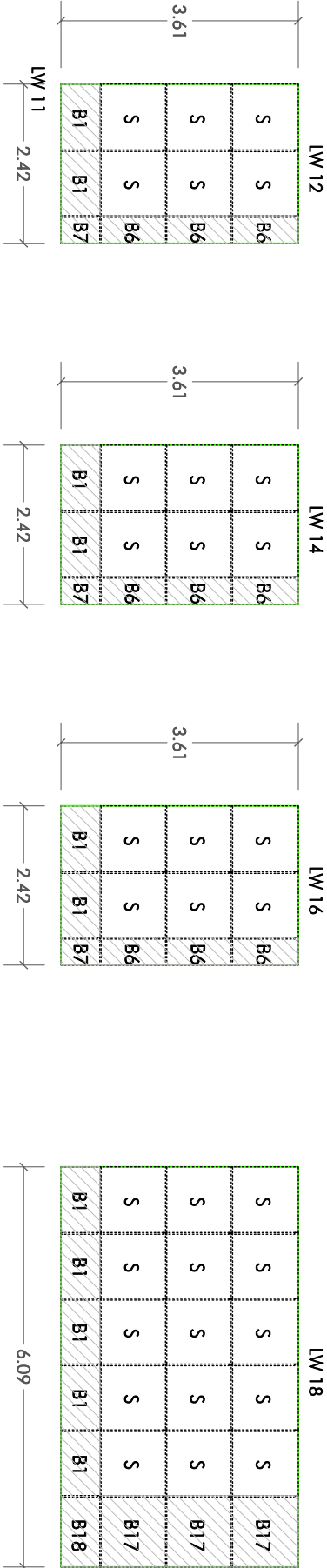
S: 1/100

INSTALLER:



CONSULTOR
Terapia Urbana S.L.
B-971880724.
c/ Factores Acc 12, 14 Local 4D.
CP. 41015 Sevilla
+34 955 229 666

R2



N-E: INTERIOR ELEVATION



N-E: EXTERIOR ELEVATION

NORTH EAST ELEVATION LIVING WALL:	NORTH EAST ELEVATION BESPOKE MODULES:	NORTH EAST ELEVATION STANDARD MODULES:
LW 11: 17,14 m2	LW 11: 5,00 m2	LW 11: 12,14 m2
LW 12: 8,73 m2	LW 12: 2,70 m2	LW 12: 6,03 m2
LW 13: 17,14 m2	LW 13: 5,00 m2	LW 13: 12,14 m2
LW 14: 8,73 m2	LW 14: 2,70 m2	LW 14: 6,03 m2
LW 15: 17,14 m2	LW 15: 5,00 m2	LW 15: 12,14 m2
LW 16: 8,73 m2	LW 16: 2,70 m2	LW 16: 6,03 m2
LW 17: 17,14 m2	LW 17: 5,00 m2	LW 17: 12,14 m2
LW 18: 21,96 m2	LW 18: 6,86 m2	LW 18: 15,10 m2
TOTAL SURFACE: 116,71 m2	TOTAL SURFACE: 34,96 m2	TOTAL SURFACE: 81,75 m2

18006 LasWap PHS LIVING WALL - LONDON
MAY 2018

TYPE OF MODULES - N-E ELEVATION VIEW
S: 1/100

INSTALLER:



Terapia Urbana S.L.

CONSULTOR

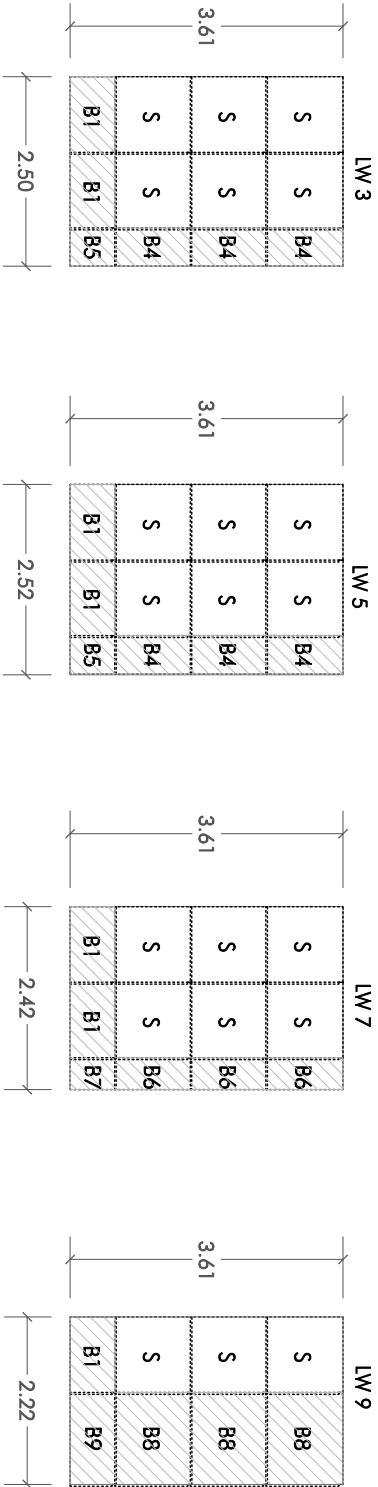
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CP. 41015 Sevilla

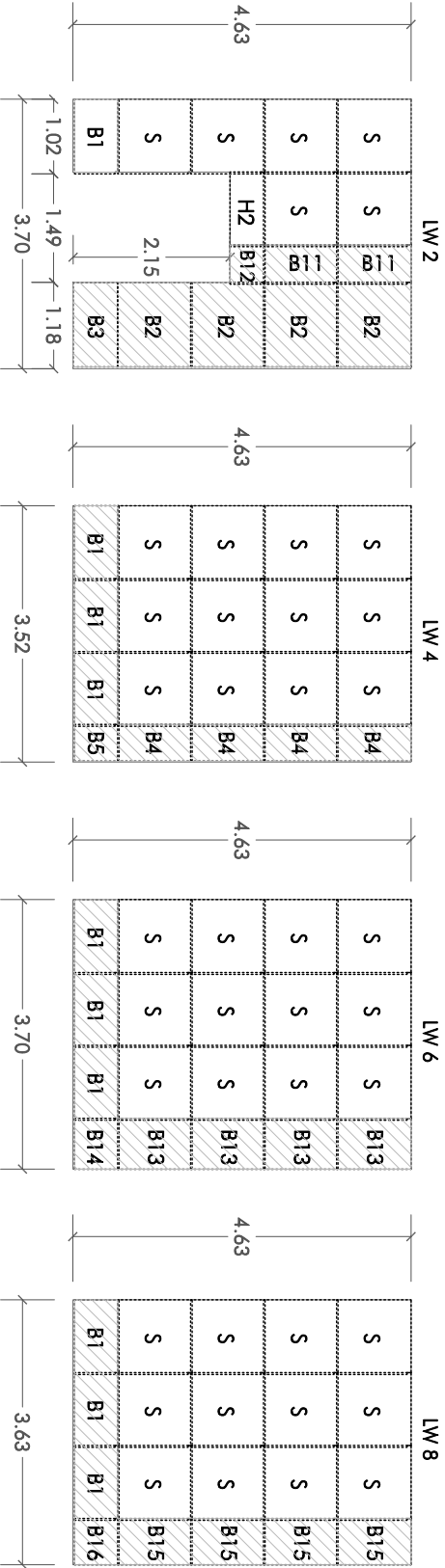
+34 955 229 666

Terapia Urbana

R2



S-E: INTERIOR ELEVATION



S-E: EXTERIOR ELEVATION

SOUTH EAST ELEVATION LIVING WALL:	SOUTH EAST ELEVATION BESPOKE MODULES:	SOUTH EAST ELEVATION STANDARD MODULES:
LW 2: 13,95 m2	LW 2: 7,23 m2	LW 2: 6,72 m2
LW 3: 9,04 m2	LW 3: 3,00 m2	LW 3: 6,04 m2
LW 4: 16,30 m2	LW 4: 4,10 m2	LW 4: 12,20 m2
LW 5: 9,08 m2	LW 5: 3,00 m2	LW 5: 6,08 m2
LW 6: 17,14 m2	LW 6: 4,99 m2	LW 6: 12,18 m2
LW 7: 8,73 m2	LW 7: 2,70 m2	LW 7: 6,03 m2
LW 8: 16,84 m2	LW 8: 4,69 m2	LW 8: 12,15 m2
LW 9: 8,00 m2	LW 9: 4,98 m2	LW 9: 3,02 m2
TOTAL SURFACE: 99,08 m2	TOTAL SURFACE: 34,69m2	TOTAL SURFACE: 64,39 m2

18006 LasWap PHS LIVING WALL - LONDON

MAY 2018

TYPE OF MODULES - S-E ELEVATION VIEW

S: 1/100

INSTALLER:



CONSULTOR
Terapia Urbana S.L.
B-971880724.
c/ Factories Acc 12-14 Local 4D.
CP. 41015 Sevilla
+34 955 229 666

R2

24 Month Living Wall Maintenance Plan



**Introducing sustainable landscapes in
the built environment to promote
biodiversity, health and well-being**

Ditton Nurseries, Summerfield Lane,
Surbiton, Surrey, KT6 5DZ

www.scotscape.net

www.scotscapelivingwalls.net

Tel: 020 8254 5000 E-mail:

sales@scotscape.net



SCOTSCAPE Landscaping Ltd.

Parliament Hill School

31st May 2018

Presented By:
Charlie Holland
Living Wall Maintenance
Manager



Maintenance Schedule



MAINTENANCE DETAILS:

Address – Parliament Hill School

Description of Works:

Scotscape Landscaping Ltd will carry out the maintenance of the Living wall(s) and associated irrigation system at the above address and as detailed in the schedule of maintenance.

SCHEDULE OF MAINTENANCE:

To carry out 48 Health Checks visits biennially.

To carry out 4 no Horticultural visits biennially.

Health Check Visits:

To visually inspect wall

To check moisture levels in wall and adjust irrigation as necessary

To check for pest and disease

To check for wellbeing of plants

To check for correct irrigation operation

To clean area below wall

To keep gutters clear from any fallen debris.

To carry out remedial work to wall as found to be necessary

Horticultural Visits:

To check moisture levels in wall and adjust irrigation as necessary

To remove weeds

To prune in accordance with seasonal requirements

To dead head as necessary

To treat for pest and disease

To apply feed and nutrient as necessary

To check and service irrigation plant and ensure correct operation

To sweep and tidy below wall

To check run off outlets for blockage

To replant at Scotscape cost any plants that have failed due to poor workmanship.

Exceptions – See Warranties in maintenance agreement



January

- ☐ Inspect irrigation – check for frost/ice damage
- ☐ Check no failing plants
- ☐ Dead leaf removal

February (Horticultural Visit)

- ☐ Winter inspection
- ☐ Remove browned foliage
- ☐ Ensure even distribution of irrigation
- ☐ Pest control (using Bio friendly controls)
- ☐ Check for air borne weeds
- ☐ Sweep hard standing

March

- ☐ Check irrigation
- ☐ Visual inspection of wall
- ☐ Check for air borne weeds
- ☐ Sweep up any debris

April

- ☐ Re-calibrate irrigation for summer months
- ☐ Check weeds
- ☐ Check for plant failure from winter months
- ☐ Sweep up hard standing

May

- ☐ Spring clean up
- ☐ Spring feed to wall
- ☐ Check for pests and diseases
- ☐ Check for airborne weeds
- ☐ Sweep up all local areas

June

- ☐ Check on all irrigation
- ☐ No air borne weeds
- ☐ Prune as necessary
- ☐ Ensure even plant coverage
- ☐ Sweep up as necessary



July

- ☐ Check irrigation
- ☐ Visual inspection to wall
- ☐ Prune as necessary
- ☐ Pest/disease control

August

- ☐ Summer – close visual inspection
- ☐ Remove spring foliage, dead leaves and flowers etc
- ☐ Summer feed
- ☐ Remove any airborne weeds
- ☐ Prune as necessary
- ☐ Apply insecticide as necessary
- ☐ Sweep up all hard standing

September

- ☐ Check even distribution of irrigation
- ☐ Airborne weeds
- ☐ Prune as necessary
- ☐ Sweep up hard standing

October(Horticultural Visit)

- ☐ Autumn clean up
- ☐ Remove dead flower heads
- ☐ Autumn feed
- ☐ Replace plants if necessary
- ☐ Sweep up

November

- ☐ Visual inspection of wall
- ☐ Ensure even distribution of irrigation
- ☐ Dead head/leaf as necessary
- ☐ Clean/sweep up

December

- ☐ Protect irrigation for winter months
- ☐ Consistency of presentation - Groom as necessary
- ☐ Pull out any weed seedlings

This maintenance schedule is repeated over a 12 month period to ensure full plant health and correct irrigation operation.

Horticultural visit may change from scheduled months if remedial action as necessary or extreme weather stops works



Horticultural Visits Sequence

Access to the wall can be gained **TBC**. Protective plastic should be laid before replanting works.

Access to the Living Wall is achieved by **TBC**

Access to the irrigation controller can be gained by **TBC**. A clear route must be available in the event of an emergency.

To prune plants on living wall as required:

ALL debris will be collected and placed into 25kg bags and removed from site safely and discarded to the correct waste management facility, via the property's designated entry / exit points.

To replant where necessary:

Damaged plants will be removed and replaced during regular maintenance visits if accessible. Mobile scaffolding or abseiler operatives will be incorporated for any major replants.

Waste management - using the same method as above.

Any materials or plants will be taken to the base of the wall by hand.

Health Check Visits

To adjust irrigation:

The irrigation controller shall only be adjusted by a competent person. This is located in **the allocated plant room**. All irrigation filters to be cleaned thoroughly on a two week basis. Filters to be removed from gutter and rinsed with clean water

To treat for pest and disease

All plants will be inspected and treated where necessary using various integrated pest management controls, reducing the need for chemical treatments where possible eg, treatment of vine weevil using biological controls(nematodes), lacewings will also be used for aphids.



About Scotscape Living Walls

Living walls are vertical or near vertical structures that are covered with vegetation, used as green envelopes on city properties, adornment for urban gardens and roof terraces and as eye catching interior features for Hotels, Spas, Offices, Retail Outlets and Private Homes

The Scotscape Living Wall has been designed to support optimum plant health. It is light-weight semi-hydroponic modular panel system constructed from a patented advanced geotextile fabric. Each square metre holds up to 49 plants in individual pockets. Each panel incorporates a drip-line to irrigate the plants through the fabric. Panels can be fitted to flat or curved surfaces and are planted on site. The system is designed for rapid installation by a small specialist team, minimizing on-site disruption.

- **Full design service available**
- **For use in commercial or residential projects**
- **Available in 9 standard panel sizes or bespoke to suit individual projects**
- **Suitable for exterior or interior use**
- **Maintenance contracts available**
- **10 year product warranty**
- **Fire resistant BS476 Part 6/7**



Living Wall Benefits

Benefits For Buildings

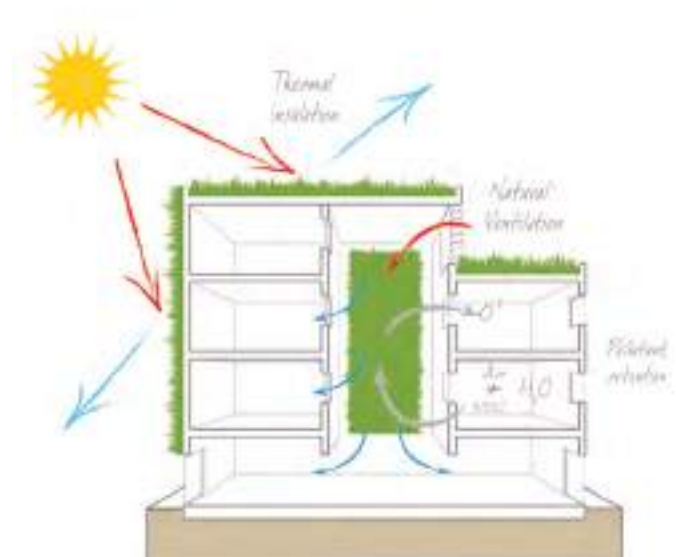
Indoor plants provide oxygen and environmental humidity, bio-filter volatile organic compounds (VOC's) like benzene, CO² and formaldehydes; improving indoor air quality. Outdoors, plants improve the thermal and acoustic insulation of the building facades.

Benefits For People

Plants enhance the well-being of people, increase concentration and productivity in the work-place, they play an important role in good biophilic design. They allow us to connect with nature, provide inspiration and increase happiness.

Benefits for Companies

Companies that invest in urban greening systems get an important return on investment through marketing and improvement of their image by communicating green credentials helping to reaffirm their corporate identity.



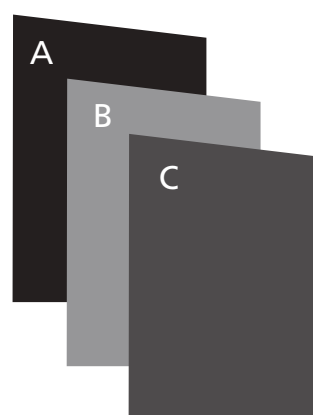
Why Fytotextile®?

Fytotextile for Plant Health

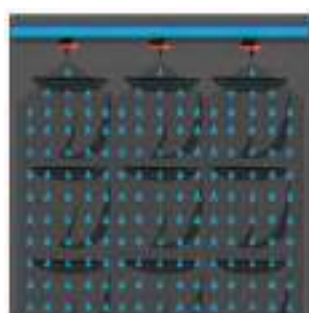
Our living Wall system has been scientifically designed and tested to support optimum plant health and growth. The University of Seville undertook several years of research with Scotscape to ensure that Fytotextile provides the ideal conditions for excellent plant growth. This patented product is the only living wall system which brings aeration to the root structure, encouraging good health and thus better resistance to pests and disease.



Breathable; provides excellent aeration to root-zone promoting strong growth and healthy plants



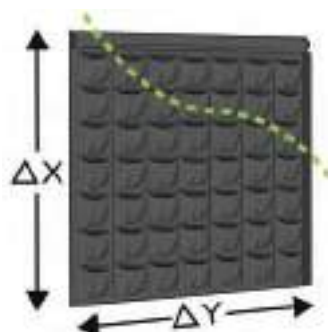
Optimal multi-layer structure
A Waterproof Layer,
B Irrigation Layer
C Breathable Layer



Even water distribution to the root-zone, ensuring efficient use of water



Lightweight and fully flexible system; can be installed on curved surfaces



Adaptable; bespoke panels can be manufactured to any shape and size



Quick installation and rapid plant growth post install



Design and Consultation

Every Scotscape project is tailored to the client needs taking into account plant preferences and corporate branding. We create bespoke planting designs for each living wall project, paying special attention to site specific requirements and the species selection to ensure the installations continue to thrive.

Our in house horticulturalists can assist with helping you achieve recognised BREAM standards.

We provide full a full dossier of technical documents and drawings necessary to support your project.

Hogarth Spa Planting Plan



Indicative Planting Scheme



Living Wall Location



Indicative Plant Species



Living Wall

Installation

Scotscape's specialist installation team have installed 37,000m² of living wall systems. No challenge is too great for either commercial or domestic projects.



The installation process:



Installation on-site
in four steps



Remote control
and monitoring
of the irrigation
system with
internet controller



Easy Maintenance
and access to the
irrigation system
from front of modules

Technical Documents Provided

Module Overlay

A full module overlay is produced showing the types of modules used to fit the façade including any relevant specific technical details required by the project.

Sub-frame Design

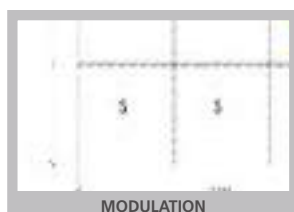
A sub-frame drawing is produced in accordance with the module overlay to ensure the correct fitment of the modules. Including any relevant fixation details and types as required.

Irrigation System

We design each irrigation system bespoke to suit the project requirements and ensure it satisfies the needs of the wall and location.

Planting Plans

A full planting plan is produced for client approval prior to any planting being carried out. The wall is then planted on site in accordance with the approved design.





Irrigation and Maintenance

Standard System

This scheme suits all walls large and small. The excess solution from the irrigation cycles is run to waste from the base of the wall. This is the most common set-up where drainage is not an issue.

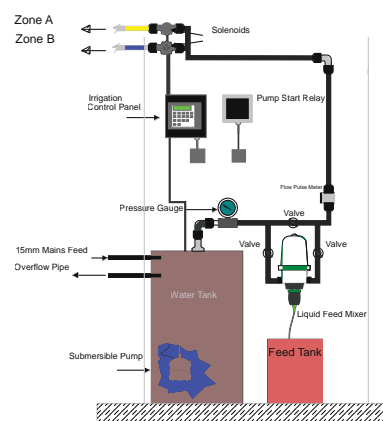
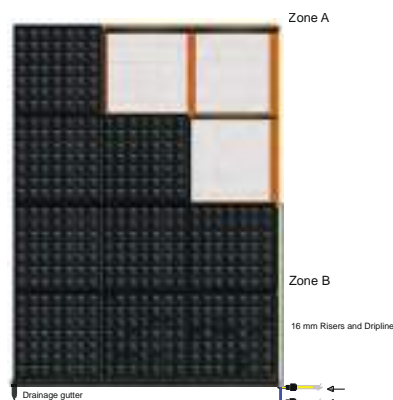
Recirculating System

This system suits locations where drainage is an issue; the water collected from the irrigation cycles is recirculated back through the system negating the need for a drainage outlet. Generally used on interior schemes, can be installed with a fresh water top-up or the tank can be filled manually for smaller walls.

Maintenance

Living Wall maintenance is essential. Scotscape has the largest living wall maintenance division in the UK we also work internationally. We have experience with all living wall systems on the market. Scotscape will keep your living wall looking great all year round allowing you to enjoy the full benefits of vertical greening.

Irrigation and Zonal Layout



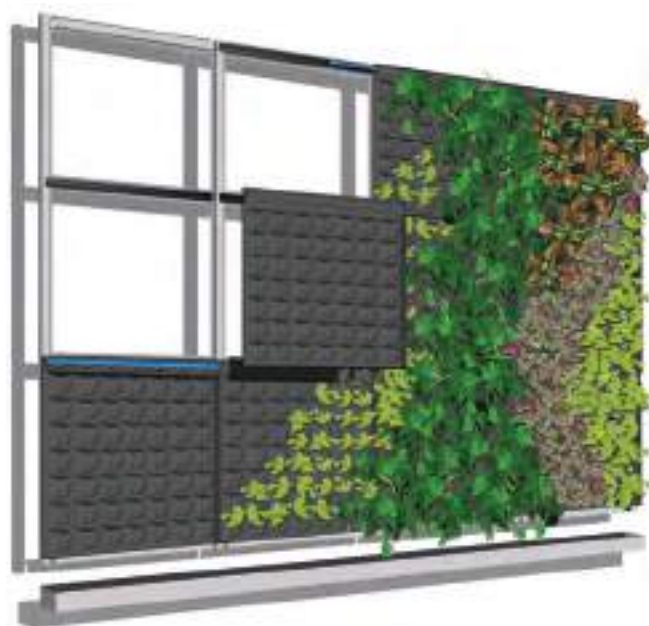
Technical Information

Our Living Wall Modules are the lightest and strongest living wall system on the market.

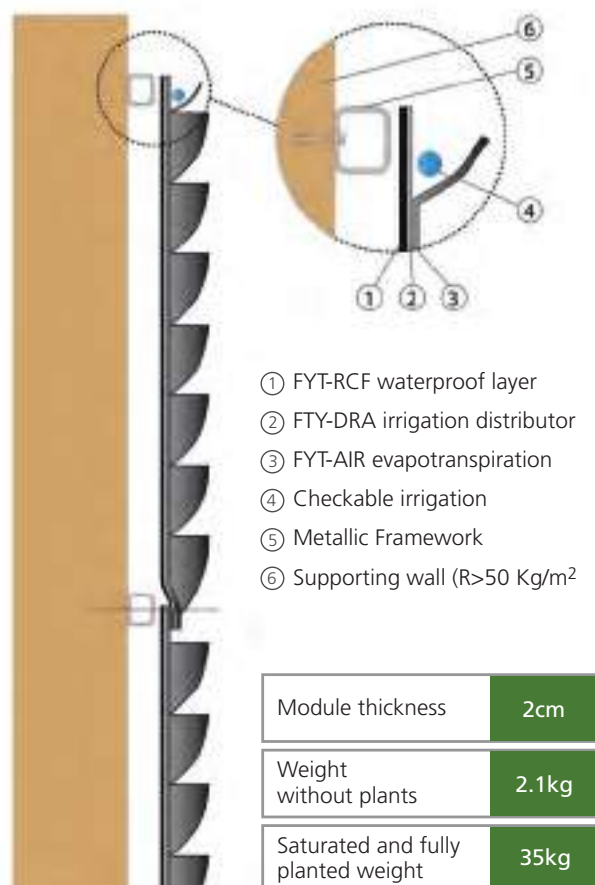
Weighing less than 35kg per square meter fully planted and saturated.

We can produce bespoke modules of every shape and size, due to the system flexibility.

The design of the module allows for accessible irrigation, minimising maintenance time once established.



Fytotextile® Module



- ① FYT-RCF waterproof layer
- ② FTY-DRA irrigation distributor
- ③ FYT-AIR evapotranspiration
- ④ Checkable irrigation
- ⑤ Metallic Framework
- ⑥ Supporting wall (R>50 Kg/m²)

Requirements for Living Wall Installation



Water Supply

A fresh water point for the irrigation system is required at point of irrigation plant installation, with 3bar of pressure available.



Electric Connection

A 240v electrical supply at point of irrigation plant installation.



Drainage Point

A drainage point at the bottom of the wall to remove excess run-off.



Irrigation Plant Room

This can be tailored to fit the available space. Size varies depending on size of wall. Average space required for pumped system; 1200mm x 900mm floor-space, 1500mm against a wall.



Auxiliary Lighting

Our Horticulturists will take light readings on site to confirm requirements; 1000 lux @ 600mm from the wall is the general minimum requirement.